Voices from Architecture
From your experience in teaching, which is considerable, obviously, uh, what are the qualities that seem essential to student success? ... And in three areas, probably: thinking skills, knowledge bases, and manipulative abilities. The knowledge bases being things they must know in order to use them, the thinking skills being the mental gymnastics they have to perform on the knowledge bases, and the manipulatives... virtually anything they push and pull around with their fingers. We can one at a time or in bunches...

Yeah, lets go one at a time, cause I’m not going to remember them all

Nobody ever does, but I’m hoping in between all the people we’ll get them.

Right, Let’s start with the manipulatives, cause that’s the easiest one.

Probably,

Um, ah, first of all, let me just preface the success question, you know how you define success, I... I don’t know that that’s so clear. You know, I think different people have different notions of what ...... successful in design, that’s probably....

That’s a very interesting point, we maybe want to treat that a little bit

Yeah, and I think success is worthy of a little bit of a definition. Um, for example, somebody might tell you... Castle, freedom engineering, computer modeling skills are essential in architecture success, somebody else might tell you that hands-on skills are... and there’s a lot of partisanship about that kind of stuff. So... I don’t know what... how you define success. I define success as being um, content rich, and thoughtful, socially engaged. Um... proposals for the built environment, and um, I think sometimes some content, is not necessarily visual, you know, and it’s not necessarily something that’s easily modeled, ah, and so when it comes to... making imagery, and making models, and drawings, uh, physical visualization skills, I think its important to have those, you know, if somebody’s good at computers, is good at making models, is good at hand drawing... then that’s all great... and I would prefer to see a little bit of competence in all of the above. And that success for me would be the ability to negotiate between different media. You know, to be able to you know use something when it’s appropriate for the content. The information is more important for me than... than the craft of the imagery. But that’s
not to diminish, you know, the skill. If somebody’s got good representation skills, then it’s clearly going to contribute to their success. Um... so, I guess what I’m saying is

Are there specific types of drawing, or specific types of model building that are more significant?

Well, I guess in architecture, anything that has the ability to communicate three dimensionality, and I mean interiority as well as you know, formal mass and kinds of things, anything that, you know contributes to facile quick, thinking, you know that demonstrates the ability to think three dimensionally is the key. I think we have a lot of people that are facile with a lot of graphic techniques, that are not necessarily thinking three dimensionally, they’re thinking two dimensionally. And so anything that is, you know, some kind of ... and when it comes to three dimensional models, you know physical models, I mean those that are apparently three dimensional, but they are not necessarily, inherently three dimensional, in their thinking about, you know the... you know spatial qualities of an inhabited space. You know, they may be beautiful, but they may not be, you know, appropriately scaled, or they may not be related to specific human experience. So, it could be a very beautiful ash tray for all anybody cares, you know... because it’s not related to inhabited space. So I think the ability to connect your own sort of body experience to what you are imagining, represent it, and communicate it to somebody else, is the real key.

That’s a good one

Yeah, I don’t think there’s anything sacred, I don’t think computers are sacred, I don’t think drawing is sacred, I don’t think physical modeling... I don’t think anything is sacred, it works differently for different kids, and I think we, we ought to let them find what works best for them, but the three dimensionality thing is key.

So they should... they should have some rendering skills, of some sort, according to their own talents, that allow them to represent their three dimensional thought processes.

Yes

Ok

Yes, yep, and I don’t care what kind of technology... representational technology, they use.

And it’s, it’s, beneficial if they can flow from one to the other.

Yes, the more the merrier, you know, because there are different limitations for different kinds of things, and I think speed is important because thinking happens quickly. And so, you don’t want to be good at something that’s a very labor intensive slow kind of technique, because that doesn’t allow you to use it in the thinking process. It only allows you to use it as a sort of final representation. So I think that you know, that quick
techniques are really important, and slow labor intensive techniques, while they’re impressive and beautiful, and all that kind of stuff, are not necessarily good thinking aids. 

_Ok, um apart from rendering, are there other manipulative abilities?_

When you say rendering, what do you mean?

Representational skills

When I, when I use the word ‘rendering,’ I mean the, the surface shading and coloring of a line drawing.

_Ahhh, you see, that’s one of those terms that changes from..._

When you put render on a computer modeling thing, it gives it the shades and shadows, and the surface textures, it’s the... bringing to life the surface of something that may just be a line drawing.

_You see, and to me it would just be a kind-of generalized term for drawing... very interesting._

Drawing is drawing and rendering is rendering.

_Rendering is more like coloring... I think, come to think of it, I’ve heard the Interiors use it that way too._

Yeah, rendering is coloring as far as I’m concerned.

_OK_

You know, it’s like the coloring book, and it’s slow and labor intensive, although computers do it now for you so...

_Un-hunh_

So

_They do it slowly too..._

Well yeah, yeah... but shades and shadows is usually the most crucial piece of rendering, but it also can be colors, materials, surface texture... all that kind of stuff... that’s how I use that term.

_Well, let’s venture forward into knowledge bases._

_OK_
What are the building blocks that they need to be able to... ah that they need in order to perform the mental gymnastics we hope we’re goona talk about last?

Well, this is a hard one, um,

This is a hard one because... well first of all I’ll start with the easy one, the one I just told you. The three dimensional ideation, maybe that’s a thinking skill...

Yeah, I think it is...

Knowledge base... knowledge base, I don’t know. I’m being human, I don’t know. Anything, everything.

Let’s go with the thinking skills, usually you get into these, and you mention one, and the knowledge base comes from it, or you mention the knowledge base and the thinking skill comes from it... it’s pretty hard to think of one without the other. So if three dimensional ideation makes a good thinking skill, let’s start there.

Ok, so you’ve got to be able to think three dimensionally, in your head and use it in, you know manipulative imagery, because you can’t hold everything in your head. You know... so that’s what the imagery is good for... at least in the drawing process. It’s to help you remember stuff... and to make your thinking more complex because, you know some people can hold a lot and you know, some people can’t... it doesn’t matter as long as you have prosthetic devices to help. Um, I think at some ability to think synesthesically if that’s a word, you know, how sensory experiences add up, in my book, that’s really, really key to architecture, because I think too often we ask people to think only visually, and that’s really not all there is to it. Because what places sound like, what’s they feel like, what’s it smell like what they... you know, it’s sort of haptic experiences of places is what most people notice. Um visual stuff matters, but it’s, you know, probably less important in lay people’s experiences or the physical environment. So I think having some kind of you know, I think maybe um uh, some good designers are good architectural designers are um, probably athletic, in the sense that they you know um... they experience the environment in a different way. Uh, you know kind of sensual. Empathetic, now you see I think this runs counter to what a lot of architects are... and I think that the history of architecture has tended to privilege the visual... and so we end up with a lot of visually oriented artistic men. No, I’m serious, that are not very empathetic, and you know, don’t work well with others and are not...you know buildings are not environments for multiple groups of people they’re more sort of deterministic, you know... kinds of spatial...

Yes, names are coming to my mind...

You know, so what you’re hearing from me is something that, you know, is not the way it is, but the way I think it ought to be.
Well, you know, if that's...

...And the way I’ve taught.

*If that’s the way you want the student to be, that’s going to be part of his success.*

Yeah, so you know... I don’t know what to say about that, but that’s the way I’ve taught, and that’s the way I recognize successful students. You know they do exist, you know.

*So very possibly, people skills of some sort... would be a knowledge base.*

Yes, absolutely,

*Ok... yeah see how that works?*

Thank you, thanks for helping me, I don’t know...

*It usually goes easier once we find one of those...*

Yeah, and I think that there are some highly successful architects who have no people skills. So what that means... I’m not going to try to explain it to you...

*Ok*

That means that the culture is corrupt and... Well, I’m serious, look around you, there are a lot of bad buildings.

*Yes, once in a while I’ve noticed one of those...*

So, yes, I don’t know

... and there are inhumane buildings

Or they just, they just aren’t xxx

*Ok are there other ways that students need to think in order to do this kind of work?*

Well I think that an attention to detail is really important and it overlaps with the kind of thing that I just said because I think uh little things matter, when you’re thinking about the nearness factor human experience of places, you know, what the door knob feels like in your hand, you know, what’s immediately outside my door, you know, when I’ the sort of little close things rather than the big picture. The big picture matters, of course as well... so multiple scale kind of thinking maybe you know something to... but being able to relate small things to the larger whole, you know to have some kind of coherence and um little sensory experiences and the larger whole is um... I don’t know how you teach that other than to just keep asking them to pay attention to it. You know, ask them, how
does this detail relate to your larger idea, but um, which is the way I’ve always done it. I do think that sort of focus on detail without losing sight of you know some kind of coherent strategy, is really important.

Now then, I’ve actually heard this kind of thing before, but I think you might be the first designer that talked to me about it...although I might have observed it a few times, particularly in my conversations with other architects. We have a name for what you just said, at least educators do; we call it parts-to-whole thinking. But the interesting thing out there is about half the people out there want to take the parts and make them into the whole, and the other half want to take the whole and understand the parts. Uh, which direction does that process go most frequently, or is it a totally interactive back and forth?

Well I’d have to fall on the side of totally interactive back and forth for success, I think you could go detailed to whole or whole to... excuse me...

Yep, We’re good yet.

I think you could have something work for you that you could do it either way, and I know that there are people who think that way... and so I’m not prepared to say that you can’t, but I think for it to be really complex and rich, it’s probably best if it’s a two way street.

Ok, and there is another very nice thinking skill. We’d like to figure out what the parts are and what the whole is somewhere along the line, but they’ll probably still come out. Other thinking skills... that seem real relevant?

Um, well because I think producing buildings is not something one can do without some help, because I don’t think, you know buildings... I think, you know, buildings are complex objects, only the most rudimentary buildings can one person handle by themselves. I think you need... the people skill thing is important both in terms of empathy and imagining environments for people, but it’s also important to develop, you know, getting things done in the office and I think this is something we don’t do very well in school. You know we’re working on it because there are collaborative projects in 102 for example, and that didn’t used to be the case... I mean, you know, people didn’t used to teach that way, and I think that’s some recognition of the fact that, at least in architecture, and I don’t know about the other disciplines, but for sure for architecture, that’s the one I’m speaking for...

That’s the one you should talk about, I’m goona go talk to those other folks.

Right, there’s no way you can get a successful building now whether it’s a successful skill for a student is another matter, you know whether they’re asked to, you know deploy that kind of ability, and sometimes they’re not, so... in my book it would be always required, and always something that would make the student successful.
Some sort of collaborative skills

Um- hmm, Well collaborative skills are, you know multi-faceted... good verbal skills...

Keep going

Good quick visual communication skills, that sort of quick communication skill that I was talking about earlier. It comes into play really big time when you’re having to go back and forth with somebody else and not just in your own head... and you know, capacity to listen,

Yep, there’s one

You know... good listen skills, and then you know verbal communication skills... and sometimes this involves writing, because maybe you may hold conversations you’re having with some consultant, or something like that.

Um-hmm that is a nice list of knowledge bases: listening, verbal, writing

And I think it’s really important... and sometimes, you know, I think that’s one of the reasons why sometimes people say that the ‘C’ students in architecture end up being in charge of the firm... because I think some of them have social skills, that the ‘A’ students, I mean historically, you know, the sort of nerdy artistic boys that, you know, do the beautiful things, you know, but can’t talk to anybody and bring home “A’s” and then the ‘C’ students are always running around, you know, interacting with everybody and have the ability to do that, and are the ones that end up in charge, because they’re the ones with the social skills. They may rely on their artistic employees, but I think they end up being the ones that, you know, are out in front.

Ok, have we said it all, or are there some more thinking skills?

Let me just think a minute, I’m not sure I haven’t left out something

Inevitably, everybody is goona miss one

I think curiosity,

Ah ha

I think being curious about things is, you know, Being curious, I think, is the kernel of creativity.

Probably

And so, you may have somebody that’s facile, and can make things, but they don’t, , you know, the thing that they don’t end up being very originally creative or anything like that,
but just good, you know, um, I think it’s that curiosity factor that separates real creativity from visual skill or competence. I think people that are curious about the world are more open to new experiences than other people.

_A fascination with novel experience?_

Maybe, maybe it doesn’t... I don’t think it always has to be novel seeking, you know, kind of thing, but, just being open and curious, you know, I think it’s an active way of being in the world.

_How would you see that curiosity manifest itself? Give me some of the clues that would let you know that was working._

In a student?

_Yeap_

Um, Bringing things beyond the, you know, assignment to bear on the assignment. You know, beyond the information you give them, always... always beyond the assignment, asking questions, or, you know, not linearly woven into the project statement, you know. Yeah, it’s bringing something from the outside into... especially something like 102 where the projects are kind of, you know, rigorously bounded, you can really tell who’s a sort of actively thinking and curious being they bring something that they weren’t supposed to.

_Oh yeah, that’s where the fun is_

Yeah, and it’s not a matter of breaking the rules necessarily, it’s just a matter of, you know, not feeling constrained by, you know, artificial boundaries. They’re all artificial, so...

_Ok, well as long as we’ve gone up that road, what would be the first red flag that would let you know... that would suggest to you the student might not be going to work out as an architect?_

Well... I think, um, the inability to conduce multiple, multiple let me think what the word I’m looking for here... multiple sort of informed proposals for anything at any given point. Um, I’m going to go back to this door knob thing, you’re thinking that ... office building, right, and uh, at some point you’ve got to decide what the door knobs are... or what the hardware is. Well, there are probably some designers never even think about it because it’s somebody else’s job. There are some people that think about it first because they’re thinking about um, what the place is going to feel like, that’s their starting place, what it’s going to..., you know, what kind of environmental character the environment’s going to be. So little things like what the door knobs are like are important first ideas, because they help structure the kind of overall feeling... So the problem, I think, and you see it early on in the students, is that somebody gets fixated on something and is not willing to
let it go or change it in the relationship to the sister parts... and whole thing, and the back and forth thing. So that, you know, if for example, somebody decides that the door knobs going to be ‘X,’ in the beginning...

Perhaps levers...

Whatever, you know, I mean they saw something in some catalog... and in this project I’m going to be using these door knobs, right, and the whole and the whole project, you know, is, you know, enslaved to this one decision. Then that’s a problem, and so it doesn’t allow you to sort of develop that kind of, you know, whatever it is that emerges out of sort of juggling things... until they all settle down and, their rightful place. And you see students not being able to do that not being able to hold ambiguity in their head, for any length of time, and, you know, generate multiple, you know, multiple possible answers to the same question. Um, their own dot one idea... and some of them get it by just copying and pasting and some of them get it because they’re just obsessed with a certain narrow range of things, or some of them, you know, they had success in one project and so they just keep doing the same project for the rest of their lives.

(laugh)

You see what I mean, there’s that sort of like being fixated on one solution, and being rigid about, you know, trying, you know, testing against other things, and slightly modifying or whatever. ...And being able to actually communicate those, those multiples on the fly. That’s, that’s what I see as the red flag sort of. And I guess you could just say, Ok, you know, it’s just stiff and rigid and can’t come up with any ideas and that’s what it looks like.

It feels like kinda like an inflexibility of the mind.

Yeah, yeah and so I guess it’s, you know, maybe holding ambiguity, being comfortable with ambiguity is a component of that because, you know, you haven’t figured it all out yet, and it’s not being too afraid of not having it done, and getting it done prematurely because it’s, you know, simple, but then it’s crude, but it’s done, you know. ...That kind of thing. Well I think you have to be comfortable with it not being finished or... (Note alchemy of the imagination)

A sense of the unfinished...
Well you’ve taught at the upper level, and the entry level, for all practical purposes,

Um-hmm

What do you hope would be the transformation from entry to exit? How are they different?

Well, I would hope that they would be able to handle uh, larger sets of well just sort of data. about a like, you know, there are issues about structural knowledge, you know, like
how buildings can be constructed that is just part of the palette. You know, it’s not like it’s any thing of... there’s some physical laws that you just don’t argue with, you know, like gravity and things like that. ...and what materials are stronger than others, all of those kinds of things. They don’t all come in knowing...

Those are knowledge bases, structural knowledge, physical laws, materials...

Yeah, yeah, I mean some of them may have more awareness of that than others, based on past experience... their father’s a contractor; they built a lot of tree houses, whatever. They may have some... some of them don’t know anything, because their approach to architecture has been through images, and not through the physicality of things, you know so... I would hope that by the end of their time here they’ve got a richer sense of the physical properties of buildings and that has to do with systems of environmental control, and both active and passive... buildings have to you know, air flow for example and temperature become really important systems in buildings. And daylight is a really important part of building design... figuring how light works in a building... all those things they may have some kind of crude awareness of them when they start, but they better have some ability to incorporate it into proposals and ways they think about buildings and integrate those things one with the other. So, materiality, physicality, human comfort... There’s also the dimension of how architecture fits into cultural expression, that they learn about, I think in school cause most of them don’t come with some sophisticated awareness of the History of Architecture or why people... how people talk about architecture. You know, intentionality... those kinds of things, and I don’t think there’s anything sacred about any of that either I wouldn’t say... for example I could imagine somebody becoming a very successful architect who never had any course in architectural history, and I really feel strongly about that. I guess, it’s so important to me that the feeling physical sensory local engagement be the driver for what gives architecture form that I don’t give a damn whether anybody knows that the Corinthian capital was based on a myth...

Had leaves on it...

I don’t really care, I think that enriches who they are, it’s like interesting... all that kind of stuff... is fun, and it’s interesting, and it’s a rich part of what human beings do. Of course I think we should be making up similar kooky ideas now, just for the fun of it. But I don’t think you need that stuff sacred in the sense that it’s fun to xxx how things ought to be now.

But your focus would be to draw on the existing culture as a resource?

Yeah, I would start there... make them aware of who they are now, and make them more sensitive to their own place in the world.

Lynn Paxon told me something about a year ago now that really fascinated me, she said they don’t know they have a culture!
Yeah, that’s another way of putting it, and if you start to become aware that Oh, because I do this every day, or because I watch this TV show it’s part of making a kind of collective you know... and then I go and like draw... I put these characters into my thing... Oh, that’s part of what’s going on around me; I’m influenced by what’s around me...

Yeah. And then when you have that kind of self awareness, then you can look back and take a more critical view... whatever happened in the past was just the same thing, it was just that was then and this is now... demystifies it a little bit.

*You talked about intentionality... I hear architects say intentionality, you want to just tell me a little bit more about what that is?*

You know, I think you should have ambition for your proposal. I think that ambition could have lots of different... could manifest itself in a lot of different ways, and I think it’s contingent of the context of the project. For example if you were doing a public library in downtown Des Moines, you should have some idea about how you are proposing to change your... cause everything you build changes the place around you. And so you should have some idea about what you think it ought to be, and communicate that. I think this ought to be a building and a park, I’m just using that, you know the library.

*Something like a sense of purpose?*

Yeah, yeah, I think you should be aware of what you’re trying to do and be committed to a certain vision for what it all means... and be able to share that vision with other people very clearly so if they say, “No, I don’t like that idea,” then there’s some dialog because that’s the way it ought to work. It’s not your building, it’s... it depends on who the client is or what the context is. There should be some dialog about what the vision or what future that this thing is going to help set up should be. So I think if it’s some private thing at home there is a dialog there about how you want to live and what you want your house to say to the neighbors, and how you want to impact the environment with the way you live. You know, all those kinds of things... you should have some vision. In the real world, it’s a shared vision between the client or the community in which this thing... in school it’s often your own vision and this is a little bit of a problem I think, because it’s important to be able to have a sense of purpose and a sense of, you know, intentionality for what you do, but you shouldn’t think of it as your own private thing because it’s never going to be that way... or it shouldn’t be that way in the real world or practice. Now it’s different for artists, you know... painters, sculptors. I think intentionality is a private thing in art... should be, that’s kind of what it is. I don’t think that’s true for design professions that are basically working with others making things for others to use.

*We’re talking about a shared intention...?*

Yeah, a shared intention because I think that is one of the skills of the designer is to sort of give form to and give purpose to... And that would be probably true for a lot of professions that involve designers... I mean everyone. That’s your law, that’s the most important thing you do is bring it all together. And you listen as well as xxx maybe... so I
think you’ve got to accept that that would be true of architecture. But you’ve got to learn how to formulate that kind of... you know, what’s the goal here. And it’s a conceptual thing and it’s a conceptual thing that guides your struggle with the multiple possible solutions and that kind of thing. And it’s a conceptual thing that may be a bit fluid to, because it can change before the thing gets to xxx.

*So there’s another nice thinking skill, goal formulation...*

Yeah, yeah, and being flexible with that.... as well. So I think flexibility is really important, but goal... you need to have some sense of purpose and ethical boundaries and all that kind of stuff.

*Ok, well we did succeed in covering a lot of stuff there. What did I forget to ask you that I should have asked?*

I don’t know, I mean I’ve been out of teaching second year for a while now so I’m not thinking basic fundamental stuff, you know.

*That’s OK, I need both ends sooner or later, I’ll find someone.*

I’ve been thinking about... I’ve been having dialogs with upper level students all year, so I’m feeling more kind of expansive in how I think about...

*What do you want to pump into those upper level students?*

Well I just think a sense of responsibility to the greater good... and that’s harder to find what that is, try to find out what a community needs and what would be the right thing.

(Tape ended, interview concluded at that point)
Well, now I can get around to the main question. We want to talk about the qualities of a successful student in Architecture. Based on your experience and in your teaching, what things seem important to student success in this particular discipline? And in at least three specific ways which we are going to do in terms of making sure we diversify the answer a little. We want to talk about knowledge bases, thinking skills, and manipulative abilities. I can explain those a little...

OK

Knowledge bases tend to be fundamentals; they’re building blocks, thinking skills tend to be the strategies you use to arrange the building blocks. Manipulatives – if I might use clothing design as a source of demonstration – guiding material through a sewing machine would be a manipulative ability in there. So then the question is what is it they need to have and be able to do in order to be successful in Architecture? And we want to talk about the things that they tend to do well and also the things that they seem to struggle with.

When you ask this, do you mean what things do they need to do well by the time they graduate, or what kinds of things would we like them to do when they finish first year?

Well, actually, I’m going to ask you to make that comparison between the two eventually.

Ok, ok, well we’ll answer it for what they need...

Let’s imagine that they’re coming out of the Foundation, and they’re Sophomore, Junior, what do they need to have and be able to do in order to continue to progress?

Well, I think the most important kind of thing that I think Architecture students need in order to progress... I think of this as a knowledge base, but you could also maybe think of it as a skill... but you need to be – I would say – learning how to learn. You need to know how to define what you want to know, and figure out where you look to find out certain kinds of things... or I might say where you look or who you go to... whatever, but to figure out, you know, if I need to find this out... how do I find it out? And that finding out could be manipulable, it could be knowledge. So that’s a really a key quality, also they need to gain the skill of dialoging with self and with others... about their projects. It’s really good if they can talk about what they’re doing Friday night, but that’s not really what I mean. You know which includes thinking critically and discussing critically without... being able to separate the work from themselves or their friends, so to speak. When you’re being critical or you’re doing a critique, that it’s not about the person, it’s about the work... and some faculty could use some work on that too. So that’s a lifelong learning goal. So those are two really important things that people need to be able to do,
and in order to be able to do that last one, thinking critically is a key skill. That maybe
goes without saying, but I think there are kids who are able to think critically, who aren’t
particularly good at dialoging critically and it has kind of two components. So those are
two important things... I’m probably goona be not quite so linear as maybe I should be...

That’s normal...

...but it makes me think of some manipulative skills that I think students need...

good...

Students need to know how to write, like writing down a list of issues that they’re
thinking about, or posing a question in a succinct way, and also being able to present
their work to somebody else for critique verbally, so that’s a key skill that they kind of
need to keep working on all the way through. And that also means being able to know
where to go look for information... so I think of it as research kinds of skills. And as part
of that, I think right now the thing that I notice the most is that I don’t care what...
whatever number we’re calling the English these days says, I don’t care what the library
says, I still have a bunch of kids who only know how to look things up by Googleing
them, and they haven’t... and they apparently haven’t understood the issue about how you
vet stuff on the web. Like kids... they’re very savvy about finding stuff on the web, but
they’re kind of at that place where we were when computers first came out where if it
came out of the computer people treated it as sacrosanct and it took people a while to
understand garbage in – garbage out. So these guys are sort of... they’re at that garbage in
– garbage out Google thing. They just think that everything that’s on Google or
everything that comes up when they find it is, you know, vetted information. And when you
talk to them about what’s the bad part of this information, or have you found it in
two or three places... so that’s something that they need to get savvy about and viewable,
and it’s part of critical thinking... how good is this information that I have... am I willing
to use it to design with, or will I use it and fall on my face because somebody will laugh
when I say it out loud because it’s just bologna? Another manipulative thing... that they
need to be able to draw, and it’s drawing to think... but also they need to draw to
represent to others. So it may be about how to diagram – which is a cool thing to do –
but also how to communicate through drawing. So they need to start developing their
hand and their computer skills. And, you know, I don’t really privilege either one... they
really need both, because you think differently... and this could be a generational thing I
suppose... I do something to think differently, just like when I type versus when I write
out by hand... those are two different kinds of thinking sets. And I think that’s true of
drawing too. When you’re actually drawing on paper, there’s a part of your brain that
you’re using that’s different than when you have to manipulate the commands on the
computer. So I think that people learn, and people communicate with themselves
differently when they use their hand to draw versus when they use the computer to draw...
both of those things. Then they make three dimensional manipulation and that could be
drawing, but I think of it more like models, and you know for me, it’s iconic model
making as well as representational model making, and I think we tend to concentrate a
little bit more on representational models here... and not so much on iconic models.
Tell me a little about an iconic model?

Well, some people here might call them scratch models, but really I think an iconic model is a little bit different than that, like if I was doing an iconic model, I would just decide, you know, the pop can is X, and the chips are Y... and they don’t have to look like... it doesn’t mean that it’s a tower and it’s tall because it’s that... or it’s flat and short because it’s that. It’s about... you can go about this with diagrams too, it’s just sometimes when kids are dealing with it three dimensionally, they can think it. Of course, sometimes it’s helpful and the iconic model starts to take on something that would become we might in our country call a massing model, which is just about like... is this something that’s about height and a little bit of mass, or about spread out and low kind of mass, but iconic models don’t have to be either of those things. And yet massing models are important – they’re maybe a little less important to me than to some people in Architecture – and then eventually being able to do a more either diagrammatic or representational model that communicates to other people. And, you know, the drawing skills kind of include... I mean I talk about computer and hand drawing, I guess, when I say hand drawing I mean the whole xxx be of collage, the painting, I mean, it really is, for Architecture, those things are more interchangeable, at least from our point of view. The technical drawing is a skill that I’ll say like the rules of drawing for let’s say working drawings or something from my point of view that they’ll learn a little bit at a time. And every office I ever worked in... I know there is a xxx that we have universal xxx... Every office I’ve worked in has their own set of standards... and, you know, it doesn’t take you very long... you just have to figure out we do this, this way and we do that, that way... and it’s no big deal. So sometimes students, and you know, these instructors can think that there’s like only one way that they can do anything, so I always try explain to them that there is like a bazillion ways to do everything and you need to be flexible because unless you’re like a sole practitioner, you’re going to be following somebody else’s set of rules. And that’s true for computer things too; like every office has their own way of setting up the layers and doing things, and you don’t get to do a drawing on your own – most of the time – you do it so that everybody is doing the same thing.(Note collaborative drawing) And it might not be your preference, but you’ve got to work in that way of doing things. So I sort of remind them that in school, obviously, they can set it up to do it however they like, but they have to recognize that in practice it’s not likely to be that way, because I just remind them that even if they think now that they’re going to be like the one person practitioner, or the boss of a little firm... the numbers show that it’s really, really unlikely that that will be true for them... that very few people still practice that way. It’s a little bit more true in the Midwest than in it is in some other places, but just because of the specialization and the amount of stuff these days, there’s an awful lot of people who practice, at least, in a mid-sized firm.

I think I hear you talking about teamwork?

Yep, I’m a huge proponent of killing the starchitecture kind of start architecture kind of deal. Yes, we have to do some individual work because everyone needs to get the skills, but everybody also needs to learn to play a role with others. Architecture is really bad
about this, and I absolutely see it when we get to the fifth year interactive studios. Landscape guys are much better at working in a group, much better. Last semester when we did the third year guys, LA and Architecture together, we had big teams, you know for a lot of good reasons, and the Architecture guys had the hardest time not just getting to do their own thing. And they’re doing their own little piece, but they had a real hard time letting go of getting their way. And, you know, I see this in practice too, and you know unfortunately we have many faculty who model that behavior. So xxxx xxxx you have some non-collaborative type things. And you know in offices you’re going to be collaborating with people in the office, and people outside of your office, so you’re going to be in collaboration and you’re going to understand that you collaborate in different ways at different points in the project. It’s not always the same kind of collaboration. And so I like having projects that students can... you do things together, and then you do things alone, and then you do things together and so on. But I tend to push more for the collaborative, because I think it’s sort of like the individual stuff is being pushed enough, that I don’t feel like I have to push it. So, ambivalent cooperation...

So do we have anything more in the way of knowledge bases?

No, I don’t think so... knowledge, manipulation, and thinking skills.

Those knowledge bases and thinking skills, they can go either way... they’re independent in a way. What do they have to know in order to use it?

Somewhere along the line they have to know some basic ideas about form and volume and... I guess you’d say, sort of how things fit. You know, you think about the poster project for 102, and a lot of people say whoa, why are we dong that... that’s not Architecture, and you try to get students to understand that thinking about composition, even if you’re thinking about it flat, composition is part of how we make places, and the weird thing about places for people... you’re composing sets of activities and you’re composing experiences in terms of volume, and in terms of texture, so these are skills you need to learn too. And one of the things that, that poster project really does help kids look into is things like... you don’t think about necessarily... but texture comes up really strongly in that project, not so many people think about the central quality of the texture, but they begin to think about texture as an important aspect, and then you can get them to think about how it’s important when you’re feeling it. Which is important, I think... you know, people live in Architecture, they might not want to live in a painting, but they live in Architecture, so you can’t imagine that the texture of the room is not important. So that these things that we start in 102 help them to begin to think more broadly than they sometimes do about architecture, because I think, typically it’s been very visually oriented, people don’t – it’s changing a bit now – but students and faculty and many practitioners don’t really think about the experience of spaces that aren’t visual. Right, because we present it all visually, and we give the awards on their visual qualities... and no one knows about it’s haptic qualities or its volumetric – in terms of sound – kind of qualities, or how it feels to sit in this place. So these are things that you start to get into, but then also they need to know... they need to begin to think about things in – one might – say sort of orderly fashion... And that doesn’t mean linear, but you need to begin to
understand like how things can go together, so you’re learning to analyze like activities and what are the spaces they need, so you have to begin to understand lots of ways to analyze information, so you’re analyzing information that’s coming in, and you’re figuring out how to put it to use. And it doesn’t matter what that information is, because every project you do has different information... it comes in and you have to figure out how to use it, and you also have to figure out what information that you need to go and get – that you don’t have. So those skills in analyzing... and what a lot of people would say is problem solving... I would say sometimes it’s problem creating, but sometimes you do something and you realize, Ok, now there’s an issue, how do I deal with that issue? I don’t think that problem creating is a bad thing as long as you’re xxx.

I’ve also heard that called problem definition...

Ok, yeah, and art texts sometimes think about it as programming or brief making. There’s a lot of different kinds of labels that people get... also one of the key things that I think students need to learn is to understand about values. And you know, that sounds funny, maybe we don’t necessarily think about that but every time you make a design, you privilege certain things over others... and that has to do with your values. And it happens every time... and you have to; you can’t deal with everything equally. And so students have to be... able to be really clear with themselves about what are values that are being asked for them from someone else,(Note: prioritization based on values) what values are their own, and how are they dealing with everything they need to do. They need to take responsibility for the outlook. An example might be, if I’m very concerned about the environment, I may be privileging green and sustainable kinds of things at a higher level than someone else. Where are your ADA concerns, are they at the very bottom? At the end, you just try to go through and make it, Oh I’ve got to put a ramp in or I’ve got to do this... or from the very moment that you start, do you imagine what it’s like if you come in if you’re walking, coming in on crutches, coming in if you’re in a wheelchair? And how you privilege or rank those kinds of things is a key aspect or your design, and you are the one responsible for it. You can say, “Well my teacher told me,” or “The client wanted.” You have to say, the client may have asked for it, but you have take responsibility for how you met it or not. And I actually think that’s a life-long thing, and I think that’s kind of hard for younger students. They’re still dealing with what are my values, and sometimes they have a hard time taking responsibility for their values. I guess it’s probably a maturity kind of thing, but it’s also maybe they haven’t been asked to take responsibility for certain... you know, we talk about kids making good choices, and they’re struggling with that as Freshmen and Sophomores, and we’re saying not only do you have to make good life choices; now we’re asking you to make good professional choices too. And it requires a kind of knowledge base, because sometimes, you know, if you are unaware of certain kinds of issues or information, you can’t possibly privilege them. So if they haven’t learned about say, like... to think about ADA and to think about it, not as a set of rules – I must do this and this, but to think about it as a civil rights issue. How can I make places that all kinds of people have equal access to? Students in second year take a class which has them look at some of those regulation kinds of things like the ADA, zoning, all those kinds of things, but they’re learning them as like sure these set of rules, building standards and so on that I have to learn. And a lot of times when they
come to third year and we’re talking about something and I say, well you know, of course this design has to meet ADA and be accessible, and the students look at me xxx of that idea like oh you did that in that class, now I have to do it here? (Note apply knowledge forward) But I always present it as a civil rights issue and some students catch on to that right away and they understand it and others just fight it tooth and nail, and the most they want to do is like meet the regulations... and they sort of hate doing that. And, you know, I think that’s also a kind of maturity thing, but it leads us to something else that’s kind of important. I don’t think that students necessarily really have it by the time they graduate, but they’re starting... and better students will have it, and that is understanding that, you know, it’s about synthesis. And that our profession, and I think that’s true of all design professions, what we do is we synthesize stuff, so unlike students in some other disciplines, our students are required from a pretty early stage to begin to synthesize things that happen in other classes in order to move well through their programs. And for some students... they’ve just been waiting for this. You can see like in high school it was not very synthetic and everything was in little blobs, and some kids just like, they jump on that all feet forward and other students like go kicking and screaming and it’s as if you want to bring in things they’ve learned in other classes... they look at you like wait a minute I already did that in that class, why do I have to do it in this class? So it’s interesting to see that in the students.

You’re talking about integration of knowledge?

Um-hmm... So not only being able to do some kind of analysis, but them to be also able to put it together.... and to be able to put it together not with maybe just the analysis you do right now, but drawing on information you have and skills you have from other classes, which... and obviously the level of detail is different at different classes in terms of how you expect that to be integrated. In the more junior class you know that it’s going to be less integrated, but then you know that by the time you get to fifth year you really want to see them integrating all the kinds of aspects. Yeah the fifth year isn’t looking at just one thing, sort of concentrating on how the building fits into its context, it’s not just concentrating on, you know, what are the materials and how is it constructed – they do need to understand that – how will it stand up. It’s not just thinking about is there good air in here, but does it look interesting, does it make a wonderful place to be? But it’s like you should begin at those senior levels to be able to sort of see all that stuff start to come together in ways that make for compelling and complete place-making.

I want to back up for just a second here... you talked about analysis and synthesis... and they’re frequent elements of courses like this that require or are supposed to have it... Is synthesis the purpose of analysis, or how close is that linkage?

I think there is a certain amount of analysis that you have to do just to understand stuff, and then part of the analysis is enabling you to pick out which things you need to use as part of the synthesis, and I think that is where some of the values stuff comes in because you’re deciding, Ok, I’ve done this analysis and I’m going to pull in this information, this information, and this information as kind of primary, and then some of this other information may fall a little bit by the wayside or it’s going to be very secondary or
tertiary in how I do my work. For example, let’s say the student has a very green attitude, like every project they take on they’re probably going to be very careful about all kinds of things from analyzing and thinking about issues on the site that affect those kinds of issues to issues in the materials to issues in the kind of long-term heating and cooling of the space over time and so on. Somebody else who is more like driven by like... maybe their highest priority is thinking about users, and so – and maybe even multiplicity of users – so they may... everything they may do may kind of start with how is this space experienced by... or used by the various kinds of users that may be there. And, you know, they might get to those green issues too, but they might get there in a slightly different way. And so what you’re pulling out to synthesize from that analysis has gone through some of the values in order to be made into a hierarchy of what things you’re handling first. Yeah and in classes sometimes we have... there is often times a kind of forced quality to that because if we’re doing a class and it’s concentrating on ‘X,’ you may try to push students to privilege certain kinds of things, because you’re trying to get them to try... Maybe not all my colleagues would agree with this, but essentially every designer has to come to their own kind of way of working, and not everybody works the same way. It’s just like learning skills... you know learning skills are different, but also... what do you call it... somebody who is more of a hands on learner versus somebody who works better with other kind of people... like learning styles. And so just like learning styles are different, so are design styles, and one of the great things about having nine different design instructors by the time you graduate – that’s what we try for – is that you have had nine different people trying to help you figure out what’s the best way for you to work. You know, and some people the way they teach is they say “Do it this way,” and you’re modeling their way of doing design. And other people are like, well show me what you’re doing and I’ll try to work in the way you work, and I’ll try to help you move forward... or I’ll try to make clear to you something I notice about the way you’re working so that you can become more conscious about the way you design. But in the end, every student has to kind of discover how is it that they work, and hopefully they’ve had nine chances to try, you know, with nine different people, advice about like different kinds of things. And so they might have tried different kinds of modeling, different kinds of drawing, ah different orders of doing things, some different ways of privileging how to do things, and by the time they graduate... you know they need to go into practice with an ability even if it’s still pretty beginning of how to take direction and run with it... with their design... with their own design methodology, if you will.

Back up again because I’ve heard you say some interesting things, that I want to kind of verify. When we talked about analysis and synthesis, what we actually ended up talking about – and I’m always trying to find out where it ceases to be English – and begins to be design...

Oh, Ok...

English is going to tell us we’ve got to do critical thinking and we’ve got to do analysis and we’ve got to do synthesis, but what I think we’re saying is we do analysis, we do screening, and then we synthesize.
Right...

...And that the screening is based on value systems...

Sets of criteria that come from other people or from yourself, in classes they may come from whatever goal is for teaching whatever it is, so there is that kind of screening, and I guess also I could say that it’s not like you do analysis, screening, and synthesis and it’s linear, like in Design... maybe it is linear in English, I’m not an English person... but in Design that’s this kind of iterative... you know Design is all about iteration, and so many different kinds of levels, and so you analyze, screen and synthesize, and then oftentimes reanalyze, rescreen, and resynthesize... and you might do that about many things simultaneously, you might do things sort of linearly and then you get to a sort of a point and you start to synthesize these two things... people work in different kinds of ways. Some people work from kind of a kernel and they just keep working out. Some people start with a big idea and then they kind of go down into the detail. And so you start from a big idea which took kind of meta-analysis, screening and synthesis, and then as you keep going down, you’re doing it at a deeper and deeper kind of point... and more and more specific about what you’re doing. If you get down here and you say, “Oop, bad news,” have to go back up here and fix something else because now we have this kind of problem...(Note multi-level thinking) or now we have this piece on information that we didn’t have before. You know, we tend to think about making a building as you do programming, you do pre-design, you do design, you do design development, you do construction diagrams, you do construction. But the fact of the matter is you wind up over here in construction, and you find a problem... and you have to go back here and do it again. I mean those kind of linear things are helpful for making a contract, but you know it’s like when they were working on the new addition, and they were digging around and all of a sudden they find a water main that’s not on anybody’s... the University has got no documentation. So they hit a water pipe and everybody’s like what’s this doing here... you can’t put a footing here, there’s a water pipe here... oh, oh. And so we have to go back and everybody’s got to scramble around, and at that point, it’s not the same as if you had known that information here (gesture at the beginning). But now, you have to take that information and kind of work backwards too... and that’s like the most scary of things when you get all the way to doing construction and you find kooky things that happen.

So we’re also talking about recombination and adjustment...

Umm-hmm, umm-hmm, and this is what I think people when they think design students wait until the last minute to do things, I think what they don’t understand is – and yeah, they should all probably work a little harder at the beginning – but also there is the case that as you do more work, you see more possibilities for doing other things. You know, a Design is never really done, right, you can always do something better... you can always look more at this, you can always find out more about that... and so at some level, it’s about understanding, you know, how far can I get into this, in this timeframe? Or in an office, how much can we do given the money that we have to do this job? ...Because we may not be able to revisit the best kind of... X-ray facilities. We may need to go with
some kind of standard X-ray facility, and just make sure that we are meeting the best practice, but in another situation, we might be able to say, let’s look really how easy it is to get people into the X-ray room... to get them off the gurney and onto a machine. Should those rooms actually be something else than what we’ve been doing? And you know there are researchers who are involved in that, and you hope... the hope between environment design and behavior research is you could have somebody over here doing that who is a researcher, so when you get ready to do the design, you could find out... that well we’ve studied hospital rooms and it sucks when you do them like this, so quit doing them like this, even though it’s a standard in the industry, it may be a bad standard. And a lot of the ADA research is about that, right, because at first it was mostly only about ‘X,’ and then as you got to thinking about it more, you realized that well, a ramp works great if you’re in a wheelchair, it sucks if you have a wooden leg. Ok, so now you have to think about two things, so it’s always about understanding that there’s kind of multiple things.

You talked about experiencing space, and somewhere over here I jotted space down once before... what is the nature of the space as it is conceived by the architect and the thinking skill that manipulates it?

Gee is that a good question, um, I think one of the things is getting students to think about not like... you would say thinking in section or in 3D versus thinking plan. Because students have... I don’t know if it’s easier to manipulate the plan... and so that’s sometimes the way people think that way, and that’s one reason why we encourage models because it can help people who are maybe not so facile at drawing 3D from nothing. You know, we use this building as an exercise in 130, it exists... which is different than having to draw a 3D something that doesn’t exist. And a lot of students have some trouble doing it... and there are some of the computer programs that are helpful in that way, but by getting them thinking in section and 3D, you get them to beginning to understand that it’s not just the floor plan... you know... and it’s not just like making a pancake building, like the College of Design is a kind of a pancake building in some areas, but it’s about understanding that some things need to be taller, and some things need to be shorter, volumetrically. And this is xxx composition; if it’s an auditorium, if it’s a big lecture hall, you feel that most of the architecture on campus, those kinds of spaces tend to be like little blubs... you know they’re a little blub off the side of a building instead of being somehow incorporated because I think sometimes it’s hard for people to think about how well you coordinate something that’s two stories within something that’s one story... and so it’s kind of an issue...

You made me think of the library...

Oh yeah, like the government tiers... don’t you just sort of want to shoot yourself when you go into? Yeah, so sometimes it’s very efficient to think about things as pancake floors construction-wise, and then it’s also important to say, ok, if there are two pancake floors, equal the same as let’s say this kind of taller one that we need for ‘X,’ or ‘Y.’ How do things that go between the floors work like an elevator or stairs...
Or a water wall...

Yeah, all those kinds of things... and air, you have to think about ventilation, you know air doesn’t stay in the little paint blob... if you want to be moving air, you have to think about how does air move. It heats and it rises it cools and it tends to sink, so you have to think about these things not in the flat but in three dimensions, so that’s a kind of a part of it. Also, students have to think about people’s motion through space... that you’re not designing for a static spot, you’re designing for people moving through, air moving through, sound moving through, you know all these kinds of things. So getting people to think both three dimensionally, and then also think, I guess I’ll say haptically or processionally. How does somebody coming in... processionally is a way that students will often understand, haptic movement, I have a really – unless they’re dancers, or maybe certain athletes, most students don’t get haptic qualities. But dancers and athletes understand – or somebody who’s been hurt – understands the haptic quality of things even as a young person. And if you have a dancer in your class who is articulate, usually she can help her classmates understand it. One haptic thing that most people understand – and now my good example is gone – if you remember the stairs that went out of the Union towards Lincoln way, those kind of back stairs?

Yes

Remember how they weren’t right, and so it wasn’t just one step, and it wasn’t two steps before the next tread? It was wrong, and every time you walked on them – it didn’t matter how often you went there – it just felt like your whole body was going to just tumble down the stairs, because you had to really pay attention because it’s not what your body expects for it to be. So we talk about that you have expectations about that stairs are certain heights and widths that your body can move down them, and if you play with those, it ... It’s just hard to step up or step down or those kinds of things. So those kind of haptic experiences are often very hard, because young people are more agile and I think they pay less attention to it. Either that or maybe they’ve finally overcome being gangly teenagers and so they’re just less aware of haptic issues, but getting them to think about what it feels like to move through space is sometimes really difficult. But it’s a starting point for them to begin to think about those kinds of things. And it’s just sort of like when Arvid, in his class, he makes them take a wheelchair around campus, or use crutches to get around campus, or be blindfolded and go across campus... just so they can begin to have a different experience so they can maybe understand a little bit what it might be like to experience the environment in a different kind of way. And, you know, you can say those things are hokey, and maybe they are, a little. But hokeyness has its place and as hokey as it might be if you’ve never... if you don’t hang out with your grandparents, or they don’t have physical and permanent infirmities, if you’ve never broken a bone or been on crutches or anything like that, you’re just unaware of all the kinds of things that make it difficult to do things. You and I have at different times not had working arms, and so you know... as much as I know all of those things, it so refreshes them when you can’t open a door, you can’t open a bottle... so those kinds of things... that experiential thing is really important to beginning to think... Ok, how will I design thinking about that? It’s really great... kids who go to Europe, there may be all
kinds of things about that, but one of the things is that they take public transportation, and
they have to schlep suitcases up and down stairs. They are in cultures that do different
things... and they’re not there just for a couple of days, they’re there for a whole
semester... and they come back and they do think about the world in a different way.
And so in that sense it’s like you’re trying to get people to think about things in a
different way than they have before, and we do it by taking them on field trips to big
cities and different kinds of things, seeing different landscapes, because you can
appreciate the landscape of Iowa when you leave Iowa and see a different organization.
A friend had a story about, “Man everything in here is on a grid,” and I’m like that’s just
Iowa and the Midwest, and I don’t think much about it, but when we were doing the class
in xxx, New Mexico, and we looked at the site plans ahead of time and the students built
3D models. It was like they didn’t understand what the site was, but they kept saying
before we went there, “This site is so disorganized.” It was like what... I couldn’t figure
out... and they couldn’t articulate why they thought... well everything is just a jumble, it’s
a mess. What’s the problem here... I don’t understand. When we got there, then they
were able to understand and they were able to talk about it, and the thing was... is that in
New Mexico things were organized based on height... because there’s serious topography.
So things were organized at different levels of the topography. but the students from Iowa
were so used to the only organization principle being the grid that the fact that it wasn’t
organized on a grid, just made them crazy. And when they got it... building site, they
didn’t get it... when they were on the site and they understood, like Ok, all of these things
are at the same topography level, these are at the same topography... and this makes sense.
But they didn’t realize and neither did I how the grid in their life is such... they have
grown up in the grid... and if you take the grid away, they’re lost. So they didn’t
understand about the different xxx different levels, and, you know, having done that now
that I can actually watch that when I help Midwestern students, but before that I didn’t
recognize that they would have so much trouble with it. And so going away from what
you’re used to and experiencing something else helps you look at what you’re used to
with much more clarity... and to realize what you sort of take for granted... you can’t talk
about what you take for granted. So it’s really hard... this is a really good way to have
different experiences to help people talk about what they just take for granted as being
what has to be... and design is all about what could be. So you have to get them out of
the – I call it, “Well we’ve always done it this way.” Like you talk about parking lots and
you say, well do we have to do it the Walmart parking lot? Well of course not, but it’s
very... you know, you ask... students are so engrained in that building – parking all
around that sometimes it’s really hard for them to think about it in any other way. And
they’re used to parking lots that are all flat and have black Tarmac on them... and you talk
to them about other kinds of things so... part of what we’re doing is helping them to also
question the things they take for granted, and to look at things in a different way.

So a vocabulary of different ways of thinking about things...

Right. and some of that is part of why we have history, how we do precedents, because
it’s about building up... your kind of what has been or how we’ve done it before and
that’s a thing to compare to... what could be and what might be other ways of doing it...
and that’s one reason why I push for the kind of non-Western kind of history stuff too,
because we mostly do the Western canon. We need to do more of the non-Western canon because it is one thing that helps kids understand different ways of doing things. And I would argue that we should put more of the non-Western canon into the typical kinds of classes so that students... rather than have them be like women artists. You know when you do it like that, it kind of marginalizes ‘other’ but also you don’t make so many comparisons between well the Western canon is like this and the non-Western canon is like this. You know what are the things that are alike, and what are the things that are different.

Ok

I’m sure I’ve forgotten to say something...

Well I’m about to dig for some of those things... sooner or later I’m going to have to flip one of these tapes over.

Ok

What would be the first red flag – let’s say you’re teaching a Sophomore, maybe even a Junior level course – what would be the first red flag that would cause you to worry if this student is cut out for Architecture?

Here’s the deal... people have Aha’s at all different levels in their careers, and I’ve known some kids who haven’t done very well all the way up until almost 4th year, and then something... somehow, being like things tend to go for them, and so I’m a little jaded about thinking that just because somebody’s not doing so well right away that they won’t ... and so I guess the thing is that if they don’t like... if they’re unhappy, if... they may be struggling, but as long as they’re struggling and they think the struggle is worth it, if they think the struggle is not worth it... maybe not. But since it’s a synthetic thing... people don’t all synthesize at the same rate. And, you know, some kids... their brains are so far ahead of their hands... and they have great ideas a and good conceptual stuff, and they just haven’t yet got their hands able to do it... and so they’re frustrated by that. And there are kids who are very facile with their hands, but their brains are like not caught up yet... and they sometimes do very well early on, and then as other kids hands start to catch up, these kids tend not to do as well, because they may not work on their conceptualization as much or their analysis kinds of skills. And then some kids are just a little slower in everything but eventually they have this ‘Aha’ and all of a sudden they’re doing very interesting stuff. I guess also I’d have to be fair and say Architecture is a profession has a huge variety of what people end up doing. And one school is teaching to a kind of solid basic mass, right, and you’re also teaching in a way that makes sense institutionally and so, like kids who are destined to be the person in the office who helps everybody out with the technical details... they struggle in school, because they’re not good at everything else, but man... you ask them something about how to put something together, or whatever, their little brains are just like working away.

(break to change tape)
So what I do try to do is help them identify what they are good at and what they need to work on. And like I would say, that probably the easiest thing to notice is when somebody’s drawing skills are not up to snuff. Yeah, that comes out right away... and it’s also something I think students can work on right away... it’s very straightforward at some level. But some kids... like they do great work and they make terrible presentations, right? It’s just like they shoot themselves in the foot... and you can also help them with that. So I sort of try to gear the things that we’re working on towards that. It’s easy to tell if somebody doesn’t seem to be getting the spatialness of things... like they just don’t have good 3D... good ability to envision three dimensions... and I talk to them about what is it about design that you’re really interested in. Because, you know some of them are interested in aspects which may not require as much 3D skills... and then I say... well you know, this may be what you want to do then; you may want to be a spec. writer. You may want to do something... you’re going to need to work in a bigger office where you may or may not be asked to do these other kinds of things. But also you should keep trying to work on these kinds of skills. But, you know, I’ve worked with guys who have zero design skills... and they’re great managers. But they wouldn’t be as good a managers if they hadn’t tried to do the things that everybody else is doing so they have some sense of what it takes to do those things. When I’ve been managed by guys who are not from design... and I’ve worked in firms where you have a lot of managers that came up through business organizations, or even through construction administration, and they’re a pain in the ass. Because they really don’t know what we do and how we do it, so they promise things to clients that are really nearly impossible... because you just can’t do it that fast and do it well...or you can’t... those are the guys that don’t understand that if you have to go back and figure out how come the footing has to go a different place now, that you may have to change a whole lot of things about the design to make it work... it’s not just about like moving the footing over. And so there is a role for people who maybe are not good designers... who will be good in the Architectural profession. Because they’re logicians or something like that...

And you know, almost all architecture offices that are above a certain size tend to have two tracks, and again it’s not 100%, but most of them... and it’s sort of the people who are doing the job management and administration, and the guys who are doing the design... and they work together, but they’re really two tracks. And there are very few people who flip when you xxx. It’s like administrators and teachers, I’m a teacher... I don’t want to do administration... it’s not that I would be a bad administrator, but I’m not interested in it. And people who are good at business management often want to do it... they don’t want to do design. And then there are people who go back and forth, and they either go to a firm that’s less segregated like that or they are just the persons who do this kind of filling on little jobs where they can do both. But those people... I would say... and I worked in really big practices, so I know a lot of people... I would say that there’s probably like 40% of the people in the profession are in the management, stuff they like doing... they like writing proposals, they like getting work, they like managing the work, and then there’s like 60% who want to do the work, and they don’t have any – NO interest in that other stuff... the just want to do the stuff. So I think there’s a lot of – even
though we may kind of be focusing of the people who are more doing and somewhat less on making it happen business wise or like that – so we tend to privilege students who are more generalists that can do all kinds of things, or they do them pretty well, and also we privilege kids who are very good at the synthesizing and manipulation of space... and the representation of that... because there are plenty of people, I think who are very good at manipulating it, but their representation skills have not quite caught up with it. And I always think that’s a problem... if it doesn’t catch up by fifth year, it’s probably because of something we did. Like we should have really just made it a mandate that that student take some more drawing, but you know an institution is set up to have everybody do the same things, and so it’s hard sometimes. I think we have plenty of students who could do many of our classes in half the time, and then spend more of their time on something they struggle with, but we’re not set up to teach that way – I mean it’s just impossible to do it in an institutional setting and make it flexible that way, so that some kids just run through the Structures and then they’re done and other kids just have to keep struggling with it and it takes them longer.

*Structures, thinking skills, and knowledge base...*

Yeah, and some of this issue with structures is people with math anxiety, it’s not that they don’t understand it... it’s that they panic about doing the math... and I think actually... I noticed the difference when Joe Bolluyt came on to teach than the person we had before... the person he had before felt like he had gotten shafted to have to take Architecture guys, and he degraded the students all the time... and kids passing at that point was a huge issue, in Structures. Bolluyt came on and he is much more easy going and he understands that people have math some anxiety and he likes teaching Architecture students and he didn’t treat them like they were just not good enough engineering students. And the passing rate for Structures went right up. Now there are still kids who struggle... and I think if we looked at teaching Structures, not necessarily as a series of kind of math, the way Engineering does, and taught it more as like a kind of like a hands-on graphic and... which is a way that some people have been suggesting that we teach it, I think all of a sudden there would be a whole bunch of kids whose projects show that they understand structures in a global kind of internal way, but who didn’t get really good grades in Structures because they script the math, and they’re going to find that get better grades. And then kids who do really good in Structures, in the class, but then you look at their drawing and they’re missing... the footing doesn’t belong... like here is the column, and there is the footing... and it just doesn’t work. They understand... they can do the math... and they understand that, but when they have to make it in their building, there’s a kind of little...

*It isn’t spatially right...*

Right, so

*One more, and we’ve kind of covered it, so what do you hope in the incremental difference between what you see students doing at the entry level, and what you see them doing at the exit level? How are they supposed to change in there?*
It’s an issue about depth, and sort of what you synthesize and the depth it goes into... so what you’re looking at is their ability to manipulate more information and to synthesize it... both synthesize more, and synthesize more deeply. I guess that’s maybe a little corny, but... I don’t know exactly what would be the word... I think deeply... it’s about... because you’re dealing with more information, but you have to learn the level of that information, and how you can synthesize it in different classes. So by the time students are fifth year students they should... it’s like, you know we have this third year prize and usually they look at it like they do the third year work and then they have somebody come in, and he or she is the guest critic and then gives the prize... And so they’re presenting at the beginning of their next semester, so right after they did it. The guys who are going to be fifth year... something happened so they ended up presenting actually their third year Fall work at the beginning of their fourth year, for the prize, cause that’s when the guest came. And without a doubt every student who was putting up their work said, “I am so embarrassed to put this up.” “I am so embarrassed to show this.” Like now I do better work, I see the problems with my work at 301, right, and so they had to stand up and talk about work that was a year old, they were embarrassed... and to me that’s like exactly what... like now they look at their own work and they know what’s not there... and of course they didn’t get to redo it, so it’s like standing up – like one of the students said to me – like standing up with your Kindergarten drawings and trying to act like you think it’s good. And that’s what it should be like... so they should be better at presenting, they should be more critical, they should recognize those things, but then they should also be... their work should reflect it too.

Because they have the knowledge bases at the various levels and they can synthesize from a lot of different places

And so they could go back... like they said, oh, I need to go back to this project because now I know all this stuff. And you sort of chuckle, because yeah they do know more stuff. And they should feel that way, and yet at another level, I think all of them could also recognize what was good quality in their work... like what did they do in the project that they did well, even if it was the first time they did it.

And now we’re back to critical thinking... Well I’m about to the end... Did I ask you what you see as critical thinking? What is critical thinking... I might have asked you at the beginning? But I can’t forget to...

Critical thinking is the ability to think critically about something, so that critically means you are going to bear some knowledge base but also some value system that you’re going to evaluate whatever you’re doing on. So... and I try to get students to understand that it’s both... And that we privilege certain points of knowledge or knowledges, and certain kinds of issues more than others. You can just say that Ok, I’m not going to do that because it’s Amy’s class and it’s about Indians and so I’ve got to value that in this class. That’s right you do got to value that in this class, but you’ve also got to solve this thing critically. It’s not just like all good... it’s not like just cause it’s Indian it’s good. On the other hand when it comes to a review about landscapes in Iowa, and you start talking
about well from the very beginning of the settlement of this land in the 1800’s, and you know I’m going to say, stop, let’s talk about that, because now I have to say that there’s a whole bunch of time before the 1800’s that you should think about too. So, yes, there’s always those kinds of things, and that to critique is to be clear about what those values and knowledges are, and what they’re based in, so if that means that you’re talking about somebody’s research, that you can cite them and that you can talk about them, in a meaningful way. It’s not about always redesigning the wheel. To be critical is not to redesign the wheel, it’s to understand how other people have evaluated things, and then you can take a stand with them or against them, but you have to make an argument in a reasonable kind of way. You know, it’s also about sort of questioning what are the values of someone who wrote this, my like my favorite example, of non-critical thinking, from a graduate class last semester. We were talking about the nature-culture split in the West and how it’s affected the landscape of both Architecture and Landscape Architecture. Each person in the class had looked at a non-Western group and we were comparing is there a nature-culture split, if so is it like this one or is it different, and a student was talking about Naris, and it was not a very good report and I was thinking that maybe information is just very poorly available and so I asked the student how many of the references and sources of information that she found were non-Nari people writing about Naris and how many were Nari people writing about Naris, so maybe we could talk about well maybe this information in a different way than that information... And the student looked at me and asked, “Why would that matter?” And at some level you’re like, Aihhh, and on the other hand you’re actually glad when the student asks something like that so you can talk about it. Because, clearly, if they truly didn’t understand why that mattered, (Note: evaluate quality of resources) we had to have a huge conversation about that because it was a key issue. So the sophistication of the knowledge and how you use it also should go... it’s not just about learning more, it’s about being able to be very clear about the quality of information based on certain concepts, existing values, or emerging values, or maybe different values that you have. I certainly have taken a hit a lot in my life for sort of pushing... I mean now multicultural and other kinds of knowledge than traditional knowledge is a little bit more acceptable in academics, but when I was an undergraduate, you said that kind of stuff and people just shot you down. You know like indigenous knowledge wasn’t knowledge, so now we’re a little better about that... maybe not great, but it’s like... I’d say our History Department is still really anti-oral history, and it’s better perhaps than it might have been 25 years ago, but they still have a hard time with the quality of oral knowledge and oral history... and as long as you know that you can at least deal with kinds of. xxx. So part of critical thinking is being able to vet the knowledge in the system that you’re working.

Is there anything that I should have asked ...

You know, I do think the most important thing we do teach designers is how to learn because you’re going to learn all along, and that how to include, you know like the criticalness of it... it’s not just like any old information in a pinch.

Oh I think they do that...
Well, I know, but I try not to support that any old knowledge in a pinch.

Well I’ll be really interested to see what you find out by doing this and what other people think we’re teaching.
Andy
Architecture
October 1, 2008

...All of which means that your background in teaching Architecture is useful to me and to this study. Now then, the main question I hope you’re going to respond to for me today is the qualities... what are the qualities of a successful student in Architecture, from your experience and in your teaching, what things seem important to student success in Architecture... and for purposes of diversification, in at least three areas, thinking skills, manipulative or constructive skills, and knowledge bases. Those tend to develop anyway, We’ll kind of pinpoint them as we go and then I’ll ask for more when we start to work into those areas. So anyway, as students work their way through Architecture, what things do students need in their toolbox? And do feel free to include both things that they seem to naturally do well and areas that they seem to struggle.

Sure, do I frame that in these three categories?

You can, but it tends to work out that one leads to another in the long run.

Ok, well I can speak generally at first, then for students, and I teach in undergraduate and graduate levels, it seems to me like there are very different skill sets that the students come with... to those studios. But I would say that from any point of view, the students have to be fully engaged as participants in the process. I sometimes will tell my students that anyone can do – well not anyone – but a really good ‘B’ project is a project where they will do everything that I ask them to do and simply respond to that, but if they do that consistently from beginning to end, they will never have fully engaged the project, because they won’t have brought their own agenda to that. And it seems to me like the students have to have a reason for being here other than getting a degree, and a job subsequently. Otherwise, they can’t seem to perform to that next level they tend to... they tend to be able to do best if they seem to have a means of operating on their own... which is almost separate from what I do for them –it goes to worlds touch – and there’s a good collaboration... those students seem to be the ones who do the best. And I think a lot of that has to... I think that touches on all of the issues, but they really need to be able to think independently. Another thing I’ll tell them frequently is that I will give them my opinion, and I will, essentially, push them, they might even hear me say two different things on two different days which would oppose one another, but frequently I’m looking for points of resistance, I’m looking for the places where they push back, because then I can judge what their position is... rather than just them following my lead. If they never give me any resistance, they’re likely to be led in circles through the course of the semester... so I need them to... I just need them to take a stand and have a position, and I think that has a lot to do with their ability to have their own way of thinking about a problem. I also ask them to make a lot of things... to think with their hands.

Those are probably going to be manipulatives...

Yeah, definitely, those would be in that realm.
What are some of the ways that you ask them to think with their hands? What are some of the things they have to be able to do with them?

Well, I do tell them – and I’m talking about studio teaching primarily here – but that to be a professional designer, which is at least a part of what we’re teaching in design studio, they need to have many different tools or many different methods of working your ideas out. And the notion of process suggests that you don’t know the end result... the process will lead you there, and in order to have a good active process, it has to lead you some place that you might not have otherwise expected to go. And the process of making things because it’s not logically linear, necessarily, allows you to add in things which have nothing to do with your verbal linear logic... it uses intuitive or formal logic which is... which we spend a lot of time training them, but we don’t always give them ways to effectively tap into that. And so I ask them to do drawings and build models and I tend to vary the pace. I’ll ask them to do it slow... attenuated sometimes... so they can really think about what their process is, and then I’ll ask them to do it in a really compressed time with not enough time to work it out... so that they have to simply iterate intuitively... and then explore what they did. I was thinking about the adage that you only use 10% of your mental capacity, cognitively... and the other 90%, what does it do? If you have it there, how do you tap into what you know? If you can only tap into a certain part of it verbally, what’s formal language that’s different from verbal language or different than written language, and how do you tie those together? And I tend to believe that a lot of that has to do with the ability to think by making things, and use those skills that you have developed that are formal skills, instead of linear, logical, verbal skills.

Yeah, I think you’re right about that...thinking with the hands in terms of drawing, in terms of models. Two more interesting words have come in here... process. You want to give me just a nice brief description of process and what it should involve?

Sure, I think that as an Architect, you have so many decisions to make, and you have to think really synthetically, and to think synthetically, you have to be able to tap into a lot of knowledge bases all at once... and weigh them against one another... hierarchically, but almost without thinking about it. You have to be able to have a means of expressing what it is that you’re trying to do and take into account environmental conditions, budget conditions, client desires, your desires, design and aesthetics... all of the different issues that weigh on the project and be able to make singular decisions that come from multiple streams of information, and if you try to do it one by one, logically, you could never get to an end result... there’s too many variations of how it could go. So the ability to think synthetically requires robust process. It requires a means that you have built up to go through that. Some of that, I think, is even based on a kind of ethical process, a way of making decisions that you think are correct... or at least correct in terms of what you’ve been given... and you are asked to make decisions about what do you think and given an infinite number of answers to that, you’ve built up a means of saying you can narrow that down. So a lot of process, I think, is finding the appropriate points of resistance (Note client) and coming to a single solution which takes into account as many things as possible.
Ok, is there one process, or does everybody eventually arrive at their own process?

Ah, it’s an interesting question. I would say everyone does arrive at their own process, but in terms of process tools, I think that there are multiple ways to do the same thing. I encourage people to have many, many ways of arriving at a solution, so if they get stuck on one, they can abandon it and do something else. Sometimes that has to do with writing, sometimes that has to do with building and making things, sometimes that has to do with drawing, sometimes it’s on the computer, sometimes it’s analog... and I encourage people to not get stuck into a concept as the end-all solution, that they need to be able to know when to stop using a tool as well as when to use a tool or when to switch from one means to another, in order to keep moving forward. So I think everyone develops their own, but I encourage them to have multiple ways to do it. Maybe another way to put that is in school we don’t always encourage good working habits. We tend to... frequently the studio system, while I love it, encourages really bad working habits. We tend to... frequently the studio system, while I love it, encourages really bad working habits, it tends to make you work really inefficiently, because the social time is learning time... but the work time can take three, four times as long as you are there...because you are using the information in different ways... that you get from it. But... so, sometimes people don’t do any productive work until after midnight, well you don’t have that option if you’re working professionally and 8:30 on Monday morning is when you may have needed to have your best idea, and if you have no access to it, if you had no means of getting at it... you have potentially lost an opportunity, so I ask them to be able to jump start, in many different ways how they can access their ideas.

As a working Architect, you get a new assignment, what do you get, and what’s the first thing you do with it?

You tend to get a variety of different things,

Inputs in other words...

Yeah, frequently you will get... there are two basic ways that you get projects. You either get a lead on a project from an individual who is coming to you because they are specifically seeking you out as the person that they want to partner with, and other times you are responding to general requests for proposals which will be sent to many, many different firms, at which point they’re trying to cull and select who they’re going to work with. When you’re approached directly, often times you have a common language, and you can begin to speak about the project immediately, and develop ideas based on they have this need, and they need about this much space, this is what they do know, this is what they don’t know, and you develop quickly a means of judging what we call the sophistication of the client, what is the sophistication level of the client? And how much hand holding do you have to do, versus what do they know. That process tends to move very quickly into design ideas. Where you can get fairly quickly into talking about what it is that you’re going to make with them. Bigger projects where you get RFP’s or requests for proposals, oftentimes what you’re doing is you’re trying to demonstrate your qualifications to do the project... and oftentimes they’re sophisticated clients, they know –
oftentimes – they know more or less what they want, so you do a lot of paperwork up
front with those sorts of projects... you’re doing programming documents, you’re doing
budgetary documents, you’re meeting with stakeholders to determine what they’re doing.
You tend to delay the process of discussing what the building is, because you’re trying to
collect enough information from many, many stakeholders to determine what the scope is.
So those projects are scope discussions, the individual projects are much more often
design discussions. They all lead to the same thing of course it’s just a question of scale,
ofentimes, and are you dealing with a person or are you dealing with thousands of
people? We tend to get those kinds of projects at the office.

Some of the material that you design from are needs, sometimes specified as a program,
and sometimes a little bit more flexible?

Yeah, we oftentimes get program documents which are very, very general and we tend to
test them, oftentimes we’ll draw examples which come kind of standard size formats...
this is the room size, these are all the requirements for it, this is how big it is, this is what
it needs to do, and those are the individualized pieces that we can then show the client
and say is this what you meant? Because they may have just written 125 square foot
office; we’ll do a drawing of an office with furniture in it, with the requirements of it, and
then show it to them and say, ok, does this work. To give you an example, we had a
project once where we had the offices listed at 137.5 square feet. And we said, how in
the world do you come up with 137.5 square feet for offices, and the answer was simply
that they had 125 square foot offices now, and they thought they needed about 10% more
space. So it was based just on a quantitative analysis, not on a spatial analysis... so we try
to turn – oftentimes –quantitative analyses, which people are much more comfortable
with, into spatial analyses which is what our job is, frequently.

You spoke about concept, what is the role of concept in design?

That’s a big question; I’m sure you get a lot of different answers to this question...

That’s why I keep asking it.

Sure, I think that... well we know that the basis of design isn’t just efficiency, and it’s not
just technical requirements... that you need to have guiding principles for how to make
decisions. We have this discussion in the office quite frequently because of the rise of
digital software which allows you to build pretty sophisticated three dimensional models
of projects. And frequently, we’ll have the situations where someone will be working on
something, and they’ll just be design the model by what it looks like, they’ll say, “Well
this looks better,” or we should do it this way and not that way because this appears to
look more interesting or cooler, or whatever, and frequently the partners in the office,
most of which have come out of a pre-digital age say, Well how does that relate to the
idea of the project?” And sometimes we’ll get resistance on that point that it doesn’t
matter. And we tend to push very hard for a consistency – I don’t know if consistency is
the best word – but that there is a basis of ideas that decisions can be... a set of ideas that
a decision can be based on, that allows us to keep control of what it is that we were trying
to do in a larger sense on the project... not just how do we make it look cool, but how do we make it into something which is meaningful for us and for the client and for all of the purpose of the project? You know Charles Eames did a lot of diagrams of these sorts of things, right, the overlapping circles of all the different needs and where they meet in the middle. And we really look for that, we look for what are all the needs and where do they meet in the middle, while trying to keep in mind that... well I think somebody once asked him, well where does pleasure fit into this matrix of usefulness? And his reply was who would say that pleasure is not useful? That needs to be a part of it, but when you’re designing these digital models, and it’s just about what it looks like, it doesn’t seem to touch on the larger issues which you’re concerned with. Or we’ll even fight for saying, it could look uglier, if it works with our idea, it’s better.

We’ve talked about both drawing and digital, and both of those are areas that we need to explore a little more. What kind of hand drawing does the Architect do... and what kind of hand drawing does the student need to be able to do, consequently?

Well you certainly would find differing opinions about this as well, from my opinion about having multiple ways to work out a problem, I would say just fundamentally, be able to draw digitally and manually, just because that gives you different ways of seeing things. I don’t think one is necessarily better than the other, but I do think they use different cognitive abilities. So I would argue that you have to be able to do a little bit of both...

Oh, I intend to ask you about both... What kind of digital do they need to be able to do, and what kind of manual do they need to be able to do?

You have to be able to manually sketch and draw... you have to be able to freehand sketch ideas, I don’t think you have be able to manually do construction drawings... that’s a technical skill. But I do think that you should be able to... from conceptual parts of the project, you should be able to do it both digitally and manually. You should be able to sketch on the computer just like you can sketch by hand, but fundamentally, I think you need be able to know how the machine thinks. You have to understand manual drawing skills, particularly three dimensional manual drawing skills from the point of view of how those drawings are constructed, because that gives you a means of understanding what the computer is doing when it does those drawings. I can’t tell you how many times I’ve seen people do a three dimensional drawing and then put their viewpoint where they think it looks like what they imagined it would look like, but not from a point of reality, not from a point of where someone would actually see the image. And it’s very easy to fool yourself in that process... if you don’t know how the machine is constructing the drawing. But also I just think that in the multiple sense, of tools, using... I had...one of my mentors in school used to say that certain kinds of drawings, certain sketches and overlaps and overlays of things allows you to think with your hands, and that there’s something fundamental a way you think with your hands which is different than the way you would think with a mouse and a cursor. And I believe that, that could be some kind of retro-grouch, curmudgeonly, backwards looking... because I’ve been in both worlds.
cling to that... but I don’t think so, I think there is something to drawing with your hands which is fundamentally different than drawing on a computer, so...

What are the specific digital things that these students need to be able to do to get through this program and work successfully?

Ah, some of that depends on what kind of work they would be doing, but the basics anymore are you have to be able to draft, and you have to be able to do orthographic drawings on the computer and be able to understand how to manipulate line, and understand those programs, both AUTO-CAD and REVIT... anymore, those are the ones that are the basic drafting programs for orthographic drawings. Those are confusing drawing programs... because they’re on screen they judge line weight by color, not by what it looks like... and people tend to do horrible drawings because they can’t look at purple, green, yellow, orange, red and understand which one is heavier or lighter than another... what it actually looks like when it’s printed out. So they need to have that skill as well, but they need to be able to do design drawings which are different than technical drawings. They need to understand what the difference is between a symbol and for something say, like dirt which is a kind of funny cross-hatch pattern, and what the idea of dirt is which is a heavy mass of material that you put buildings into...and so you want people to be able to do drawings which are evocative of the quality of the thing, and not just the quantity of the thing that they’re trying to make, so I do think that they need to be able to do two and three dimensional digital drawings that allow them to get at the quality of the thing... maybe another way to put that is a traditional Architecture project from the era of pre-digital would ask you to do essentially a basic set of plans, sections, elevations, the two dimensional orthographic symbolic drawings of what the building is, and maybe a perspective... though perspectives are time consuming, and maybe a model. That tended to leave off the first part and the last part of the important parts of judging the project. The first part being where the idea development came from, and the last part being what’s the perceptual quality of being there... and they need to be able to use digital tools to get to that perceptual quality of being there. They’re just faster and more sophisticated than doing hand drawings.

Ok, and this idea and development part, that would probably go back to concept and program? Those are some of the knowledge bases that we need to deal with. You’ve mentioned, just recently, knowing the symbols that go into these drawings that’s a knowledge base also... they really aren’t ready to use the things until they know certain things.

Yeah, the conventions, you have to understand the conventions of... or the drawing language of the profession, which is unique to the profession... and that’s a requirement they know, on the other hand, as a means of getting registered as an Architect, if you take a formal or traditional path through the profession, which is what most of our students do, you are going to have to do an internship, and a professional internship is about three years although most students take more like five years to get registered... meaning that you’re going to have the education that you get from the office as well... as a required part of your training just like the other professional schools in law or in medicine. Some
things we’re better at teaching in schools... some things they’re better at teaching in the profession. And a lot of the technical things... particularly drawing standards and symbols, they need to understand that they’re there and what they are, but you’re much better learning that in the office than you are in school. We just are not as equipped to teach that and they’re going to get a ton of it later anyway.

*What are the really fundamental things they have to know before they’re really ready to advance as students in this discipline?*

Advance... within the school or advance once they get out of school?

*Well, I’m actually thinking of moving through the coursework here, but we hope they’re going to use it once they get out.*

Well, we have National Architecture Accrediting Board Standards which we have to teach to...

*I’ve read them...*

...And those can be interpreted in different ways, and they tend to cover certain basic standards of knowledge bases, of technical and historical and you know, the essential qualities that we would define as what Architects do. And we try to teach to those standards in ways that are not as separate as their listing. They list them individually and separately, but you don’t apply them individually and separately. You apply them all at once all together all at the same time, and so we spend a fair amount of effort trying to take the traditional separations design studio, history and culture and technology and in some way blend them together... or make students understand the technical requirements are not different than historical or design requirements... that they use them all together. and that’s difficult to do when you teach them separately, and when you separate the classes out into these different silos it’s frequently difficult to bring them back together..(Note integrate knowledge). and I see students struggle with this when they get out of school, that it’s easy... with the myriad of decisions you have to make, that are absolutes... it’s very easy to drop many of the things that could be considered superfluous or esoteric, but which we also could say is the essence of what we do.

*We talked about two kinds of thinking that I want to revisit, we talked about synthetic thinking because the architect has to integrate many knowledge bases at once, you want to talk about what’s being synthesized, and how that process works?*

Sure, some of this goes into the technology courses that I teach, but we will frequently ask the students to do assignments where they have to draw from many different things that they have learned before, to perform that... and they have to do it quickly, and they have to do it all at once. Because when you use that kind of thinking professionally, you most of the time don’t have the ability to go off a one by one checklist of what the issues were. You simply have to look at say a site that you’re being asked to evaluate, and a building type that you know is going to go on it, and know, almost instinctively... well
it’s going to have to be long and narrow, it’s going to have to sit this far from the edges of the site, it wants to have this relationship to the sun, people want to be close to the windows based on this use, it wants to environmentally sit in a certain way... all of these things have to happen at once, so that you can immediately say, “Oh, well this site probably won’t work very well,” or, “This site would work better than that site.” Because you can look at it and have that knowledge base almost embedded in the way you think about what the project is... and you can’t do that unless you’ve done it over and over again... it builds over time. I sometimes tell the students that talent wise there really is no difference between when you get into school and when they are out of school or they are, and who I am, but experience makes you faster, and being faster makes you process information quicker and more synthetically to be able to make better decisions earlier...and the earlier you make better decisions, the more able you are move on to more sophisticated other sets of issues. If you’re struggling around at the beginning trying to make those basic decisions, frequently you’ll either make bad decisions, or you won’t get to the potential of what it was that you could have done.

And what you’ve been telling me about is what I would call establishing the design criteria, and you’re talking about establishing them in clusters and chunks and having an almost intuitive understanding that enables you to do that with some efficiency.

Yeah, that’s a good way to put it, I think. That’s right, and some of it is trying not to make them into specialists necessarily because it will happen frequently in the profession where people will be just for the purposes of efficiency, placed into only one area dealing with projects. And while that’s very efficient, it tends to not make the best projects. It tends to make people specialists in one area and then not be able to deal with the issues of the other areas, so...I find the projects get diluted when they are passed from one hand to another hand to another hand and those people don’t understand what the concerns of the other parts of the chain were. That may be particular to the way we would see the kinds of projects that we do... both in school and in practice, but it’s a somewhat serious concern that we don’t separate the knowledge bases too much from one another... as we teach them here or as we want them to think about them later. So... cause you used the term clusters, I think, yeah, there are clusters, but we try not to have them be as separate clusters as much as we possibly can. We’re trying to cluster them together so that they are able to think about them like that.

Because if they couldn’t think synthetically, then you would have buildings that would be a kind of an odd conglomeration of things that were put together and may not quite fit or unify properly.

Yeah, and I think you see that, quite frequently, I don’t think ... or as one of my partners in the office says... we’ll frequently try to get them to think about fundamental ideas and then be able to elaborate on those and develop them deeper rather than have too many separate ideas that don’t fit well together or what Paul, my partner would say, we don’t suffer from an abundance of straight forward really well done buildings, out there, that’s not the problem. The problem is just the opposite we suffer from things which seem to have a confused set of agendas which never fully came together, and so more ideas is not
necessarily the goal, (Note: unity, and concept as unifier) but better developed ideas that you can have control over frequently is the direction that we try and get. That’s probably not universal, but that’s the direction I think we consider from a practice point of view... just because, it’s hard to do even bad projects. There’s a lot of effort into things that even aren’t good, so why not try your best to make them good if you’re going to put the amount of effort into them.

And therefore... the unifying value of concept?

Yeah, exactly... that’s how you would tie that back together.

Ok, it’s starting to make sense. The other thing that we talked about that I’d like to delve into a little was spatial analysis, and spatial thinking in general. Architects talk about space all the time, what’s the nature of the spatial thinking we want these students to develop?

Wow, that’s a tough question... I can probably give some examples which will probably get closer to it.

That’s the easiest way to do it.

Frequently when students get programs, a program will list spaces, and the nature of a program is you have to codify and separate uses of spaces so you can describe them. And what we try to get them to do from a spatial point of view, is pull that list apart and suggest that things can happen inside of one another, that things can happen adjacent to one another – vertically as well as horizontally – that you can take a spatial idea and it doesn’t necessarily describe a room. That it describes a place... and how do you get to what that place is and the qualities of that place... which is separate from bounding it with walls and a ceiling and saying ok, now that activity can happen there. So another example I oftentimes do for students is I’ll draw on the board a box, a square and I’ll draw sort of an amoeba shape, and I’ll ask them which is the more interesting building to them, and I’ll get the various selections... most of them will be amoeba, a few of them will pick the square and think that... obviously it has to be the dumb one... and I’ll come back to them and I’ll say these aren’t buildings, so much more of the quality of a place has to do with what it’s made of, how it’s put together, what the light is, what the acoustics are, what the things you add into it which are not about the shape or form of it, necessarily. So space is a much broader topic than what does it look like. There’s all of the other senses that have to deal with that. Or the other way of saying that... is to say the most important thing you have to worry about in designing places, or the thing you tend to spend the most attention on are the things that engage the most of your senses... so the things you touch as well as see, and that you hear and that you feel... those are things that have a tendency to have the greatest impact on how you physically are involved with that space... and that has very little to do with just what a drawing would make it look like, there’s many other factors that we think about.

AR-C38
So we’re interested in the options with regard to the form of the space, we’re interested in the quality of the space, and the experience of the space.

Yeah, and experience is something that’s very, very difficult to tap into with the tools we have, because the tools we have separate us from touching it from smelling it, from hearing it. You know we don’t have those qualities, usually until we’re done so how do you build into people the ability to understand what they’re going to have other than just a picture of it. And that requires experience and time, and cataloging experiences and how you get at certain memories of what were good things and how do you replicate it.

Let’s do a red flag, green flag description. What would be a red flag that would suggest to you that a student you’ve got in the early years of Architecture might have chosen the wrong profession? Or, the green flag... that you look at this one and you say, boy am I glad we’ve got this.

Sure, you know, the immediate red flag for me is effort. If someone doesn’t seem like they’re particularly interested in putting the effort in, that’s usually a big red flag for me. I don’t know if I’ve had too many students who I was comfortable judging whether they had made the correct vocational choice, because of what they did, it was more how they did it that I was worried about. Because we judge things subjectively, I sometimes will tell students in terms of design and grading that it’s the least fun part of my job, because essentially I’m asked to judge something subjectively that I can’t actually teach them. Because I can’t actually tell them do this, this, and this and you’ll be a good designer, it doesn’t work that way. I have to work around the edges that way. But as long as they give me the ability to work with them, and they’re able to respond to criticism, and they’re able to do things on their own, that usually is the symbol of a good student. If I can ask a student to do something, and they’ll try it, and then they come back with something better, that’s an immediate green flag for me that someone has understood and engaged it, and been able to make it their own. The other red flag for me is the sort of syndrome... the I need to be a hero... it’s all about me. That they can’t work collaboratively and that they feel like they’re the smartest person in the room. Because you know, there’s that problem... as soon as you think you’re the smartest person in the room, you’re not going to be learning from anyone else, and you can’t get better. And so you try to make sure that they retain a certain humility that allows them to learn. Super arrogance or the lack of ability to listen to or judge the quality of your peer’s work as having any value, probably means you’re not going to get very much out of the course of study.

You teach at both the entry level and the graduate level, or the upper level. Comparing your students, what’s the difference between the entry level student and the exit level student? What kinds of changes are we making in between there? We hope...

Yeah, you hope that by the end that they haven’t lost the excitement and engagement that they had came in. I think most people come into Architecture school thinking they know what it is, and what they want to do. And I would say a lot of them leave a little less sure of what it is, and a little less sure of what they want to do...Which maybe is a good thing,
because it opens them to other possibilities of what it is, or people will come in thinking I want to do houses, and I want to make this... I want to be a designer making houses, and they’ll leave understanding that that was too narrow a view of what the profession was. So I find that when they get out they tend have a method of thinking that is really broad, and really sort of open to possibilities... and that’s what we want. I also think that we overrate our ability to ruin them... they’re able to resist even the worst of our temptations to destroy their creativity or to turn them into something which is... I just don’t think we have that much power, they’re stronger on their own than we give them credit for frequently, because I’ve seen people do just Ok in school, dramatically rebound when they get out of school... just on their own with no interference from us whatsoever. And I see it all the time, so I tend to not engage in discussions that suggest that we are either ruining or saving them. We are adding our input into the process, and we’re doing our best, but they’re super resilient, by and large.

So what are we adding as they progress through school?

First, I think the idea is... probably what happens, is that we break down preconceptions and we give them the opportunity to think about it afresh. And then we build them back up... it sounds so much like a military version of basic training, and I don’t think really is necessarily that way, but there is a certain desire at the very beginning to make sure they understand how broad the opportunity is, and that tends to force them to un-learn certain things. And then you try to give them the information in ways that they can understand it. They understand concepts, and then they understand how those concepts apply to spatial ideas, then they begin to understand those apply to the input of other people – on the outside, and different locusses – urban issues; rural issues; you begin to build up the technical requirements which are quite difficult and require a certain rigor to get through; and then, by the end of that, we ask them to put it all together in a comprehensive project that suggests that they understand conceptual, historical, technical all together in a project. And then we tend to cut them loose a little bit and let them explore on their own, without a structure of the program. Then we ask them to demonstrate again a bit of technical skill in a more advanced comprehensive... we just started that part of the program, and then we cut them loose again to study whatever they want. At which point they can study any sort of... they can study painting or dressmaking, or whatever they want, but we kind of try to balance between the more traditional technical build up of NAAB skills, and their ability to express themselves. and be independent in their thinking, and that tends to be the fluctuation.

You talked about ability to judge quality of work, in the context you had it, you were talking about evaluating their classmates work. What is the need to evaluate the quality of work, and how is it managed?

...The need for the students to be able to evaluate the quality of work?

Yeah
You know, I find that we spend a lot of time training them to be able to quickly make decisions about the quality of things. They can walk into a room, and they can hear nothing about the projects, they can look around the walls at fifteen or sixteen projects and every single one of them can pick the same three that they like the best. They have developed this formal intuitive skill to look at things and understand them really quickly. And I think that you have to have that ability more than anything to edit yourself... and to edit your peers as you work collaboratively. Different people work in different ways, and you try to help them understand what it is that they’re most comfortable with in working, but almost everybody needs to be a good editor of their own work... it’s really necessary. And you have to be able to articulate how the you think the decisions being made are appropriate or not, so I come to that from the point of view that I’m an editor – that’s what I do. I have way too many ideas and I have to trim them down and that is the process that I tend to put forward because that is the way that I think. But you know the way they work the system, they have a different faculty member every single semester, I would only assume that the higher powers that decided that at some point wisely said, well everybody’s going to give them something different they’ll sort it out for themselves. So, I’m less apologetic than I used to be about just telling them what I think.

Actually, I’ve heard an Interior Designer talk about that same process just recently, so it becomes interesting now. When I talked to this other person, we talked about it as a filtering system where we have lots of ideas and lots of factors coming into the design and then we have this built in filter where we pick out the things that are relevant and useful, and perhaps eliminate others for some reason, and that’s part of this synthetic process.

Yeah, filtering is a good way to put it as well. I most commonly see it in the development of projects where people will have multiple ideas and at some point those ideas start fighting one another... they come into conflict with one another... advancing one seems to dilute the other. At which point you need to...this is a conceptual issue again, and you need to determine which of those is the one important idea which requires you to advance it, and suppress or eliminate the other. (Note: concept as a filter) And so there’s a kind of hierarchical development that happens through the course of a project. If you don’t have a conceptual basis of what was important from the beginning, you frequently don’t have a way to make those decisions very well, and things will end up being either convoluted or diluted to the point that they no longer have any power.

Ok, we talked about iteration earlier... so we want to have lots of ideas for the purpose of sorting them out later? Lots of ideas is good, but then you need tools to...

Edit those down

...Edit those down...

Another thing I tend to tell students is that the sort of... the one beautiful primary idea is a bit of fiction or at least not a reality of the way you can perceive and design... that the first idea you have is almost certainly going to be eliminated because the budget won’t allow it, the site won’t allow it, the client won’t like it, the code officials won’t deal with
it, zoning is against it. Whatever reason, the first idea is almost always gone. And the second idea that you come up with probably isn’t going to make it either, and you’re typically to your third or fourth iteration before you even have a chance of advancing that forward. If your ideas tend to progressively dilute, or disintegrate through the course of it, your projects are continually going to get worse. You need to have multiple ideas and they need to be able to build on one another and get better, not worse... and that’s an absolute requirement. The best designers I’ve ever worked with always, always work very fast at iterating and come up with one after another after another. They have tools to be able to do that; each one got slightly better than the one before. And that’s the only way you can do it. If you’re going to have a golden perfect idea, and it gets shot down and every other one is compromised, you’re not going to be effective at doing this professionally... it’s just not going to happen.

Ok, that was a beautiful discussion of how designers think.

Thank you

That’s the general run of questions that I have. The final one, of course is what should I have asked that I didn’t ask?

That’s funny, I could almost frame it by what are the stories that I tell students that I didn’t get to in this discussion. I think I got to most of the basic... I think I got to most of the basic ones.

That’s the purpose of the interview...

Sure, yeah, that works quite well, I think. You know, the only thing I would add as I try to be reflective on what the qualities are that make good teachers... and make you effective at what you’re doing, is that I think it’s quite critical at some point or other to try to remember what it was like when you were there as a student. And to be able to empathize with what you did, and what you didn’t know. One way I think of that when I very first started teaching was I remember faculty when I was in school who were viewing projects in a way that the suggestion was you already know what you’ve done right, so I don’t need to tell you that, I need to tell what you’ve done wrong. And I remember when I was in school realizing, wait, I don’t know what I did right... I don’t know what I did wrong either. If you only tell me what I did wrong, I don’t have a way to actually value what I did that was right, and I tried really hard to remember what it was like when I was there, and what I needed to be told to help me understand what was right, not what was wrong... and that was, I think, for me... I try to really respect those students and I tell them, I’m friendly, I’m not always nice. My goals are exactly the same as theirs; I want them to do good work. I want them to learn a lot and advance, and I don’t need to be friends with them to do that, but we’re on the same path. and so I try to be very much... I had a mentor when I was working once, who was a level above me and basically told me in no uncertain terms from a managerial point of view was that he worked for me. It was his job to facilitate what I was doing, not my job to do what he was telling me to do, and I think that’s largely true in teaching. as well...you know, it is

AR-C42
my job to facilitate and help them get to what the goal is. It isn’t their job to just do what I ask them to do. And as long as you keep that perspective, they are willing to work really, really hard if they feel like they’re working for themselves more than for you, and that, I think is one of the reasons why – when I’ve had success in class – it’s because they feel like we’re all together with it, everyone is respected, there are no favorites and all the goals are the same through the course of the process. So, sometimes when I’m teaching I feel like I know less every year... maybe that’s the way it’s supposed to work. I feel like I was more sure what my commissions are when I very first started than I do now necessarily. But that’s because I learn more from them than they learn from me.

The other thing that you’ve just told me that’s kind of interesting, and I see it back as I work across my notes now, is that the Architect is answering to a lot of people. In addition to having the program and the concept, and the established design criteria, you’re answering to both the client and the firm and each other.

Yeah, absolutely, it’s a super collaborative process. Frequently plan zoning officials who you wouldn’t think of a designer proper, has more impact on the design than I would, the budget has more impact on the design than I would in a lot of ways. You have to be able to think of yourself as part of the process. And it’s difficult to teach collaboratively always in school in the model you will go into later...

Do you find that there are substantial differences between the kind of collaboration that you can do in school and the kind you can do as a professional?

Yeah, absolutely; I think the biggest problem we have in school is we have no clients, and I’m a terrible client because I’m a critic... and they’re worse... students are, because they’re allowed to change the rules as the go to fit what they’re trying to do... and that resistance makes better projects... and being forced to deal with difficult issues make for better projects. They don’t have that problem in school and when you try to make them collaborate with one another, there’s no hierarchy, they’re all equally trying to do well for themselves, no one wants to defer to someone else because it feels like you’ve lost control of your ability to take control of your educational learning process with that, and so it’s virtually impossible to replicate what you would do out in the profession. In the end, though they’re going to do that out in the profession, and I think you have to set them up to be able to do it, but you don’t have to give them a big version of it in school. It’s not possible anyway... the other thing is just try to get them out there, get them out in the trenches. We’ll do projects where we’ll come in and we’ll give them the kind of feedback that they will get. They’re learning Architecture, they’re talking to architects, all the time... they get in front of a regular person and it’s like they’re speaking Greek, I mean they don’t have a way to communicate. Another way to put it is the difference between undergraduate and graduate students is that graduate students were real people before they were designers. and undergraduate students became designers and started to think in a design way before they were fully developed as regular people. So they have never lived in the real world, or at least the world of people that don’t think of design as a sort of primary occupation, so frequently they have a sort of difficult time putting themselves in the position of someone does not think of design the way they do... and so
they can’t communicate with those people. Grad students don’t have that problem at all; they’re already fully formed regular folks, they come into it because they’re interested in it. But you take somebody of 18 and you indoctrinate them into the system, and then you ask them to think for people who have never been in it, this is difficult for them to do. This takes a lot of time when they get out of school to begin to understand, wait, you don’t tell clients concepts. The thing we’ve been asked, to do for five years and articulate, and tell you over and over again and defend? We never even tell the clients... that’s right... you don’t... that’s mind bending for students.

Well I know we have to get you to class...
What I hope you’re going to reflect on for me today are the qualities of a successful student in Architecture... from your experience and in your teaching, what things seem most important to student success in Architecture? These things might include specific types of thinking, manipulative or constructive skills, such as if I’m talking about constructive or manipulative skills, I might be talking about guiding material through a sewing machine, if I was in, of course, some other discipline... or areas of knowledge. So we’re looking for stuff in three areas: thinking skills, knowledge bases, manipulative abilities. If I can associate that with building blocks, the knowledge bases would be the blocks, the thinking skills would be the strategies for arranging them. So we can deal we can deal with those things kind of one at a time, or you can just jump back and forth across them, because one of the things I’m learning from this process is that people tend to think of one when they think of the other, and then I just say Oh, yeah, isn’t that interesting.

Well I have no idea how you... I’m going to just talk for a few minutes and you’ll have to figure out which box things fit into.

That’s where the good stuff tends to come from.

Ok, and I’ll share this with you; that often I do summer orientation, and the students ask what it takes to succeed, ok? So these are the kinds of things that I talk to them about, and some of the things that I want them to be able to reflect on... as they consider things. So one... a whole series of things, students have to have curiosity, and by curiosity, I mean a desire to find out more than what lies on the surface... to dig deeply into a topic. I mean to successful... you want to know what successful students do, so one of them is this kind of tenacious curiosity. Second is capacity to learn; we need to help coach our students on how to make sense out of abstruse material, so the ability to learn from my perspective is to come across strange stuff, new literature, and make sense out of it... by making sense out of it, to construct personal values out of it, to learn to how to make it instrumental in terms of developing a personal skill... might gather from this, or your world view. So this kind of thing of curiosity and learning to learn, I think it is our responsibility to help students learn at an advanced level, yeah, what’s learning at an advanced level mean? Many students arrive here with a background in which they are presented with certain kinds of information, they’re expected to learn that information, and to get tested on that information. There is kind of a direct connection between the stuff they’re told, and the stuff they’re tested on. Alright... I’m a fan of – in lecture classes – of essay questions and the students need to integrate that material and form some position regarding it. The other thing about a design education is that there are rarely answers in this kind of finite way. And it is a very difficult hurdle to understand that what you need to do in design is to ask questions about the question put before you, and you need to formulate multiple proposals which you then need to learn to judge. So
design education is a very advanced kind of learning cycle in which you have to both master certain kinds of facts, but you also start to operationalize those quickly, and you know if you’re looking at... what’s his name.....

Bloom’s Taxonomy?

Yeah, if you’re looking at Bloom’s Taxonomy, a lot of disciplines say, well that you don’t get to analytical judgment and critique until you’re at the advanced levels of education, but we need to help our students make the transition from high school to start doing that almost right off the bat in the design program. So issues of learning now it’s also learning in a not exactly in an open ended, but a more open situation where what you bring as a thinker matters as much if not more than what you’ve received as clues, ok. So I see design programs as programs where you give clues to students and they have to use that curiosity and that capacity to learn, to start to invent things. Then there is an issue of... I talk to students about their tenacity and passion. You can have skills that will allow you to be facile at sort of making a picture or drawing, but the capacity to where was I heading with this, do you want to stop for a second?

Well we started with tenacity and passion...

Right, so you can make a quick sketch, but if it’s off the scale, you can’t say just that’s crap alright, but the issue here is the tenacity to pursue it and redo it, to hang in there when it’s hard to getting ideas, when it’s ... you want to test to see if the audio is working?

(At this point the recording ended) The Henry interview was damaged by an electronic issue. Therefore we met again on February 24, 2009 and used the written notes as a source for elaboration and clarification of concepts.

List of topics from the notes
Tenacity and passion
Capacity to communicate
Critique and criticism as iterative improvement
Crit and coaching - feedback
Creative synthesis
Patterns of action
Big idea- little idea
Patterns, the skin of space
Aesthetic as part of formal
Function
Representation
  • hand
  • model
  • digital mastery
Present and think
Client communication
- ethical
- builders
- feedback

Shape the environment, how?
- Materiality & possibilities
- social political and economic

Knowledge base and manipulatives
translate

**Red flags**
Architecture privileges inventive capacity, is so doing, we also diminish other contributions
- Can’t change modes of thought
- Don’t play the game
- Can’t invent
- Don’t persevere
- Think they know
- Visualize space
- Lack sense of craft
- First idea is the only idea

**February 24, 2009**

*Ok, one of the things we talked about last time was design methods, and I have a note here that says they need to make that their own. What do you have in your mind about design methods?*

Well, I can’t recall the original question how that came up, but students need to develop their own working methodology. They are exposed to a range of professors with a range of approaches on how to go about thinking about design projects. Out of that context, then, by the time students graduate they ought to have an approach on how they handle research, how they handle precedent, whether they work through models, whether they work through digital media, whether they work through hand drawing, or they keep journals... How they generate forms so there are different strategies for thinking about design projects, and we hope that the students develop their own working approach during the period of time that they are here.

*Now some departments or some individuals, perhaps more likely, would tell us about design process. Now I think what you just told me is it’s variable by the individual?*

Yes
Ok, but you also mentioned a couple of components to that design process. You talked about research, you talked about having a sense of precedent... are there some components that in your mind tend to be there most of the time?

I would say all of the ones I just mentioned are kind of there all the time. You may handle them differently in your mind. For instance, one of the ways to use precedent is to make something like something that already exists. Another way to use precedent is to look at the precedent and say what are the rules that this designer is following? And do I take those rules and I analyze them and carry them forward... not to make something like it, but to extrapolate it.

Use the same thought processes...

So you try to look at formal processes or organizational processes rather than looking like... or using the same materials...

And so there’s a difference... there can be two kinds, you can use precedent to create a resemblance, and you can use it... rely on it in terms of the thought process and what went into it.

Right, right.

Ok, another interesting comment here, you said something about limits produce space... spatial thinking has gotten to be one of the things that I find intriguing as I’m talking to people. You want to talk about how that happens?

Well, in terms of limits producing space... let us presume a void, an endless void, it’s just endless void, alright.

Yes...

Now let’s imagine the two of us in the endless void the instant the two of us are in the endless void, some things happen. We can recognize the distance between us or with our western eyes... we have western eyes. If there truly were an endless void with nothing in it, we might not have the capacity to understand that distance in our brain. But we’ll approach it, with the western eye, we appear to one another in an endless void. But now, we at least can gauge our presence to each another and the distance from one another and how we might rotate or whatever. Now let us say we are both there vertically as we are now with our heads here and our feet there, there’s no top or bottom, our relationship is this, and we decide to take a plane that’s the size of our two bodies lengthwise and square, and we put that plane above our heads. We now have a presence beyond ourselves, so if we did the same with below our feet but not touching it, we start of begin to understand the nature of a space made or shape thing. So when I said it takes limits to understand space... without a boundary, without an object, without some reference point we don’t necessarily understand depth. We don’t understand the cues of what lies between because the issue of space isn’t the objectness of us, but the surround.
Well now, this is interesting because I’m thinking about what someone else said a while ago, and her comment was there’s a lot of two dimensional space in three dimensional space. Does that make sense to you?

To the degree that we understand measures, the two dimensional measures in some ordinate help us understand it that way I guess. Another is because, again this western eye, and the hegemony of vision, we tend to reduce the picture out of that window which when we see it live, which you can see it, we see the whole atmosphere of that depth and in a little fog we even know it more, OK? This intense sun actually flattens it out... we lose the sense of depth; we see it almost like a post card. So what happens is our that eyes create a two dimensional image which is... the classical origination of the idea of a landscape, the things seen before our eyes... so...

Now I’ve got a few qualities here that we talked about at one point in time. You talked about curiosity being important to student success.

Um-hmm

What is the role of curiosity?

Well, the issue in inquiry, inquisitiveness... So we look at that coat and say it’s black, or dark charcoal... is it black or dark charcoal, is it as black as the black of your book? Is it reflective and why, what is the nature of the material and why is that? Why does that material seem a different kind of black than that material than these pants, but they all seem black, can they all be black? So now, if we can just do that and extrapolate that to far more complex issues, the issue is not just what is there, but why is it the way it is? What lies beyond, what is beyond the surface of the inquiry. In the material world it might be looking at this wall and saying well what is there about the organization of this wall? This is a modernist wall; things are laid out according to sort of... there are certain kinds grid controls, you could almost imagine a Mondrian painting lines, series of lines underneath this, there is a vertical line that goes from top to bottom on that side; there’s a horizontal line beneath this silver thing and these white things, and a line that goes both up and down. At the same time there is layered and collaged stuff... but they’re also framed, so there is a certain kind of framing, gaps and spaces that are filled with the abstract and with apparent disarray maybe to some, but highly ordered in another. So if you were going to analyze it, why is that? What is the source of the design perspective that’s made manifest in this particular surface. So curiosity to me... and it’s a part of learning, you just can not accept what’s given. That’s the initial starting point.

Ok, so this curiosity is going to lead us to investigate things more thoroughly, but apparently it also contributes to learning.

Right

... and the capacity to learn.
Because through the searching of curiosity, you learn the dimensions of what you know and don’t know.

Ah...

... and what you might need to head towards. I was watching my granddaughter who is 6½ months old. She was... we had some eggs, soft boiled eggs, so there was three quarters of an egg shell. Well her hand was small enough to put even in the egg shell. So she picked it up... she was given it by her Grandmother, not my wife, but one of her grandmothers... ok?

Ok,

So the baby started to... she looked at it; she held it; she rotated it; and then she started to grab the edge. Then she realized that she had the capacity to break it. And she began to learn and manipulate this thin shelled thing... until it was basically all destroyed. But as she was doing it, she was in fact trying to discover what it was. And that’s maybe the first minimal lessons of learning, but you look at the egg, the egg has no sense of fragility until something happens to it and we can be the instruments of discernment. So that’s....

curiosity is immensely important.

Ok, another thing that we talked about a little, that seems to have a role in the success of a good architecture student is sense-making and abstruse material...

Yeah!

You want to talk a little about the nature of that skill, I’d call it a thinking skill...

Yeah, well... you can call it pattern making, thinking of things that are connected one to another. Today’s web, let’s just take this window, ok? Let’s say I gave you a thousand sticky balls, but they were slightly different size, quarter inch, three eighths of an inch, half inch diameter...something that you could take and throw against that big pane of glass, and they’d appear up there randomly, right? So we go out there on today’s web and we pick and choose the news, entertainment, sports, we go to face book, we go to whatever. So the question is, how do we map that, what sense do we make out of it? Now the sense out of that complete randomness might be a game, to see we’ll map this, we’ll map the connected space of the larger balls and the smaller balls, or we’ll map the hinterlands of stuff and we’ll try to make sense out of it. So whether it’s called patternmaking or connective... looking for connective tissue, I’m rereading some stuff right now, in epics, in an area that I’ve looked at a lot previously. I’m finding new metaphoric structures of new analogies... that are helpful, to things that I’ve already used as analogies. So I’ve got a pretty focused search going on here, but it’s knowing where to go to find that kind of stuff too. Whether it’s a thinking skill or not, but I think you can engender the capacity to discover and know, and how to go about making linkages.

So making sense is a kind of a making connections kind of thing?
Ok, and probably a related thing that we’ve talked about is integration, or integrate material... and following that I have non-answers, question asking, and multiple proposals... and that sounds like a process to me.

Right, what was following that?

It started with integrate and integrate is a word that I’m running across quite a lot. I think sometimes, that it is the same as synthesis, but I haven’t been able to pin that down yet. But it seems like a thinking skill that’s prevalent in design. How do architecture students use that? Or what is the nature of that skill?

Ideally, for me it is simultaneously relying on several bodies of knowledge as you put something together... or as you propose something. If I draw this.... (drawing) Ok, that’s a profile of something, what would you say that is a profile of... you’ve had Western Architectural History.

A profile of something...

A partial profile...

I would have made it into an angel.

Heh, heh, you would have made it into an angel... well it might be an angel... it’s an architectural piece... let me finish it out here. Well it actually does look like an angel. This wasn’t meant as a Rorschach test, this was meant as an Architecture test. Alright...

Well now I have found a human figure, and I’m still not sure what the structure behind is, but I’m seeing some kind of a dome on it...

Well you’re seeing it as a solid, and I’m drawing it as a volume... it’s an arch; it’s the profile of an arch. Ok, so now, embedded in the arch... Western classical elements, OK? (still drawing) So that if I did that...

Now, it’s an arch

But to sketch the arch, to understand it, now it takes on your vision... your vision of this thing now has to understand...

... the outside is solid

The void and the mass in simultaneously, and the western tradition of the iconic column, and then we can give ourselves a little capital and give ourselves some depth, and pretty soon we understand this thing as a vault going away and as a wall, and there we are. Now
we’re standing in some kind of space together. There’s even another column, I eliminated
the outside face rather than the inside face so now we’ll have to do something to darken.
So, the issue is as I draw the material and the historical and the somalic content and the
scale or position are all in my mind, right? So to me when one makes line like this, Ok,
one can position a column, and with that comes other kinds of notions about structure and
order and a whole lot. So integration to me is this kind of bringing several layers of
knowledge to a line, for instance or to a spatial organization.

I’m interested in one of the things you said as you were sketching this archway for me,
you began to talk about the relationship of form to void. You want to talk a little bit
about what that relationship is and how we manipulate it?

Well I guess it’s more or less a continuous manipulation. You can manipulate planes and
we can manipulate objects to have a spatial consequence. And this one of
encapsulization, so if we do this, (drawing) This thing leaks at all the corners, right?

Yes, it’s sort of a planar room that you’ve drawn.

Right, but at the same time, I could have made it ...

You’ve drawn what appear to be four columns with a person among them.

Right, but the space relative to the person is about the same size. Ok?

Yeah...

So it’s this continuous manipulation between the material aspects of what we’re making,
ideas about material boundaries and supports to the imagination of where we are in
places... it’s the only way I can say it. So now we have a bounded mass object with a
void around it, we have floating planes with no edges and boundaries except that the
planes are conventional enough that we understand... not quite a room, because it really
isn’t a room, room, it’s a place a floating place... and then here we are a group of obelisks
and we’re still transforming space and mass in each of these things.

But every time we put an object into the space, we begin to define it.

Right

Ok... well as we march our way through what appears to be kind of an understanding of
design process, we’ve talked about integration, we’ve talked about investigation and
asking questions, an we come to the topic of multiple proposals.

Yep

If you’re teaching a class what are these proposals and what is the role as a designer
what do you need to know about, what do you need to be able to do?
Well you need to be able to draw upon... those things that I mentioned... your sense of history, your sense of material construction, your sense of structure and purpose, and then site context... and then out of that... it’s kind of ways of envisioning things. So the way one might order space, or the way one might use landscape, and you do that to test... you can test scale, you can test massing, you can test organization, by having multiple proposals for someone and you bounce them off one another.

_How would that differ from what we call iteration... is that the same, is that different?_

Well iteration would say... multiple proposals is having four tracks, iteration is learning something and then changing that track.

_Ah, ok..._

Now, it’s not to say that as you investigate this track that it might not inflect you towards some other track, ok?

_OK... that’s actually very nice and clear..._

So multiple proposals would say should this be a tall tower, or can this thing be flat? So then what’s the extreme conception of flatness and what’s the extreme conception of tallness. So you could say well maybe this thing needs a top to express its tallness, and it needs a door... it kind of looks like a rocket... but it still is looking like that. Maybe the flat thing is too flat and it needs a gesture in the middle to sort of recognize that it has a door. So now this is working through iterations of exploration of a basic approach then the multiple approaches is to start at the outset with multiple attacks on the project.

_So when we’re talking about multiple proposals, we’re actually talking about what... as I’m doing this, I’m cross relating them now, because I’ve actually talked to a lot of people._

_Right_

_What people have spoken of on occasion that may be synonymous is generating multiple alternatives._

_Yeah, sure... yes_

_OK, And then iteration would be sequential... subsequent developments, perhaps more than one based on the original alternatives._

_Right_
Ok, I got it... and then we talked about some things that I would call more... Oh, I’ve got to judge them. After you’ve got all these proposals, what is a good evaluative process, what do we want students to be able to do?

Heh, heh, be able to... well, there’s a range of things, because in particular because Architecture, Graphic Design, Interior Design, Community and Regional Planning, Landscape Architecture... in each of these areas there usually are fundamental purposes or utilities that need to be satisfied. Then there are some that might be illuminated by being made slightly differently than we conventionally find them. There’s the capacity of how something’s made, there’s the capacity of its visual delight or its spatial delight; so we then begin to arrive at some judgments... we have energy efficiency or sustainability that can be built into this as well... is there an aspect of structural integrity that can... how reasonable is it to expect to use these kinds of materials in this kind of way... reasonably – a judgment there. So you begin to pull apart those integrated things that you started with and look back at them to see how well things are satisfied or not satisfied. So that, to me, is that you begin to look at multiple vectors that are intrinsic to the particular lines and form that you are using. In Community and Regional Planning, and I have a background in Urban design, one of the things that I look at is whether or not a proposal for an area is rich enough as an armature for a certain kind of inhabitation. So if one doesn’t make a something fifteen inches high somewhere in the landscape, people will either sit on the ground or they won’t sit. But if you pop in the possibility of having a seat, they might sit down... which means that you can design in possibilities or preclude things. And that is an aspect of judgment in public space... is it commodious to gathering is it a xxx piazza, or do we want it to be symbolically there and completely empty... in terms of anybody lingering. We don’t want anybody to linger...

Nothing fifteen inches tall...

Yeah, you don’t want any lingering, so how do you design in the possibility for lingering? And that raises, well, during what time of year, what kind of shelter, in what kind of climate. You know is it a shady grove? Do you sit under it? Do you have something to lean against? So there’s all sorts of things then that are brought into play with the idea of gathering.

As you started to talk about purpose and utility, I found myself thinking of what I have now learned is properly called program. Purpose, it seems to me must be different than program, is program more on the utility side?

No, program has different multiple vectors to it, one of which is the measures of a place. You say how many rooms do we need and what kind of rooms are they and that kind of stuff.

It’s a count-um up checklist kind of thing.

It’s one thing, it’s one aspect, what kind of equipment goes into it, what kind of events go on in it? So we can discern the nature of events, the nature of equipments, the amount of
space that we might need to do that and there’s all kinds of arrangements, then we have that. But what is the point of it all is a different thing. So is this a place of learning, is this a place of engagement in some way? Is this a place of discovery so there is a place or wonderment? Now it’s not that they can only be discovery or wonderment, but the... the characterization of the... and it would be like this... in the American county courthouse layout across Iowa and other parts of this country. The function... part of the program the space layout is to have a courtroom and a couple of jail cells, and a hall of records, right? But the iconography of the building is to symbolize the government or the American agrarian democracy. So the purpose is to symbolically represent the government on the one hand, and to meet the necessities of orderly legal enforcement of the commonwealth. So programming then has several vectors, one of which is the spirit of the place, another of which is the measures of the place, and that’s how I present it to students... is spirit and measures.

Ok, and then we talked about a capacity to communicate... what kinds of communications skills are useful?

Well, for... clearly the capacity to read and write and speak effectively. I don’t know if that’s one or multiple...

I call that three...

Ok, speaking, writing and reading... then in the other part for designers is the ability to represent their xxx. And representation then of something that does not yet exist... or as a mockette or whatever... has to do with the ability to make physical models, to make hand drawings, to work with a computer, to work with any media so that whoever our audience is can understand it. So to me those are the modes of communication that are important, because...the world, relative to designers, the world basically uses pictures and everyday language. Designers, like most specialists will use arcane language to their discipline. So the designer needs to be able to translate from the designer’s lingo to the language of the community, and that’s when the use of words and writing, speaking, drawing pictures that people can understand or making models that people can imagine themselves in are the tools that we have... and they’ve been those tools for a long, long time. In Architecture, they’re part of Vetrivius’ obligations of the Architect... was to demonstrate the nature of the constructions so that in his case the emperor would know what the heck he was getting.

So drawing is communication...?

It’s part of communication, and then the issue of representation.

Ok, yeah that’s been a really interesting topic. I’m seeing drawing as a thinking skill, drawing as communication, drawing as representation, and when drawing is representation, does it necessarily need to be from observation? So that’s going to be a real interesting thing that’s going to come out of this.
Yeah, and it is those other things too...

...Yeah, because people are talking about those other things. What is the relationship of critique to criticism? You can toss critical thinking in there if you want to, because they may be all part of the same thing.

Well, I’ll back off and take them is a more abstract sense. If the critic’s job is criticism, then one takes a look at a movie and analyzes it compared to all other movies that one has seen and known, arrives at judgment about plot and theme and devices and whatever, and you say well it’s a good movie or not a good movie... that’s what criticism is.

Ok, so we’ve got a good / bad judgment...

A judgment from apart... now a critique to me would be the part of a learning intention...which is to be a critic in a way that helps someone specifically learn as they are developing their work. So it’s not a final judgment, it’s an indication of trajectory, or current circumstance compared to a whole lot of other circumstances and possible trajectories. So in the critique as things are evolving, we could reveal possible trajectories and we might reflect things towards a possible trajectory in some way. So, to me, critique as to do with the ability to utilize the whole apparatus of criticism with the idea of developing by the recipient in that critique... basically it’s what we do when we talk to our students, but we only give feedback on an essay... or what you’re going to get is feedback on your dissertation text or whatever it’s going to ultimately turn into. And criticism is we now have twenty three thesis before us addressing, ‘X,’ how do we judge and learn from these and is there a best one? People ask me what’s my favorite Scotch all the time, and I say I don’t know, I don’t have a favorite Scotch. And then they say, well if you were on an island someplace and you could only have one Scotch, which Scotch would it be, and I’d have to say is it a tropical island or is it closer to Antarctica, is it in a moderate climate part of the world. So to me, I in fact do exercise substantive criticism with respect to Scotch, but goodness is linked to context for me in these things. Now, maybe if I’m sitting on a sunny day someplace and it’s 80 degrees out, I just don’t want a whole lot of smoke and xxx and a long lasting complexity. You know, I want a smooth light Scotch that’s not going to abuse my brain too much, not going to put me to sleep, so I’ll change my Scotch.

Ok, so I have down here on my list where we’re back to a few things that we’ve mentioned before, but I’m seeing a process here where apparently we got to it out of critique and criticism, but we talked a little earlier about iteration, iterative improvement, criticism, coaching, and creative synthesis which we related to feedback. What is that process that we want students to be able to do?

Well I mean ultimately you want them to begin to... as they’re here, is to mature in their grasp of these other issues: structure, light, materials, sustainability, history and context, all that stuff. And to begin to have the capacity to stand back a little bit from their work to apply self criticism and judgment; it’s a very high demand that we ask of our students... to say what next and you’re sitting there at 11 o’clock at night and saying what the hell is
next? I don’t know where I am. So our ability as students mature through the program is
to try and help them discern where they are. And discern next courses, and to do that as
we offer critiques, we hope to help them learn from that to model those processes for
themselves.

Synthetic thinking, what kind of a process is that for an Architecture student. I’ve got
creative synthesis which kind of tantalizes my imagination what that might be like. That
of course would be putting stuff together...

Well, synthesis, in the same way that curiosity is a part of an analytic task... delving into
something, pulling it apart, looking at its structure, looking at how it compares to similar
kinds of things, the synthetic process is thinking of all that analytic knowledge as a
grammar or the words... and you’re inventing something. In spatial design surface and
texture and color, material, planes and non-planes and horizontal and vertical objects of
all sorts are kind of like the grammar that one then plays with. And the atmosphere is the
one creates it stays in one place so you can never detach... often the Architect sort of
leaves this ok, that’s a 10 X 10 X 10 cube, or 8 X 10 or whatever, really thanks a lot, but
you’ve got to envision the possibility of it. So synthesis to me is drawing upon that
knowledge to generate proposals.

You kind of touched on something... got to make sure I don’t go too long here, I think I
better hop over what I’m thinking. We talked about representation a little earlier, it’s on
my notes here, we talked about hand representation, model representation, digital
representation...

Right

And think you talked about all of those just a little bit ago, and then we also talked about
presenting and thinking... I don’t know what that was, so maybe I’ll hop over it. So the
next thing I’ve got on the list is client communication... what is the interaction between
the Architect and the client?

Well, I think it is this, this kind of translation, so one of the things about working with a
client is to learn who they are and what they’re about. Then it’s to learn what their
environmental quest is. They’ll use languages, they’ll use English language they’ll use
pictures, they’ll use places they’ve been, they’ll bring you books, they’ll bring you
magazine articles... or they might be working for a corporation and so and so, and we’re
going to go see these other five companies and what they did last week, and so it’s just a
continuous exchange.

(Interruption, flip tape)

Sometimes they’re appropriative, sometimes they’re kind of work on somebody’s psyche,
and sometimes you have to steer them, so you know the communications are quite varied
with a client. You’re always on, so I think unless you’re trying to set somebody up in the
psychology of steering somebody, but if you are truly designing something, you’re
designing something that they haven’t necessarily seen and experienced before... which
will change their experience and / or their work and play, the experiences of the rest of
the family, the rest of the congregation, whoever it all is, it’s going to be a new dynamic,
and you have to learn as much about their expectations and hopes and dreams about that
start. I taught a course about project management at XXX University, and I said project
management is simply dream delivery. So if it’s dream delivery, the first thing you have
to understand is what is the dream? And that comes through your ability to connect with
other people to help them tell you what their dream is. Now delivering the dream is when
we bring all... everybody else into play, all of our knowledge of history, all or our
knowledge of culture and society, all of our knowledge of materials, all of our knowledge
of budgets, all of our knowledge of the expertise that’s required. We bring that together
to address the dream. Then, at least in Architecture’s case, most of our clients are
actually looking for a place that they can eventually go out there and experience. So you
then figure out how to not only conceive of, and have the client understand, the possible
resolutions of their dream but how to get it built so it’s kind of close to the dream they
had.

What would be some of the significant differences between an entry level Architecture
student and an exit level Architecture student?

Certainly they would have a much a enriched capacity to develop... they would have a
much enriched design process and the capacity to generate design options and
alternatives, a much advanced critical perspective on how to evaluate the things that they
do make, and far more expansive command of the stuff of Architecture, because no one
comes in here knowing Architectural History, they might have seen some old buildings,
they might have traveled widely, but to understand Architectural History, in the larger
history they don’t know... most of them don’t know what the hell to do with it once they
learn it, but...

(laugh)

There are some instrumentalities, understanding physics, understanding gravity,
understanding the dynamics of structure, understanding basic systems, so there is a huge...
it’s astounding... I see what kids are able to invent in fourth year with real coherence,
compared to where they were in the Fall of their first year, it’s just staggering.

Ok, so that was a bunch of the knowledge bases that they have to have, the very basic
things without which they aren’t going to be able to do the thinking that will eventually
be Architecture...

Right, we need to get them launched.

What are those building blocks that have to be in place, you just gave me a lot of them,
are there some more?
Well you do have to understand climate, and you have to analyze site context, you have to be able not only to understand the various materials, but the kinds of systems of which they are a part... which they can extrapolate. This building out here (indicating the new addition) this thing is going to have better energy efficiency, it’s going to have LEED platinum or something like that which is supposed to be highly efficient relative to other efficient buildings, but the building is pretty much... it’s even more hand made than hand made buildings, you know, there are a bunch sticks out there, steel sticks instead of wooden sticks, they have some steel trusses, some steel round pipe columns and they put all that stuff together and they layer out some good old fashioned steel decking, put some concrete in there with some mesh, and see, the systems are... a little tie back over the one inch insulation is a little improvement, so the whole damn thing out there is just about as hand made as anything that’s been hand made in the last 200 years. So to that degree, nothing is new, except that the chemistry is new. Now the chemistry of the thing is new so what kind of architect... You could be prepared to undertake chemistry and physics... the chemistry of the blue board, what gives rise to it, very little of which is there... you can see it up there, that blue stuff, that blue insulation board... the chemistry of that blue board has a direct effect on energy flow which is physics. So to some degree you’ve got to bring together your knowledge of physics and your knowledge of... you’ve got to like that stuff... just as much as you like the image of it... some people like it more than others, so they really get into it. xxx that really matters, you know, as a sustainability person, he invented energy and the chemistry of the blue board and the plastic wrap, typical of where it’s made and the resources that go into it, its durability and its permanence and its capacity for recycling are part of its sustainability. When we attack the operation of the building, surely we’re attacking the 30% contribution to all of the use of energy in the world... you know buildings. So that is important, but deep sustainability is far more than the operation of the building. It’s everything that goes into it as well, including labor. On the other hand you could say, well you made fun of it as a handmade building, there’s no difference in 200 years, what the hell would all those people do if there wasn’t handmade labor? So, it’s part of a... these guys are out here; you know how fancy this thing is, you know what they’re measuring with? They have stiff yellow measuring tapes and they go up there and then they poke it up against the thing and bend it down and say, Ok 36 ¼ inches, I guess.... you know, that’s all they need to be. That’s it, out there with a carpenter’s level, couldn’t get it straight, they took these big rubber suction cups, stuck them on the face of the panels, and them pounded them down with a rubber hammer. You have to leave here loving it all and being interested in it all to sort of shape the direction you want to take.

Ok, I’ve got two more points on here, that look like I should at least touch on them... the aesthetic as part of the formal and the function... what kind of sensibilities do they need in these areas if they’re going to be good at this? aesthetics and function?

Aesthetics is tough because there are different aesthetic traditions, but you somehow you need to understand the sources of proportion, and composition, contrast, radical difference, and how to make use of it. You can do that, fortunately, because we live late in life as a society, we can look at a lot of stuff that exhibit those characteristics. So to say that everything is about symmetry, is bologna. To say that everything has to be
proportioned according to the Golden Section is crazy. On the other hand, why not learn something from symmetrical propositions, and from the geometries of the Golden Section. Some people look at the Golden Section in nature and the Golden Section as it is intuitively recognized and used in Eastern Architecture as well as Western Architecture, and say hmmm, maybe there’s something about 1.618. You know, that’s deeper than individual cultures.

Ok, the last thing that I asked you to reflect on is what would be your first red flag that some student in one of your classes maybe wasn’t cut out to be an Architect. I’ve got a bunch of notes here, but I think I’m just going to see where you take it.

If they’re not cut out to be an Architect...?

Yeah, what would be something that would be a red flag that would cause you to worry?

Probably, um a lack of passion for inquiry into the built environment...

Yep, you said something like that before...

Ok,

You want to talk about inventiveness... some of that is in here, in a couple of different ways I think.

As it pertains to just like what you need to be...?

What you need to be able to do... the reason I ask about the lack is because I can turn that around and make it into a need. But I see a couple of things in here that talk about invention...

You need to... Ok, these were communication inventions, on the spot, try and portray something, you just need to have the capacity to have these reciprocal communication efforts, they may or may not even have been successful, but they were the ones we had here, they seem to have worked a little bit. So this capacity to continuously renew and reassemble and to make an initial attack, to have the capacity to learn from what you’ve done, those things, to me, are aspects of inventiveness. In dealing with a project or a question, and all of a sudden, you know, you’re driving along, and you say, I’ve got it, I need to do this, I need to do ‘X,’ which is to add some character or dimension to something that wasn’t there before.

What’s the role of perseverance in that process then?

It’s this capacity to bring to bear this analytic capacity and synthetic capacity with curiosity and your background of knowledge and means to say that the first rough effort at something is just that. So understand that something is always just beginning, it’s not an end. So perseverance has to do with successions of new beginnings. You understand
that they only hold water and you’re never going to get perfect, so each time you try to advance the beginning or advance the iteration, you don’t have iterations unless you have perseverance, right?

Ummm-hmm, and that actually goes to what is the little note on the very bottom where you said the red flag is the student where the first idea is the ONLY idea. That would be a lack of perseverance and the resultant failure to iterate.

Right

Probably the last thing we really have to talk about is we’ve talked a couple times about the ability to visualize space, and I have another note over here about three dimensional vision... you want to talk about what that skill is like?

Well, I think for me it’s imagining one’s body in some place and being relatively precise about it. I guess that’s the only way I can say it, and part of that has to do with going to places to experience that.

So some of this is precedent based...?

... It comes from understanding, YEAH, it is... in the sense that if you can... you can draw a lot of things, but until you can stand under a certain kind of arch, it’s hard to... you’ve got to translate between mental images and the things that are out there. Or actually you go out and experience the world, then you make another one. That’s why a lot of us all spend time designing, Architects, in our xxx Architecture years spend time designing houses, and they all look like suburban houses, and why that...Because that’s what we know. So we can know what a certain kind of image is as you experience it. But until we add history and lots of other elaborations and other things that we discover, it takes time to get out of that and get beyond it... but we’re at least taking the first steps by trying to figure it out how to reinvent the stuff we already know.

Because initially, our knowledge base is experience...

Right

And then as experience multiplies, we can move to imagination?

Well yeah, imagining beyond that.

Well we’ve worked our way through almost all of the notes... Oh, I’ve got something here that says big idea, little idea; is that something you’ve had a tendency to talk about before?

No, I don’t know... there are sets of ideas that go on within some place... like this, making it tall and making it flat might be the master strategy, but then there are strategies within making things that are flat and making things that are tall, that are intrinsic to them, and
those now become, those are overlays and additional ideas that begin to reinforce the first idea...

*Ok...*

And that phrase today, little ideas and big ideas, that’s what it implies to me right now. The big idea is the master strategy; within that there are many options for the things that one does.

*To me this is sounding like something that I would call systems design where we have a large over arching design and then we have lots of little components that have some things that are consistent with the major design and then some things that are different.*

Yeah, see systems design to me has to do with an initial armature where all of the components are a part of that same organizing idea...

*Yeah, like you were talking about the wall earlier...*

Right, so that might be a systems design. I’m thinking of... for me it’s ... it is more of a... let’s say we want something to be tall, so for a long time in Architecture, say a tall cathedral, it wasn’t envisioned that you could have a continuous thing that goes all the way up to the top and comes all the way down, ok? (drawing) There’s a volute on a column, ok, so that when you look at these cathedrals you see these continuous tall lines, they’re all reinforcing each other, right.

*I actually like the history of Architecture, so yes, I know*

So before we got to flying buttresses that would allow the truss and all that stuff to happen, the way we laid them up was, well we got one story and that’s as high as that column got, and then we got another story and that’s as high as that column got, and then we got another story and that’s as high as that column got... wall was like that and then when we tried to make those into columns we got these horizontal lines, so we could never got quite as tall, and we always had a bunch of horizontal lines interrupting the tallness...

*Umm-hmm, horizontal articulations...*

So the horizontal lines were taking dominant roles and the rhythms of the horizontal lines were taking... so are they a part of a system, I don’t know. There are different ways or emergences that help us create an atmosphere.

*You know, that helps to explain your big idea / little idea concept to me, because even if the big idea was soaring height, it didn’t function until there was another idea which was flying buttresses...*
That’s right...and skinny volutes that could go...colonnettes that went past the fronts of all... of changing columns.

*Well, that’s all, I’ve run through all the notes.*
What I hope you can reflect on for me is the qualities of a successful student in Community and Regional Planning. From your experience, and in your teaching, uh what things seem most important to student success in Community and Regional Planning? They might include specific types of thinking, manipulative or constructive skills, um, uh, thinking skills, uh-oh knowledge bases, areas of knowledge, we can treat those one at a time if it’s convenient... Yeah...

...or you can just ramble across the things that you ah notice students seem to really need or, or that successful students always seem to have...

Ok, I’m going to start, there, there is a certain mindset ... I, I’m going to kind of start with kind of the very broad types of things which are not terribly academic... and then, then go, go into more academic focus.

I have found in in all the years since I’ve been teaching that one of the things that makes planners different from maybe other other fields is that we don’t just study a problem or an issue, but the one thing that makes... that differentiates us from other fields is the, OK, so you’ve identified the problem, what are you going to do about it. And we really are the prob..., you know, very much the problem solvers. And the problems are very, very broad, this is one of the things that attracts a lot of students to planning...and what attracted me to planning. Is because of the fact that it is very much interdisciplinary as a field overall. And, and that way, you know, my way of thinking of it when I was going to school was I liked it because of the fact that you could never get bored in it, right? I mean, you get tired of one aspect, Oh well, you can just kind of you know, uh go over to another area and you could you know, kind of bone up on your knowledge ... and, and then use the same skill set then to approach even different, different kinds of problems. So I think the fact that it is very much interdisciplinary is, is um something that tends to attract some people and maybe maybe frustrates other people. I don’t, I don’t really know. But I do think that that’s a real strength of the, of the field and of the profession, as well. And so I think that tends to attract some people... certainly in terms, uh, that’s one aspect...
The other aspect is the mindset, I guess is that people who are attracted to planning tend to be fairly altruistic. In other words they really kind of care, and they care about communities, they care about people. If you don’t care, I mean if you really... you know how some people think about jobs and careers as, well you know, am I going to get a job and can I make money. I mean, you know... that’s what students always ask and that’s what they are always thinking about what careers to go into and I mean yeah there’s jobs in planning don’t get me wrong but we’re never going to be very rich I mean it’s really, it’s really, um it’s one of the, it’s not poor paying but you know but it’s never going to be something that the people are going to become extremely wealthy at. There’s there’s another reason why people are attracted to planning. It has to deal with you know helping people being, being committed and interactive with people, making communities better, um you know working to help groups of people to be able to solve really societies problems. I mean that’s a big part of what, of what it is that we’re... our our role is, um and our role within society and what the expectations are. And that’s also something that tends to really attract people... I mean there might be people that are in other disciplines whether it be sociology or architecture or something like that. But what, so the skills might be the same but the one thing that differentiates us is our real commitment to people and to society to try to make things it better, and I think that has to you know, attract people away from maybe some of those some of those other similar disciplines into ours and what makes the key difference.

OK, So if you have someone....how how can you tell if a student has a good sense... has a good people sense? Or this this feeling that you’re talking about?

Well they don’t necessarily, I’ve seen students that don’t have very good people skills, but they can develop those. I mean that’s part of what the curriculum is about is to develop them, but you have to have a good feel for people, I mean you have to be committed... to working with people and you have to kind of I guess it concerns like, like people. Planners and I think people coming into the field where if they don’t really like people, it would become very obvious when we start doing things like public committees and they just, they don’t like it... they’re not interested in doing that, and that’s one of the key things that planners have got to do. You’ve got to be able to deal with people. Now there’s lots of people who, who may say, well you know, I don’t like working with large groups of people, but you know there could be people who are good at smaller groups of people and other people are good at larger groups. There is no one size fits all for planners. I mean, I would say I’m probably a good person with kind of smaller groups of people, uhm, but you know, I’ve learned how to be good with bigger groups of people. So you can you know kind of overcome some of that. You don’t have to be good at all sorts of working with people, but you have to generally at least like and care about people. (note group communication)

OK um, what would be one of the things you would notice first if the student wasn’t a real good problem solver?

Um
I’m asking that ...yeah...because it lets you to talk in depth a little bit about what that looks like when you see it.

Right, I think that the, the key thing with being a good problem solver is being willing to ask questions.....and ask a lot of questions, and think, you know probably because planning is so multi-disciplinary, you’ve got to be able look at things from multiple perspectives and if you’re not really able to do that and, and, and, you don’t do that, and everything’s very much focused on um............. uh, like you ha... like people having to have a script, or always having to follow the process that’s always the same way and they can’t deviate from that, based on what information may come that will lead them down different channels then, then that shows me that they’re not going to be very good at this field. Um, you’ve got to be flexible you’ve got to be able to work with the data and the information takes you...you’ve got to be willing to ask a lot of questions, even like the non-obvious ones.

(laugh)

You know, as well as the obvious ones, I mean you can’t ignore the obvious ones, but but you, you’ve got to be able to think multi-di-dimensionally, ..um.. Planning is a very complex field because of that, and you know there, there’s, even though we talk about the planning process, if there’s a way to approach problem solving, it’s not, it’s not complete. In other words, it’s not going to, you know, you have to be able to adapt it to the situation that you’re in – and then take it and run with it. And so I would say that that’s probably one of the things that I would say is that that’s a dead dead give-away. You know part of that is going to be, you know once again experience – that as students get, get um – a more broadening experience – through their education, then they can begin to see – Oh well, you know, I had to think more comprehensively. So that can come along with it, but they have got to be willing to engage in things so in critical thinking, being able to think on your feet, without always being prodded. Um, and making connections between information – VE-E-RY critical. You know anybody can go out and say OK well I studied the population, I studied the economics, you know all these things, but you know; it’s being able to convert this like this what I call the data into information, take it and put meaning to it, meaning that other people can understand and signify...so that you get a complete picture and not just what I call snapshots. Anybody can do the snapshots it’s somebody who can put all the information together in a comprehensive way in which people can then understand it: the problem, their community, the dynamics, and therefore come up with possible solutions.

So do you find that this is a growth process at which in which case what would the entry level look like and what would the exit level look like?

I guess the entry level would just really be an issue of um....... of wanting...wanting to learn to ask the questions. I mean I think that would be... I know that sounds very simplistic, but that’s really what its what it’s about. And also, I mean I hate to say this, but it’s really having an open mind. You’d be surprised how many students really do not have an open mind.
Maybe not

In terms of wanting to, well you know, you know like what I have found in teaching freshmen and I’m always so surprised by this, but they really want to know like the answer is 37, you know. And anytime you, you force them to think more broadly, then, you know like they, they want you to tell you they want you to tell them the answer. And the problem is that the answer, especially in Planning, but I know in other fields... so don’t think I’m limiting it...

Yeah, that would be a problem

... is, is not, you know, 37. It’s not that easy. And uh, but, they always I find with these kids like you’d think would be so flexible and malleable and you know they’re they’re 18 and 20 year olds they, they really just want to know well what’s the answer. They don’t really, in some ways, want to learn. And I find that the ones that are the most successful are the ones that really have a thirst for knowledge, even if they don’t know what they’re going to do with it at this point in time. You know, it its the ones that are just like, I just want to know what’s going to be on the test, now that, I, I know, you know, this is goona kinda be very simplistic here but, you know part of it is just op.. having an open mind, and allowing for information to go in, and, and, and, and then providing them with the opportunity for them to make the linkages. You know, so often, you know you could put that information in...as a professor as an instructor you can get that information into them, but, but, you know, the task is whether or not they can process that information again and make sense of it... and own it – almost. Take ownership of it – or can they just regurgitate it back? Um, yes, I mean they’ve got to be able to regurgitate some back, some information back, but if that’s all they can do then they have not processed the information, and they are not making any and its the thinking is what they’re going to have to do at the higher levels as they get more complex so that’s what you’re looking for – at least initially. Is that ....?

Yes, that looks like a really good curve of what that particular thinking skill might look like....Um, are there other things that you’ve noticed seem to be really relevant thinking skills? ...as long as we’ve started with those.

Yeah, well I mean it’s really it’s really being able to make the connection to think more broadly, you know and also be... because I’m here, in the College of Design, you know a lot kids come into school thinking they know what design is, or what design’s all about; because our culture right now is really focused you know like HD TV and all that kind of stuff. It’s really focused on, on design – so they think they know what interior designers do, and architects, and landscape architects – and they probably don’t know much about what Planners do, and that’s OK, they don’t need to know that. But, but they think that they know what design is, and they think that design is like, you know either painting making pretty pictures or making pretty rooms, or building pretty buildings and, and I, and I guess you know that’s a very simplistic view of what design is all about and the big part of what you know I try to say to them is design is just so much more than that. And
they don’t have a sense of that and they don’t really understand how things like in their general education will link up with how they’re going to be good designers. That, you know, design is all around us, and that we’ve got to be able to read designs, and actually, you know, they can, but they haven’t been really taught how to read their whole environment. Virtually the whole environment is designed. Um and they, they, they think that so much of the information were trying to give them is not relevant, I mean I hate to say that, but that, that’s how they view You know They don’t they don’t even know about the past, they don’t even know about you know history, they, they, they think that they can just start designing from this point in time onward and that they really don’t have to look back and see what has come before. And, I don’t expect them to, to to know that stuff when they come here. I don’t even expect them to know that in the first year. But I want them at least to have developed an appreciation for the fact that they are going to have to go back before they can go forward.

You, we’ve kind of, we’ve kind of, we’ve kind of ah alluded to the concept of knowledge bases here...

Yeah

This might not be a bad place to talk about them, we can always we can always back up if we come up with another good mindset. Uh, do you find, what would be some of some of those knowledge bases that you think they really need to, to have in place in order to build on and succeed?

Well, they certainly need to know, know history, and, and general history, particularly in the history of the society or the culture in which they are working in. I’m still surprised at how many people don’t they don’t know anything about Vietnam, they don’t know anything about the Berlin wall, they, you know I mean, just what I would call, I guess, you know I lived it so it’s part of me, but an awful lot of things which, which to me have a great deal of, you know political economic, social impact and you can’t design in isolation, I mean, you have to know the society and the history and the culture in which you are designing... and I’m so surprised that they only know about you know their little time capsule. Uh, And even if you ask them about the like the civil rights movement, Well that’s you know ancient history. You know they, they, they don’t they might know little facts about it like they’ve probably heard of Martin Luther King or something like that, but they don’t know about the movement and what it accomplished and, and, and the struggle that went on with it uh, so everything is like you know down into these little tiny sound bites and as to what it really means, in terms of significance and contribution, it’s you know, so it, it’s not just, you know they may have a few facts, but they don’t really understand it, in, in terms of a of a context, and a significance. So getting them to to really think beyond these little facts and make, make connections from, you know like the civil rights movement happened, over a period of time and, you know like why did it happen then, versus now, versus you know like at the turn of the century, what you know It’s just.. just amazing to me how they don’t really see things, they they see things in little chunks rather than in, than in kind of like our linear forms of connections between things, you know it’s like Oh, this happened, and this happened, and
this happened but they have no idea, OK so why did it happen then, what were the factors that came along that made that possible. (note cause and effect)

_You, you, your your gestures are suggesting a fragmented understanding of culture_

Very good, very good, yeah, yeah, that’s it. It’s just little bits and pieces they have exactly that, but they, can’t make sense of it they don, they have bits of knowledge, but they have no comprehension and understanding.

What are, what are the real knowledge bases that they need to build on? Is there something besides history or... is that really the fundamental?

Um kind of the starting point, well I guess, I guess the other thing you know, in terms, in terms of knowledge, this is kind of a sideline of knowledge, but it’s kind of knowledge and kind of a skill how do you begin to uh, gather knowledge so it’s kind of like, you know how do you conduct research, what is quality research, versus well garbage?

(laugh together)

...and that type of thing. So where do you go if you don’t know som... anything about something, how do you go about getting that information, and where do you begin, and where do you start, , and how do you build on it, I mean, that’s partially knowledge, but it’s partially skill or kind of ...You walking the line

Yeah, and so you know having an appreciation of where you go to get information, and, you know, I mean that’s the other thing that surprises me, they just google everything I mean the fact that they would actually pull out a Dictionary, or um go to the library, it’s not really in their realm, which is kind of too bad. There isn’t anything wrong with doing some of those quick searches, at least to get them started, but you know the whole idea of quality information, is certainly, they, they can’t distinguish. You know they think Wikipedia is just fine and dandy...

Un-Hunh

Yeah, and the fact that you have to check your sources, and, and that you can’t just rely on reading, like one book or one article, that it has to be much more than that. I, I’m kind of I’m kind of learning from you know, freshmen on up here,

Um-hmm

....that certainly is something that’s part of our whole program, to help teach them how, how to do that. Um so if you get some information you get the quality, the idea of quantity build a case and then understand for or whatever the perspective. Yeah.

Both of them sound like they’re real useful in terms in terms of knowledge base. Um, I was, When do you... What kinds of... We’ll come back to these both probably one more
time, but we’ve touched a little bit on the thinking skills, and the mindsets, and we’ve talked about the knowledge base a little bit, maybe before I leave knowledge base, I should say what are what are the things that you think a graduate, what are the solid knowledge bases that you hope they are leaving you with.

Well they certainly, they do have to know their history. They have to know, we, we have one of the things that we teach them is the process. It’s called the Planning Process. Depending on what book you read or what professor you had it can be anywhere from five steps to eight steps it depends on how much you want to break them down... you know, or how much you want to condense them together. Um, but it’s a way in which you kind of approach problem solving from a a planning point of view. And then, it’s probably not remarkably different from the process that anybody you know like in landscape, or architecture would or, you know any of the other fields, ah approach um...

You don’t know those steps off the top of your head... that would be kind of an interesting thing to hear

OK, well, uh You start with just gathering information about the issue or the problem because uh lots of times what you can find out is that the problem isn’t quite what you thought it was so you have to start with just gaining, doing that. So that, so that you can develop the real problem statement... so, that kind of thing, and then and then perhaps you need other background information that might be relatively useful once you’ve got the problem statement identifier. OK

Second is goals and objectives, so it you, you know what the problem is but what do you want to see in terms of the solution? Do you want to make it just a bit better, or do you want to really solve it or what are we trying to do here? So that’s, that’s step two.

Then then, you actually kind of do the research and think about what might a possible solution look like? Ok, and so through that you develop alternatives OK, and then you have to evaluate the different alternatives that you’ve come up with, and so once again then this is where information and your goals and objectives come back to be kind of criteria, so that you can gauge alright, then you have to make a choice among the alternatives, based on your evaluation and then then you have to focus on implementation so how do you implement the solution that you’ve identified?

And then the last is kind of monitoring and usually you implement what it is that you’re going to do, and then you monitor and see if you have any you know and have any positive effects with that.

OK!

That may be a bit messy, but anyway it’s close enough.

No that’s, that’s a ni... no, that’s a nice description. Uh, so, as we’re looking at this graduate toolbox, they’re going to they’re going to have uh, a knowledge of history,
they’re going to have um some research knowledge, and they’re going to have a knowledge of a planning process?

Yes, but something else that’s very important, and I even get a little bit of this in the the 183 class, which some people might say, Oh my god, you’re but, um it’s some ethics and our overall social responsibility. And now I see this, now I will qualify this... in the 183 class I talk about designer’s responsibility, but I do point out that that, virtually all of the professions, within the within the college have a code of ethics or at least ethical guidelines. Because we have social responsibility in terms of what, what we do. This is V-E-E R-Y important to planners. This is a big thing that shapes not only what we do, but how we do it. Because we are very much the public types of servants and it’s the uh only way we uh can actually do our job effectively is to build public trust therefore the public has to know what kind of who we are, what we stand for, and all those kinds of things. And this, this is where we we come into you know who are we as a profession? Well quite a bit of guardians of the environment, you know protector of the underdog, you know, our job is to protect public health safety and welfare, protect the public interest, you know these are the the BIG ideas the grandiose ideas that should guide all planners in terms of who you are, um what you do, and how you do it. And so, you know to me that’s a very big thing, and I start that out right at the very beginning. Um it’s really you know a graduate, I want to really know the code of ethics know what our responsibilities are um, but you know, initially, I just want them to be aware that um we don’t work in isolation, that there are certain expectations of us that we are indeed a, a you know, a profession versus, it’s a job, you know they’re two very separate things so that they understand that there, that, that, you know, their selection in all of this and their responsibility and obligations not only to themselves, but you know to the others that they work with. Now that, that I will confess that’s a little bit of my soapbox, but it is something that that a graduate should know and will be asked about if they want to go for certification

And, and what you’ve just told me is that the big things that planners work with are um the things that they’re moving around and combining and recombining are very human qualities.

YES! Very much so, yes yeah.

That’s really quite a an intriguing uh look at what it is we’re arranging that you just gave me.

Yeah, yeah, because you know one of the things, ah you know, there’s two ways to look at what planners do an... and it depends on your perspective once again a lot of people think well we design cities, so we’re very much physical designers, but I would say yes we design cities but we’re more social and economic as well as physical designers. Yeah, we really look at things like you know affordable housing and how do people move from one part of the city to the other do they have access to certain lands or certain places to live, you know are there jobs for everybody and do we think about the whole spectrum? You know, in terms of residential, you know access to jobs, access to schools
and education you know space often determines accessibility and so you’ve got to me we’re much broader in terms of the design that we do. Although a lot of people think of it as physical infrastructure roads, you know that kind of thing. Sewer, water, we do a lot more than that.

Yeah you, you, you I think you just told me you’re designing lifestyles.

Yeah, yeah, yeeah, well we design for the people who live in our communities and we should design for everybody, not just those who can afford it. Yeah have to everybody else.

OK, Very, very interesting. Uh, There is just one more major topic to touch on, and then whatever we think we forgot.

OK

Uh, We want to touch on manipulative skills. This would be the stuff that you need to be able shove around and push around, guiding fabric through a sewing machine that would be a manipulative.

Yeah, yeah, uh – well one of the tools that planners now use, a lot which is a manipulative skill skill is GIS, Geographic information systems. We have to be able to think spatially, and of course so one of the ways we can do that is to map things. Um, and the GIS allows us to be able to map things and also manipulate, it’s a tool. But we’ve always had to have that skill being able to think spatially, and look at spatial patterns and then, and make sense of them and understand them. Because you know all too often what will happen is you know we’ll put all the parks in one part of the city, and there’s none in another.

(Chuckle)

You know, ya really gotta kinda be able to see, see that and look at, look at your patterns and understand what that means. That, that even includes things like looking at, you know like where, where do you have to put certain kinds of programs in certain kinds of people, you know, where they live, and where they’re concentrated, so you can do that you’ve got think about do I want to really concentrate all the poor in one part of the city, or do we want to spread them out, you know. So being able to, once again, make sense of the data, spatially is very, is very important. In other words, you can’t just really say, oh well we’ve got 36% of the population, you know, rent, we want to know what’s, what’s, what’s the distribution of that...And, and not just in percentages. (Note, spatial thinking as in distribution)

That’s probably the biggest manipulation that, that we need to be able to do, but I guess a second thing um and I’ll tell you I’m not very good at this, I mean it would be great I, I can’t draw, I am not that way inclined, I mean I even to try to make examples on a blackboard or something, it’s pretty bad, anyway, I’m just not that way oriented, true.
But, you know being able to kind of show things, especially if you’re trying to do more physical types of improvements being able to show, you know this is kind of what it is now, and this is what we have in mind so that people have, can develop the vision. You know planners are very visionary people, Um, the planning process, helps to get people to think about the future, and that’s what we’re oriented toward, but being able to give people a real picture of what that future vision is about is actually is a is a would be a very positive skill for planners to have. Now you don’t always have to be able to do that, thank god for technology, but, but you know, certainly, being able to do that would be very helpful. So whether or not you can do it through drawing, or sketching and things like that or as I have to do is use something like Photoshop and.... You know, doing things like that.

*Pick up building here – move it over to there*

Right, right, and widen the street, put lights on down it, or whatever it happens to be but there’s there’s things that, that you can do. Those to me are more the manipulative skills I think in line with what you’re talking about.

*Those are probably, those are probably the ones, but you know what you did while you were doing that, you mentioned three more thinking skills.*

**OH OK!**

*Let’s back up on those a little bit. Uh you talked about thinking spatially.*

Yeah, well part of it is that we’ve got to be able to see the patterns or no patterns and understand them and understand their significance. In terms of uh of what they will mean. Um or applying services of different types.

*Now when we’re talking patterns, I know a lot of different definitions for the pattern, let me make sure that I’ve understood the right pattern. Are you talking about repetitions of activities or instances, or are you talking about more like a dress pattern. What kind of a pattern are we talking about here.*

Um......Actually both, to tell you the truth.

**OK**

Because um you, you, in some cases you want to see repetition of certain patterns, because then that would have a lot more to do with things like engineering aspects.

*UM-hmm*

...of what it is you’re trying to do

*Um-hmm*
So you might want to have kinda like concentrations and then, you know, things concentrated in some areas and not in others. But you also want to just see the overall distribution of things to see if there are concentrations or um, or um, or, or not, I mean whether or not things are dispersed or concentrated. That might tell you how you have to put together certain kinds of say social programs if you’re trying to reach certain targeted groups, for instance. Or distinguish groups and, and so we work we’ve got to be able to to see how to make things work. And so you have to kind of be able to really study what it you know, I’m not really explaining this very well, but,

You’ll think of it sometime

Um, yeah

But let’s, let’s try this again, let’s try this again. Would any of this be related to say, a template? That type of pattern?

Somewhat, I mean certainly one of the things that you want to create is and you want to examine is like the land use pattern. And so from a template point of view, like these have to be certain colors signify certain land uses, and so we want to be able to put these up and look at them and say, OH, Ok.

Ahhh

You know, what, what is going on, ah ah because you want to have uh you want to have a mixture of land uses. You want to have a mixture of densities, you want you know in in certain places and certain ways. And so you want to certainly be able to certainly, so what are you going to use........(unintelligible)........template.

OK yeah, So there are different kinds of patterns that are included in this type of spatial thinking

Yes, yuh, and yet they’re all different so I can’t say that like you know, there’s one pattern that fits all or...

No, no that’s OK, there are just so many different things that are indicated when someone says pattern

Right, right

If I’m goona understand the actual thinking that’s involved there, then I’ve got to ask a few more questions, and that’s why we do interviews.

Right, right, cause I’m using pattern in a different, very different way than probably other people would use that word.
Yeah,

I, and that has specific meaning to me.....

...As a planner

Sure, and the people over in clothing would uh be thinking about draping, and they'd also be thinking about repetitions of a given image motif.

Right

And those would be two different kinds of patterns altogether again. So when you start talking about patterns, you really need to pin that one down.

Yeah

... and then you talked about Planners being visionary people.

Oooh yes, yah, yah.

And that seems to me like a thinking skill.

Oh yes, it is, it is – because so much of what we want to think about is well, but, there, there’s two ways that that we study them, study you know kind of like what is it now, but then the big thing that we do and how we work with these places is what should it become, the potential is there, and how do we go about unlocking it. Identifying OK, you know, the big thing that we do is we get people to think about the future of their community: what kind of community do they want to have? What’s important to them? And they can trade off, you know, right, budgets you can’t have everything, so what are the most important things to do? And how do we, how do we, begin to approach that?

All right

Yeah, and, and in fact, we have part of what’s in the planning process is ah what we call visioning, that it is a planning term that has been used over the last uh ten to fifteen years. I call it comprehensive planning, but you know, there is a new buzz word developing visioning. But it really is hard, you know what we do. We get people to think about the future...and in a very broad context.

At what point in a student’s career does, does this sense of future come in?

It, probably more the upper division, I mean first of all you’ve got to teach some skills so that they can evaluate Where are you now, you kind of tend to start with that. And then once they have a good sense of being able to understand where our community is now,
then they can begin to think about where is it going in the future? Um, but you know part of it, and I’m going to go into another skill, sorry,

*No, that’s fine, that’s what we’re trying to find*

A big thing that we teach them is not only to find out ok, where are things now, but also to be able to identify the trends of what the future is is going to hold, if you don’t make any changes. So, you know like one of the things we have to do is they have to figure out population projections, economic projections, so, you know, having basic statistical skills so that they can indeed be able to look into the future. And say you know, these are the trends that are occurring, and if if things don’t change in any way, shape, or form, this is how things are going to go and then that way you see people can say, Oh I really don’t like those trends. Those are the trends we want to change and then there’s other trends that you might get, Oh these are really good trends and these are the ones we want to keep and not touch. So that’s part of what a planner’s role is, is to see that and understand it, know what that means so that they can make the decisions as to what they want to do.

*And that went back to your research concept, and that was good, but in the meantime, you said, statistical skills.*

Yeah, yeah, I know, I told you.

*Is that... Is that one of those knowledge bases that needs to be there?*

Yeah, you know this is all part, you know I should have dragged out our accreditation document because

*Actually, I intend to read it,*

OK

*I’ve got to get my hands on it first, but I intend to read it because I think it will probably be part of the review of the literature.*

Well, they will. They talk about, now I’m trying to remember, I know I should know, I do these site visits, but you know, there’s a knowledge component or what’s required in terms of knowledge, there’s a skills and then there also is something about I can’t remember what they call it, like getting into things like ethics, and stuff like that. Professional, professional base. So...

*OK, well we’ve taken a marvelous romp through Community and regional planning here. What are some of the things I forgot to ask, and should have?*
Well I guess, I guess, just a a few things that I would say is that, unlike some of the other professions, we don’t, our manipulation skills are almost more mental manipulations.

Yeah, that makes sense, it’s pretty hard to pick up a population and move it over

More kind of physical manipulations, and that that even has to do with even the visioning, and we’ve got to think about OK 5,000 people are coming in the next five years, what are we going to do with them I mean it’s, you know, you’ve got to be able to, You know, you can’t just say Oh well we’ll put them over there, you know what I mean, it’s it’s, a lot of this is an awful lot of what planning is about is a puzzle and so you have to figure how you’re going to layout, layout the puzzle.

So we’re working with a mental visualization of the manipulations that they’re going to have to make.

Yeah, and the incremental steps that are going to have to be made

Do you teach that from a physical manipulation, or do you immediately press for a mental?

Well certainly, the mapping skills are... would probably be more the physical manipulations that we get them to do, and eventually, they should almost be able to do some of this stuff in their heads, well eventually, somewhat. (Note: representation)

Yeah, that makes good sense

Yeah, so, so I mean that’s... and they should be able you know to that’s part of the statistical skills too that they should eventually be able to develop some of these things well enough that they understand well, well what they can do with it, and what they can’t.

At this point there was a knock at the door. As we shifted positions so Lola could go to the door, the recorder was knocked to the floor and ceased to work. Fortunately I had completed what I considered the questions I hoped to ask. Upon returning to her chair, Lola showed me a website where I could find the PAB (Planning Accreditation Board) guidelines.

She concluded our visit by adding two more skills: reading a site plan including elevation, and collaborative problem solving. Then she added, that planners begin with a broad knowledge base that is increasingly integrated as the students progress. They must develop a multidimensional understanding.
Ok, so you’ve seen a lot of students by now.

Um-hmm

And you probably have... at least what I hope you have by now, a pretty good handle on what it takes to be a successful student.

Um hmm

What I hope you will reflect on for me today is or maybe are the qualities of a successful student in Community and Regional Planning?

From your experience, and in your teaching, what things seem most important to student success in Community and Regional Planning These “things,” might include certain aspects of design thinking, manipulative or constructive skills such as guiding material through a sewing machine, or areas of knowledge.

As students work their way through Community and Regional Planning what do they need in their tool box. Please include both the things students seem to do easily and those they struggle with.

Well, it’s interesting, interesting in the sense that I often emphasize that Planning takes two forms of thinking

Good

The first one is technical, and this is why people hire you. And the second one is what I call normative or political, and this where you have to understand your community and the stakeholders that you are dealing with. Now technical issues that means competence in certain things that are close to your heart and talking about Planning, there are so many sub-areas, and I am talking mostly about a generalist planner working for a city similar to this, for example. I’m not talking about very specialized planners who deal with one aspect. So technical for a generalized planner means that they have to know about many things. Not only methods and techniques, but they have to know about other things and be versed in, if they have a question that they know they can not answer they have to know of where to go to get the answer. Normative means you have to be politically aware in terms of what is possible, and what is not possible. And what I am talking about here is that you have to be cognizant of the fact that you are... as a planner, you are not a decision maker, you are an advisor to the decision maker. And what you want is to... decision makers hire you to help them make good decisions. But sometimes, decision makers don’t make good decisions and you have to be cognizant of that fact that they have their reasons for not making, or not selecting the alternative that you have argued
for, and so on and so forth. So I also often argue that Planners have one word that is supposed to be very close to their heart. Which is a new common sense word, what I’m talking about, the word is alternatives. There is more than one way to cut the cake. And it’s your job to let the decision maker know about those different ways how to cut the cake, but you just don’t tell them this is better than the other one, you have to tell them what is the positive and negative ramifications of this alternative versus that alternative versus the third alternative, and so on and so forth. This way you are giving them a choice with awareness about the impact of those alternatives both the positive and the negative, and then they have to make a choice; now we will go with this one.

So one of the thinking skills that we’re talking about would be generating alternatives?

That’s right.

And another might be projecting the ramifications of those alternatives?

UM-Hmm.

We’ve kind of begun to talk about two aspects; we’ve started to talk about things they have to know in order to generate these alternatives, and also the mental processes that lead to them. Would you want to elaborate on either of those before we advance?

There is a set of techniques that all planners should be familiar with.

Ah, knowledge bases. Tell me what they are.

And your best source for that would be to grab a catalog... university catalog, and you will notice whether we are talking about the undergraduate or the curriculum is devised in a way that we have what we call the core courses and the method courses. Let me concentrate mainly on the graduate program, because there is quite a bit of similarity between the graduate and the undergraduate. The graduate program you will have to be cognizant of the fact that many of those students entered the graduate program with a degree that is not necessarily in Planning, and they range from English majors, Graphic design, Architects, Engineers, History majors, Journalism, almost name the major and I will tell you that I have seen these come and study Planning with us, including religious studies. This core, for all practical purposes represents the knowledge base that all planners are expected. On top of that we talk about specialization courses I’m interested to focus more on transportation, so you take more courses in transportation. I’m interested in housing; take more courses in housing; I’m interested economic development; take more courses in that and so on and so forth. Now, the structure of the core, aside from the introductory course, because of the fact that they come from different backgrounds...aside from the introductory course which is basically a melting pot, in the jargon of the field, we have a set of about three or four courses that are methods courses. Where they learn about certain steps, they know how to do for example to do a managers analysis, how to do economic analysis, how to do demographic analysis, how to do site analysis and so on and so forth. Another course that they are required to take is what we
call the planning theory course in the planning theory course is supposed to introduce them to the normative nature of planning focus on ethics, focus on values, focus on goals and objectives, a focus on different types of decision making. How you can make decisions and I’m not talking about people per se, I’m talking about organizations, more than individual and introduce how the evolution of that start. This is the way at least that I introduce that course, the evolution of planning theory over time where we were, where we are now. (note history) The third component of the core is that Ok you have planning methods, you have planning theory, that’s early, and minimum they are expected to take one studio course, and that studio course is the one that sort of forces them to use their knowledge base and all of those other courses and come out with a resolution to that particular problem that they have been given.

Now we’ve moved into what I would consider, usually, a thinking skill. We’ve begun to talk about problem solving, and that really goes to how people think. This is something you stress?

Um-hmm

Are there other kinds of thinking that they then build out of these knowledge bases?

They have to be critical they have to be critical, and they have.... to be aware of societal issues, not in the context of now, but in terms of the future impacts because you see a planner gives you longtime horizons, they are not talking about now and its really interesting in the sense that the lecture today centers on that, how planners call the basic figures of our society. That President Hoover argued for that you recall during the depression

I might have been too young during the depression

I was a boy we know that we wanted a house for every family, a car in the garage, and a chicken in the pot. That was once a goal.

I remember that, not because I remember it, I must have been a baby during the last depression, but I do remember it from my history books.

And the funny thing is the manifestation of that on our cities. That’s what we did that’s what planners did. We built detached homes, separation of where they live from where they work and this means they have to have cars to drive them from one place to another, and so on and so forth... and now a days, we question all that. The interesting thing is that the one who started questioning this form of planning was not a planner. It was a woman named Jimmy Jacobs, and she was a commedienne, and she looked at the country and she wrote her first book, The Life and Death of Great American Cities, and she was very critical of the way planners were planning the cities because they are destroying the fabric of neighborhoods... and she was talking about traditional neighborhoods. And she was talking about grandmothers and mothers are not looking out of their windows and seeing the kids playing on the street, because our streets have been taken by cars, and no
mother would allow her kids to go out and play in the street. So they started questioning those issues. Planners should have questioned that. And critical thinking... you know you should have questioned that and for the past 25 years that has been major concern that our planners look at, but yet, it’s going to take two decades to deal with the impact of this.

*In the meantime, you have said one of those words, that in point of fact I’m doing a seminar on critical thinking, and the lack of critical thinking that we are seeing at the university at this point in time. One of the difficulties things is that critical thinking means different things to different people. You’ve begun to say that critical thinking in your mind is about questioning, would you want to elaborate a little bit on what you are looking for when you say you’re looking for critical thinking?*

I am looking for questioning, I am looking for participatory kind of thinking we do not have the answer, the answer has to be a collective answer, and we have relied for too long on the technician, in our society. Technicians look for efficiency, in the work they do. I’m using efficiency in the general sense, it can also mean expediency. Yes, it’s the cheapest Ok? But is it equitable?

*Ah yes,*

Ok that’s a serious issue (unintelligible section) kinds of issues

*When you say that critical thinking is collective, are we talking about a group decision making primarily?*

We are talking about participatory, participatory in the sense that xxxx there are different ways of cutting the cake, and um...I don’t know if you know this, I serve on the City Council

*Ohhh,*

I started my fifth year

*I bet they enjoy having you!*

When you see how things are done, and how the cities are made, you realize that if you don’t listen to everybody, your decision is lacking; you will make a decision, but it comes back to haunt you. And this is why it is essential in this city, whether you agree or disagree, you have to listen. And make your decision based on that knowledge that is presented to you.

*I can agree with you there, I am now doing the listening that should have been done when we planned the core. It’s really important, and its a good point. We covered the knowledge bases, I think we’re getting close to complete on the thinking skills... is that most of them do you think, or is there something else?*
That’s a good overview

*That’s a good overview of how they have to think? Do you have anything in the way of manipulatives? If you were in fashion we’d be talking about guiding material through a sewing machine... things they have to be able to push and pull around?*

That’s a question of design.

*That’s design...*

Again, and this is where I fault our college, and this college is typical of many colleges across the country. I am a city planner, cities hire city planners, who comes to work with city planning departments... What I mean by work, who goes and says I want to do this and that, can I do this can I do that? Who comes and speaks on the projects in front of City Council’s or Planning and Zoning Commissions... Architects, mostly architects and Landscape architects. And I am talking to you out of experience, I have served on the Planning and Zoning Commission, I have served on the City Council, and very rarely do you have someone else come and talk to you unless they work for a consulting firm and they are pushing something... but yet, you look at the curriculum that all of those departments have, whether in architecture or in landscape architecture, or even in planning. We have very little that we require our students to do for planning courses. The interesting thing now I am teaching an elective course, YYY which is a service course, students from all over the campus take that course. The majority of my students are outside the college. And the same thing is true of XXX my other course, most of them come from outside the college, but that is a required course for Community and Regional Planning students. But what I am basically saying is with regardless of whether it is architecture or landscape architecture they are realizing that need for integration, and I would say they discover that out of the university much more than what they are inside the university, which is unfortunate because we should expose them to it. Now we try to do that but with integration.

*So one of the things they should be able to do is talk to people in other design disciplines?*

Right

*Do they do any building or hand work of any kind?*

They don’t, really. What we do, we could consider land as a point of regulations, of the xxx department and zoning is the bread and butter of planners. They don’t design a building per se, but they tell you how to build it. They ask the city about the housing codes, the city about the building codes, the city about the plumbing codes they have to make sure that all of those codes are enforced, and you can cover this is the size of the lot, you’re going to have to have 20 feet between this house and the edges of that house, and so forth. Zoning regulations, they will tell you what is alive in each area of the city,
and how this is enforced to meet the requirements that are in the law of the land in that city. But they don’t do it themselves, they don’t go and design the house itself, they don’t go and necessarily do the site plan some of them do if they specialize in that, but the majority of them don’t do that, but they make sure the site plan is submitted and they check it. Does it meet the laws that we have?

So the regulations and the zoning are the things that the planner manipulates. And those in turn make sure that everyone else does what they’re supposed to.

That’s right

Ok, That is definitely a different mentality than what many of us might have done. What would be the difference between an entry level student and an exit level student? What is the change you hope you’re making from entrance to exit?

That’s a good question, Ah, you know when they enter they are not familiar with another word that is pretty close to the hearts of City Planners... is the planning process, they are not familiar with the planning process. And you know, I argue in my introductory class, that everyone, regardless of age, sex, religion, or ethnic origins or whatever, is a planner. And I tell them humanity would not have survived if people did not plan. I would tell them that the best planners as far as I’m concerned, who really accomplish what they want, are the kids. Why do I say that? Because we often give in to the kids they xxx you they cry, I want it now (hit fist on desk) and if you don’t give it to me now the whole world is goona collapse. So Mommy gives them the bottle of chocolate so they accomplish the end that they want. They know what to do, even the infant, they cry when they are hungry. And... I think what we do is make them think explicitly about the planning process. And the example I give them, is that I ask them if they have kids if they have younger brothers or sisters and if they ever took them out for a walk and taught them how to cross the street. And I sort of divide it, what do you do, tell me, how do you do it. You stop, you look right, you look left, nothing is happening, and you cross. So, let’s analyze this, what is the goal that you are after, the goal is to cross the street. Well, in order to cross the street, you have to research. You know, you check, is it safe to cross? If it is safe, you cross it, if it is not you don’t. I made them think explicitly about the goal that they want to accomplish, the research that they have to do in order to accomplish it, and I make them also realize that they have to do something about it, because if they don’t it’s not goona happen.

Those are actually big things.

And that’s the difference between what, when they leave and when they come in, the sense that they start thinking along those lines, and make it explicit.

So Process... and process includes goal development, research, action
(Illustrating on a notepad) As a matter of fact, I have often abbreviate the planning process, you know by Goals, Research, Alternatives, Policies - established policies, and then Effectuation or implementation.

Chuckle - GRAPE

You picked it up didn’t you? Did you hear that before?

No I didn’t but I was watching for an acronym to develop because it seemed so straightforward.

And you see, this is a very simple planning process, but the question when you lay out a plan is whose goals are you attempting to...

That’s where the critical thinking comes in...

That’s where the critical thinking comes in, this is where participation comes in, this is where values come in, and you are not supposed to do your own goals. And my argument is if you do any planning process without articulating those goals, it becomes an act of... (covered the “G” in the grape acronym with his thumb)

Oh dear!

And I challenge them to forget it, because basically the reason I say that... what is the definition of “RAPE”... the definition of rape: forcing your will on others. And if you use your goals, for the community, you are forcing others your on what you want accomplished and we find that they don’t want it. And this is how we rape the environment, this is how we rape neighborhoods, this is how we do all sorts of things, you know.

Wrong people’s goals?

That’s right. I’m not talking about wrong people’s goals, I’m saying those goals have to be the goals of the community, not yours.

And then how does the research play into structuring those goals and understanding them?

Well, you see, I told you before Planning is both technical and normative. This is normative, this is technical. These are the ways that we can accomplish those goals. And those ways can be this alternative, this alternative, and that alternative. So those are normative, technical, this is both... normative and technical. This, in here, is where the decisions are made by decision makers. So I would say this is mostly normative and then you come back to effectuation and implementation. You are talking again about technical and normative, and I would say mostly technical because you want to make
sure that you are doing the right thing, you know that you accomplish what you set out to do.

So we would hope that the difference between a student at the entry level and a student at the exit level would be that they would be inclined to process their decisions and generate alternatives.

Um-hmm

Are there other contrasts that you see.

The key is is the student aware of others, aware of others in the sense that one colleague a few years back wrote a book, and I thought methods... technical methods and he was more in planning theory, and he did a book... and in many ways he surveyed decision makers... that planners work for. What do you value the most about Planners? What they value the most was not the techniques, the technical education, but their ability to generate alternatives, and to communicate those alternatives in ways that can help others understand it.

That’s a big word, communication.

That’s part of thinking... that’s part of critical thinking.

Yeah it would be... in your sense of critical thinking, yes. That would be part of the collective nature and participatory nature of critical thinking... it would have to involve some communication. Well, I think we’re getting about down to the end. Ah, what is it I should have asked you and forgot to?

My name!

Well, we have to have a pseudonym for you

Oh, a pseudonym, alright Aladdin

Aladdin, I like that... that will be different from all the others, I like it.

You did a good job... you forced me to think.

Well, I hope that we covered all the mental gymnastics that we need to... I’ll push the orange button.
OK, Now we can tackle that big question. Um based on this rather nice experience base, what are the things it takes for a student to be successful in City and Regional Planning. Um, We’ll try and deal with the studenting process first, and then we’ll try and work our way on up to what we hope those graduates can do. We want to talk about three areas. We want to talk about the thinking skills, the mental gymnastics, the mindsets that it takes to do this?

And we want to talk about the manipulative skills, what do they have to be able to do with their fingers what do they have to be able to push and pull around”

And, Then we want to talk about uh knowledge base. Things that just have to know before they can um do other things.

OK

We can do those one at a time or I can just let you talk about what you think a successful student looks like.

Let’s do them one at a time um... In terms of skills, what they can do um with your hands....

The manipulatives

The manipulatives, umm...Planning requires a lot of looking into the future, and trying to anticipate what’s going to happen in the future, and trying to appraise that. Planning is more or less futuristic. In trying to do that, you always have to have some basic um, um quantitative skills, to be able to put it into the future. If we see this population that is increasing, you want to be able to ask yourself what will be the population of Ames Iowa 20 years from now? What will be, um how many children will be going to school 20 years from now? Then you can anticipate uh and uh plan for them. So that’s a very important set of um skills that planners need. The ability to be able to use a little basic um statistical methods or techniques in order to understand the current situation and then use that information to provide a future - so that’s an important fact

Planning, also, Planners also deal with a lot of things in terms of space, how things are distributed; and and as a result of that most planners have to have some basic understanding of ah spatial dimensions and relationships. An attention to space and in order to use that, they should be able to know how to read a map, they should be able to
do a map, they should be able to use, um computers, computers software is a key habit, GIS is an information system that is can be used um to map or I use to look at relationships and that is useful. Detection skills,

and, and then the third set of skills that is needed: statistical, one, maps and GIS, and then the other one that I would say is important is trying to think about what is the human participation ...planners is the one that has to make decisions based on how do you interact with humans, and so the ability to organize the public, ability to um encourage public participation, to to lead a group meeting to organize and motivate people. The human interaction is a skill that they also have to have.

So if you ask me, these are the three most important skills: the ability to read and manipulate numbers, the ability to map and understand maps and use GIS, the ability to interact with people. And use that as a tool to inform people about planning. So these are the manipulative skills that you need to be successful in Community and Regional Planning.

OK, very nice, um, now then, um we’re obviously going to end up coming back to some of these ideas. It never fails, as soon as you start to think about one thing, it brings...

Yes

... other things to mind, but let’s move on up to the knowledge bases. And we sort of touched on that a little bit with the quantitative

Um-humm

but uh what are the uh knowledge blocks that need to be in place in order for them to progress?

Well the knowledge blocks, usually, you know understand things at the community level and at the urban level they should be able to understand anatomies of urban systems how does cities and communities function, what makes them grow, what makes them decline um so you need to understand the workings of communities interacting, changes, patterns, that kind of thing. You need to understand that. Um, so that, um, for some programs would be urban, but for ours is not just urban it’s community and regional. So we we deal with small towns, we deal with um big cities, we deal with regions, we deal with communities. So you should be able to understand all of those um functions and how they work together with other systems.

We also deal with the institutions, we deal with... Um, planning works, because we have the backing of the government planning legitimacy comes from the backing of the government the government gives planners legitimacy to do their work, it is an enjoining to do everything based on the legitimacy that we get from the government so we should be able to understand the workings of the government. How does the political system work, local work, state work, national work? How do all these things work? So
that is a block understanding the workings of the government and governmental institutions. So that way when you have a problem, you know where to go, you know where to find something... how to find out whatever is important.

The third aspect that I would also consider important is what I would consider the special dynamics how does something that happens at one level affects the other levels you should be able to have have a view, have an understanding of how things are connected (Note systems thinking) and then use it to know a place to start so that you will be able to determine that if something is happening it’s likely to have xxx from, from us

so again, I’m not going to be very exhaustive, but I’m going to give you three areas: the one that I’ve talked about is the urban, the community, and the rural areas is how does that work the other one is uh public institutions. What public institution has the power and the authority to use if it’s about zoning, if it’s about legal issues, if it’s about land; all these things, we have to know.

And then another one is spatial interaction and that involves relations between places and people and power what happens in one place in uh the system.

OK, very, very interesting, um as I’m working through these interviews, I’m constantly fascinated with the sheer scale of the things you work with.

Yah, Yeah

And then, uh, the one area that we haven’t touched on yet is the, is the thinking skills, the mental manipulations, and how do they have to be able to think this stuff.

Well, I think that’s about xxxx

About...Pardon?

Critical thinking

Critical thinking

Um, I don’t think we all agree what that means

That’s the problem

Especially, what it means is to be able to sometimes do um self assessment, um to be able to read um reports on public issues, and be able to think beyond exactly, what is, what is there, um for instance you could have a plan that is written, you know, very professional, we... it has no mention of race or gender issues and uh... but when you, when you think about it, you might realize that if we implement this plan, it is going to have a negative effect on one people.
Yes

So, so in that way you, you have to go beyond what’s presented, and be critical, ask questions, ask questions that get to the intent and unintended and uh the ideas that are hidden and then you begin to question authority be able to, to, to become a what I oftentimes considered, a spokesperson for for the poor people, for disadvantaged disempowered people, and that’s what planners are supposed to do. Planners are supposed to be able to go out into the community, look at those who have the greatest need, and to be able to be the advocate for them. Um and these are some of the things that we need to be able to do. In terms of critical thinking skills, in terms of uh being willing to work for um people who would be... otherwise uh not have access to power or authority

Um about what I think that planners... also, and I think this is also true for most other disciplines, is have to have a sense of optimism... (Note part of creativity) because um what you have is that you, you are confronted with a problem with a problem, and uh unless you have that sense of optimism, you will not come up with a solution. The problem becomes so daunting that you just give up. But if you say I know there is a problem um but if you can be more positive about that then you think there’s a solution then you can look for solutions or you think this is something that nothing can be done It’s self-defeating not to look for some solutions when you know that there is a problem.

So this sometimes this is very very important, seeing yourself as a spokesperson for, for the marginalized, xxx, for women and children, be a spokesperson for them. And then have a very optimistic outlook about solving problems.

Ok, you’ve just spent quite a little time telling me about what kind of an attitude is necessary in order to find solutions, um that causes me to uh ask is solution-finding one of those main functions.

Yes, yes Solution finding is uh, well actually solution finding one of the things that planners usually do xxxx so you look at it and you say, so what do you think about it that is a means to Make decisions. That is a big one

OK, if What, what would be, now I’m going to turn it around the other way, and see if I can jog your memory, a couple of symptoms if you see them in a student that you begin to be worried if they’re in the right field.

If I see a student who does things because they feel that uh that is what they need to do to get through that students show commitment to anything If you notice this student, xxx of course that means they are not going to get a very good grade. Because in Europe, they are finding that you know, as a planner, you should be passionate about the issues that you deal with. That is really a way that you can be able to make a difference. So if you see a planner who is passionate about the issues you can disagree with them regarding what they are passionate about, but the passion to me is a very important trait, um that can help um students succeed in planning. Um It is a...... It is a volunteer work in the
community that can be to me is one of the things that I look for in trying to identify which of our students can be admitted to graduate school. Of course, you can have a planner who can just be um a bureaucrat who just sits in the office and isn’t really passionate about anything. Bring me something and I will do it I will do the basic um what is required and I will not go beyond that, and um, not go beyond that. You can have some who succeed in doing that, but I would not consider them very successful planners. I would consider planners are very passionate those who... have those qualities who do things because they believe in that. Those are the ones that I would consider being successful planners, rather than those who just do what is needed, what’s required; I would not consider them to be successful planners.

They, These need to be people who want to make a difference.

Yah, yah, that’s what I said, yes.

OK uh What would be the difference between uh you teach at different levels too, make a comparison between the students at the 200 level, and at the 500 or 400 level. So that we can kind of see where they, what they come in with as a base, and what it evolves into.

One of the problems that we do have in our program is that uh we are part of a college where you know, a lot of programs, most of the other programs have enrollment management. So architecture, landscape architecture, we have students who come in here and want to do these courses um some of them end up not getting accepted so they so they get into a...a...a City and Regional Planning So when you get them... some of them are not very satisfied, they wanted to be this, they wanted to be whatever and, and for some reason they aren’t in that, and they are in planning so they don’t know what to do, they are not excited, they don’t know what planning is all about. Then as you get them through the ah....... this program, um you see them get into the planning and become very excited about it. They become, they begin to see opportunities and kind of drop opportunities, opportunities to do something with planning and they become more excited, um so in terms of changes in the personalities, most of the people who come into planning are someone other than things they are thinking but a lot of them are people who are out.. or disappointed or something like that, then they come in there, and they are not excited about it but after they go through it, they get into it, they become more excited, more interested and they want to work very hard. So in terms of changes in personality, that’s what I see.

You see a motivation change that takes place?

Yes, yes, that’s it exactly, a motivational change.

In terms of the skill sets, I think that um you come in and by the time you are finished, you have, as a student, by the time you leave here, you probably understand more about uh how cities work, and you have some skills in um ah, how to do quantitative stuff xxx ah population projection, they may have done studio work so they know how to work with committees, not just in isolation, in committees, so they know how to interact with
people, they know how to do presentations how to stand in front of city councils or.. create and present the idea so they they learn all those things and by the time they are a senior, I think most of them acquire those skills.

Ok now, I want to go over a couple of things in closing that kind of caught my attention right away. You talked about spatial dimensions and spatial thinking... and I assume, but I don’t want to assume until you tell me, that you have an awful lot more dimensions that two ore even three. How many dimensions are we talking about here, in this spatial concept?

Well... we... Most of our, most of our work is is, our laboratory, our, our, our studio is, is outside in reality, in the community, so when you look at something, you deal with, you don’t usually reduce the objects that you are studying to models, two or three dimensional models, you don’t do that, you go and study them in the natural setting so that means that, you know, you go into the community and you deal with everything that you see in that context, in the context of the community, so you look at it in its natural dimensions um so, so, I mean, so that is how, I, does that make sense to you?

Yes, in my imagination, though, I’m thinking of so many dimensions that...

Yes so many dimensions, and we cope with that in terms of relationships so we look at dimensions in terms of relationships how, ah individuals, objects, communities are related (Note multidimensional relational) and that becomes very important So you look at the community, in its natural setting, and you go beyond the community to look at these relationships, which are in the community. You look at the people within the community, you look at the relationship among these people in the community. Its much a more complex, um sometimes less detailed than maybe architecture or landscape architecture, because the the the scope, the scope of a planner is much more bigger, is community, is notxxx Is not a building so you do it much more bigger scale, and that, that poses a challenge you don’t, always... the details are important but that’s not the only thing. (Note big picture thinking)

Yeah, That, that’s really interesting insight there on the, on, on the amount of detail that a person can literally deal with. Uh Sometimes I look at architects and I ask them why all architects seem to think in layers they work on that thing, and then they work on another thing so I asked an architect...that was the best way I could think of to find out... and she told me that you have to because of the amount of detail, you can only conceive of so much at one time....and yet, i..it sounds to me as though you’re telling me that um the City and Regional Planning approach is to work on a general level and then dive into the details

yeah, take a, take a, take a big view um of the situation, the whole situation, and, and look at that, that’s how you can descend into the relationship. There are some planners who look at... are actually writing about agricultural policies in the state of Iowa and they’re thinking about how that will affect China.
Ah-Hah

So that, that’s an important level, you are thinking across countries, across continents and what does that mean and how is that going to affect everyone, so again, that’s different, that’s much much broader.

Yes, that’s very interesting. And, uh, I, I have heard patterns, you talked about patterns, and actually patterns is something that um, that I’ve heard before, but anytime somebody says patterns, I always want to ask what kind because there are so many different kinds

Um-hmm

There are issues and items that tend to repeat each... that tend to repeat, and that’s one kind of a pattern; and then there’s the kind of pattern like a template, that you might cut around in order to determine the shape and size, would you like to talk a little bit about the kinds of patterns.

Well, I think the kinds of patterns planners deal with is uh the ones that tend to repeat.

A repetitive pattern!

Yeah, that, that’s what planners generally um are interested in. A repetitive pattern because that allows you to be able to project something about the future, to go from the known to the unknown and patterns helps us to make that leap, from the known to the unknown. Um, if you know that every time that you see this, video, you see a white light then it becomes a pattern and then in the future, you say, well, I’m likely to see this, then you expect to find this one by it. So that’s how we pro... project into the future. And, and, and, that’s what Planners do. When they use patterns. Um, sometimes you look at patterns in terms of history, how, patterns of history, patterns of time, sometimes you look at patterns in terms of space. How the pattern varies from one place to the other. So we look at the patterns across space. Sometimes we look at patterns across objects, or people, we can uh talk about the profile of um, uh, the unemployed person, who is a person who is not likely to have a job. then we can see that that person is likely to be a woman, that person is likely to have no education that person is likely to have a single Mom. So you, you create a pattern, you create that image, and then you go out and once you see somebody who fits that criteria, you ask need to ask yourself if this person has a job and if you don’t have a job, then how do you come up with interventions and the pattern allows you to be able to um come up with some solutions. So that is the usefulness that the pattern has for planning.

OK, you mentioned history, how important is that?

Usually what planners do is bring together all the social sciences. Somebody might look at it differently, but Planning from my vantage point, from my own... from what I do I look at planning as ah as ah something that allows you to bring together all the social sciences. History is very important, political i... issues are very important, economic
issues are important, cultural associations are very important, um but generally, you
know we have um history, as bru-xxx economy as xxx um, um, and geography xx.

Geography!

So we’re talking knowledge bases applied to a location.

You have asked, over everything, I think, you’ve asked a lot of good questions.

Thank you, I think.

It’s very interesting.

Yah, it ... It is, I’m quite interested in, um in this, this form of design...

Yes, that’s interesting

We design policy, so we do policy design, and ah....

.. and the policy literally changes the physical design,

Yes, So planners do policy design and uh we expect most of our graduates students to be
policy designers. Um, um so then you might not even design a city, even, you design
something xxx... the policy you do policy design...
Yeah, the media is just really, really unusual, I do believe that you are designers, there’s... I... I have no trouble finding, finding things in there that say, um we’re doing design, but the media is just enormous.

Yeah, yeah

Well thank you very much...

You’re welcome

... for spending this block of time with me and giving me your insights.

You’re welcome
What I hope you will reflect on for me today is or maybe are the qualities of a successful student in Community and Regional Planning.

From your experience, and in your teaching, what things seem most important to student success in Community and Regional Planning. These “things,” might include certain aspects of design thinking, manipulative or constructive skills such as guiding material through a sewing machine, or areas of knowledge.

As students work their way through Community and Regional Planning, what do they need in their tool box. Please include both the things students seem to do easily and those they struggle with.

...What do they need to know in order to be good at this, to be able to do...

Before, they need to like what they are doing. They need to understand what Community and Regional Planning is all about. And they need to have a sense of purpose. Community and Regional Planning is a discipline that has to do with actually doing things for communities. If they do not have a vision they are not going to be successful, and the other thing is the will to learn; but I guess this can be said for every student.

About life, I believe that is prerequisite to be a good student.

Ask about knowledge bases

They have to build on, first of all, the role of space in human life, how space change behavior, and uh, modifies... etc, etc. etc. So what they need to understand is what we call the spatiality of human life. If they do not understand the role of space in, they are not going to be successful. First...

Second they need to understand the role of policy.

Some of those are quite interesting... um, could we elaborate just a little bit. I particularly want to come back to the use of space, but let me fill in the gap here first; and can you tell us a little bit about the role of policy, what is that? ... bearing in mind I’m a Graphic Designer.

Yah, yah, well policy determine the land use.

Ah, Ok, now let’s go back, and can you elaborate a little bit more on the role of space in human behavior and life?
Uh, human being lives in space, even though traditionally we have been thought that time is the most important thing in human life. I think that time is important, but maybe even more important than time is space. And I’m not saying that life is determined only by space, but the quality of the space that surrounds us is very important. So we are here in this room, which is a space. We are in college which is another space, and we are in a society which is made up of multiple spaces... so they have to understand that.

What would be an example of a spatial adjustment that a Community and Regional Planner might incorporate?

Um... In what sense.

How might a Community and Regional Planner change a space... purposefully?

Yeah well, understanding for example that a space is used by multiple publics and then so when they design a certain space, they have to incorporate... the understanding of multiple uses of space.

So access would be a feature?

More than access... yeah, access is one, but also what you call it... flexibility is another one, and interaction... interactive is another one.

Ok, now there are some interesting thoughts.

If these are fundamental understandings, what thinking skills do they need to shove these around and make them work.

First, they need to understand that space is not free for all, but and that there are certain categories, of um classes that have not access... or they have limited access to spaces.

Are we talking about social classes?

Yeah, and just looking at problem of social classes.

In terms of um thinking skills I want to give you an example from a totally different discipline, so that I don’t influence your thinking... if it was clothing design... which of course in none of the college of design...understanding the relationship of the garment of the body would be a complex thinking skill it’s a kind of mental gymnastic, I guess I’d characterize that as working with the relationship of inside to outside...what are the relationships they need to be able to think of.

Well the relationship, basically the relationship is a um a political relationship... it’s the ability to perform one’s identity in space... and um... which has not been the case thus far.

Ok, give me an example of where you saw a major conflict there...
Well, in the sense that for example, certain classes have not been able to take advantage of... uh you know well, for example you guys are American, you know what it means living in a segregated society... so that’s places for black and places for whites.

Yeah, that would definitely be a problem with political access. Ok now we’ve got one more that we want to kind of treat here and that would be manipulations. Stuff you need to push and pull around with your fingers... or some people have incorporated mental manipulations into this.

Planners do not need that... Planners just need to you know, I think they just need to have a basic understanding of design. And that I would consider it important for them to know how to draw a hand, as well as by CAD, operate design software, but that’s not the major... major skill of a planner. But definitely manipulation of space, they should be able to understand it... and I don’t see that at the present time.

You don’t see them developing a sense of space?

I don’t they don’t even know what is it.

That’s scary!

Is not scary, that they are not taught to think about like that, they are taught to think of the space as neutral and they are taught to think that uh as planners are the expert and so they tend to much analyze that too much in terms of knowledge.

They don’t have enough understanding of the political and social constraints that are placed upon space?

Basically they do not understand that space is a social product. The space is constructed... it’s a construct, and uh they think that spaces just happen... that’s what I think.

Ok, they seem to feel that space just happens. You said a little bit ago that they need a basic understanding of design would you like to take that apart a little bit into the basic understandings that you...

They need to know what an elevation is, what a section is, and what a plan is. They need to know the understanding between a perspective and some other thing. And they need to understand uh details of space they are not used to that... that’s what I think they should know.

Give me an example of a detail of space

They do not understand what a corner means, what a surface means they do not understand materiality, how a different material may or may not facilitate a certain social action.
Oh, that is cool... Ok so far all good input. One of the things that intrigued me right away... is that when you said design, you have a... you gave me a different list than I might have gotten in my own department... and I think that’s one of the intriguing things in the study I’m presently engaged in. As soon as you hear the work you think you know what it means, but then, you always ... that’s why I did the interviews... you always have to dig just a little deeper to make sure you understand what the word means to everybody. And the same thing has been true of space although, I think this one is probably more consistent with the spatial issues that we’ve been confronting. Thank you, that’s very interesting. And I will see what else I can make of this.

Turned off recorder
As I prepared to leave the office, another interesting topic entered our conversation, so I asked Alfred if I could turn the tape recorder back on... and asked him to reiterate some of that post-interview conversation.

Say that again about the clear identity in the college?

Yeah, About how to teach space, you know what is space... how space is important in human life... I would not get a sense of where the college is, I mean I get a sense of where architect think about space and um, but um, and maybe it’s Ok, you know, but I would like to have a core course that would deal with issues of space, and the importance of space in human life. I haven’t seen that.

What would be the ideal contrast between an entry level student and an exit level student in their understanding of that concept?

Yeah, they enter here, and they think that space is a pre-given, given unproblematic. And they get out of here thinking that space is a social construct, and it’s always problematic.

Ok, yeah, that would be a substantial change in understanding.

I would say so... and I think that that would be for architects, who always think that their discipline is above politics... they just make beautiful buildings. Sometimes... not all of them, and uh we are trying to change that... and planners who always think that they work for the, the common good... and of course it depends on who you talk to in society.

Yes, Jamie Horwiz, upstairs in architecture I think works with those human behaviors in spaces... every now and then, I get an opportunity to talk to her.

My idea is always this one to talk to students, and you have been the object of planning, you are going to have a very different understanding of what planning is.

Are they finding that this is a favorable, or an unfavorable experience?

They don’t think about it. Maybe because...
Even if they’ve been affected by it?

But they don’t know they have been affected by it.

...so you have to teach them that first...

Exactly, so when they think they think that planning is always good, I always tell them, what if you are an African American, and you have been uh, you know, the object of planners, where planners have come to you and told you that this is the way you should live and this is the aesthetic of your space... etc, etc. So they don’t think like this.. and um, you know... but this is not a problem, I think it is a generational problem

Yes, that could be... they call this the “Me generation,” right now.

Yeah... little bit, you know... I had this problem, you know. I came from a country in Italy, uh where my family was displaced from downtown and removed in the 1930’s into the periphery, to make space for a certain type of new vision of the city. So my whole family was removed from the social network and relocated to a totally different part of town where they were given a place to live... and a sort of way to live in that space, so I am particularly keen in talking to students about this idea of top-down, bottom-up planning. Who is the expert, who is not the expert, because they can make a lot of mistakes.

What’s a bottom-up planning?

Bottom-up is that uh, where you have the stakeholder involved in the planning of the space. Top-down (actually said bottom up- more likely intent has been substituted) instead is where you just go down there and you tell them this is what you need.

OK

Why do we not like professors, right ... sometimes we do that.

... and I can see why students might think I’m the planner, I just tell people what to do.
What I hope you’re going to reflect on for me today are the qualities of a successful student in Graphic Design – your definition of successful. From your experience, and in your teaching, what does it take for a student to be successful or become successful in Graphic Design? For purposes of diversity we want to try to talk about three areas although they tend to converge in talking about them. We want to talk about thinking skills, knowledge bases and manipulative abilities. So, from your experience – which is considerable – what does it take to be good in Graphic Design?

Undoubtedly, in my opinion, the thinking skills are the most important thing, and analytical, critical thinking skills, if you see those are the same or separate... I don’t know. But the difference between a good Graphic Designer and a great Graphic Designer is the thinking, so while I think form is important, I don’t think it makes somebody rise to the top so it depends on if we’re talking acceptable level, an employable level, or we’re talking about what is the top of the profession. If you’re aiming for the top of the profession then critical thinking skills are more important in my opinion.

Ok, right away, you’ve said one of those terms that I like to ask people to describe in greater depth, because I’ve learned that people have different visions of critical thinking. Would you like explain that a little more descriptively?

OK, For me I would say critical thinking has to do with being able to hear a problem or a scenario and to be able to take it apart, to be able to prioritize the levels of importance, in terms of how to approach such a problem, to be able to incorporate prior knowledge from a variety of different experiences to bring them to the issue...Critical in a sense of being also being able to spot the irregularities or inconsistencies in the problem... should I use an example?

Beautiful

I think about... I don’t teach practicum that often, but when I think about teaching practicum, when I have done it in the past, it is shocking to me that the students will often interview a client and not ask any of the major questions... and that’s because if inexperience, but it’s also because they are missing something about the nature of what we do... They think that we just take assignments... that we are just told what to do and then we pretty it up.
Ah yes

So the client walks out and I’m just appalled, and I say to the students now do you understand why they need that? Do you agree with the fact that they need that? What exactly were they asking for? What are the alternatives to it, and what sort of concepts would they be open to and what wouldn’t they be open to? And they don’t know any of this, they only know that it’s a brochure and that it’s two color and they do or don’t have a logo... I mean, you know... and it happens a lot which makes me think that it is the... not only that it’s important but it’s maybe a shortcoming of many design programs. It’s not unique to Graphic Design, because I can also think of an example of where I was on an interdisciplinary project that had students from all departments in the College and the DOT wanted us to do some welcome signs or installations for each of the interstates as you enter Iowa. And they told the students they don’t want any messages that have to do with agriculture. Yeah... and students just bought it 100%, and the faculty – there were like eight of us – we were shocked! We were like, why did you agree to that, why didn’t you argue with that? Did you ask them for what reason would you want to represent Iowa with a non-agricultural message, and they said, “The client doesn’t want it.” The client is WRONG, you know, it was so obvious, it was obvious to all of the faculty, not one of us thought that, that wasn’t a mistake. But the students all were just like ok, so they all started creating things that had to do with electronic images and... What, is this Silicon Valley here? I thought we grew corn.

That’s not Iowa

We’re rural, what’s embarrassing... why do we have to hide that? Because somebody at the Chamber of Commerce in Des Moines thought that... enough already with the corn. So anyway, those are... I would think if you had critical thinking skills you would immediately listen to that and say, hold on, let me understand what it is about an agricultural message that you object to, and maybe come at it from a different angle. Maybe you can’t win that fight, but at least ask why. I mean, and it turns out that the students that the design they picked was not agricultural, but then again I don’t think we convinced any of the students to push agriculture in their design.

Hmmm

So to me it seemed sort of like having the coin, the Iowa coin, have nothing to do with the fact that we grow things here... and there were people who wanted that, who wanted to have nothing on the coin... yeah, so I mean it’s just that sort of question of like are we just passive recipients and we just sort of like do whatever they tell us to do or are we trying to get them the opportunity to get beyond that.

What is the relationship of critical thinking to critique?

Hmm, again, the question of being able to prioritize... being able to decide what is the most critical... what is the most significant criteria that we should be discussing at this moment, at this stage in the project or in response to this person’s work? I try to get
students to make criteria lists at the beginning of a critique, now and that you know that is like... Hmmm, you know... and I say to them, you know this stuff, what are the criteria that we need to use in order to talk about this work? Slowly they remember that there are criteria; it’s much harder for them to decide which of the criteria is the most significant about this person’s work... so if everybody’s at the same stage and this person has had one particular problem and this person is having another particular problem that’s hard for them... maybe that’s beyond what we can expect of them, but I do think that the main thing is being able to look at the big picture and say at this stage in the project with what this person is showing, what is the most important issue to discuss right now?

So the difference – if any – between critical thinking and critique is prioritizing what you’re going to talk about...

The difference between them?

The difference or the relationship... Well, if it’s a difference...if it’s a relationship...

Because what I meant in that context was how critical thinking helps you in a critique... how it’s different from a critique, I mean critique is about things other than concepts... we talk about form as well.

So it is an application of critical thinking.

Critique is... yes, yeah yeah.

Ok, and one of the values of critical thinking is that it helps prioritize the criteria... and you’ve used a nice word there... because I’ve used that one a lot, and every now and then I get told I’m wrong for using it... criteria...

Why is it wrong?

Because other people like other words like say factors. What is the role of criteria in design?

Um, I think if you are constantly reminding students about criteria, it keeps it from becoming just a pure form experiment. I think they are... they find form easier than concept and function and they always will try to solve things on a purely visual level if they aren’t constantly reminded that form is only one criteria of the message. So, I think that to not have criteria... all you’re left with is I do or don’t like it... and you know how I feel about that...

YESSS, and I think you just gave me two examples of criteria, concept and function?

Umm-hmm

Are there others that are really fundamental to the xxx?
Well, I mean we just had a preliminary critique in wayfinding yesterday, and readability was a major criteria. There are sort of subcategories of form and concept, and function... readability would, I think, come under function, but there are other things depending on the nature of the assignment. There are other functional issues, like safety, which comes in, in wayfinding, but doesn’t come in, in print design. So each of those categories comes in... in terms of concept we have criteria of uniqueness and clarity, and appropriateness. So yeah, that’s nice and clear and it’s very unique, but it has nothing to do with that client; so there’s appropriateness as a criteria.

Well that took me through the initial group of thinking skills that you listed... good ones all of them... Maybe one more we should talk about: Analysis, what is the nature and end result of analysis in Graphic Design?

Um-hmm, I guess I would to say analysis is going through the who, what, when, where, why questions... and how, to make sure that all the questions about the project have been asked. because if you go back to the DOT welcome signs as an example; the students asked what, but they never asked why. Some of the architecture people asked how... which had to do with plans for installation... where does it go, and how will we construct it? But why, means what do you want to accomplish with this and why do you want these things... and what is not intended... so a full analysis would go through all of those things including the client’s needs and motivations, and what we know about their audience and all of that. xxxx

So it’s a questioning process, and a thorough questioning process?

Um-hmm, um-hmm, you know under the surface of what is stated as the project brief... to better understand... you know I’m doing that with seniors right now... we’re doing that parity project for corporate identity, and they start out with logo designs, they start out with kind of very predictable small ideas, and I say take a step back, what motivates humans to desire that thing... is it fear of death, is it fear of rejection, you know; you step back and ask bigger questions. That’s part of analysis... very underplayed....

If we take analysis as a prelude, what comes next?

I don’t know what you mean...

Is analysis the first... well probably not the first, it’s probably the second or third step... but does it precede or lead to another process?

Well, again, it depends on the nature of the assignment, but it most of the time leads toward conceptual development, so what kind of message might I be able to create that would solve this problem?

Ok, so it’s where we start to... after that we start to put some things together that begin to give us a sense of direction?
Um-hmm, Um-hmm,

Now then, are there some really fundamental things that graphic designers simply aren’t going to be ready to advance until they have some knowledge of those?

Um, yes, basic design principles, I think, you can have great ideas but not be able to depict them in a compelling way if you don’t know how to organize them, and of course typography is the big difference between mediocre designers and good designers... probably is their ability to handle type... not only because its aesthetically pleasing, but because being able to handle type is a form of information hierarchy. So everybody thinks it’s just purely a beauty issue... like making type that’s lovely, but really a lot of what good typography does is clarify the relative levels of importance in the composition, you know. It’s something that we do, and don’t even explain to the public or to the client that that’s what we’re doing.

Design principles... you want to give me a short list so we have it clear what you’re talking about? I know, and I know you know I know, but I need you to say it.

Ok, repetition, similarity, direction, radiation, gradation, confrontation, anomaly, economy, focal point, did I say concentration?

I don’t think so...

Ok, then contrast and all of its sub-levels: contrast of line and mass, contrast of geometric and organic, contrast of curvilinear and rectilinear... rectilinear/angular, contrast of soft and hard, contrast of dark and light, contrast of negative and positive, contrast of static and dynamic, contrast of warm and cool... hmm...

Warm and cool, yep, that at least gives us, or eventually my readers an idea what kinds of principles we’re talking about, because I’ve learned that principles may mean different things to different people.

Yes, I mean there’s, you know; there’s a few terms that are substituted... you can say variety for contrast, people say simplicity or reduction for economy, and they say emphasis for focal point, but usually they’re talking about the same things. Some people say xxx for what I would call elements, and there’s a big misunderstanding among students that... I was having the students write design principles on their matrixes yesterday, some people said ‘organic’ as a design principle, and I don’t think organic is a design principal, I think that it’s just simply a description of a type of shape...

It’s a possible contrast...

...but it’s sort of like saying a circle is a design principle... and it’s not... so...
Ok, so we’ve got thinking skills, we’ve covered some basic knowledge bases, what about manipulative abilities? What do they have to be able to push and pull around with their fingers, toes, elbows if need be?

You mean physically manipulative...?

Yeah, manipulate... often fingers, but not always

Uh, they need to be able to draw.... xxx

Draw, that’s a big one...draw hand eye coordination... You want to talk a little about what kind of drawing is prevalent in Graphics?

I need them to simply be able to do ideation drawing which is like a rapid visualization that you don’t teach. We’ve tried to incorporate it into the drawing foundation class, but it doesn’t... most of the people who teach that class don’t think that that’s a valuable skill.

OK, actually, I’ve heard that ideation kind of drawing thing several times. Are there other kinds of manipulations or skill based types of things they need to know?

I would like them... you know for my three dimensional classes, I would like them to be comfortable dealing with craft things... build with paper and cardboard, think three dimensionally so that they can build something, and I usually try to get them to build rough models because they don’t have that skill. ... and they can’t believe they did it... it’s apparently a really valuable thing to do. I have some people who are completely tortured by this process, and so I say OK, so I guess I can’t part with that.

What is the nature of that three dimensional kind of thinking?

What’s the nature of it? Um...

How can you tell if they’re doing it or not doing it? That sort of description would help...

Oh, well... if they’re not doing it and I say... if they show me a sketch and it seems kind of 2 dimensional, even though it’s supposed to be 3 dimensional, and I say, OK, here are some paper and some tape, build me a little replica of what you mean, and they can’t do it.

Hmmm...

Now if you’re visualizing something that is ultimately going to be three dimensional, you should be able to figure out whether it has two legs or a solid base, or whatever. You should be able to figure out relative proportions of things; it’s taller than it is wide or something like that...And sometimes they just freeze at that moment.

Really....?
Which means that that hasn’t been... that’s something they haven’t really worked on. Actually, in our program, we’ve actually, I think, increased the 3D stuff dramatically partly because of the foundations class, and then they do a three dimensional project in 270, now, really successfully.

_Hmmm, I must see that..._

It used to be with cubes, and now, last Fall they did completely open and the stuff was wild... amazing stuff, experimental, um, I don’t teach that class, so I don’t know how they got them up and running so fast. Some people did things that were not very experimental; but others just really went to town.

_Cool_

...Which, by the way, I don’t think they could have done without that foundation.

_Well good_

... That’s just my opinion

_Ah, what would be your first clue, or what would constitute a red flag that a particular student might have entered the wrong discipline if they’re in Graphics? Or, on the contrary, what would be the green flag that would say, “Boy I’m glad we’ve got this one.”_

The first red flag to me is a lack of curiosity... a sort of just this is what you said for us to do and so here it is, I did it. You know, without any...... taking the road... the least difficult path of saying, “I guess she wants a hobo in a row boat.” ...As opposed to the people who are really excited about it who are the ones who didn’t wait to be told exactly how to solve the problem, they went ahead and started exploring things, and did some research, and aren’t afraid to put some crazy ideas out on the table in front of us... that’s a big one. So, another thing that is a red flag to me is people who do not think that my methods have any bearing on them. So if I say you need to try to do rough sketches... you need to do rough sketches with marker, you need get some color pencils and explore color relationships, and they don’t do any of those things, that to me is sort of like... that’s a lack of curiosity, that’s the same... the way I do things is fine, I don’t even want to try finding out that somebody else’s method might also work or work better.

_I don’t need to be here; I already know it all. (Note: willingness to learn)_

Right, right... I had a drawing due in class yesterday. The first two weeks I talked about process, process, process. I explained why, you know, I know this isn’t new to them, why you will not go to the computer in logo design until your idea for your logo is solid... why we will go all the way to critique in markers... and yesterday was the first day that they had sketches due. And I had a student in there and he had created his designs on the

GD-A7
computer, and I said what is this... he had already put a signature on it? And I said, we haven’t even approved the concept for this. And he said, I know, but this one I really couldn’t sketch it, it was a rectangle. I really couldn’t sketch it... I had to go to the computer. And I said that isn’t what I asked you to do... and everyone at the table went hee, hee, hee, he’s in trouble. That’s a red flag for me, that’s a huge red flag. So nothing I said so far would convince him? So... we’ll see, you know, but that idea that, yeah, your methods are just your methods, it’s not part of a teaching methodology.

Chuckle... We’ve all seen them

Yeah, yeah, but that is a big red flag... people who don’t have enough curiosity to say, “I bet she knows some things that I don’t, and it would at least be worth trying out what she thinks works.” (Note: willingness to try new things / learning strategies)

Yes indeed... and taking another look at those students, from yet another perspective, Think about your entry level students, which I suppose, in your case, would be Sophomores, for the most part; and then your Seniors, and what is the difference that you see between those two groups... what they can do, and how you tend to teach them. You want to make a comparison between your entry and your exit level?

I haven’t had sophomores in a little while, but I did teach Sophomores for many years. Sophomores are much more curious, they are much more interested in what the professor has to offer, because they have a beginners mind, and seniors are using that. Seniors, their increasing skill is counterweighted by their obsession with the superficial. They want portfolio pieces. They just want portfolio pieces, and we have to talk them into giving another year to conceptual development and design process development. They really, really want to just give up and say we got some really, really good stuff out of that class. Whereas the Sophomores are not ready to put together a portfolio, so they are completely in tune with the fact that what they’re doing is building a skill.

OK, so at the sophomore level, we’re doing more skill building, and the students are more willing to do that.

Um-hmm, yes

... And at the exit level, they have the increased skill, and their goal is to build a portfolio, which may not be consistent with your goal?

... And they have, for the most part, had an internship, which makes our teaching much more difficult, because the internship gave them exposure to the real world, which has things like speed and cost efficiency. So on their internships they don’t do process sketches, they go straight to the computer, and so suddenly they think that our methods are busywork or hazing kind of stuff. Because they think that we don’t know what the real world is about. The real world goes straight to the computer, and just cranks stuff out as fast as possible, and so there’s some unlearning that has to happen. I don’t teach them very often in the Spring semester, and I think the spring semester must be just hell,
to teach because at least right now I think there’s something that they can recognize as being new... new stuff that they haven’t quite gotten their skill set up... in the class that I’m teaching, which is Corporate Identity, and the assignment project, I think they’re recognizing that, Ok, I’m not good at this yet... but by Spring semester they’re just obsessed with prepping for the real world and the depth of thinking seems failed.

*You want to give me a short list of those skill sets that they gain from Sophomore to Senior?*

Um-hmm, well, simple things like page layout, sequential design, systems design... is a big one, I have the last few years taught a wayfinding class, and they have no experience in systems design, yet they’re going to have to do it on the project, so... But they get that at the close of the Junior Studios... I guess, you know the conceptual development; the Sophomore projects are much more form based than concept based, so there’s a lot of conceptual work that happens in the Junior Level... and in some of the elective classes that they don’t take until the Junior year.

*So we would hope that by the time they are leaving you, their work has a much stronger conceptual element?*

Um-hmm, I mean that is not across the board in Design education, We do have some distinction compared to other schools in that we push concept a lot more.

*Ok, so we’re starting to get into the nature of the transformation as students move through the program. What types of things do you specifically want to see that change in them as they grow into Graphic Designers, literally?*

I want them to become self-reliant; I want them to not fear showing their ideas; I want them to be able to go home and work on a project without wondering what I want.

*Oooo...*

Some do, and some don’t... some people will get all the way through and still want that. But I want for them to be able to say, “I wasn’t exactly sure what we were supposed to do, but here’s what I did,” as opposed to the people who come up and have done almost nothing because they weren’t sure what I wanted. And, you know, if you want to stay at the bottom of the profession, then just wait and be told what to do,(Note: initiative) but if you want to rise to the most interesting positions then you’d better figure out how to define the problem. So, I think it’s that; you learn how to define the problem if you learn how to figure out what it is you’re supposed to be accomplishing. (Note: define the message)... then you can be more self-reliant; you don’t have to wait until I did or didn’t do something to correct it... I mean there’s a... you know that thing they do on the first day when sketches are due, and there’s always a bunch of people who did nothing... nothing! Because they want to see what somebody else did and see if they understand it. They want to see somebody else go through the critique process and be told, “No, that’s not that’s not the right way to handle this,” or, “Oh, these are wonderful.” And then
they’ll go back and work, and I used to, but I don’t anymore... I used to give first day of sketches grades, like part of your final grade will be how far along you are on the first time you present sketches. I gave it up because even that wasn’t a motivator; people would still come in with nothing.

*Might have to send them home if they came in with nothing... I’ve got nothing to teach you today... you don’t get to see what the rest of them did.*

I know, you know, but that is the difference. People who are progressing nicely are the ones who... they trust in the process of learning and so they are willing to put their stuff out there, and at the risk of finding out that maybe this wasn’t the best way to do it. (Note: receive critique eagerly)

*We keep coming back to problem definition, you just gave me another one for this thing that I haven’t had a good word for... but we talked about criteria, design criteria, setting design criteria, problem definition, finding concept... these are kind of all part of the same thing. And I hear another word in some of the other departments... you used another word, while I was listening to you, you called it a design brief.*

Um-hmm

*I’ll hear the people in Architecture or Interior Design talk about the design program, and when they’re talking about the design program they’re talking about the virtual checklist or what will be in here.*

Um the design brief is a term that I like because it makes sense to me, it’s not used that much in America but it is what all European designers refer to it as. It is the... the design brief is the assignment as it was described to you by the client. It does not necessarily identify what needs to happen. Sometimes it’s very surface level, you know, we need to communicate that we made a new ice cream. We think that our communication should happen in a series of ads. The design brief says, you know, we’re going to spend this much money, we want it done by this deadline, and make sure that the strawberries are prominent. So yes, it is different from a design program. I think that the design program, in my understanding of that term from the realization of exactly what needs to be in here. So the design brief sort of comes from the client and is open to question... is open to definition. So if there was any way that the design brief from the DOT for the welcome signs would say we need to communicate that we are a state that is much more than agriculture... So the design program would not necessarily say that.

*There seems to be a major core of things around this process of establishing what the design will be, and then designing in that direction... that seems to be really fundamental. The problem I’m always having is getting at the language that’s going to say that to everyone.*
Right... and we’re all resistant to sharing the language these days the one we have although because I like the 3D stuff, I have adopted a lot of their terms... more than maybe the others in Graphic Design.

Well, that is the general list of questions I usually ask, are there some other things in here that you wanted to talk to me about or you think are really...

There was something I was just thinking I should follow up on... and I’m trying to think where we were... We were at the... It has to do with...Oh yes, in terms of education, I think that increasingly over the years I have started to push with the students that there are project criteria, but then there are learning objectives for the course.

Ahhh...

And so, for example, in the Corporate Identity Project in 470, symbol design is one of the learning objectives, and so if you come to me and say, “I’ve researched companies like mine, none of them use a symbol; they only use a signature, therefore I’m going to do a signature.” That might make sense for a real client, you might be able to say, Ok, I think it should be purely typographic, but the learning objectives for the course say that you need to develop... more work on symbol development, and so therefore, that’s what we’re going to do. And so sometimes the learning objective overrides what ... it overrides some of the possible solutions, so you can’t get out of this project without doing a symbol. Or you can’t redefine the newsletter project to say it’s not going to be a newsletter. You know what I’m saying? There have been students who said, “Nobody does a newsletter anymore, so I’m going to do mine as a web site.” Nice observation you’ve made, it’s true newsletters are not that common anymore, HOWEVER, if you choose to not learn that part, then you’ve missed a valuable part of the learning objectives. So I think that, is something that, it doesn’t get looked at a lot, it is a way assess them... to have learning objectives and then to determine if they have been covered. But the students don’t know about the learning objectives because they aren’t aware that... they don’t think we have a plan, they think that we just have some assignments that we give. So I think that... I don’t know how it fits into your questions, but I think that that’s part of what design education needs to do is make sure that we have learning objectives, because if not, then the students can just say, “I’m choosing to make mine really conservative because my client is really conservative.” Well that’s nice, and in the real world maybe you would do that, but we’ve given you a chance to explore, and we don’t want you to come up with a conservative solution. We want you to try something. So I think that it’s a little bit of a sometimes a contradiction there... by saying to them, define the problem, figure out what your client needs... but if at the same time your client needs a web site instead of a newsletter, SOR-RY! You know... this is pretend.

Ok, very nice, very concise... a little shorter than usual actually, but I think you just kind of knew exactly what you wanted to say.
Ok, in that case, we’re ready to ask what is probably the main question: from your experience, and in your teaching, what seem to be the qualities of students who are successful, or become successful in Graphic Design? And in three areas, knowledge bases, thinking skills, and manipulative abilities. What do they have to have in the toolbox to be good at this discipline?

They have to be persistent and good... good organization, and generally intelligent. You know probably as much as I do, the research on intelligence says that if you have high intelligence you’re not good in one field... you’re good in pretty much all fields (laugh) ...

So um we have highly valued good grades and good academic performance in XXX Graphic Design

Now um... let’s start to... it’s relevant what they have coming in, but also let’s say um, what qualities do they have to have as they advance in the program? You said communication... There are so many kinds... do you want to elaborate on that a little?

They need to understand visual and verbal communication skills and be able to articulate themselves in a variety of media... so perhaps through photography, typography, through written and spoken words, and understand the relationship between those... how do you craft a message visually and verbally.

Ok, well you’ve started on knowledge bases, they have to know some photography, they have to know some typography, um, anything else?

Is that coming in, Jane, or is that what we expect them to have when they leave?

Um, I’m going to ask you that eventually... uh, we can do it backwards if you want to. You want to make a comparison between your entry level student and your exit level student... what is the transformation in there?

Uh, in an entry level student you need have to have someone that is I said, skilled in communication and willing to take direction so that they are able to learn in this regards. The student as they advance and exit the program generally have skills in um, image making, verbal communication, typography, color usage, conceptual skills, conceptual thinking skills, and to a certain degree, common design research practices... so audience analysis, and um, visual assessment, able to pick a visual style, and apply a style to a message, able to understand how to form a message, by a variety of media... whether to make a web site or a poster, how to coordinate those graphics together in terms of kind of a system type of thing. An entry level student, usually just by comparison has an interest in visual communication and perhaps some skills in two dimensional space, or three dimensional space, and perhaps some material skills that they have gained from high school or their own intuitive processes... but those are usually rather rough.
Well there’s some interesting things in there to work on. Um, an understanding of style, and how to apply a style... want to clarify that a little, and tell me something about where they get this from... sources?

In a program such as ours, hopefully they’ll gain some of it through historical reference, understanding traditions, various traditions... what does it mean to have a Bauhaus type of style, what does it mean to have modernism or post-modernism kind of styles, they may also understand more of what we may think of as vernacular, so perhaps if they want it to look western, or they want it to look contemporary, or if they want to look like it’s targeted to children, or they want it to look corporate, and so they should understand, visually speaking, what makes a message look corporate, versus what makes a message look playful... and how to target it, what makes it look in gender... masculine or feminine. And so their understanding of that would then be plugged back into, um, different visual qualities... line qualities, color relationships, spatial relationships. We also see cultural emphasis there, so for instance, if they wanted to make something look Asian in influence, the student should be able to understand and visually articulate space, you know, give a sense of an Asian influence, perhaps, versus how would they handle space to make something seem like um, high-tech or corporate? That, that, understanding how to articulate those differences, in a visual format would be very important.

So one of the things you’ve told me about here is the communicative properties of style?

Yes,

... And in the process, you said some more things that were very interesting.

That’s good; people don’t usually say that to me, so go ahead.

You talked about two dimensional space, three dimensional space, and the ability to think spatially. What is the nature of that for the graphic designer, or even for the two dimensional artist?

Well I think the ability to think spatially is very important because you have actual space, which is real volumized space, you have two dimensional space which is within a like a picture plane, and then you have what we might refer to as like a virtual space, and that could take on senses of time based media where space over time is of importance. It could be um implied space that we talk about in graphic design, like overlapping elements, and use of perspective, atmospheric perspective, or other types of spatial manipulations, light-dark color relationships, um how to break boundaries... creating borders and breaking borders, these types of things, though, would be primarily used for message making, for purposes of meaning... so if I wanted to make a message that showed somebody breaking out of the mold, then I want to create a symbol, or a poster, or a design that shows breaking a spatial boundary. In a more physical sense, designers need to be able to design for both 2D and 3D space, and um, 3 dimensional spatial issues are often times given over to other areas, but I don’t think that that’s necessarily, you
know, how it should be. I think graphic designers should be able to make messages in a variety of languages, and they should understand spatial languages, pattern languages, formal properties of light, distance, relationships of material usage... probably not to the extent that architects and interior designers understand them, but certainly in terms of their... what I would call their... visual language and their informational properties... because those are areas where often times the architect and the interior designer doesn’t quite go. They’re more looking at the sculptural properties or the habitation implications of space, but not always the communication in terms of how it, how it informs the user... and so I think that information and um, informative power, communicative power is always kind of where the realm of Graphic Designer is at, so it compliments and overlaps with these other disciplines, but does not replace them. Does that make sense?

Well yes, I think that this is the first time I’ve heard anyone say anything about the informative power of space. It’s really interesting how different people describe the qualities of space.

It’s the final frontier, Jane

That too... would you talk a little more about um, you talked a little about 3 dimensional space and the fact that graphic designers use that too, and you talked about 2 dimensional space. Could you give me an example of where you would use each? You’re the first person telling me about 2 dimensional space, and I particularly want to treat that in depth.

I think that 2D and 3D space have to be considered in terms of what they can do, and you have to also understand that 3D space has tons of 2D space in it. 3D space is a combination of 2D spaces everywhere in essence... so if you can’t handle 2D space, I can guarantee you, you’re not going to handle 3D space very well. It will be, maybe, there... I mean you can’t take away 3D space, because we’re breathing air, and we clearly have volume as people, right? So you can not negate 3D space, but if you don’t treat the 2D spatial implications of it... which is in a lot of cases, where the information contact point is at, so if you think about the surfaces and the quality of the surfaces, on those volumes, and how you treat those, they have a lot of implications, and also how you light them, to, to sort of um give hierarchy to the informational properties something you can’t see... you can’t appreciate, read or understand so you have to think about those in that relationship. Now 2D space uh should have a systematic relationship so is you’ve designed a design system, your web site should mirror what’s happening in your newspaper ads, should mirror what’s happening when I come into your office space, and it should have a cohesiveness or a harmony. The messages are different because 2D space can communicate different things than 3D space, and each of them have their fortés... so for instance, 3D spatial communication maybe tells me where the front desk is at and how to get there without asking a question, because I don’t want to ask because that makes me feel stupid. And so 3D space should be sculpted in ways and should be augmented with 2D spatial messages, either signage, wayfinding cues or visual graphics that help me to conduct my business appropriately, and empower me to do it on my terms without assistance if that is the best scenario. The 2D spatial collaboration should mirror
the same sort of qualities or essence of the nature of the communication, the business or the artifact, whatever it is. Um we talk about 3D space with regard to small size and large size, so if I’m teaching about 3D space, I can teach my students a 3D space could be a package design or it could be an exhibit, or it could be an interior space. It’s mainly a scale relationship change, but it will have interior and exterior space, it will have vistas or ways of viewing in and out of it, and it will have message carrying surfaces. And so, that’s one of the main differences. 2D space in kind of easier in a sense because you don’t have to worry about all of the implications of it in other dimensions ok, you only have one plane to deal with, but I think you have... in 2D space you’ve got to know how to handle it... and we have a lot of principles that help us to handle 2D space that also can be there for... mirrored onto 3D space. So if you understand pattern, repetition, form, focal point hierarchy, anomaly, linear associations and then also style, then you can sculpt or design for 2D or 3D space. That’s going to... You know, you have hierarchy and a focal point in both whether you acknowledge it or not... your viewer will.

So in your vision, it’s a possible or even an easy transition from 2D space to 3D space?

I don’t think it’s easy, I don’t think anything about design is easy ... you know it has so many social emotional implications. I don’t think anything about design is easy. It is manageable and it can be taught. It has rules that govern its creation and there are ways of evaluating it. It’s not like just, you know, an artistic creation where maybe you can’t really contextualize its effectiveness. It does have rules that govern... and those rules can be defined, and it’s an iterative process, so the definition of your rules that govern how you design, also govern how you evaluate your design, and how you redesign. And it’s a fluid system so you might find that there’s a flaw in your design or you might find that there was a flaw in your rules. ...and you fix the problem... wherever it’s at. So if your rules said something that didn’t allow for the proper creation of an object, you have to reestablish what were your criteria for design, and that has to do with an audience analysis, and the... what I would call activity theory... the definition of a problem.

...Because if you don’t define your problem appropriately, you can not design a solution for it, so until you can articulate your problem, and also creatively... in a new way... because if your problem were appropriately solved right now, it wouldn’t be a problem, would it? So, by definition, whatever you’ve seen as solutions, probably didn’t work... so that’s where the creativity aspect comes in.

Well, two marvelous concepts in there, establishing the criteria for a design, you do this by audience analysis... and what?

Activity Theory

Activity Theory

There are various methodologies... I mean, you’re very versed in methods, I mean, those are two that are...some of my favorites, I also like Vygotsky’s theories of experiential learning, I like Dewey, of course, what’s not to love about Dewey? You know, so I use a lot of learning theory, because I think designs, if they are going to inform, and they’re
going to teach about themselves, they’re going to have usability, that in my mind, by default, says that the product or the thing I design must have a learning strategy embedded in it so that when I look at it, I understand how it functions, what it does, intuitively... it can resonate with my previous knowledge. Activity theory is a method of identifying the constituent groups in any given activity, and understanding the role that it plays... and it talks about mediating devices, and I think of designs as a mediating device... something that mediates a relationship between audience and message maker, or mediates a relationship between two persons, or between persons and objects... and so if you think about the... Are you familiar with activity theory?

*It happens I’ve read a thesis lately with that in there...*

Yes... let me clarify (laugh) ...that alone will not be enough to do it. Lest I get myself in trouble, I will shut up now. Ok so this is what I call motivator, this is subject... or the person or whatever... and the part that you read that was like really wacked, is down here. (drawing) this is like rules, community, division of labor, Ok, and in this relationship, and the stuff you read in the middle... complete, utter nonsense. And here, the rules, community, and division of labor is the whole culture that governs any communication or interaction. So between you and I, if I’m going to design for you, I’ve got to know what culture you come out of. What system of things are you bound by, so for instance, I might need to know that you’re an American, I might need to know that you are a woman, I might need to know your age, or your religion; I might need to know if you work, I might need to know if you have children, I might need to know if you are an internet shopper, I might need to know.... And all those things are governed by what is legit in our community; these are the things that keep you from being a serial killer. Ok... the things Mom taught you, the things you learn in Sunday School, the things that the policeman told you when he pulled you over, everything is down here, Ok, that is your foundation. And then you, as a subject, the median meeting line is what you design and so that is your... what you made, and that is... and this is Vygotsky, so you will be very familiar with this. This is a reinterpretation of Vygotsky... said this. There is a mediating thing between what you want, the motivator, he calls it the object... but what he means is like objective, the reason for doing it, the motivation for doing it. And so between a subject and a motivation this object is a go-between... and so, translated from Russian, has taken on a variety of terms, but in essence, what we as designers do is we need to know our subject who they are, what system they have to play within, and when we design this, we are designing it to take into consideration what is the primary motivating factor for that subject.(Note summary)

Which would be a better synonym for, “subject,” client or message?

I would say target or maybe exact audience

Target audience?

Target audience... that’s how I think about it... these words are... he call this, “object,” but in terms of primary motivating factor, target audience and then this is what we do, the
designed object... I call that an artifact or an environment... up here. That’s how I usually refer to it. Don’t put too much til I publish this OK, Jane.

OK

Did I have you sign a non-disclose agreement? Well we’re close OK? I’ll probably have you edit it anyway.

Yeah OK... in the meantime, we talked about social implications, emotional implications, and once again, these begin to sound like knowledge bases. These have to be something that the designer is versed in before their designs are going to have the quality that they should have.

Right, right, I think of design as applied psychology, if you don’t understand cognitive and perceptual psychology at a fundamental level, I don’t think you can be a good designer, you can make stuff, but that doesn’t make it a very adequate solution. It might even, by accident, work... people who are highly intuitive can just like make stuff that just by accident fits. but if they can’t articulate why, I would have to say that their ability to generalize that outside of their own personal culture and target ... you know if they’re not a member of the target audience, and they can’t articulate this, I don’t think they can design outside of their own realm.

Are there other of those really basic things that they’re just not going to be able to think at a design level before they have those... those upstairs to manipulate? We’ve got psychology, we’ve got social cultural, we’ve got a vocabulary of styles, we have an emotional sense... Have we got it covered?

Pretty much... now we talked about the idea of being able to make a visual language... and that would be similar to the projects that you were teaching in Florida where you might say, “Show me confrontation using two squares.” You know, or something like that. ...And then, now show me obstinance, now show me love... now show me anger... You know, and can you, can you articulate sort of touchy feelly non-object things using abstract relationships? Proximity and abstraction... and projection in a sense; because if you’re taking a verbal language which has grammars rules and nuances... and projecting it into a visual language, which has a different set of grammars and rules, and nuances... you are sort of a translator. It’s like translating Spanish to English, it’s not going to fit one to one, and each is optimized to its own culture... and its own... sort of grammars and structures. So they each have strengths... things that they do better, and things that have to be sort of interpreted from one language to the other. Does that make sense?

Now you’re the first person who has said translation, although that would be something I would say. What is... do you have any idea what visual translation is?

Visual translation from what to what... like verbal to visual? or visual 2D to visual 3D?
The thing that I’m speaking of is an objective, and he just says visual translation, so I thought I’d find out what it means.

Well I think visual translation... to me would mean taking one form of information and either translating it from visual into something else, or from something else into visual. And it would almost be like, you know, a Japanese to English Dictionary. You know, and this is critical, Jane, actually. This is absolutely critical because what I find at least in my own research, is that many people can articulate a problem, OK, and they can understand the target audience, and they can even know what the solution should be... but until you can take that long list of articulations in a verbal language and plug it into a visual solution, whether a 2D or a 3D or a time-based, or a spatial, or a sensory solution... until you can say um, I have a person who is experiencing anxiety, so I need to make a piece of communication to ease anxiety... OK, these are the things that ease anxiety, you know... maybe not too much information, well defined steps... things like that. Ok, how does that now translate into my artifact or environment? If you can not make that translation... if you can not do the translation step you’re talking about, which is say, Ok, visually, you know if you were using the two square analogy, two squares close means we like each other, two squares pointed... with the pointy parts, it means we’re antagonistic, overlapping maybe means that one is domineering, you know, if you can’t do those kind of translations into verbal-visual... you can’t do design. And this is critical because you’ll see it all the time in psychology... what’s... the difference between psychologists and designers is that psychologists observe a situation; designers have to make a solution for it... so they not only have to observe it, they have to be able to write the translator... and the translator changes with each situation... so I can’t say that there’s one translator, but the ability to write the code for translation is what a designer has to do.

Ok

Is there enough tape here?

Well, I actually carry a second one...

You would

But we don’t have time to do it... what would be the first red flag... maybe it’s in your sophomore studio, maybe even your junior studio... that this student maybe isn’t cut out to be a graphic designer?

If they’re not willing to put their ego aside, and get inside the heart of the problem.

Because you’ve got to... at a certain level, admit... you know, like admitting is the first step to recovery... you have to admit you don’t understand the problem... and you have to give yourself permission, and do the work to understand the problem because if you can’t understand the problem, you’re just pulling crud out of your, little, you know, little tool box; and it’s not a real solution for your client or for their situation. So the first step is saying, “I don’t understand this.” And then the next step would be being willing to use the tools and do the work to understand it. And sometimes... people... I see sometimes
very talented people who can just whip stuff out and they can do it with such a certain
degree of success that they would be able to be a successful designer for a very narrow
thing... they might even be a highly acclaimed designer. But certainly, I would like to
think that the breadth of what they are able to do doesn’t go past their own personal
experience. So to me that would be something that I would be like Whoa, and I don’t
think there is one solution for everyone, I don’t think that’s doing justice so sometimes
people are very style jockeys... you know, just styling it out, and people make whole
careers in graphic design on that it’s just not what we believe is an appropriate design
solution process.

They should be multi-lingual designers...

Yes! (laugh) We’re willing to hire a couple in our firm... you know, you speak Spanish, I
speak Russian... blah, blah, blah, Ok we’ve got it covered.

Ok, so once again, we’ve come back to the issue of problem...

They’re everywhere...

... and making sure that we thoroughly understand the problem. What steps would you
say go into understanding the problem?

I think having some sort of method of associating, so at the undergraduate level, we teach
audience analysis and you know like knowing the visual sense of your target audience,
and then researching the content area. And so at the undergraduate level we keep it
rather basic. So you just research message, research the target audience, research style,
apply what you know about 2D or 3D, you know, spatial manipulations, the basic
translator. There you have it

That was actually a nice list, I liked that.

Thanks

Ah, Things I wanted to back up on... oh no, can’t back up yet; I haven’t asked you about
manipulative abilities. Um... if we were talking sewing, one of the main manipulative
abilities would be guiding material through a sewing machine. A lot of these things are
stuff you push and pull around with your fingers and toes. Uh...What are the
manipulative abilities that would be essential in Graphic Design?

I think it varies, everybody is going to bring a different skill set of manipulative abilities,
and what I try to do as an instructor is determine where the seat of your skills lie... and
sometimes I’ll ask students, “What do you like to do, are you a photographer... do you
like to do photography,”.... No they don’t, “Do you like to doodle and sketch during
class?” Well, yeah, I never take notes, I just sketch who’s sitting next to me. You know,
it’s like trying to determine are they in essence in their personal tool box of abilities, what
do they have, because I like to optimize that. I think everyone should be decently versed
in a variety of things... like if you had to... like if I put a gun to your head, and I said I’m
going to shoot you if you don’t take a photo, can you do it. You know, you don’t have to like it, you just have to have a basic ability, but I also think it makes sense to optimize on where you’re strong... and a lot of times schools look at where you’re horrible and say let’s just work our brains out where you’re the worst. You know, and I just... that doesn’t make sense to me. Because, you’re going to have to have a more successful student if you actually look at their skill sets and say, “You are great at this, let’s make you even better.” And they’re going to achieve more, and they’re going to feel more in harmony with what they want to do. Um... and it makes... I think your class is less cookie cutter, because there’s no sense in me making 20 replications of some ideal model, when I could have 20 unique designers that each have a personal voice and contribution. Now they should understand how to be versatile... like if you’re an illustrator, you should have multiple styles perhaps, and you should understand that there will be type in your composition, so must have typography skills, but you know, that would be different than having a person who is extremely gifted in typography and then I say, “OK well let’s teach you how to use typography really well,” and, you know, really optimize you. Does that make sense? ...So it’s not like um, manipulatively speaking, you want to have everybody reach some weird median. You kind of want to look at where their personal skills are at.

What are the real minimums?

Um, if you can’t you know, like do the translations, it would come down to the ability to you know, baseline... you’ve got to be able to run technology. If you can’t run your computer these days, you are probably shut down. Because, you’ve got to be able to have a minimum ability to make basic visual-verbal messages as taught at a sophomore level, I think our sophomores go out very highly skilled in 2D space manipulation and understanding on typographic relationships and photographic relationships and those type of relationships. A lot of schools would not pull people up to what we would consider sophomore level at senior level. So I think that... you have been there, you know what I’m saying. So I mean, I think at that point, and then from beyond the sophomore point... the junior and senior level, we’re really pulling out those strengths and we’re helping them to define their careers. But if they can’t get through that basic sophomore level of spatial manipulation, technology, and type/image verbal associations, I don’t think they can make much of a career of Graphic Design. You might be a Graphic Artist in a print shop or you might be able to be in Kinko’s, or you might be able to be at the Des Moines Register, but you’re not going to be in a Massimo Vinelli Studio. April Greiman isn’t goona hire you... you know, so those I would say are basic skills, and you know, Roger talks about the various, five different levels of designers and talking about like maybe that entry level point is that person that has just enough basic skills to organize a piece of information... for like a newspaper ad. They understand visual hierarchy, they can do the software good enough to get it on the page, and they have enough of a basic sense of color and visual relationship to make a message. The next becomes level is the people who start to become art directors, they can actually manage other designers in these capacities. The next higher level become business owners who can actually start going out and looking at um, looking at how to develop complete
businesses based on design. The next higher level become researchers and philosophers. And so... each level requires a different kind of research methodology. I think we train people for level three, art director and business people in our undergrad program, and research and design philosophy in addition to that in the grad program.

_Umm interesting, are there some prerequisites to technology learning... are there things they should have before they’re ready to do that?_

Well, I think most of our students today are well versed in that, there may have been a day when they weren’t, but I think today’s youth come up with such a high-tech culture that most of them are able to you know, navigate that kind of space... although there are a few that have difficulty with that, and mostly it is a mismatch between their cognitive patterns and mappings... their natural way of working if you will, and what the computer forces. The computer forces a certain linearity, um, you need to put things in, in a certain way. You need to, you know, use the cropping tool in a certain fashion. You need to understand a stepwise procedural sort of way of working... and if you can’t do that, or if you just categorically refuse, because it’s such a mismatch with your intuitive cognitive map, that’s going to be a problem. And it, more often than not, is a personal choice, they just do not want to do that, because it is not a comfortable fit. Does that make sense? I don’t think it’s because they’re not able to do it; it’s just not a good fit.

Now, I can back up a little.

_OK_

_Um...Material usage, what is the nature of the material usage information in Graphic Design?_

It can be about anything, students tend to gravitate materially to photographic and digital material, you know things that they can digitize, or that they can photograph, or things that they can generate digitally. Now I think that it needs to be pushed further. I think that they need to get more material experimentation, because through the experimentation with real material they’ll learn different processes and get different visual effects. And that doesn’t mean that it can’t later be digitized to make it graphically reproducible, because oftentimes in Graphic Design, we have to be able to make 10,000 of it. So that means that perhaps the hand stitched pillow you made is not going to go out to 10,000 people, you know... unless you have an inordinate amount of time. But um, I think the ability to understand what it means to do stitch work, and what it might mean to stitch your message into the pillow and photograph it or to, you know, somehow use that other material substrate for a different visual effect... will be a point of difference in the type of things you can create. So I think we need to understand material usage and push themselves in that way whenever possible, but they tend to gravitate toward easily digitized or digitally original materials.

_OK, well that’s the great majority of the questions... yes, we’ve done very well. Thinking skills, we’ve talked about a lot of them as we worked our way up and down...but_
assuming they have all these basic building blocks, in there, they know how to translate a message into visual, they can illustrate, they can take pictures, they can use technology, what uh, thinking skills are they using to manipulate those?

Well I think it’s important to understand their thinking skills in the sense that people have different what I’ve already mentioned is like cognitive maps... ways of working. They also have different um sensory channels if you will, that they think in best. Some people think visually first and then translate it into verbal, other people think verbally first and then translate it into visual... and there may be others, there probably are others. But in our field, we tend to see verbal thinkers and visual thinkers, and usually they have some overlap. But I think in terms of their thinking skills it’s important to identify what kind of student you have... because if you’re a visual thinker and I tell you to brainstorm first, and I force you to write out all these words, you’ll probably do it, just to please me, and get me off your back, but it did you no good, because that wasn’t your natural thinking medium. So the things you did think were forced and didn’t relate well, and what I usually find is the student then sticks that in the book, goes back and does their natural process, and then tries to claim it came from the process I asked for. So, you know... so I try to find out if the student thinks more naturally visually or verbally first and ask them to ideate in that method first... Because it seems to me absolutely ridiculous to force... to make the thinking pattern an obstacle. Thinking is supposed to be a resource, that’s how we generate our ideas, and if it’s not absolutely fluid and natural, it’s an obstacle... and I can’t have that, I want to pull the thoughts out of you... and I don’t want you tripping up against the mechanism that I’ve asked. Now that being said, I often times will... I’ll try to identify what your strength is, but I’m goona try and teach you another one. Because the day may come when you’ve got to have a couple of thinking mechanisms or you might have a boss that has a different thinking mechanism than you do, and you need to understand the mechanics of that... and so sometimes we’ll teach students also thinking strategies which is a common thing that comes out of higher education.

You want to give me a short list of those?

Oh, like a matrix, or to do some sort of rubric or matrixes, some sort of metaphor combining process or methodology, if you will, in terms of like using metaphor, a computer is like a milk jug because... they both hold stuff. One holds physical stuff, and one holds digital stuff. So some sort of associative thinking process... or maybe we say, you know, like a visual morphing, I say how do you make... morph this pen into a cell phone in ten steps. You know, and that becomes a visual wrapping or morphing process, sometimes we ask students, you know, like to think of ways to pull out ideas out of ideas, and verbally that would become where I’d say, “OK, in your mind map compare... you know um,... combine this word here, and I’ll circle which word I like, and this word. Now work on those two and make an association from them. Visually, I might ask you to do a bunch of sketches, and then I pull out sketches, you know, and then the combination becomes whether words fuel the sketches, so I might say take that one and put it across the top, you know, graph on the chart, and then take a set of principles down, so now on the top you’ve got your word, which was milk jug; and now I say milk jug plus you know, linear, and open form, closed form, anomaly, direction, dah, dah, dah, dah....line quality... And so that’s where you start making visual-verbal associations, but your
thinking skill needs to - in that first phase - be in that natural intuitive process that the student gravitates to.

So then you use sketching as a visual ideation process?

For visual thinkers, and um, written associations for verbal thinkers, and then at some point, like you said, the translation... that’s the key one, that you said, you know, what is that. The ability to translate between one and the other is the key... missing piece, and that’s... sometimes has to be learned, so you have to teach how to do that. Sometimes the kids are very strong visually, but they can’t associate it verbally... stuff like that. So that’s why you can teach the other... and it’s critical to teach both, but you need to know first where their home is at, that way you’re not constantly fighting them. I try not to fight my students, it goes better. (Note visual verbal association)

That’s a good idea, Ok, well we’ve covered an awful lot of it, um, I wouldn’t mind revisiting those manipulative abilities. Right now I’ve got photography, sketching, illustration, not sure about typography, but technology for sure.

Yeah, by manipulations, you’re talking about the ability to work in that quasi- physical virtual media...?

Hand stuff

Hand skills, I guess design is a lot about thinking skills. I think thinking is king... if you can’t think it, you certainly can’t make it. Um, but there are a lot of hand skills that come into play, and so...

Like...

Well, you know, I think the ability to manipulate various medium, you know... is important. It’s not critical, if you can’t draw sketch or illustrate, it’s not goona kill you, you can get around it... we teach you compensation strategies... cause you’re maybe an amazing person at seeing visual compositions... I mean I’ve seen people who just take amazing photographs, but nobody... you could put them all in the same room and everybody’s would be about the same except for one person who was just able to just see the associations through a lens by framing. So I think framing is a skill, the ability to see associations in a material, see potentials in a material and maybe push a material, and that to me less about I guess the tactile manipulation, than understanding the potentials.

Tactile manipulation is a good word for this, actually, I should have thought of that. Um, associative skills... you talked about having them give you a bunch of words, and you pick a word here and a word there, and then you ask them to find the middle ground. That’s a kind of a... so you’re asking them to make the connection and develop a message out of that or....?
It’s sort of a left brain, right brain sort of an activity. The left brain is giving you of course your most common definition, your right brain is everything else. And so by making a metaphor or asking to do a combination, you’re taking that most common, you know, description of both those things, and you’re having to associate into the… anything else any other possibility, and your left brain just finally gives up and says Fine, take it right brain, I can’t do this, you know. So you’re kind of asking for a lateral shift and I think that ability to help our students do a lateral shift in terms of how they’re thinking about things, is what we do as design educators… and we think of a lot of ways to do that, like create a metaphor, or we might say um, some invented research, something that they’re extremely uncomfortable with, so they have to very uncomfortable before they get more comfortable. It’s a lot of that like what your research I was looking at, how to make people comfortable with novelty… And seeing patterns, seeing associations, and then understanding extensions of that, in a variety of ways. Like taking lots of ideas, reduce it down to few ideas, and taking those few ideas and making lots of ideas again and reducing them down, and so we do a kind of iterative process of more – fewer, more – fewer; and then we’re kind of culling out the most common stuff that seems like it’s just not a great solution, kind of reducing it down to those.(Note filtering)

Well one of our thinking skills would be mental iteration, generating a lot of alternatives, and then the second one would be, uh sorting them out.

Yes, comparing them to an acceptable solution… and that’s the criteria we talk about in the project definition… so you take your very highly creative thing and say Ok, does it still, you know, pass muster here, does it still make it through, you know...

So you use your initial design criteria as an evaluation also… Ok. You’re shaking your head and going Yep!

Yep!

Ok, and this, we hope, this pattern of iteration and culling, iteration and culling, and making new and associative connections, we’re hoping this leads us to something that’s a little more innovative and different?

Right...

Right…?

…and appropriate

…and appropriate

…in my mind, you know we talk about the difference between usability and desirability, you know the cognitive solution versus the emotional solution, we decide everything emotionally. You and I know that, every decision is emotional, it’s propped up with a cognitive reason that will make sense to our spouse or whoever’s paying the bill. Ok?
Ok, well that prepares us to ask what I hope will be the main interview question, although I intend to probe various areas that I have learned by now demand probing.

OK

What I hope you’re going to reflect on for me today is or maybe are the qualities of a successful student in Graphic Design. From your experience, and in your teaching, what things seem most important to student success in Graphic Design? These things might include specific types of thinking, manipulative or constructive skills... if it was sewing, maybe guiding material through a sewing machine... or areas of knowledge. Those three things we want to treat, but they tend to blend anyway. So as students work their way through Graphic Design, what do they need in their toolbox, and please include things that students seem to do easily as well as things they seem to struggle with.

Ok, that’s a thesis in and of itself so I’m going to take this and look at it. (Took the printed copy of the interview question)

Oh you are!

Well then I can refer to it.

Ok, you don’t have to be too specific with it...

OK,

I’ve asked about knowledge bases, thinking skills, and manipulative abilities because it’s going to give us a broad cross section.

I think all of those skills are important, manipulative skills are something that can be developed; students that I see might be more skillful in their senior year than in their sophomore year, and knowledge base, certainly students will gain that through their projects as well... Thinking skills, I think thinking skills can be developed although it seems as though you come with them and you leave with them, and sometimes students can be coerced into thinking different ways, or through questioning you can develop them, but I don’t feel I have an influence on the students’ innate intellectual abilities. I hope I can help students think in different ways, but I think these things certainly help students become successful, but there are other elements too, and I think that has to do with student motivation, student commitment, and persistence. I’ve seen motivation, commitment, and persistence... students who have those qualities can far succeed more than students who have good manipulative abilities, good knowledge, and good thinking skills. I’ve seen, over the years, some beautifully talented students who fall by the wayside because they don’t have that motivation and persistence. And I’ve seen students
who come in with maybe a lower level of the skills, but through dedication, and persistence, and motivation they rise to the top, so that’s always interesting to see. It would be great if we had students who had both of them, you know those six sets together, and that would be great... I don’t see it very often, and the consistency... and I’m talking about consistency throughout a semester, or throughout their three years, because sometimes they’re highly motivated in their sophomore year, an then in their senior year, they start to lose focus... you’re smiling

*I’ve heard it before (I was remembering Sally)*...

Yes, they lose focus, and then... some other people might use different terms, but they lose focus, because they have other influences, like the impending wedding, or highly charged job search or the impending move to another area of the country. So those things... they lose focus.

Returning to the manipulative abilities...cause that’s what you said first, what are the things they have to be able to do?

Well sophomore year, the first two projects are hand skill based so they have to know how to cut and glue paper. And I’m learning that students seem to come, in sophomore year, knowing those skills, or having some experience, but I spent a lot of time first semester last fall showing students how to cut paper, how to glue, what kind of glue, showing them the materials, and I’m really surprised that they don’t have that knowledge, but...

That’s a knowledge base, we’ve got to talk about that later. Ok, make a mark...

The manipulative skills might be cutting the paper and gluing the paper and they’re not quite skilled with that either, so it takes practice, so I have to give them more direction and more time to practice that. And I’d be happy to show you their first project, the manipulative skills on this project are better than a couple of years ago, and I think that’s because I spent more time on that level. So the manipulative skills and the knowledge skills go together...

And it’s going to be that way throughout that there will be an association between a knowledge base and a thinking skill of a knowledge base and a hand skill. We’re going to find that.

That’s true... and also software. Right now they’re in the cube project, systems, color, and design, and Illustrator is very important, knowing the Adobe Illustrator software program, and some students clearly didn’t know how to set up a document - what size paper to use, and so what I did this morning was I partnered them up students who didn’t know with students who did, just so they could learn from each other, because I’ve learned over the years that they learn from each other quite a bit, and it takes some pressure off me to teach the software where I can help them more in the thinking skills. So, that’s something, they need to know software skills.
That’s an interesting thought, because what you’re doing, at the same time you’re doing that, is you’re conveying to the student that the thinking skill is the most important part.

I hope so, I hope so, because one of the questions I hear a lot on the Sophomore level, and you’ve taught this level too, is, “You said you liked this on Friday,” or, “Do you like this?” ... Or, “You told me to do such and such.” And I had to pull back this morning and say... explain the difference between something that’s working visually versus ‘liking’... and one little girl got it, she said, “Oh yeah liking is more subjective.” I said, “It is,” because one of them said, “Oh you like more complexity on some sides and less complexity on another.” And I said, “Well, let’s talk about that.” I remember hearing Mia Sheridan, I think it was talk about... when she was writing her restaurant reviews, saying she would go out, sometimes with other people at the table and somebody would say, well I like this dish... and she said if I like something I have to turn it into less subjective words. What is it I like about it, is it the texture, is it the flavor, is it the color, and so I’m trying to help them understand that that’s how you make decisions in terms of that subjective term of, “like.” Because sometimes I’ll have a strong reaction to something, whether it’s a jarring reaction or a very affirming reaction, in my own mind, and I have to be very careful about what I’m responding to when I tell that to the student. And I find that midway through the semester if I hear them being able to use those subjective words, less, and talking more about the Design Principles, then we know, I think that I’ve helped them develop their thinking skills.

So I think what you’re talking about here is the knowledge base... is knowledge bases that allows them to talk about the discipline, to talk about Graphic Design, and to think about Graphic Design in greater depth.

Yeah, um-hmm

...And you’ve just told me that one of those is Design Principles.

Um-hmm

Do you want to talk just a little bit about “The Principles,” what they are and what their role is for these students?

Sure... and just a minute, I want to read what you have here about thinking skills... Ok, and could you repeat your question again.

We were talking, I think ... you began to venture into knowledge bases, when you talked about someone at a restaurant who had to come up with more precise vocabulary in order to fully discuss her experience with the food. And then you immediately tied that to Design Principles, and I asked ... I said, Oh, those are probably knowledge bases, you want to tell me more – for the record – about what the Design Principles are, and what their role is for the Graphic Designer.
Oh, Ok, so we have Design Principles which would be... could be direction, contrast of size, weight and so on, and...

*I’m familiar with them...*

Yes, you are familiar with them...

*As soon as you give me a couple, I know which group we’re talking about.*

And it’s important that they understand what the Design Principles are, and how they are guiding their project. The young lady who just left is quite knowledgeable about the Design Principles, and understands them in terms of unity and harmony and so on... and so once the students begin to understand the Design Principles and they have that vocabulary, intellectually, hopefully – especially in the second project – they start to apply them a little bit more clearly. Oh, I have a sense of movement here, or I have a lot of complexity contrasted with economy in this one. And so if they understand them intellectually, of course there’s always a gap at first between intellectual understanding and experiencing them. Same thing with xxx, but that’s another subject. So if they understand them, then they can start to – hopefully – apply them. And it takes a while... it takes a while, but they start to understand once they see – it changes between the second and third project in the entry level class – they see, and in their projects it seems as though they begin to quote unquote, “get it.” The first project they’re struggling, you can see that and the second project they start to understand it, and the third project – that is where we’re getting into text type so it is a little bit different – but they do understand that, and the use of the grid system. And the grid system is an invisible underlying structure that helps organize things visually. You may not, if person is looking at say a page of magazine layout, or even the layout of a novel they will see a consistency from one page to the other... the folio, the page numbers are in the same place or in flipped places, always at the bottom or always at the top, the chapter heading might be at the top or the bottom, the text is in one block and it’s always in the same place on the page... and that is because the designer has consciously made a decision to put those things there... and that’s what we call an underlying grid structure.

*Which is, of course, a knowledge base and ultimately, a thinking skill.*

It’s a thinking skill, and the students in my 475 advanced Typography class, some of them are still struggling with the grid and I’m really... it always is disappointing that they’re still struggling with the grid, or they’re struggling with contrast and size, but also this is the fall semester, and we lose a little bit of knowledge after a gap of about four months, so hopefully the second and third project will come up to speed otherwise I’m going to start praying really hard. ...And some of them are Juniors, and still the Junior year they’re still struggling with type because they don’t have enough experience yet.

*Ok, well let’s turn back to manipulative abilities...*
Well let’s get back to the idea of the principles being different across the design, because one of the interesting things about our curriculum here, that I think we miss... and I don’t have a solution for it, but I think we do miss somehow, the idea of students understanding that what they are designing – and this goes more for the upper level classes because then we start to deal with concept and so on – how does that affect behavior, how does their design affect behavior or thinking, or how does it affect society. Now I know Lisa Fontaine and Deb Satterfield have been talking a lot about green design, and wouldn’t it be great if we had an interdisciplinary class that dealt with all of those principles. So... as maybe a capstone course across the disciplines, so that you know students who are in their Freshman year – I’m just thinking out loud here – but in their Freshman year all the majors were together, and maybe the majors might be together again as a capstone course.

...Which Design Build kind of fills that hole, but it certainly could be pressed farther.

It could be pressed farther, and it seems as though if you’ve got a skill in typing, you do the type, and you do the building, rather than Ok, you do the type... why don’t you put a hammer in your hand and let’s see what you do. I think Graphic Designers could pay a little bit more attention to how we affect the world. Now it seemed to me in the early 20th century, designers had a higher calling in a sense, or at least that’s the way I viewed things. Where they designed for the common good, form follows function, and so on. And I think we’re more driven by the corporate culture... it used to be that it would be a design director, look at Bradbury Thompson, he was a high level designer in Cummins Engines, whereas the Graphic Designer is way at the lower end of the scale so we’re more directed by corporate culture than having a kind of say. I think students miss that... they miss that, and I think the curriculum doesn’t fully give designers the permission to have the power that they could have.

So at this point you see that we are expecting them to design on aesthetic/perceptual principles, and you envision the probability – possibility – hope that we should be doing more in terms of moral ethical cultural societal...

Hope, yeah, and I think some of the Professors do that a little bit more, some might do it a little bit less, and sometimes we’re so squeezed with media, knowledge issues, especially when you start to get into the heavy software driven courses that it might be a little bit less in terms of the ethical and moral...

Ok, I think we need to generate a couple of lists here, because we’ve started a lot of them that we probably need to expand. We said hand skills and we started with cut and glue. Are there other hand skills that the Graphic Designer needs?

Hand?

Hand or kinesthetic, anything you can push and pull around with your fingers... even toes maybe.
Well, it depends on the materials that they’re going to use. Sophomore year, at least the first class, a lot of times they’re using paper but when they get into their Senior year then they might design an editorial project and some students will use their sewing skills... so then it would be fabric. Some students will do clay animations and so on, so it really depends on what the student is interested in using. I encourage my students create xxx projects and then they might photograph it and scan it in. So the materials are pretty much wide open.

Ok, and then we talked about the materials functioning as a knowledge base, I know we wanted to expand that, and I can’t quite remember where we went with that...so maybe it will come back. But we talked about concept, what is the role of concept in design?

The role of concept in design is paramount, and I think that is one of the things that distinguishes the Iowa State University Graphic Design program from say, some of the smaller colleges that might be sort of more illustrative based, or more software driven design programs. But concept is that one big idea that drives the design, and you teach concept the first couple projects in the Graphic Design Program are more principle driven... less applied, but when you start to have applied projects, such as the package design, or an editorial design – which would be a book design – or a magazine design, then you have to have a concept – one big idea. And students grasp onto that pretty quickly... and they struggle with it and against it for a long time, well what’s your concept... well I liked the blue... well color is not a concept. So and also we’ll have, I’ve learned over the years that if I have students write down or type out what is your concept, they’ll tell me more about form. Oh, I’m going to make a package for this project and it’s going to have blue and red and I know I want to use Futura and Adobe Garamond. And so I have to sit down and say, that’s what we call the form, but how are you going to use this, what is the message you want to communicate? ...And as I said they struggle against that, and some of them fight against it, but, most students will understand that. If you have a strong concept, your project will be strong – maybe the form isn’t quite there – but you can always work on the form. But if you have a weak concept to begin with, beautiful form will just make look it pretty, it won’t make it memorable. Usually it’s about one to two years out when I get Emails from students – former students – who’ll say oh my goodness, I can’t believe how different our program is from other programs, you know I’m working with people who don’t understand the idea of concept, or, my boss really likes to hire Iowa State students; we want to hire some Iowa State interns for the summer. And so once... we have an incredibly successful Senior Portfolio night where have employers come from Chicago, Eastern Illinois and Minnesota, and Kansas City; because they’ve had some of our alums before and they want to see more... and so it was terrific, it was terrific, so they understand – the employers – the value of the thinking skill that our students have.

So one of the thinking skills we want them to have is the ability to design on concept.

YES... yes...

... and we do hope we’re teaching that...
I hope so I believe we are, I believe we are yes.

*Ok, and we’ve also talked about message and the importance of message as a Graphic Designer...*

...And most students... occasionally I’ll see a message seems to be out of... that I might feel morally or ethically uncomfortable with, and I have to point that out, I don’t necessarily need to change their mind, but just say, “How do you think a woman might feel looking at this?” “Well sex sells.” “OK, well, what if your 8 year old sister were looking at this?” Hoping that there might be a light bulb going on in somebody’s mind that who is your audience and who might be your audience?

*A sense of audience...*

Yes, thank you Jane, of course

*And also, I think what you’ve done there is you’ve pinpointed where – one of the places at least – where those moral ethical concepts become solid design requirements.*

And it sounds as though – I’m thinking back on what I’ve said earlier – I think we can do more in terms of helping students understand that moral and ethical dilemma that they might have. In the business class that I teach, we do cover – although not in any great depth or detail – those ethical issues that students might face once they’re out in the working world. But I think... there’s more of that I think could be done. And that’s the key word, is more, I know that when I started teaching, 15 years ago, Sophomores didn’t have to struggle with learning the computer... and so more, they carry more, those backpacks probably weigh ten pounds more than they used to, they have to learn more, and so we add more into the curriculum, and we have to think about how can we balance it rather than adding, so sometimes things go by the wayside. I don’t know what that would be but... unless you want to make this a 5 year program. I don’t think so...

*I could help you with that... we could talk about that after we’re done. But this is the second time we’ve started to address technology, so let’s take a look at technology. Do you want to give me a short list of the technology skills we’d be hoping they have in order to work well at this?*

Sure... well I think they need software skills, and that would be the Adobe Suite programs, is that what you...

*That’s the kind of thing...*

Understanding spreadsheets might be good, because if they’re in their business classes, or in their practicum class it’s great for budgeting. Let’s see... other technical skills; I’m not sure where this falls in, but certainly Typography... that’s probably more knowledge...
than skill, but you definitely need to know your page layout programs to get some really good typographic solutions.

Typography, certainly is one of those major knowledge bases.

Yes, yes...

... And probably there are numerous ways they need to think about typography, once they have that knowledge...

Yeah, yeah, and that’s very true, that’s very true... and knowing the software, and knowing how to manipulate it, knowing... not settling just for the defaults, is really important, because then you can really expand what you can do. And I’ve noticed that in 475, students... some students are still struggling with not using the default leading, you know the spaces between the lines, so in the first project I have them submit their files in their original state, so that I can see, did you change your rulers from inches to picas? Because that’s very important that you know the measurement of typography is done in picas. The page size is in inches and then you change it to picas, because that’s industry standard... and they do struggle against that. And then they have to understand that you can manipulate those page layout programs – excuse me – up to wazoo, to really get quite an interesting variety so you’re not doing single line spacing – interline spacing or leading – so that you can really have some beautiful white space on the page. Students didn’t even know how to set margins, so that would be probably a knowledge. So do you have... I think I’m a little bit, technical skills I’m drawing a blank on any more. Can you...

They’ll come to you...

You’re not going to feed me?

I can’t prompt you, but I don’t worry about it any, because I ask other questions, and they tend to come.

OK, ok

In the meantime, you said space on the page, and that’s an interesting thinking skill... being able to comprehend that.

OH, yeah...

You want to talk a little about the sense of space that a Graphic Designer has to have?

Oh gosh yeah, the sense of space is really important, and it can be developed – I hope. Sophomores tend to call that white space – empty space – rather than negative space. We often call positive space things that appear on the page, might be a letter form or it might be a color shape or something, and anything... the void we call negative space, but Sophomores... not so much in the last couple of years... but they used to call it empty
space, Oh, it looks really empty to me. And along with that, that negative space on the page or space on the page, one of the most important design principles students learn is contrast – contrast of size, contrast of shape, contrast of complexity, and economy – and so those are very important. So, yes you might have one side of the cube that has a lot of negative space, it’s very economical just need three elements in that space, but you’ve got another side of the cube that has ten elements, so you contrast economy with complexity, and it will probably have a beautiful unity... depending on other things going on there. But I think becoming important with symmetry and asymmetry... non-designers tend to think you center the type on the page, that’s the way it should look. You know, if we look at that can over there that says, non-infectious syringes and metal sharps only, everything is centered there. Well clearly somebody who has experienced good design didn’t do that, or it was done deliberately because you can read it from here. And for me to be able to read most of that from here, that’s good, because that’s an important can to use. That’s a can where you discard your sharps, your exacto blades, so we need to do that. But for the most part, and students have struggled with their page layouts in advanced type, thinking everything should be in the center, and I think part of that might be a personal aesthetic, but it certainly can be developed. When you start to get into personal taste, that’s a... that’s an animal I’m not sure I’d want to let out of the cage, but being able to manipulate things on the page and have a sense of unity and balance without putting things in the middle, without putting something at the top and the bottom. You know that idea of asymmetry is an important principle to be able to understand, and use, and master.

I often ask myself if I should call that a knowledge base, or if it’s more like a sensitivity.

It’s a very good question... I struggle with that, you know I see students who are advanced students and I think – it doesn’t happen very often – but sometimes I’ll think, Oh gosh... there seems to be a lack of sensitivity to size contrast, or positive and negative space, and I don’t know whether I can ... I don’t know, Jane. I don’t see that very often, but it’s like a bull in a china shop. Where somebody’s type is always really big, everything is always jammed, or always centered, and who knows, it might be a sight problem. I don’t know, it could be as simple as needing reading glasses, but I don’t know; it’s a good question and I’d have to think about that one.

Let’s take a look at the thinking skills. If we would characterize the knowledge bases as building blocks, then the thinking skills would be the methodology for arranging the blocks. What are some of the main thinking skills they should have? We may have just been talking about one of them.

Well, they need to be able to synthesize information, so synthesis is important... and that to me comes with experience, and also looking at work, and persisting at doing something, so that would be synthesizing.

Where do they get the material to synthesize?

Well we build one project on another,
Ok... synthesis implies a bringing together of various elements, or factors... I was kind of wondering where they get them from... nothing comes to mind?

No, I’m gathering my thoughts...

Ok...

Well one of the strong things about this curriculum, especially in the Sophomore level is that we have three projects... or four projects, and each one builds on the other. So that synthesis comes in the first one they start to learn hand skills, and the technical skills, and they start to learn the design principles with large format type, and then we go to... we combine that with 3 dimensional and then the third project is the type project. So they’ve go large to small they start to synthesize that idea of the knowledge of typography with the design principles and color, and in that xxx project, sometimes we add – actually I think that happens in the second semester – adding a concept driven project. That’s where it gets a little tricky Sophomore level... but the synthesizing, I think comes in, in the stair step way of organizing the curriculum.(Note: past and present learning)

This is a new one...what you’ve actually got there is a kind of a... as you’ve said, “stair step,” or you’ve got a kind of a staged fusion like a reverse tree – almost where we start out with a few things which you instill as knowledge bases, and which you teach actively... and then you keep adding one more thing, and one more thing, and one more thing that they must fuse to the original concept,

Yes!

...create the synthesis, and produce. That’s very interesting too because that might be a less threatening way to approach synthesis. Nice thought. Are there other thinking sills that we should talk about?

Well, I’m not sure where this falls in, and maybe it’s more in motivation and consistency, and persistence, but the ability... or willingness to do some research. And when students in the upper level courses, where the projects are concept-driven, they have to do research. Now research could be in the form of – let’s take an example of they’re designing a food package – so the research might be going and researching color palettes that appeal to certain food types, research would be going and photographing that food product on a shelf, research might be going to the library and seeing how has the tomato soup can label changed over the years what did it look like... And maybe this food product that they are designing is going to be in another country; what does it have to be? If you think of all that research: the audience, they have to research color, they have to research shape, they have to research material in terms of is the soup going to come in a box, is it going to come in a can is it going to come in a jar? So and then of course, they’ve got visual appeal. One of the successes of the 80’s was the food product, Classico Tomato Sauce, that was originally designed by the Duffy Group – now the Duffy Group – in Minneapolis and the art director on that was Charles Spencer
Anderson. And that – I remember that product – a) the product is superior, and b) that package blew everything out of the water at the time, because they did a simple thing. They went from a round tall jar to a squarish jar – almost like a Ball jar. And they took that lid and put a design on top of the lid and did this beautiful – it looked like a woodcut print. Now that packaging has changed over the years, but that involves a lot of research, and so students have to do research, and they have to come up with something memorable. So that Classico, first of all the product was superior, and being of Italian-American descent, it was superior because it didn’t have sugar in it, it had olive oil rather than soy oil, so it tasted as close to my Mother’s sauce, in fact that sauce met my Mother’s exacting standards, and she used to serve that to guests, and they didn’t know that it was not her sauce. So it passed Theresa XXX’s inspection. So you have to start with a superior product, so we... I’m getting off target here, but research is important. So students have to be willing to do the research, and able to use what they’ve learned and apply it. And the brightest students, the more intellectually endowed students will be willing to do that, and they’ll be able to synthesize that information. And I think...

So research is one of the sources of the material to be synthesized...

Yeah, yeah, sorry Jane, I talked around that...

That’s OK, that’s why we do interviews, because we’ll get to it. ...And yeah, the type of research you’re talking about, I’m not envisioning statistics.

No. no... although it might if, say, they’re designing an informational poster about volcanoes and hurricanes or something, statistics might play in there... or the frequency of certain things happening in a certain place. But no, I’m not talking about... it might be viewed as quote-unquote, “softer research.” ...But research none-the-less that is integral to the success or failure of their design.

So yes, it’s a broader look at research. In the meantime, you said they have to make the design memorable by coming up with something. That’s a thinking skill.

Umm- hmm, OK, thank you...

Do you want to elaborate on what the nature of that thing is... what do they have to do... how do they think it, how do they do it, um... we say that all the time, “You have to come up with it,” but I’m pretty sure they aren’t plucking it out of the air. Any thoughts on what the nature of that thinking actually is?

(thoughtfully) I think... I think, that memorable thing, that thing you look at and you say, “This is the best in the class,” is something that you’re right, they don’t pull it out of the air it comes from the research, it comes from the ideation, from the sketching... they have to do a lot of sketching... and I always find it interesting that students will say, “How many sketches do you want?” And I used to say, “As many as you think you need.”

Well I might get twelve... no I’ll say do sixty... “Ooh.” And I know from myself that my fiftieth sketch is going to be so much better than my tenth, and usually by the fiftieth or
sixtieth I’ll start to have really good ideas. So it’s but in the chair time... is what I call it; it’s with writing, it’s with design, it’s with cooking, the tenth time I make those brownies they’re going to be hopefully better than the third time I make them... although brownies are a little tricky. But it’s that dedication to working through what we call the process... sketching, even in the making... manipulating materials, and research can be also in... research in materials, working with different materials am I going to make this out of tin, am I going to make this out of cardboard, is it going to be... wouldn’t it be great if we had this cool models laboratory where they could... but anyway. So it’s but in chair time. I don’t think those great big aha projects come from the thin air. It comes from that dedication, that motivation, that persistence... persistence is a big one. People used to say, “Oh, I don’t have patience to do art.” Well, we’re doing design, and I don’t think it’s so much patience as persistence... that willingness to just work through projects... work through it. There’s always a step... at some point we all become frustrated... we all become frustrated, and I’m old enough now to know if I’m frustrated, take a break... just take a break... doesn’t have to be long... and I try... the students were laughing at me this morning because they were working really hard and it was ten after nine and I thought, alright everybody stand up, tuck your chairs in and then we just walked around the atrium, now I it sounds goofy, and they were a little bit embarrassed, but it gets them in a different physical place and they come back and they were smiling, they were breathing deeply, and they sat down, and I think things happened. I was at the AGI conference, and there were ten designers up on the stage... it was mostly students and faculty. ...And one of the questions... I don’t remember the question, but the answer was take frequent breaks because you’ll always get frustrated, and when you come back, your eyes will be fresh... and I think that’s true... so I think the students maybe a thinking skill or a knowledge skill might be that they have to understand their process. One of the things we emphasize in this program is process... how do you work through a design problem. We absolutely don’t like the students to just go from here, their brain, to the computer, because things will usually look crappy, especially if they’re not quite skilled, because they haven’t understood that going from your brain to the computer, you need that intermediate step of using your hand, using a pencil or a pen, or marker... or crayon to get that idea physical... and seeing it on paper, doing the sketches...

But we’ve been talking about sketching, we didn’t talk about that at all in manipulatives...

No, we didn’t, I skirted over that...

But you know, we’re talking about sketching here as a thinking skill almost more than we’re talking about it as a manipulative ability...

Well, I think it’s probably both. I mean sketching is certainly manipulative ability, but I think as you are manipulating, you are thinking. It’s not idle doodling; you are thinking about the problem, you are thinking about solutions, you’re working things out, you’re thinking visually, so I think it very much is a thinking skill, at least the work that I saw today they were definitely thinking about the grid, they were definitely thinking about the color, and they didn’t have to be so concerned about their manipulative skills because it was more of a thinking process than a manipulative process. I always find it interesting
about the drawing... the first year drawing that the students do; because it seems to
develop manipulative skills quite well, but it doesn’t seem to develop their thinking
skills, and I think drawing can be used as a skill to develop thinking skills, and so we
have to work with them here to use drawing or sketching as a thinking skill.

*Ok, that’s a good discussion...*

How are we doing on the tape?

*Oh... I don’t know, I can flip them if I have to, but we’re doing fine. What would be a red
flag – green flag situation, if you have a student... since we’ve talked Sophomore level...
I’m going to ask about higher up pretty soon...*

Ok...

*But so far we’ve been talking about Sophomore level mostly, if you have student in your
Sophomore class, what would be the red flag that would cause you to wonder if this
person was going to have good success in Graphic Design or the green flag that would
cause you to say this one is going to be outstanding?*

I think it goes back to those six qualities that I mentioned earlier, and quite often it can
get down to those emotional qualities of persistence and motivation and consistency...coming to class on time, doing the assignments, asking questions, being willing to take
direction. So those are important, but also the red flag would be inability to understand
and use the design principles... that inability or unwillingness to use sketches, but I have
to say for the most part the students that we get in the Graphic Design program have
decent GPA’s and so that means that they have been successful students in their
Sophomore year, so that meant that they have learned the importance of being a good
student... which would be following directions and completing assignments and so on.
So generally have them. A red flag is a student who is unwilling to take direction... that
they think they can pull it out of the air the night before the project... and some students
might be incredibly talented, but they might not want to put in the time to develop those
thinking skills through sketching and through research, but that’s rare... that’s rare, but
that would be the red flag.

*Would you like to describe what direction looks like in the classroom? What does
direction consist of?*

Direction means following the problem statement. Some students will decide, well I
don’t want to do the project this way, so I’m going to do it my way. And, you know
Graphic Design as a profession is a client driven... for the most part... profession so if a
client has a particular request... now certainly their request might not be in agreement
with the designer, and it would be up to the designer to help the client understand why
this tomato product might be red rather than green... you know research shows... But
students need to understand that there is usually someone to report to in a sense. Or
profits are driven by clients being willing to come and give you money, or if you’re
working in corporate structure, you might have an art director that you need to follow directions. Now we can always disagree, but students need to learn those skills. So that’s I mean by direction, also during the course of our projects, students need to understand that perhaps the instructor knows a little bit more than they do, and there might be an occasional student who doesn’t understand that professors have a lot of experience, and we’ve been vetted, we have a reason that we’re here at Iowa State, and it might be maturity level, where a student might be unwilling to take direction. So that would be a red flag.

So some of this is in-process critique?

Yes, yeah.

And in the meantime, you’ve told me about a problem statement and also about a client relationship. A problem statement tends to shape the design in some way, and it has a few items on it...

Um-hmm.

What is the relationship of the designer to the client?

Well, it’s very important, and the client could be many things, for example I talked earlier about the fact that a designer could be part of a corporate culture, an in-house designer, so the client would be somebody within the organization and so it might be doing newsletters, or a web site or even a presentation for an executive who needs to do a PowerPoint or even a flip presentation. So client that way, or a client could be a... let me back up... perhaps there might be a designer who has his or her own design firm and the client could be a business owner or a client could be another designer, and often, for example, Meredith Corporation will assign a book design to one of the small design firms in Des Moines rather than having their designers in-house because they’re doing magazines and there’s enough work and so they’ll assign the book to another designer outside of Meredith. So the relationship is very important, in that respect, the designer has to understand what the client says they want, understanding what the client needs, and who will be on the xxx, for example if you have a small business, start up, that business owner may or may not understand the role of design in their business. What will that identity mark look like, how important is it, do they have to spend money on design and printing? Often, might be a first time business owner, might be a small start-up, and they don’t understand, well why can’t I just do this on my computer, and bring it to the printer and that’s good enough. I spent time with a business here in Ames as a financial advisor and we spent a lot of time working on it, and I spent time designing it, and when it came to printing, she decided she couldn’t afford it so she just made her own design business cards and started to give them out, because she couldn’t afford to have them professionally printed at the time. They were terrible, they looked terrible, and they don’t look professional at all, but for her they’re good enough. So the role is very important in understanding the role that the design can play. Now has her business taken off from there? I think it’s done very well, but not based on the design. She’s gotten the word out,
she writes this article for a publication every month, and word of mouth has brought her business, and so on. So design plays a role in the success of a company so helping the client understand that.

5 What you’ve told me is that the designer must be sensitive to the wants and needs of the client as well as the audience...the wants not necessarily being the needs...

Exactly, yeah...

10 And also, that we have to teach the client, sometimes, what the role of design can be.

Yes, and that can take a lot of time... the role of design... showing them good design versus bad design, it’s probably not unlike an architect working with a client and saying to them, show me what you like, show me pictures of what you like, so that they can get an idea of their taste... that’s a little bit different, because that has a lot to do with behavior and motion in a different sense, for a designer has to understand what is it that this business needs, is it a brochure, is it a web site, is it getting the general public to understand what you do, or do you need to get your word out to other design firms in some way?

15 And that knowledge base of whether this should be a brochure or a web site, that’s based on other knowledge, that’s based on other knowledge bases, one of which is audience...

Yes, it is, and research as well. One of the courses we have here is the internship, and the internship is very important for students to understand their role in the business and their role with the clients... and the more successful internships are the ones where students start to have client contact... where they start to understand how to talk to a client... or at least be in a room where a designer is talking to a client, and asking questions... so that they get to be maybe even a fly on the wall. The less interesting ones for students are where they are just a pair of hands, they are just there for their manipulative or technical skills. Those tend to be quote unquote, “dull and blind” for them.

20 Let’s do a compare and contrast, what’s the difference between the entry level student and the exit level student? We’re really looking for the value added between entry level and exit level.

Well, one is a simple maturity. Students mature a lot between 19 and 21 or 22. So it’s a maturity level. It’s an experience that students have had through either practicum class or Rome, a study abroad experience and/or their internship, so it has to do with maturity and experience, and also the skills have developed a little bit more... the manipulative skills, have gotten better... gotten stronger; their knowledge... they’re much more facile with the software, and their thinking skills hopefully have developed... their understanding of concept, their understanding of audience, those are huge, huge leaps that students make.

30 It should be... knowledge bases and thinking skills. Art there any that just stick out to you right away that you absolutely know that your seniors have “gotten it?”
Yeah... the reason I hesitate is because there are a couple of ways that they’ve gotten it... and I can talk about the business way, and the study abroad way, and the studio way. In the studio way, I know students have gotten it if they read the problem statement, they start to have ideas, they understand the idea of quick sketching, they don’t grab onto their first idea... that they have a couple of ideas. They’ll talk to people about it. They’ll do some research, and they’re faster... so all of those, and by the time they’re seniors, we need to think of a way to engage seniors a little bit more, because they’re mentally out the door in February. But how can we bring them back into the car... into the corral and really excite them, because they’re good designers by then. They’re good and they can make things pretty on the page... the concept might be a little bit weak, but we want to really engage them on the higher thinking. Maybe it might be this idea of across disciplines or thinking about different kinds of principles... ethical moral as well as visual principles. So that’s how I know if a student has gotten it... if they’re faster at something, if they’re willing to spend the time...

Tape ended, reversed tape

There we go, it blinks red when it hears us. The only thing I have left to ask you since I’ve now turned the tape over... I’ve asked you lots of things, and I’ve dug into them in depth where I thought it was going to make an interesting cross section... is there anything I forgot to ask you that I should have asked you or that you specifically wanted me to know about?

Well one of the things that I touched on was the knowledge base that students gain from going to study in Rome for the semester, and there are many concerns I have about the Rome program... I don’t need to discuss here, but one of the things I’ve noticed; I taught there three semesters, and one of the things I’ve noticed is a certain kind of thinking and knowledge skill that students gain from going to Rome versus staying in Ames. Now, students do develop quite a bit in the Fall of their senior year... whether they’re in Ames or in Rome... a lot of them have done internships or they’ve worked in a firm over the summer. So they gain a little bit of maturity, they’re able to work a little bit faster, but the students who go to Rome are forced to live and be among people of a different culture which is a huge big deal... and most students do it well by the end. They are able to use public transportation, travel easily, and not have that anxious look of a terrified animal the first two weeks that they have... or go walk to class the first weeks because they’re too afraid to ride the tram. It’s not that they particularly like walking very well, because face it, in Ames they drive a lot. So it’s that maturity and confidence level that students gain. Now does it come up visually... certainly in the kinds of colors and maybe products that they design, but really it’s one of those intangible things, you just know that students have gained a certain amount of maturity and confidence. Here’s an example, it’s not design based at all, but when I was in Rome a couple of years ago I had an errand that was an important errand for a student to do – she way my undergraduate research assistant - and I needed her to do it because I was busy doing other things and it involved going to a business, doing a transaction, waiting in a line, struggling with somebody who didn’t speak English, but I gave her enough information that she would need, but I knew
that it would be a long process. Dealing with Italian business can be rather... trying your patience. And she had to go to a part of Rome that she wasn’t familiar with... and I said, “Just know that this will probably take you two hours, and that’s ok; it will take a long time and you’re just going to have to be patient... and if you have questions, you’re just going to have to give me a call; here’s my cell phone and so on.” So she can back a couple of hours later and I said, “You did it.” And she said yeah. I said, “Was it challenging?” And she said, “YES.” And I said could you have done this your first two weeks when you got here, and she said, “Oh no, no.” And I said, “Look what you’ve done.” And she said yeah, that’s true, that’s true. So there’s that kind of intangible thing, I think traveling does that whether it’s part of the study abroad program or if they do it on their own. But that’s something that I just wanted to touch on those things. And, you know in Rome we take them on studio visits, or they have lectures by well known international designers, and so they get a different flavor than what they can get here. And so I think that that’s important.

_Ok. We can turn it off._
Voices from Interior Design
We have said that you are an instructor of Interior Design here at Iowa State University, and that you have taught virtually all levels here. With regard to that experience base, what I hope you’re going to reflect on for me today are the qualities of a successful student in Interior Design. From your experience, which is considerable, and in your teaching, what things seem important to student success in Interior Design? These things might include specific types of thinking, manipulative abilities or constructive skills… if we were talking sewing manipulative abilities would be guiding material through a sewing machine, but anyway, we want to talk about these three areas… but there’s nothing sacred about them… thinking skills, knowledge bases and manipulative abilities… the reason I ask about that is it gives me a certain diversity in the response. The knowledge bases, if we could use a quick metaphor would be building blocks, and then thinking skills would probably be the strategies for arranging the blocks. So what do they need to be good in this discipline?

I think for me the most important factor would be a deep-seeded sense of commitment to the subject matter. Patience would certainly be an issue, an ability to suspend judgment, I think is an important issue… on a more fundamental level, I think strong reading comprehension, and analysis ability, are important, a broad based general educational background, and competence in the ability to perform mathematical, analytical processes an ability to interpret literature, and ability to think logically using a variation of a scientific model, the ability to express oneself in a variety of different modes and media… an ability to receive messages in a variety of different modes and media… philosophical maturity by which I mean an ability to form a personal philosophy and reform it as time passes, and I think those are general design competencies, not necessarily related to our field. Related to our field, I think a fundamental commitment to the individual scale of human factors, and the ability to study the biology and the psychology, and the sociology of individuals… and yes, the sociology, of course, the group dynamics and that kind of thing… An ability to, and willingness and interest in an ability to constantly evolve and refresh knowledge and perspective. On the subject of skills, I’m not sure that I see any one skill as being critical… the absence of which would be sort of professional poison, so I don’t necessarily see that. I do think a general ability to visualize both mentally and physically is important. Um…

What do you mean by mentally and physically?
Well I mean, I think a successful student/educator/practitioner has to be able to imagine things that aren’t... things that could be and form mental images of the parts and assemblages that can be translated into some other visual form, but aren’t always translated into another visual form... that they can picture problems before they happen, in their minds.

Well, that’s interesting... one of the terms that shows up in the foundations curriculum is visual translation, and it’s one of those that I’ve been trying to pin down... exactly what was meant by that... no one seems to know, but you’ve just talked about it, so what does visual translation mean to you?

Well I think, that could maybe be a dissertation on its own as I view it. One way of thinking about visual translation is to think of the sense of sight as being a receiver for input and the mind output, so anything we see in our minds or in the round, if you will, we can learn from, we can analyze it, we can make generalizations about it, and we can transform it into new ideas either in bits or wholes into something new. And so that might be one form of visual translation... is that ability to use things we see as analogs for things that could be. Another kind of visual translation, I think to me would be to look at something in one form and imagine it or convert it into another form. The most basic would perhaps be to see a building and translate it into a floor plan, or see a floor plan and mentally or physically translate it into a building, and so that idea of it being a process of turning “A” into “B,” through cognitive processes might be one interpretation of that kind of process.

Is the 2 dimensional – 3 dimensional translation the natural one, or are there others?

Well that is a natural one, but I don’t know that I would consider that necessarily native to the concept, or that the concept has to include description in those terms. For example, I think seeing something that is 3 dimensional and analyzing its qualities and performance, and incrementally making changes in it while imagining it as a 3 dimensional form is probably more critical to me than that 2D-3D transformation. I see that as almost an incidental consideration, 2D to 3D... because it suggests that either 2D or 3D is of importance, and I don’t think it is.

And so you would consider that the more significant aspect is the ability to imagine change... or transformation?

Yeah, to imagine transformation, and to have some options in terms of the ability to do that, and I guess the reason I’m hesitating about endorsing the 2D-3D paradigm for this is I think if an individual has sufficient tools, they can overcome some limitations or difficulties in making the 2D to 3D transition, because they’ve got other means... or other detours around that. I mean that’s a frequently used modality, but I don’t see one as being absolutely essential to the process.

Understood; We talked about options... what is the role of options?
It think the biggest role to me of utilizing options as a tool is a kind of self-analytical ability that one explores solution concepts, one explores ideas in terms of the achievement of a variety of desired outcomes, and each time a set of performances is laid out, that becomes an option, even if a subtle change takes place in the process of analyzing one piece, the result is another option... and one can always weigh the original option against the new inspiration.

So would iteration or alternatives be similar concepts?

Um, well I think they could be; it would depend on your definition of a concept. If the concept is a visual concept at a point in time, then I think you could have iterations that were not options...

True...

That did not explore visual variations, they explored other variations, but the visual concept really hadn’t been affected. Conversely, I think you could have operational or functional concepts, let’s call them, that ah, were explored, and the same functional concept was used, but with considerable visual variety, those iterations wouldn’t show any alternatives to the original functional concept. So the designer has to keep her or his eye on the ball and make sure that unless they’re looking for happy accident, that the intent of the exploration is being addressed by the process of exploration.

Ok, and we’ve said concept a lot of times in the last few minutes, and it’s one of the things also that I see in the CID requirements... that the role of concept is very significant, and I’m trying to understand how concept compares to a couple of other terms that I’m seeing and hearing throughout the College, similar terms, I think. You want to elaborate a little on the role of concept in design.

Ok, well I think concept could be a dissertation topic.

Yes, probably all of these could.

I not only don’t adhere to a single definition of concept...

That’s why we’re doing interviews...

I not only don’t adhere to that, but I actually celebrate the idea that a variety of conceptual tools enriches the design process. So I don’t feel there is that one right definition, that one magical activator for a concept that is important for students to know, quite the contrary, I think that one of the greatest risks to creative problem solving is a sort of prescriptive definition of concept that’s used every single time.

Where do you get a concept from?
I don’t think anything’s out of balance, I think you get concepts from visual characteristics, from operational characteristics, from construction issues, from expressive goals, from societal considerations, political, religious, geographical dot, dot, dot, for infinity.

Almost anywhere...

Right, I believe the fundamental definition of a concept isn’t very profound at all, it’s a dictionary definition, it’s an idea. And so it’s an idea for solving the problem, and I think that’s naive, that concepts have to be a collection of ideas for solving the problem, and that maybe one of the hazards in the educational process as we practice it, is you’ve got to start someplace with the “C” word, and quite often that becomes a thematic definition of a concept... that it’s a thing. How would this thing influence the design process, and sometimes those things are very nice metaphors for the problem or problems that are being addressed, and some cases, they end up being... because of the student’s professional immaturity, they end up being rather arbitrary and irrelevant, but still utilized because there is a clarity between a thing and another thing. Right so, I feel that one of the educator’s jobs to make sure that people leave town with more in their baggage than the metaphor as a conceptual tool. But, you know, I’m not sure how to focus a discussion on where concepts come from... because nothing is off limits in my book.

Ok, I’ve got to get on to the next question, but you keep raising questions that are very interesting... what would be the differences between concept, program, and design criteria? Criteria... and a lot of people will quibble with criteria, but it’s the broadest one I can come up with at this point in time. Criteria, in my mind, there tend to be more of them to start with, and sounds as though you like a lot of concepts to start with... perhaps narrowing to a theme later on... is that right?

Yes and no, one is, I’m a very vocal advocate of methodological approaches to design, that is very analytical step by step analysis of how design is done, but on the other hand, I don’t for a minute believe that that’s a valuable day to day office skill. The reason at the higher education level that I like to give so much emphasis to it is in much the same way that you learn to drive an automobile, you don’t have to tell yourself to 100 feet from the intersection, put on your turn signal, it becomes internalized, it’s automated, and I think if it’s at the freshman, sophomore, and junior level, students are aware of steps and sequences of steps that are customarily part of design process, and they hear that often enough, even though it’s not a specific set of steps, a hundred feet away or two hundred feet away, they’re aware that the turn signal and the intersection are linked, that gradually that enhances their effectiveness as a designer, so in terms of starting with the concept, I don’t think it’s a bad idea for individuals to... just simply imagining the assignment, they’re been given... without talking with the client, without seeing the site, without even imagining the setting that it’s in, to generate some conceptual alternatives. So in other words, the concept can be, and I feel strongly for most designers, it is, one of the very first things that happen. But I don’t think in a formal sequence of activity, the concept is anywhere near the first thing that comes out. The reason I think it’s useful, though, is it means the water is hot and the coffee is on the table, before you really need coffee. As far
as what comes first, I think it’s really to me... I don’t think that was the question, the question was...

No, but it’s an interesting topic...

Well in terms of what comes first, I think it is insight which comes through investigation, and so some of the investigation involves talking with people, like a client, some of the investigation comes from hearing the project description, and keeping it fresh and authentic exactly as presented, but also reinterpreting it in one’s own terms as a kind of “1A,” and “1B,” then the step that sort of runs neck and neck with that investigative process, to me, is analysis. Drawing conclusions about what you think you know, making some conclusions or what you still need to know or understand better, and when you finally nail that down and say, ok, these are my conclusions and based on my conclusions, these are the requirements, implied by that, that’s the program. Let me take it one step further. In terms... and I forget what other term you used... I would call it factors...

Factors... that’s a good word, I called it criteria...

Yeah, criteria to me is the next step, there are some criteria we know are important to the project, that are from a temporal standpoint, impossible to act on formally. And we would like, as designers to have an explanation for everything we do, but I think sometimes one of those explanations has to be... we ran out of time, and therefore, not every decision that is made in design ends up being like the decision as to whether you’re going to hold the tile on the space shuttle with this or that. You know, some of them are just instinctive, they’re fueled by experience and information, but we haven’t really made them consciously. We’ve got factors going beyond the criteria factors are all of the things that affect the problem, most of which the designer never identifies. They’re issues that another designer might come in and build their entire project on, and that might make their project more successful, it might make it a disaster.

So from the factors identified by the investigation, we eventually pull out some things that we choose to design on.

We eventually discover some of the factors which become criteria and we eventually codify some of the criteria into the program.

That’s a discussion of design process, Ok.

Yeah

Well, we better get back to what we were supposed to start with, even though all of these are interesting... because other people are talking about them, and when I hear them, I’ve got to investigate them a little. What are the fundamental things that students have to know before they’re ready to advance into interior design?
Well this will be kind of repetitious, but I think they’ve got to know how little they know. They’ve got to know how much they have to know, and they have to know how to start getting some of that. But, you know, I see so many students who are non-visual scholars, who are bright students, great scores, who struggle with the visual part of design, but can have a long distinguished career in the profession, and I see visual problem solvers who are strong from an artistic standpoint, who are terrible scholars who don’t know half of what they should know, and have a distinguished career in the profession.

So there are a lot of different skills that students can bring to it and succeed?

Yeah, I think an infinite combination of factors leading to success, but you know, I think an important aspect of that is that knowing what they don’t know, the sense of humility that they are able to identify their shortcomings, and correct or control the consequences.

Ok, um... if you’re looking at a class of students, what would be some of the things you might see in that class and say, “Oh wow, there’s something we can build on.”

For the individual... there’s something we can build on for the individual, hunh... anything.

Give me a short shopping list of common ones.

Um... enthusiasm, patience, a kind of blind dedication, communication skills, people skills, curiosity, I’m looking for the word that as a single word describes suspending judgment... not... a willingness to write down anything regardless of whether there’s a belief in it or not, because our opinion may change, some new information may come to activate and report to that, there again, I think it’s patience and open mindedness, it’s curiosity, it’s an exploratory mind... and I think individuals who exhibit a high level of any one of those particular criteria, may end up being a miserable designer. You know, that there’s not one thing that is the key to success. May be so, if I was going to invest in one of them, I think it would be enthusiasm.

Enthusiasm, ok...

Or dedication or whatever you want to think of it as being.

If you find a student that has this dedication or enthusiasm, what kinds of things do you see them doing... that tell you that tell you... that say wow, look at this?

Bouncing off of adversity.

Ok

Um, again as a skill, I think it can take a variety of different forms, but they go into things with their eyes open knowing that eventually their energy will get them over, under, around or through the next conceptual block (my note, confidence in ideational ability)
that they run into, and so they don’t tire as quickly from failure they don’t tend to classify experiences as failures, they just think of them as experiences... as steps in the process. And so, a sort of failure proof attitude by which I mean “failure” in quotes, not that they don’t fail, they often do... but they don’t think of them as failures.

They are persistent, yep... that’s a very common one.

Let me say though I think it’s persistence harnessed inextricably to dedication or motivation, or something of that sort, because I think persistence can be harnessed to broad measures of achievement, or high ranking, or high ranking or something of that sort. I think it has to be connected to a sort of altruistic belief in the field. It’s not a get aheadness, it’s advancement, or it’s maturation or something that motivating factor for the person.

Ok, so do you find that these same people who seem to have this persistence... enthusiasm also set standards for themselves that they drive toward?

In a formal sort of way?

Uh... not necessarily..... maybe, maybe not?

Well, I think they set goals from time to time but I don’t know that there is a mental checklist that they’ve necessarily got... that they say, “I’m persistently advancing toward this target, and primarily this target.” And I would think they’re probably pretty open channel communications that they can be drawn off task if they see an opportunity to do something else that seems to be... at the moment... of higher priority.

Here and there we’ve talked about people skills, we’ve also talked about relationship to the client, uh, what is the interior designer’s relationship to the client? What should it be?

Oh yeah, I was just going to say that. This is kind of naive altruism, but fiduciary of the client, that they are trying to work in the client’s best interest to move the client’s experience and a whole range of client issues to where they believe the client wants to and needs to be.

So you want to move their experience to a good place...

Right and I kind of marvel at this phenomenon in design... what I marvel at is that some philosophies are contradictory to that... or appear to be... where the work stands or fails kind of in a vacuum, and how it connects to people is of relatively low importance... and sometimes, seemingly, no importance at all that it... to me it’s a... I don’t know, I hesitate to call it an artistic approach, because I don’t know how artists feel about that particular aspect of things, but the work... and for some artists... seems to be about the work, and how people react to the work is their own business and that doesn’t seem to consume a lot of the artist’s time or concern. I can understand that and get behind it in artistic
activity. I have trouble getting behind it in applied design or applied art, where to me it’s purposeful problem solving and most, well nowadays I’ve come to understand that maybe not most of the purposes are human, many of the purposes are now more global than that, more ecological than that, that there are impacts on the ecology that are not tolerable even though they are in the best interests of the individual.

This is one of the things that’s emerging from this study, that has been quite interesting... what principles drive design. And you’ve just mentioned human considerations, ecological considerations...

You know, I can’t right off hand imagine other principles that are at the same point on Maslow’s hierarchy of needs. You know, I see most of the other principles as being means to those ends, not ends in themselves.

A good point, I think.

Well, but on the other hand, a principle is, I think by definition, a way of doing something else, and not an end in its own right. So maybe that’s just stating the obvious.

What would be for you a red flag, or maybe a green flag, a red flag when you’re looking at a class of students and you’re saying, I wonder if this one really belongs in Interior Design, or a green flag that tells you, boy, I’m glad we’ve got this one.

Well one of the... I’ll get around to answering your question, but as sort of a preface to it, one of the things I find most difficult is to explain certain behaviors that I see in student work, and to me a red flag would be ambivalent, but it is often... especially in early contact... it’s a little bit tuff to sort out ambivalence from inexperience or um, lack of proficiency in a particular area. Let’s suppose we’re looking at a student portfolio after the core year, for the portfolio review process, and I see someone who has torn out magazine illustrations and arrayed them across the board as part of a process... say for the doorway project or something like that, and I look at that and I say first of all, that’s not very sophisticated, that doesn’t show much depth of understanding of the role of craft in design, and secondly, it is crudely done, and thirdly, it’s irrelevant to what they’re trying to do. From the student’s perspective, he or she would say, “I want to show coarseness, I want to show the informal side of life... that aspect of life at the lowest end of the socio-economic status/influence scale... and they do it by tearing things out, and there’s glue all over the place because they wanted to grow and they never used glue before. And so philosophically they’re saying, even though this costs me, I’m going to try to learn glue, and then finally, in terms of taste, their taste and sophistication and that kind of thing... their whole message is that design is much too preoccupied with itself and its sense of modernism, and so this is going to be anti-modern, anti-design. It’s going to be the people. So here are all the things that I would be looking for in a really good student: a willingness to explore at any cost, a sense that humanistic and social values are of primary importance, and sense that design can capture and communicate critical issues; and I immediately discard them from consideration. So that to me... those are everything I mentioned there was a red flag, but it could also be a sign of a promising career. So
intentions and an explanation of causal factors has to be in the back of your mind every time you see a red flag. You’ve got to say, you know, a red flag in what language? What does that red flag really mean? A red flag may be a pendant of courage a challenge, or it may be, you know, you’re out of the game. I’ve seen a lot of both actually.

We’ve talked about communication in a lot of different ways, and you came back to it now, talking about message, how many different kinds of communication do you find are real relevant? You want to give me a short list of the things that are real useful?

How about a short list of the things that aren’t useful, which is none. Oh! Any kind of communication is good...

Yeah... not necessarily appropriate, but when... you know, I think the communication toolbox has to be one of the bigger, clumsier toolboxes, and it has a lot of dust on it because some of the communication modes don’t get used very often, but which one is most important, attitude, maybe... your communications attitude... but as far as the particular mode, I don’t think any one strikes me as being most important. You know... maybe um... I’m not sure I could rank them without spending a lot of time thinking about it.

I didn’t ask for a ranking really...

I think verbal communication is important, and it strikes me on first blush as being pretty critical, but I think people... somebody who has a speech disability... could be an excellent designer using visual communication and text. Somebody who didn’t speak the language, I think, could talk themselves into a good contract with visual communication. Probably the easiest to use would be freehand visualization that’s sort of a cornerstone of the visual communication frame of reference... but given enough time, someone that is a clever 3 dimensional assembler of things could get the job done too.

We’re starting to work into manipulatives now. Ok, so we’ve got some freehand visualization, we’ve got some 3D assemblages, are there other manipulative abilities that are real relevant?

I’m feeling like a broken record...

That’s OK

What... I’d be hard pressed to find something that I don’t think is relevant in terms of manipulation. There are some that I think would take a lot of creativity to use effectively... people do it. A lot of it I think is mental and an awareness in terms of what you’re doing in terms of manipulation. It’s an understanding that certain aspects of what we do in manipulation have connotative importance to the way people interpret what we do... and so if a student does a model, for example... and I love models... if I had my way, our program for the first two years would use nothing but models... I mean certainly sketches leading to them and so forth. I just think there is so much to be learned in Interior Design from creating 3 dimensional assemblages. that... if there were an
association looking for a president... volunteer president... I’d quit my job to do it, if its goal was to advocate 3 dimensional modeling. I just think that’s critical, but it’s not the model that I think is so important, it’s the student’s ability to look at the model and say, “Oh, I know this is going to send some bad messages,” but it’s the best I can do right now. It’s an insight, a self-analysis of what that is saying... what it’s doing for them, and its limitations and its xxx.

So what you’re wanting is for them to be able to make their thoughts visual through, in this case, model building?

That’s one facet of it, but one of the other reasons to do model is to understand your field. To understand, by using glue, how nuts and bolts work; or to understand, through building with nuts and bolts, how nuts and bolts work... that sort of understanding of the mechanics of the thing. I think we’ve talked about this in passing before... is that modern students are so fluid in digital things that they often unwittingly miss developing even basic comprehension of mechanical. Now they’ve got a lot of depth and not as much breadth as their historic predecessors... but the model can sort of overcome some of those things; it will help them get a spatial perception... how proportions play out or the consequences of proportionality, whether it’s something boring or invigorating; it sort of confirms that process. So...

And functionally, what isn’t likely to stand up for example.

Yeah sure, one has to be able to suspend their beliefs about things again though. For young people and mature professionals it’s hard for them to accept the fact that the model falls over; that there’s a direct connection to the real element... that it’s going to fall over too; or conversely, the fact that it falls over in the model doesn’t mean it’s going to fall over as a real piece... that there are other dynamics associated with it like things loaded on the shelf... like they’re going to be bolted on there as a permanent part of it... that becomes part of its performance.

Ok, what kind of difference are you hoping to see between the entry level student and the exit level student. We’ve touched on it just a little early, but what are we wanting to see in the way of that transformation?

Wanting or expecting?

Hmmm... I’m not sure which one... let’s go with the ideal.

Ok, in the ideal, we will see humility, we will continue to see enthusiasm, we will... we will um continue to see a kind of passion for exploration and discovery. We will see a student for whom grades are just another mode of communication, no more important or less important than anything else... in fact that’s the most important, I think I’m being facetious, but I do think that unwittingly the goal of the core should be to give everybody an “F,” because I think desensitizing the importance of grades is critical. If I gave that assignment to myself as a core person, I would say, “Get real,” and also, it’s counter
productive, because in reality, we’re wanting... I think we’re wanting competition for entry into the programs. We’re wanting to see everybody’s best effort, with a great many of them realizing that their best effort may be 43rd out of a list of 40... that are going to get into the program, but that’s naive idealism on my part.

How would you compare say your sophomores to say your... you don’t teach seniors that much, but even maybe your early grad students? What should be the difference between that student that’s received some training, but early training in Interior Design and the one you hope is going to go out into the professional environment soon?

Probably not soon enough... is that what you mean... I hope you’re going to get out of here pretty soon cause I think I’ll commit suicide.

I can’t talk, I’ve lived here as long as anyone.

Well I think one thing that’s really lopsided about the student experience here is that... the importance of challenge... the importance of maintaining those things that made them such bright sharp sophomores, as graduating seniors. Grades, clearly, are not sufficient for maintaining motivation, and we tend to take our eye off the ball or something... maybe it’s voodoo, maybe they’re all cursed, but I think our seniors are sometimes poor substitutes for sophomores.

Hmmm

I think part of it is that inherent mysteriousness that comes to much of the sophomore level... that we haven’t gotten in... that the getting in is a gratifying career, not becoming a sophomore in your major.

Hmmm

...And I think that is information that can be communicated more persuasively by us, and by the core... I don’t think we make that a priority, to say you haven’t gotten in, you’ve just taken the first step in getting in... and when you’re a professional, you’re not in, you’ve just taken the fourth or fifth step at getting in, and as a mature adult, you’re not in, you’ve just got a good start.

So level of challenge is one of the big things, you’d like to see that continuing drive and enthusiasm to work and be better.

Or, putting it causally, where I think it belongs, I’d like to see a program, not just a core, but a program that places a higher priority on maintaining the motivation and enthusiasm of the student.

OK, we talked about analysis, analysis is a major thinking skill, and yet I have a sense in design that the purpose of analysis tends to eventually be synthesis... only thing is we tend
to call synthesis a lot of different things in design... so if we analyze something, what comes next?

Well I was thinking and not listening carefully, we were talking about after analysis, what comes next... or after synthesis, what comes next?

Well one of two, either how... what kinds of synthesis would we expect might result from the initial analysis, or after analysis, what do we do with the breakdown we’ve performed?

Well, if synthesis is a kind of pulling together of individual partial solutions, to problems, and to combine solutions, and a subsequent step in synthesis is pulling combined solutions together into the final solution, then I think that can happen... that better happen before analysis is complete. Analysis to me generally results in the program, but you can only use that step if you’ve got another process which you call evaluation.

Umhmm

Analysis to me is a conclusion about what you need. Evaluation is a conclusion about what you’ve got.

Very nice thought, and there was another one in there that I think may characterize design and I don’t think I’ve heard it before. Usually we talk about analysis, and then we talk about synthesis, but what you have told me is that we practice multi-stage synthesis, and perhaps multi-level synthesis.

Yeah, and I think most people would adhere to that, it’s just that when you’re using basic paradigms, one of the paradigms of the design process is one that has feedback loops littering the task... and that’s... I think most people would say well yeah that is the way it really is, to help people understand the variations in paradigms, we can’t show feedback in every single one of them, or it would muddy the concept of that particular paradigm. There’s the linear paradigm where you start out and you go one, two, three, four, five...

Folks in Education and English love it...

And Freshman design instructors depend on it, because if a freshman were exposed to this spiral feedback littered divergent, concurrent process paradigm they’d never go into design... and so I think feedback is an implied secret that is held for the later levels of achievement within this society... the culture of design.

How does feedback relate to critique?

Well, that’s one of those terms that has plural meanings, feedback could be an instantaneous thing where you get one person’s opinion on what you do, on the other hand feedback could be part of the process of synthesis where you get to an in-progress critique, and someone says, “You know this thing that you’ve been celebrating and kind
of cocky about all along, I think it’s full of holes, it doesn’t work because of x, y, and z.” You go back and you change it... then the feedback takes on that second meaning as well, which is it told you something, but it is also a kind of conceptual loop... back to revisiting an earlier stage... so there’s another feedback. I think you could take another meaning of feedback which is the electronic analog of (sound effect) you know if you get this kind of electronic squeal that comes through the system, and I think often feedback in the critique takes that form. Then it creates so much noise about something that’s of little or no consequence, that it takes the individual’s eye off the task and they suddenly shift from the major themes that are working well, and spiral into the earth on that one topic, because they heard it ad nauseum and they thought it was important, only because they were hearing it, but it wasn’t, it was just squeal.

*You know, that’s a really interesting thinking skill there... that ability to filter out the noise, and stay with the important things in the design.*

Yeah, and be willing to filter out the noise, because some... I think most people in critiques who create that irritating, unintended squeal, feel strongly about what they were saying, and so it’s often a real gamble if it’s me creating the squeal, and they’re my students, I’m kind of expecting that they’re going to do something about it, and one of my favorite axes... I can’t always act on it, but I think fundamentally, I believe it, is when the student says, what do I want. My mental response should be: something I don’t expect.

*Yep*

And I don’t know how you give students the confidence to do that, just in four years, because it requires... I keep using this suspension of belief... Here it involves a suspension of distrust and skepticism, and cynicism about life and a trust that things will work out when you forge ahead knowing that everybody on that panel said no, don’t do it... or do it. You do the math and you say no, that’s not the right decision.

*OK, well... I have worked my way through the great majority of the questions. Oh, there’s one that I wanted to revisit... altruistic belief in the field, what is that?*

An altruistic belief in the field, well, it’s just a fundamental confidence in the rightness of the actions your profession takes. It’s a confidence that Interior Design if studied long and hard can be done with great purpose and impact, and impact, sometime before you die... and therefore if you study long and hard enough, you will come to understand the rich variety of roles that are played by your field... but you don’t necessarily have to know that to trust it and believe that it’s there.

*That might be about it... are there any relevant questions about student progress, about student needs in terms of doing this kind of work well, is there anything should have asked you and forgot to... something you just really wanted me to know about it?*
Here’s a question that during the course of the conversation I realized I have no answer for, and that is what should the core faculty be doing to improve the core?

Well yeah, logically, as it says in the purpose statement of my study, the content should be drawn from the content shared by all six programs.

(Tape ended with the interview)
Betty-Sue
Interior Design
September 5, 2008

That’s the basics, therefore I need to ask you to reflect on a couple of things for me today... most particularly the qualities of a successful student in Interior Design... at least in the classes you teach. From your experience and in your teaching, what things seem important to student success, what helps them be or become good at this discipline, and we want to talk about it in at least three contexts... mostly for the purpose of diversification. We want to talk about thinking skills, manipulative or constructive abilities, and knowledge bases. Now we can treat those one at a time, but usually what happens is one brings the other to mind and we just end up hopping back and forth across them. What does it take to be good at this?

OK, well I’m maybe not your best person to ask this because my degree was in Architecture, not Interior Design but...

Well some of my Landscape Architects are from other places too...

Well I see Design as kind of a continuum so there isn’t... I don’t differentiate very strongly between Architecture, Landscape Architecture, Interior Design, Graphic Design... A good designer is someone that is a creative problem solver as compared to when I was in Engineering. Yes, they’re problem solvers, but they’re more analytical problem solvers, and so the creativity is what I see coming in here and bringing this thing to the design discipline and something that ties all of our people together as good designers is that extra creativity that they bring to it. Now how do you define creativity... I don’t know for sure, that’s a hard thing to give specific to it. But in the levels that I’m working with, successful students are students that are able to visualize three dimensional space and manipulate that and see how it could be changed. They’re ones that are willing to not necessarily follow all the rules all the time; they try things that are different and they’re willing to make some mistakes and say, yeah, that didn’t work particularly well and move on. They don’t commit to one specific design idea and then kind of just marry into that and not explore other things. I like to see students that really explore and then expand on a number of different ideas rather than zeroing in... because in design there isn’t a... I mean in Engineering you’ve got A answer, Ok. I mean, they can do the math and they’ve got an answer. But in Design there isn’t a single answer, and so... I take this the other way too, when I’m talking to students... because with the students, sometimes they get frustrated in that and they may be working up until the night before coming up with new ideas and I tell them what you’ve got to do is come up with the best solution you can with the other constraints that you have... because there is a time constraint. There’s always going to be another answer... another – maybe better answer, but as a designer, you’ve got to come up with the best one you can for your client, or the money that they have available to spend on it, and for the time that you have to commit to it. And that’s going back the other way on this... I’m moving away from your education question... I’m sorry.
No, actually you’re going right into it.

Ok,

We’ve talked about constraints and the ability of constraints to shape the design problem; where do they get those constraints from... and would you like to give me some good examples... just maybe a short list?

Ok, constraints from a professional standpoint but we’re talking more from the standpoint here of students... how do I want to say this?

Ultimately, we’re hoping those students turn into professionals...

Professionals, right, right and so some of the things certainly tie over, but here in the university we oftentimes don’t have a client that they have to work with. And that’s one of the things that I try to do in my teaching is – the one class that I teach – I try to have real people that they have to work with, because that’s a whole different ball game than having somebody write a list of what they want this, this, and this. When you’ve got a real person on that other end that’s making requests you’ve got a lot more work to do. I always try to figure out what they’re saying and not necessarily what they want or need... and you’ve got to interpret what they’re saying and what they’re needing and your job as a good designer is to yes, listen to what they say, but then go beyond that and figure out what it is they really need. More than once I’ve seen people say this is what I want, and then when you get to that point and you give them just that... well that’s not really what they need. I’m going to use some examples around this University of some of these buildings that have gone up. Vet Med went up with the new addition, and what they said they wanted, that’s what they got, but it isn’t what they needed, but right now they’re in trouble already and they haven’t even had the opening dedication for the building... and they’re discovering that there are some big gaps between what they got... which was what they said they wanted, and what they’re needing now. And I use examples like that when I talk to students all the time too, because if you’re going to be a good designer, you’ve got to think ahead of your client, and you’ve got to be their... brains on figuring out where they’re going to be. Because they won’t come up with all these things all the time, and you’ve got to be ahead of them.

Ok, so what we have here, I think, is a listening skill. You’ve got to listen beyond what’s said.

Um-hmm

... Especially in terms of your client relationship. So some of these constraints, or one of the large broad areas that I’m beginning to deal with, is the things that we have to manipulate in order to determine the design...Criteria isn’t a bad term, factors is a term, design program, I hear that said once in a while, but I think what we’re talking about is where to go to get these criteria, and one of those places you just said is clients...
Well, ok... the where else on that is – this is working from when I talk to them about becoming professionals – they need to learn from the past. They need to learn from what other people have done... and this is where a lot of designers fail is that they don’t go back and take a look. I’m going to use Vet Med again, and hopefully this will never go out to any Vet Med people, but when they first started doing the work, I said go to the University out there at Colorado, at the Veterinary School out in Colorado, because they made some major mistakes... they spent almost three million dollars correcting the mistakes that were made in the first couple years that they were in the building. And nobody went and looked at those... so this place made some of the very same mistakes, and that’s one of the things, I think, that bugs me... cause we do not do enough of what is called... the industry calls it... post-occupancy evaluation. We don’t go in after a place is open and really talk to ALL of the people. We may talk to the people at the top, but you need to talk to everybody, you need to talk to the janitors, you need to talk to the secretaries, both before you build, and after you do something. Because you’ve got to get that whole range of people, because they’re the ones that are actually using the facility and understand what’s working and what’s not working. So one of my big complaints in the Design discipline – and maybe this isn’t education – but what I try to talk to them about in education is that you need to do those post-occupancy evaluations. Because you have to learn from what others have done... truly analyze what works, what doesn’t work, why does it work and why didn’t it work. Where can we make something even better?

So, ideally, learning from other people’s mistakes...

That’s right... and there’s plenty of them out there. And, you know, we have a tendency to also borrow other people’s ideas. Even the great ones... Frank Lloyd Wright borrowed from over there in Rome, you go into the gallery facility in Rome and it’s got this wonderful spiral that takes you up. As far as I can tell in looking at it, the skylight that’s over the top in Rome is exactly the same pattern as the skylight that’s in the Guggenheim.

I knew that’s where you were going...

Yeah, I looked at that, and I thought well that looks very familiar.

Yeah, and sometimes it’s a purposeful borrowing

Um-hmm, yeah, and there’s nothing wrong with that, being inspired by or borrowing from that. So that makes sure that it’s working for that... I’m kind of a real practical designer; I want to make sure that my solutions work for my client. I’m not creating... I want it to look good... don’t get me wrong, but looking good does not take precedence over serving the functions it needs to serve. So I see why you’re looking at Frank Lloyd Wright...

Well, actually, I like that too.
Ok, what are some of the real basic things that students ought to know before they're really ready to launch themselves into higher levels of Interior Design?

I should have done my homework for this...

Oh, just think about your classes, what is it that you know you need to teach them so they can move forward?

Ok, well basically one of the classes I teach is Design Visualization, I need to get the Graphics. I think they need to be able to do graphics...drawing is their language, and once you get into the design profession, wherever you are, you have to have that language skill, which is drawing, whether it’s in the sketching, or the drafting, or the AUTO-CAD, those... that’s the way you communicate. And so they have to be proficient at the new language that they have. They have to be able to visualize space. There are so many people who can’t visualize three dimensional things...and that’s where they get into a lot of trouble. They have to – I’m going back on what I said before – they have to know what’s been done in the past, they have to have some understanding of...

Historic vocabulary...

Yes, what’s done, what’s worked, what hasn’t worked, you know whether it’s distant past or it’s recent past, and they have to be able to pull out what can inspire them for their future design. Ah, let’s see...

Those are all solid ones...

Ok, good... I sometimes wonder, because coming in from Engineering, I kind of have always looked at things a little bit different than everybody here. And yes, I came from a place where there were rules. It was obnoxiously overlaid with rules, I do remember a drawing class where they had us draw arrowheads, 500 arrowheads. Somebody sat there and measured to make sure each arrowhead was four times as long as it was wide. Now...

Laugh...

But that’s where I came from originally

Ok, micro measurement. Well, we’ve said a couple of things here... even though, let’s go back to these again, because what we’ve begun to talk about here is manipulative abilities... at least what I would call manipulative abilities...

you have to be able to manipulate a pencil if you’re going to draw or sketch or any of those other things... what other things should they be able to push and pull around with their fingers... and you’ve done it in the context of representational skills... either as representational skills or in some other context?
Hmmm, ok I guess I’m having a little trouble with exactly what you’re asking, what else do we have to be able to ...

*Well, in the first place, are there different kinds of drawing?*

Oh, definitely, there are plenty of different kinds of drawing, ok, you have your conceptual drawings, you can have them from very loose and free to a very constricted and drafting sort of thing, so yeah, there’s a whole range of where these things can be. And some people fall... there are some people that are never going to be very good at that quickly conceptual real rough type of drawing... they kind of move over here a little farther before they get started. And then there are other people who quite good at this and they can’t quite get everything lassoed in and controlled at this far end, and so people kind of fall in there and I think there’s a place for all of them in design.

*Ok, and we also talked about graphics... what is the role of technology in here? And what kind do they need if any?*

Oh, the technology, well, Interior Design ... health, safety, and welfare issues are a primary concern there...

*Oh, there’s a knowledge base...*

Ok, I see... So talk about technical, they need technical background in there to... they need to understand codes, they need to understand – I’ll take up – a topic that I’m learning a lot about right now... lighting because I’m going to be teaching that in the Spring... and so I need to get half a dozen steps ahead of them. Lighting... like this...

*Oh lighting, Oh very cool!*

That’s actually... Interior Design is kind of that’s their bailiwick... Architecture tends not to put a lot of emphasis on that, Interior Design is kind the home of where most light and color... Architecture, everything is in black and white and shades of gray. They don’t necessarily experiment that much with color... and I’m saying that from my background as an Architect – that was what my degree was in... was in Architecture. Obviously there have been some changes in there, but the things that Interior Designers tend to be concerned about is designing the interior for... to ensure the health, safety and welfare is obvious, and so lighting is one of the big things we can do. We talk about the acoustics, we talk about how different spaces will affect perceptions... say for example for the elderly and how they see or don’t see in certain situations. Light bulbs have to be changed, the color renderings have to be changed for them to be able to see as well. And we just started Universal design... trying to... one of the things some of our graduate students are working on now is aging in place... a way that we can design so that we can stay where we live....
Well, we’ve just talked about occupants, and in this particular piece it didn’t sound like they were necessarily the client... what is the relationship of the designer to both the occupant and the client?

Ok, well we are designing for the client’s wishes, but we’ve got to make sure that we ensure that the occupants are able to use the building properly and the way we see they should, definitely. Here we are, we’re the occupants of this building, but we’re not the client, the client was the Board of Regents. Yeah they designed it... Ok, I’m not even going to go there for the new addition... sorry.

Ok...

Yeah, you’ve got a, hopefully, you’ve got a client that is equally concerned about the occupants and how they are using the space and that they be able to function in the space, but as a designer, I think we have to be concerned about the people that are using... whatever, I mean whether you are an LA or, an Architect or an Interior Designer, or a Graphic Designer... the people that are using your design is going to be important... a product designer... that’s who you are designing for.

Ok, and we’ve also talked about the visualization of space, manipulation of space, I think what we’re talking about here are spatial thinking skills... well spatial thinking skills are one of those things that does tend to change a little bit from one person to another and one designer to another. You want to describe your vision of spatial thinking?

Oh boy, I don’t know... are there various theories on spatial thinking?

Ah... it varies a little, it’s really interesting.

So what

No, no, not until after you tell me. Ok, if you have a student who you think is a good spatial thinker, what are they doing?

They’re able, in their head, see a three dimensional space that they can move around in... they, they know what’s happening on the ceiling plan, they know how you’re feeling walking in the space, what the enclosure is going to feel like. So is there a theory on this or where are we going?

Yeah, there are, I’ll tell you but not right now... because I want to get as much on that tape as I can.

Ok...

What would be a red flag to you if you had a student in your class and you begin to wonder if they’re cut out to be an Interior Designer? Or the contrary, what would be the green flag that would say... boy I’m glad we’ve got this one?
Um, I’ve had several students that I would call a red flags, and it does go back to the visualization. I give them a plan, and one of the very first things that they do in their Sophomore classes is they are given plans... elevations of rooms... cubes, that are cut up cubes, and if they can’t figure out how those things look, without me having to draw little sketches... I use sketches. This happens within the first like three or four weeks of class, you know some of them will have problems, but they get onto it. But I’ve had some that simply will never see it and I’ve had one that always saw it completely reversed. She took whatever was negative and put something there... and then didn’t have stuff where there was stuff. I mean it was always the complete reverse... everything was reversed. I was really... I liked to watch how she figured things out because it was always the opposite, and I wondered... maybe we should do some study in there.

Oh, I would have loved to yeah.

Everything was the completely the reverse, she took what wasn’t there and put something there, and if there was stuff there, it was gone.

Hmmm...

And needless to say, she didn’t finish in Interior Design but she did go on and get a degree in Sociology.

Oh!

She was very frustrated because, you know, she couldn’t see it; I mean she literally couldn’t see it.

So there is such a thing as the ability to see space...

Umm-hmm

...and then there’s the ability to visualize changes that could happen within the space?

Umm-hmm

Well, let’s talk about thinking skills for a minute, you’ve given me one so far and it’s a great one to ask about so we’ll go there, and then maybe we’ll see if we can think of some others... Creative, “They have to be a creative problem solver.” You want to give me some ideas what this looks like in practice? What does creativity look like?

Oh, ho, ho... That’s a tough question...

Yes it is, and it means different things to different people so it’s always good to ask.
Yeah, and how do I know when I’m looking at someone that’s creative, as compared to somebody that’s just getting it done?

Or... if you’ve got a working definition of creative, you’re welcome to give me that...

I don’t have a... and when I look at a student and I see that they have a... you’re in a class where there may be 40 people that have the same assignment, and you’re going to see 38 of them doing kind of the same stuff. And then you’re going to see a couple of people that you’re going, my... I never thought about that... whoa, and they kind of blow you away... (Note: uniqueness) and that’s the ones that... I mean the rest will be... there’s always a level of success that people can get to... there’s always different niches that they can do, but the ones that are going to go excel and be the top twenty Interior Designers or something like that, are the ones that take it beyond where the majority would end up. They will go one step further, and just kind of blow you out of the water.

They do something unusual...

Umm-hmm

In some way... Unusual in a good way, or just unusual?

It’s got to be unusual in a good... I mean, just if you do something wacky, that’s not... I guess that’s unusual, but it’s not... but it’s got to be still solving the problem in a very unusual unique way. You know, I’ve seen the same project in various times... maybe I shouldn’t say, but some of the classes, they have used the same project for years, and I’ve seen things for the last ten years that they’ve recycled the same project on a regular basis, and so you see a lot of the same things. The same thing with the... can I go through the 102 projects?

Of course you can...

I mean we’ve been recycling the same projects in 102 for ever since it got started. And so now, when something comes up different, that really excites me...when I see it, because I’ve been seeing those same, same, same, same things. You know, it’s not that those people aren’t necessarily going to be a good designer at some point, but they’re not the ones that I find as truly creative people.

I think they try to get uniformity in there, but I’m not sure.

Yeah, but you see... that’s the problem with this, I could see during a single school year you need to use some uniformity and have the same projects, but I honestly think you should change from year to year, because I’m seeing recycled... and I know this, I mean I’ve talked to enough of them that I’ve seen kids recycle projects.

I’ll tell you more about that after we’re done too...
Ok, is there where I’m supposed to hit the button and say stop?

No, it’s just that I talk too much and then I end up with too much of me on the recording.

Ok

What would you hope... or if you could contrast, even having been to some crits or something, what should be or is the difference between the entry level student and the exit level student?

Entry level students when they solve a solution they’re meeting a level of requirements that says yes, we’ve got this space... we need to do this, and they just kind of meet the minimum requirements. When they get to the end, I want to see that they take everything beyond what the minimum... you’ve got to have this, this, and this...that they say Ok, yes, I’ve got to meet that requirement, but these are some other things that are issues. And when I’m seeing them working on a project, I have a third year, they have an institutional type project. They go out and they meet with a lot of people and they talk to... One of the projects that your daughter was involved in was the nature center, they went up and they talked to the nature center director up there. They then went to other nature centers... they contacted them, xxx. So I like the fact that when I see somebody that’s at the end of their academic career, what they’re doing is researching and pushing if farther and exploring and, you know, many of those students went ahead and came up with a number of different ideas. I’ve got a whole packet of letters from the Dickenson County Conservation Board to people that worked on the project this Spring, because they ended up using a lot of the ideas that these kids had.

Very cool!

They finally got their money, and this was the good thing, because the kids were really engaged with this project... particular project had gotten stuck on hold from the time that your daughter worked on it two years later we came back because they had kind of a whole new thing happen, they got a bunch of money... this is a longer story... but, I’ll make it real short. They lost the County support, they pulled it, in part because the County Supervisor really didn’t want them to build where they were going to build there, because he had access to some land that was right next to it and wanted to put condominiums on it, so he thought... but they were able to get some good funding from a very unusual source and that source kind of put the County over a barrel and said we will give them this $380,000 but only if you kick in too, and they knew that the situation was very public... everybody knew that that money was there, and if the County didn’t put in their quarter of a million, they wouldn’t get it... and so there was a lot of pressure. And the kids got to see that, that... this was this was the students got to see... and work with that whole thing too. So that was really a good thing, from the standpoint... not necessarily of design, but to understand when you’re working with your client like this, there’s going to be those situations and you’re going to be involved with them. 

ID-B23
So what we would like to see between entry and exit is the ability to go out and get more things that the design should be... beyond what are the basic requirements. Let me ask also, in this comparison between entry and exit, where do those requirements come from at the entry level and at the exit level? Do you give them to them, or do they research them, or...

Well it can vary, I mean oftentimes we’ll develop a very limited program of what is required, on there, and typically, like the Sophomore level classes, you know, I will have a program of things, that will say, this is what needs to be on there... and I’ll make up a client. By the time I get to the Junior level classes, I give a kind of a preliminary of what it is, then I expect them to meet with their clients and flesh out a program... they actually submit a program that they have developed based on conversations with their client and the research that they’ve done. So that they take it that next step farther and work with them. And then, from their program that they’ve designed, and developed, then they do their research and start designing. So everybody in the class that I’m working in with... that institutional class... there is like eight people on one project, so they’ve all come up with some different ideas. We did something with harder one question... equestrian rehabilitation... the students that I had two years ago, I think, and so that was a very unique and different thing because none of the students had a clue about what to do with horses, and handicapped individuals... and how do we get handicapped individuals on top of horses. So that was a very unique project, but it had some really good results, because one of the students ended up volunteering out there to help with that.

Are there other things that if you think about those two classes where you see clear differences in what your expectations are... or in what students are able to do.

Not only do I want them to take it farther, but I want them to present it in a more professional fashion where their communication tools should be greatly improved. They are able to do a better job of using their language. I mean they stand up there and they tell me about things... and I think don’t want this, I mean yeah, it’s nice to hear, but I want to be able to look... by the time they are in their Junior and Senior year, I want the graphics to tell me the story. I don’t want to have words and they have to explain to me for a half hour what they’re doing. I should be able to look at that and have a full idea of where they’re going and why they did what they did.

So you would expect to see considerable growth in their visual communication skills.

Umm-hmm

... and would you see also, do you see at the entry level that they want to communicate verbally more, and at the exit level that they communicate visually more?

Yes

Cool, that’s an interesting thought...
Oh, ho, ho... Ok. I don’t know where this is going...

Ok well...

You know, I still think it’s important to communicate verbally, but I expect to see an improvement in... a better ability to communicate with the visual community, with that language that they have. Because in design is that graphic language that is a unique language that we have, and we have to be able to communicate in that language so that the rest of the world can deal with it. So it’s important to have those skills, but it can’t be just so another Architect can look at that drawing and understand it... it’s got to be so that other people... they don’t have to have a translator. You know what I’m saying? I guess I got off on this...

No, no, that’s why I do interviews, because I need to get those tangent pieces that in depth insight sometimes to make it work.

I’m not sure how in-depth, I had gone to the doctor’s office for an appointment this was actually for my sister... the appointment was supposed to be at nine o’clock, when I called you, we still hadn’t gotten in yet... it was 11:30 before we got out...

Well that made time to go get lunch...

Well no, at twelve o’clock I had to go do that conference call...

Ok did we... so we talked about communication, and I should probably touch on that one more time... we’ve talked about visual communication, and we’ve talked about speaking skills, are there other types of communication that are real relevant?

I guess I can’t think... either you’re talking or you’re doing it with your eyes, I guess, I don’t know.

Ok, ok... in that case, so far in the way of thinking skills, I said I was coming back here, and I’m doing it now, we talked about creative, and we looked at that one pretty close... are there other thinking skills... ways that they should be able to mentally manipulate the knowledge that they have?

Well I do think that they have to be somewhat analytical to be successful, it’s not just enough to take in information to be creative, you’ve got to analyze, you’ve got to understand why something does or doesn’t work. So I think... I’m going back to Engineering... I think the analytical skills are good. You have to have some level of that ability to go in there and evaluate things kind of objectively take a look at it, analyze why things are the way they are, and what does work and what doesn’t work... so analytical thinking skills...(Note: critical thinking)

Is there an ulterior motive in the analysis? Where are you going when you’re doing analysis?
When you’re doing analysis... well my thought is when you analyze what others have done, is you try to make sure that you do what they did that didn’t work, and give them something that does work.

5  Ok, so you’re using it as a filtering kind of thing...

Umm-hmm

I’m looking at my design, I’ve analyzed some other designs and I’m going to take these things out, because they didn’t work for other people.

Yeah, that would be one thing, and I would hope they would be able to analyze their own design ideas and be able to visualize how that may or may not work, and do that. Ok, I’m going to use another really stupid example, but since I’m at Vet Med... the University of Colorado out there, their Vet Med facility had a covered over area to unload cattle, for people that were bringing cattle in for whatever needed to be done with them. There’s a fairly large space, covered over, that people could drive in there with their trucks and their trailers, and be under cover. The back far end was all glass block. Now just imagine what happens when you unload a bunch of cattle just off the range, and they’re in this kind of darkened in space and they see light; the light is where we’re all going. And within the first week, they had a load of cattle that got out, stampeded went right through the glass block, completely ruined a dozen cars out in the parking lot, and it’s like Ok, that’s kind of common sense... analytical thing... you’ve got an animal that’s in a dark place, a hole, they’re scared to death, they see light... that’s where they’re going.

You’d think so, but mine used to lay down...

Your cattle... Ok? Well these were range cattle. Ok, like I said my background is really different than a normal Interior Design person, I mean I’m not even an Interior Design person. My background is unique.

Well, I’m pretty sure that’s why you are on the list... Ok... well I think I have asked my way through the great majority of the questions that I was going to ask.

Ok

Is there anything that I should have asked and didn’t... or anything that you particularly wanted to tell me about teaching in this discipline that I didn’t ask you to tell me?

Well, I would say teaching in this discipline, I really would like – and I’ll just say teaching in this College – we have so much opportunity to do more interdisciplinary work, and we don’t. And I would like to see us tying things together more... and a lot of it has to do with everybody’s got to go for tenure, we don’t kind of tie our xxx together. We don’t even know that, hey, Betty-Sue in Interior Design does happen to know plant material, so when I talk to Heidi or you know somebody else, they don’t realize that in fact, I do know a little bit about what they’re talking about, so... I think that we just
don’t know that there are a lot more cross-disciplinary opportunities... and that would be my one thing. I think bringing us all together was great, but we need to take the...well this floor is Interior Design, this floor is Art and Design, this floor over there is Architecture, and over there is Landscape Architecture. We feel that we’re under one roof, but we don’t integrate real well.

*Everybody should have the experience that I’ve had.*

Ok, Because you’ve worked with...

*Well I have set out to talk to at least four people in every single program in the context of really understanding what it is they do or try to do with their students.*

Ok, well this will be very interesting.
... and what I hope you will reflect on for me today, is the qualities of a successful student in Interior Design. What is the student that tends to be or become successful, what do they have, what do they know? So from your experience and in your teaching, what things seem important to student success in Interior Design? The things might include specific types of thinking, manipulative or constructive skills... which I like to call manipulative abilities, now if you were in clothing design, I take all my examples from clothing design so as not to prejudice your opinion, ah, one of those constructive skills might be guiding material through a sewing machine. So, anyway, as these students work their way through Interior Design, what do they need in their toolbox? And we want to talk about it in terms of three areas which can be purposeful, or we can notice them as we go past, but we want to talk about thinking skills, knowledge bases, and manipulative abilities... the manipulative abilities, that’s the guiding the material through the sewing machine, the knowledge bases, those are the building blocks they have to have upstairs before they can stack them in any interesting way, the thinking skills would be the method of stacking. So what things seem to characterize the students who become successful in Interior Design?

You mean successful as a student?

Yes, although we really hope that if they’re successful as a student then they go on to be successful as a professional.

Well usually first, the traits that they have to become successful in the school carries them into the industry... into the professional world.

That’s why we teach what we teach... we hope

Well, I mean, that’s what I see happening, because I stay... or they stay in touch with me after they... quite a few of them, so I can see that happening out there too. But, first of all, for me, and I’m being very subjective...

You’re supposed to be...

Ok, passion is very, very important. Now when I say passion, passion for design, passion for art, and by that I mean all arts, anything from fine arts to theatre, ah music, so all arts, all related arts. Passion for learning, ah passion for inquiry, whether creative or xxx, both of it, passion for life, if a student does not have passion for this and probably this is a lot mixed up...

We’ll get there...
Yeah, Yeah, we’ll fit it in the last... I think with that kind of passion, this excitement that comes from within, and from experience, now they are very young, I realize that, but still, since we are talking about a group of people, they do have an experience that they bring to the table, and that experience is aesthetic experience, life experience, human relationships experience, experience about ah life in general, ah exposure to their arts, exposure to knowledge, exposure to literature, ah exposure... well I’m going to have to specify their music, theatre, art... fine arts, and in that sculpture and all disciplines, are appropriate to the... so, if they have this, and this, I believe, starts in one’s family, ah it starts in one’s early education, whether formal or informal... by informal I mean in the family, so they already come with a big, ah, big wealth of input, if they do, they are a few steps ahead of the rest of the group in... towards success, I think. It depends on what we mean by success, and I should have asked you that. What does it mean, “success?” It might mean something different to me.

Well, a good student in your class.

OK, so um, a good student... so that brings in character, personality, intellect, and creativity, by creative I’m thinking about intuition. So all of these things are really important in the person who’s a student coming into the program. Now Freud says all this happens in the first seven years of one’s life, and I happen to believe in that. So after seven, from seven to seventeen, then a lot is happening outside the family, outside of one’s immediate environment, so that’s where the community comes in. So in that is pupil orientation or people, ah personal, people sensitivity is very important, because Interior Design, like all of the design fields has to do... starts with people. Starts with one human being and serves a lot of people and is people related. We design for people, we design around people, we design with people; so it’s very important that we have this knack of understanding people, and human nature, understanding personalities, to be able to work with them, to be able to get deeper than the surface, because that is all part of design, so they come in with that. If they have that role filled up it’s one of the first... where they, they, it’s already inside them... all I have to do is mold it, guide it, and show the way. If they don’t have it, and they still want to be interior designers, that’s where the instructors can come in because then we have to fill in these gaps, and hopefully prepare them... and I’m not talking about training now, I’m still talking about this ah, inner wealth. Ah, and you do, an instructor does it with inspiration. If one could do that and have some of the gaps filled up and bring the students to that level of wealth, then we can start talking about intellect, and start talking about representation, and start talking about what is required in the field professionally... and personally at the same time. So, with that now, what should a student who has this wealth, could have or should show to become a successful student? First of all, I think the student has to have a liberal arts background... and I mean really liberal arts background. And that’s a huge advantage of American education, by the way, because in Europe it’s always specialized or compartmentalized, or disciplined because we are working with human beings, is important. Secondly, the student has to have awareness... self awareness and awareness of others, awareness of the environment. The student has to be exposed to different cultures, the student has to be, again, exposed, even if he or she is exposed, we should go farther and deeper into fine and related arts, exposed to different cultures, and then also
maybe foreign language. And I’m always shocked that our students can go to Italy and never learn the language, really, and not enough to converse, because that opens a lot of doors, and we are living in a global age; it’s important. So culture… being exposed to culture means exposed to foreign language as well. Then one has to have intellectual curiosity, one has to have deep artistic sensitivity. Again with all these, then we will throw in the courses, the subject matters, the skills, and then hopefully it will come out to be a very good student, good interior design good student of interior design

Ok, what are some of those gaps you find yourself frequently filling?

Um, alright, it changes from year to year, it changes from case to case, because I’ve been teaching not only Interior Design, but I’ve been teaching, teaching for quite a while… I see different… ah books showing different dynamics, different approaches. Technology is one thing… at first technology made a lot of difference during my teaching experience. In some ways a very good impressions, in some ways not so good. In some ways it made the students lazy, in some ways it expedited some of the learning process, in some ways it made it made them detached from human beings, which is very important… and that I see today… gap now that wasn’t so much in the beginning, but now it’s a gap. Ah, they are much more inward. Um, one of the things I see lacking is altruism, now, anyway it’s changing, now, maybe because of ah, all this sustainability and the focus on green design, they are becoming much more outward now, it used to be… I used to call them the ‘Me’ generation because of it, so now I think it’s becoming much more community oriented and human oriented, but I still think their scope is narrow… ah culturally especially. It’s getting better, but has to be much wider, and again foreign language I would say is very important that’s lacking in this day and age, from what you would expect. What else are they lacking? I think they are lacking, um, curiosity, they are lacking that adventurous, in learning, especially when it comes to risk-taking, because at least in this institution, everything is graded. I was talking to somebody from the University of Oregon… they don’t have grades for students, and I said, “Wow,” my husband was somewhere that they didn’t have grades for students either, but that was at the graduate level, but at Oregon, they had it at the undergraduate… which is really, really admirable, because that allows students to really do what they need to do, you know to accomplish something creative, not for the grade. So they don’t come there I’m assuming to be saying, “What do you want me to do?” It’s this is what I have to show to you, they’d be saying. So um, intellectual traits, and artistic, and curiosity, and risk-taking that’s missing… that I can think of right now… to fill in the gaps.

Ok, um… let’s take a look at the manipulative abilities. We haven’t talked about those yet. We’ve done a lot with thinking skills I think… Let’s work with the manipulative abilities, sometimes technology is one of those…what are some of the others that you…

Directly in Interior Design… I’m talking about… What I’m missing right now, and that’s what I will be emphasizing next year, in this coming year, is I realize that now… is sketching, by that I mean that is sketching, I don’t mean… that’s why I don’t want to say draw, because the more I say draw, everybody thinks of fine arts draw, making this beautiful, beautiful finished piece… I mean the language that belongs to designers… that
quick sketching that gives the essence of something they either perceived or conceived. So either conceived or perceptual... it’s very important, and I think we’re lacking that... our program is lacking that in Interior Design. Maybe Architecture is doing better, but we’re not...

I’m hearing that, that’s going to be an interesting thing if it keeps going.

Let me tell you why it’s important. It’s important because especially before technology, we used to be able to communicate with lines more, and I still do that when I’m giving feedback, I prefer to draw it. So if they bring something to me on the monitor, that doesn’t work for me, because I’m drawing and the student’s not drawing, so I say to them, alright, I see it, but what happened from point ‘M’ to point ‘T’... that I’m seeing of the monitor, that I don’t see, so show it to me. So I’m talking about process... now they tell me, “Well, I did that on the computer.” And I say, “What did you do on the computer?” ... All I see is this one drawing that here and now, right now, and they say, “Oh well I had others, but I erased them.” See so they are really... exactly... erasing whole complete thought pattern which is very important for me as an instructor or a team member, or as a co-designer or someone to see and understand where the idea came from and how it developed. And one of the first things, to express this, and to record this on paper, is sketching. Yet, not printed drawings, not printed pictures, but very simple line drawings... line sketches that will communicate a sense of the idea or a sense of anything that’s an xxx that’s very, very important. When I get... I’m being very xxx now... not all of it especially xxx all together, and ten years ago... fifteen years ago, if the people in the firms... employers or designers or xxx designers saw anything that was computer generated in the portfolio of a student whether for internship or for entry level, they would be grabbed. Now, that’s run of the mill kind of, it’s expected that everybody knows that... working on the computer, the Photoshop, the... whatever it may be. And what I’m hearing now in the request for recommendation is that the student needs to sketch, sketch, sketch, sketch, and sketch by the meaning that communicate with the team members through lines. And I said xxx class, because that’s a skill that has been there, and should have been kept there, and it should be there all the time... regardless of what happens in technology, regardless of how you represent that. It’s the process, so if you focus on process, then it’s important. To me, process is very important, it is like a child growing. A child grows to an age, and then becomes xxx, but what happens up to that point, the same with the student, what happens during the process... on the growth... on the education of a student, as well as on a single project, so that’s the growth pattern that I would like to see on the paper through lines. And it’s also the emotions; and I should be able to feel the emotions, see the emotions on the paper through these sketches. It’s something I mean emotion... we are in the business of emotions I think... we create environments for people to emote... and I don’t care where it is. It could be a zoo; it could be an office; it could be a hospital... so there are emotions involved. And how can I see these emotions? I should be able to feel the emotions that the designer is trying to create in these sketches... in the simplest way. And if the lines can give the essence, the spirit of what the designer is after, then I will be able to see it, hopefully. So that’s important... that’s really the main thrust right now.
We’ve got to come back to manipulatives, but this is really, I think, an important point and I believe you’ve said it more clearly than anyone else has so far... that sketching as language is really the issue... and sketching as visual communication so that we can quickly communicate to one another what it is we’re trying to represent. But you said another good thing in there and I want to get there before I forget it... it’s got a star beside it.

Well when I say sketching, I do mean lines... lines are the language of the designer, rather than words. I mean people tell me for instance... they call me on the telephone... I said, you know, we are working on a visual thing, what you tell me on the telephone, my imagination will take it in a different direction, than your imagination will intend to, so why don’t we get together and you show it to me on paper. So it’s very visual, visual representation, but it’s also lines, not words, so lines become the tools of the language... (Note difference in gesture drawing, the emotional/kinetic gesture vs. technical) also tactile gesture drawings of landscapes and architecture

The unit of expression
Exactly, exactly... and communication

Yeah... Yep, there’s one there’s one that we’re going to have to talk about some, I think. And I’m going to have to start listening more closely to see if other... somebody yesterday said something about... so it sounds familiar already. But then you talked about process...

Um-hmm

... and a lot of people are very interested in design process, but I’d like you to give me a quick rundown of what you think goes into that process.

Everything...

Everything, because it’s um... and I always use the baby as the simile, metaphor, analogy probably... it’s like a baby from conception to birth. When I say process, I mean the conception of the project to completion of the project. Now what is the completion of the project, what’s the conception of the project? It starts... first of all it starts with the problem... what’s the definition of the problem, what is the problem, or now we don’t want to say... a lot of us don’t want to call it problem... call it challenge, what is the challenge? What is the fun of the designer to resolve, to discover, to undo, to make it come to the surface... so this something to be approached, attacked, attempted, whatever you want to call it. Because I want to be very careful not to make it negative; when I say attack it’s really not attacking like attacking somebody, but you’re still attacking. You sit at the xxx, I sit at the xxx, in front of the computer, and there’s nothing there... and something has to happen, and it’s a very scary moment, this moment. Where do I start, what is it that I want to do, where are these ideas ever going to come from. What am I to resolve, what am I to create – and create is a big word to make something come out of nothing. Discover is already there, so you discover this not as bad, as hard as create, so
you say that moment is very lonely. It is terrible, and at the same time it is fulfilling, because that is the moment, of the beginning of everything. So that’s the beginning of the process, the moment when you say, what is it, what am I supposed to be tackling, resolving, or finding out, or creating with the question. Then of course you become more investigative, so what is it, what does my client want... you see designers have their clients in order to create, they’re not creating things without clients, without a problem, that’s something given to us... it’s not like artists whom I admire and envy. Oh, I have this urge to paint and get it out of my system, and now I’m ready for the next one. No, we have to wait, and wait, and wait until we have a client so we will have a problem or something to work on and then start creating. So you ask the question, what is the problem, and then what does it want to be, what is the needs and the wants, usually of the client at first. So because you have a human being involved, a client involved, then you have to learn off the client, that’s where that innate knack of relating to people comes in. You really have to understand your client. It’s one thing for me to give to you what I think is a good design, but it is also, at the same time, it is... what is it that you need. You may not know that, you may know what you want, but not necessarily what you need. And this is where I think the designers come in. So, I can give you only this, I’ll try to give you what you need as well as what you want. And then if I can understand you, and if I can make your life better, it comes out in what I give to you, then I really know you, I understand you, or at least I think I understand you. And a client designer relationship is a very interesting thing, if it’s a happy relationship, xxx the results are happy too, the results are sometimes sublime. We have seen cases of this in the xxx of Interior Design, excellent client designer relationship, so it’s very important. Then I ask, now as a designer, I ask myself, what is the purpose, of this design, why am I doing this. Why does it need to be done? What is it going to serve... who is it going to serve, so that’s all about, again, the thinking process, what I call the intellectual process. Then the designer, of course will get all these wants and needs and start what we call the programming... well maybe the givens for the project. And then... if you notice, I’m not saying criteria, I’m saying the givens for the project... the facts. Now here comes in research, and I think 50% of good design is research. If you really know, and if you really learn about the different... If I’m having a health care project, I may not know the latest equipment in say in cardiology, let’s say, but I go to the environment, and I get to know why it’s being used, and how long it’s going to be person medicine like xxx of medicine in a very quick xxx, lot of concern happening, so I have to xxx research about health care, physical needs more public use of space, so I want to create a space for the people to work in or for the patients, or their families to stand. It really has to be holistic. So I can not say, Ok, this is my inclination, Oh, I will put the equipment there; no, the equipment has to belong there, and the room has to be right for that equipment, for that space to be working. So I need to get on top of this... this is part of research, part of learning about the... if it’s health care, I need to learn about that narrow discipline of knowledge. I don’t mean to be saying that I need to know medicine, no, but I need to know how it functions xxx, from the physicians’ viewpoint, from the staff viewpoint, patients’ viewpoint, and visitors’ viewpoint... so it goes in many directions. Then I have to... so that’s research... then I have to know how it’s going to effect... cause and effect, because what I do is an end result impact on the people, so I need to see that, I need to know that... and if I don’t know it I have to have an awareness of it, a sense of it. And I think it comes from
research, especially if it’s not something I’m totally xxx. I mean there are avenues that I feel comfortable with on my map because I know the streets and then there are those very unknown areas that I have never traveled, well then I have to go back xxx and study the maps, I have to study the physical environment this and that, so I won’t feel as foreign in that area when I go in there. So research is 50% of the whole design process, I think. Once that is done, and first you look... I don’t know how much you want me to go into as far as process is concerned, but you look at the location of the place, because we’re Interior Designers we usually work with people who are working with existing buildings. So I have to study the building, I have to analyze the building, I have to analyze the context of the building and the environment, the micro and macro environments, so that I will know what I do here will relate to them and not only among the four walls, I’m really working matters where it is environmental. So there are relations, outside relationships, and this relating to the larger meaning, and this larger meaning relating to my macro environment... well let’s say the neighborhood. So it’s not limited to this, I really have to have an idea what is happening out there. So my creation will be part of the whole, and that is what makes it holistic. And I have to be very aware. Now again, I’m speaking for myself, no design is isolated... if it’s isolated, then it’s not part of the whole. Therefore, good design has to be holistic. Alright, so, once I have the facts, and hopefully I have the them, because I am interviewing, and hopefully if I need more, I can always go back to the client for more questions, but then, that’s the intellectual part. Then I take the ball... xxx this is when my creativity comes in, and that’s what I call the creative phase... the intellectual phase, the creative phase. That’s when I start thinking about concept. I have all these facts in my head from the client, from the program...

I call it food...

Right, exactly, the fuel, the food... so what do I do, where do I start, I have to ask myself what does this space want to be...what is the essence of this space, every person, you have an essence, I have an essence, and you’re precious in our own way and I’m precious in my own way xxx. We have spirits, we have something that makes us what we are... the same with the spaces, spaces have personality, spaces have spirit; spaces have essence... so what is it? What do I want it to be? Then I say what is the image of the space... which is more physical, more visual I think. Maybe the image sometimes speaks to the spirit or... then I ask how do I want people feeling the space. How do I want people to emote; it might be my client, but then my client is not by himself or herself, there are other people, so I have to think about that. So I am really starting to develop a concept, and the concept of course is the main idea that will be with me and xxx that will drive me throughout the design process. So it goes at first... the concept goes through different stages too. And things start coming about, first you have idea, just like the baby, I think creation is phased, and the creation and the baby is very much the same... goes through an incubation period, in that incubation period something is developing... the client may not see it, that’s why we don’t show a lot of the process work to the client, because it is not important to them. They only want to see the baby when it’s born, but I’m the one who’s carrying the baby, and if that baby is developing in my mind, on my paper, so as it goes, I go through all those relationships all kinds of things xxx, and then it goes out from bubbles or non-descriptive things, into maybe a couple of rough diagrams,
they start taking shape, other spaces develop xxx, then we build these other relationships, adjacencies, private, public, quiet, noisy, dark, light... and when I say light, I am also talking about daylight and the evening light, and that the colors... A lot of our students think of colors at the end, xxx. No, this is part of the concept everything is a nucleus of the color, nucleus of the materials are all there in the beginning of the concept. Because... as a designer, when I sit at that table, the incubation stages of the process, there is image in my mind of the space. Sometimes you can see it, not in details, but you can see it, and you know how it will feel, and that’s very important. If the designer can not see that, then everything is very prescribed and cold, and expected. Well I call the xxx, but if you can see that, if the designer has this sensibility to this kind of emotion that the space will have xxx, then it will be different kind of space. It will be aesthetic, it will be safe, it will be comfortable; it will be an ensign of one’s life, that’s the ultimate purpose or goal of the Interior Designer. So it’s important that one sees that... and in that...that’s why it’s important that one has the sense of style... what the style is going to be in interiors, the colors, the temperature... and I mean by that both the atmospheric temperature and climatic temperature. And they’re all in there as it develops it will become more specific and more real. So design process is a long process, and there is a design development there is always an exchange with the client, exchange... finally you put it into scale and there is always people that want to know what it is going to be like, and that’s when you get the first, designs into sections, elevations, and perspectives, all at the same time. That’s another gap we have in the understanding of the design student... that allow us to work on plan which is really up to three foot high in many cases of the space, as you see the bird’s eye view... but it’s more than bird’s eye view, it is the worm’s eye view it is the feeling of the whole space, it is important, that’s why we say it’s important that the student can think in 3D, not only can think, but also can express... and that expression comes in sketches. Now when I do that, it’s for me... the sketches... I need to see how it’s going to look. And first I have to convince myself, then maybe if I’m working with somebody else, I’ll show it to that person and say, “Well this is the way I’m seeing it.” But then the person can see what I am seeing in my imagination. So, then after all that, I draw to scale... elevations, sections so we see the space in its totality. xxx elevations, sections because elevations give the vertical relationships and of course planning gives us the space planning, and perspectives give us, hopefully both. In any case, perspectives give us the image, ambiance, and how it might function. We can begin to see the function if it is not too distorted... because designers have a tendency to distort some in perspectives, to suit their wishful thinking. But then, you know that’s why you do... if you create a constructive perspective, then it’s really true to reality. And then you say, well, what did you do here, well I fake it up... why did you fake it up, that’s where the problem is. So perspectives are good show to maybe one open corner, but it’s the section, plan, and elevation that we really become designers when we see how things relate to each other. Then the presentation, sometimes too... presentation is to the client... creative boards, but in any case, that’s when you are presenting your idea and hoping that the client will accept it, sometimes accepting some parts or not, with variations, then the designer and goes back revises comes back and designs again... and that’s in a way, the implementation process. I would say this is when things are slowly defined ... the ideas are slowly defined, from a design standpoint. Then, of course the restoration part or the construction part for which you draw specifications, conceptual drawings and then from
there, again, when it is completed, there is something else coming out of the designers role, in the professional role, what they call POE, Post Occupancy Evaluation. I give you your space, you live in it, work in it, and I come back and ask xxx how the space is working, because what is really important is how the human being, how a person relates to the environment. And that’s something we don’t really have the chance to teach or even experience in an educational program. But that’s what teachers xxx are hoping, that they will go out and see what is being xxx constructed and people moving, and how the end users relate to the physical environment that is created by the designers. That’s really important... important not only for the client but for the designer, because that’s when the designer learns where he or she has made mistakes. Because it is inevitable that mistakes will be made, but can the designer learn from those mistakes? That’s when they do this Post Occupancy Evaluation, and hopefully they learn. If they can not modify the existing design, then the designer does the next project, he or she will not do the same problems, hopefully. So that is to me, in a nutshell, the design process, but there are many, many details in that.

Well, now we might do something that’s vaguely negative, what would be the first red flag in your mind that you would see in a student that would cause you to say, I wonder if you really belong in Interior Design.

I never say that...

You never even think it?

No, because you never know. I have, even in my education, and in my teaching, I have had xxx like that. I would really xxx, I’m going to say that, but I will not say xxx, because you really do not know how a student will grow. Because it takes one good instructor to open up a person, to inspire a person, and pull things out of them. There’s a reason why that student is there in that studio, first of all. Because we have only so many... why, we have 25,000 students on this campus. Why is it that 25,000 is not in that studio, only 10 people is there. So something propels them, something pushes them, they may not know it, they may not show it, I may not see it, I may not know it at that time, but that doesn’t mean that that person can not do it. Not all artists come to it, but I believe that everybody has potential to become a good designer. It depends how that is developed, so I will never say that, and I know a lot of my colleagues do say it. xxx never be a designer, not the way he designs, not the way he xxx, NO.

So there’s nothing that ever worries you?

No, not in the beginning, but one semester is enough for me, if that person stays in one spot, where he started, in the same spot at the end of the semester, then I worry. By the same token, some people are bright, come there, in the beginning then they are full, and they are sparkling, and they have no respect, I worry, even though they have promise, because one can not grow in a given time, then that worries me, at the same time, if that person is not xxx or xxx, scared, well give them a chance. That’s why it’s very important that one has to be constructive, especially in the earlier stages of one’s education. I’m
talking about the semester hours... so I need to encourage. That does not mean that I do not show the weak points, I will show the weak points, but I have to have students see the weak points, but I have to have the students see the weak points. It is not enough for me to say... And then I have to give them, I guess, examples, not design it for them, but have them try different things... that’s where the risk-taking comes in... very, very difficult. Try something, and don’t stay in that box, see, don’t worry about failure, that’s why I don’t like grades in the studios... you either fail or you succeed... all this A, B, C, D... is not working. They should be free to experiment; it is like a kid in a sandbox.

We talked our way all the way through that tape (pause to change tape) The second side of the tape has a strong sound of electrical interference, the transcription is, therefore less precise.

Ok, the students that don’t begin to show you new ways of thinking about things,

We can go back to that point again... I do not say that, but... that’s when I think what’s important for them is that, that person has a passion that we are talking about, and I can see that in their eyes xxxx when I see that, I know

Notes:

Comparing the entry level student to the exit level student
Patience
Attention to health safety and comfort
Understand how space enables experience
Imagination
Passion for the work
Sense of adventure
Curiosity
Awareness
Iteration
Have 1-3 million ideas
Sense of purpose
Voices from Integrated Studio Arts
Integrated Studio Arts
Stacy – page 1
Stan – page 22
Stella – page 36
Stu – page 47

Stacy
Integrated Studio Art
October 1, 2008

What I hope you’re going to reflect on for me today are the qualities of a successful student in Integrated Studio Arts. Based on your experience, and in your teaching, what things seem important to student success in Studio Art? These things might, and I hope they will, include specific types of thinking, manipulative or constructive skills..., now if we were working in fashion, a constructive skill or a manipulative skill might be something like guiding material through a sewing machine, but anyway, as students work their way through Integrated Studio Arts, what do they need in their toolbox, and please include things that students seem to do easily as well as things they seem to struggle with. Now we’re wanting to diversify this into knowledge bases, thinking skills, and manipulative abilities... that’s something that tends to happen anyway, we’re not going to worry about it a whole lot... I’ll just try to identify those as we go. So what does the successful student have to be able to have, do, know, understand, think about...

Well, the successful student in the studio arts area needs to have a very healthy dose of curiosity, and curiosity is funny, you would think that curiosity is something that people are just born with, and I think it is, I think it’s very much a human attribute; however I think it can be encouraged. by different means and by different kinds of instruction, so one of the things that happens when students come to the Integrated Studio Arts Program is have second year students – they don’t always have an idea of what is possible – so we have presented them with a curriculum that introduces them to a number of media... and those media areas are experienced for their entire second year – eight different media. And out of those eight media areas they perform tasks that involve problem solving, use of tools, exploring sometimes historical precedents, and from this exposure, they are led through their own curiosity, the curiosity that has been encouraged, during the course of their evolving second year exploration, with the help of an advisor they select an area – sometimes two – in which to begin to do more advanced studies. So that curiosity, as I said can be encouraged, and it isn’t always something... students don’t always know what’s possible, so it’s possible to be curious in a general way, what will happen if I put olive green next to baby blue; but it’s not possible always for someone who doesn’t have any experience to know what does it mean to work in Photography... what does that look like, what could I do. What is inside of me that could be released by going through a course in Photography... and how would I translate that into a focused exploration that might take me any one of a number of different places. Students today have changing needs, needs that are different than they were part of the student needs that I experienced as an undergraduate, which is now thirty years ago, and those needs, I think are shaped in
part by changing landscapes of possibilities. This is a much more mediated world. Media, in the form of digital media, are much more important and prevalent – electronic media I should say – are much more prevalent, and an important part of their lives... both in terms of communication, but also in terms of their artistic expression, so their communication in general I can count on the fingers of one hand the number of phone calls I’ve had from students in the last 4-5 years; and the Emails are countless. You know, that’s kind of an obvious... So to succeed in the Studio Arts area, that curiosity which has been fed is then nurtured by advanced studies... and the real... the exciting aspect of being an artist is that design and understanding design is a foundation, and being an artist means that you take that foundation knowledge and you are always working with foundations... you are never at a point where you are not dealing with the basics of good design... no matter what you’re doing, it’s just there all the time. The great thing about being a Studio Artist is that you’re not working in a team, you get work on your own. Now you may do work that is a commission, and that might involve a team, but the biggest difference between what students in Studio Arts do and what students in Graphic Design, Interior Design, Landscape Architecture, Architecture, and Planning do is that they work individually. They are their own team unto themselves, and this has distinct advantages in that it really gives those students who are entrepreneurial and very much self starters a place to focus their efforts. But it also is important that a student be entrepreneurial and be a self starter because you can not be a successful studio artist and be waiting for somebody to come and tell you what to do. If you’re not driven by a dream and a fire in your belly... Don’t mistake my comments her to say that an architect can be casually involved in architecture... they must have that fire in their belly too, however to be a successful studio artist, you are going to be making very much your way in the world in a way that different than working for a firm... or working with a consortium of people such as someone who becomes a designer. And an awful lot of architecture students seem to graduate from the architecture program are going to wind up becoming grunts in somebody’s studio for a while and kind of paying their dues... as it were. Some of the other skills that are important in terms of their ability to manipulate materials is for them to really pay attention to materials and the way that materials change with time, and with different actions that are used on them. (Note: transformational possibilities of materials) So if you are working in a metals class, you have to learn exactly what happens to the metal when you are using double hard solder, hard solder, medium solder, and easy solder; those are four different temperatures that I remember from a metals class that I had... I loved the difficulty... you have to pay attention. What color is brass when it’s heated and what happens to that metal just before the solder melts and flows into that joint. So that ability to develop a good base of empirical awareness is something that we as humans have naturally. We would not have technology if we did not have the ability to gather and substantially use empirical knowledge. However, that being said, we are a very mediated entity now in the world as human beings. We are used to having everything told us explained to us, showed us in pictures, and I find that students really struggle to make these observations.(Note: ability to gather information by observational) It’s the biggest difference I think between my generation and this generation. People don’t pay attention to what goes on; they are used to having it appear on a screen in front of them... if it’s really important it’s going to have a flashing black and white border around it, or it’s going to be accompanied by very loud
rock music. So that ability to make empirical observations and put together a body of awareness about cause and effects with materials and processes is critical to being a successful studio artist. This is also true, probably, in the other disciplines as well, but I’m going to limit my comments to art...

That’s what you’re supposed to do...

...because that’s what I sort of think I know about. A willingness to be persistent... not a willingness, an ability to be persistent, and work to learn any of the craft aspects with any of the materials that we work with... whether it’s a 3D animation, a 4D animation program or learning to work with clay of the wheel... requires the ability to sustain a commitment to learning through a great deal of failure... and this persistence is one of the things that I can not teach my students. You are either a persistent – I can encourage it – but you are either a persistent person or not. And if you are not a persistent person, you should probably pick something else, because the amount of learning that takes place through failure, especially in ceramics, is enormous and that requires that there be this persistence that allows the learning to take place and ultimately coalesce in progress. And I’m not suggesting that just because ceramics deals with a wet amorphous material that it is any harder than working in wood or working in metals, but it does have component that if you are making something in clay, and you make it perfectly – which all of the beginning students have done so far – and you put it in the kiln... things happen. And so, this particular process, this particular studio, the ceramics studio, involves changing clay to ceramics through the process of adding heat. So that’s where that persistence becomes really important and also that ability to look and analyze what’s going on and to see when I do this, this happens... and to say Oh, well I’m going to continue doing this because I’ve gotten good results and to say Ah, tried this and this happened; I wonder if this was a problem. There is a physical language to learning to work on the wheel, that I can teach people who aren’t naturally kinesthetically talented, but there are people for whom that is a natural... they have kinesthetic intelligence. I don’t if you believe in multiple intelligences, but I do; and so I think that... we certainly have examples as I just watched the Olympics, in August; you could certainly see beautiful examples of kinesthetic intelligence. And I can teach people the... you know, but again an empirical observation and also persistence backed with a kinesthetic ability is just part of it.

That’s part of the manipulative ability, that kinesthetic sense...

Yeah, and some people have that naturally... or just have that ability, and it comes more easily to them, but it can be learned. And so it can become much more... it’s not as big a determining factor as the persistence... and enthusiasm, and curiosity are. Hierarchically speaking, those are more important. You know, a number of people who are very well known as ceramic artists today who would be the first person to say to you, you know when I started out it took me three times longer than any of the other students to learn to do anything on the wheel... Liz Meiser Bauers was here a few years ago and said, “I was a flop my first year because I just wasn’t any good at it.” But, she wanted to do this so badly and she persisted and now she’s a very, very accomplished ceramicist. In terms of
skills learn and can apply, the ability to... I was trying to think if anything is exclusive to ceramics that is not there in any of the other areas.

*Well it doesn’t have to be exclusive either, just so long as it seems to be quite necessary.*

Yeah, I think an ability to see form in your mind’s eye and to be able to then draw that form from multiple vantage points is really important. So if I get this idea that I want to make this sort of figurative piece and it has a big shield or mirror like thing to it, and it’s got this sort of squat lower body... I can do a doodle, but I have to be able to turn that form in my imagination and make that drawing front, back, top, side, so that I can see what happens, what happens as I come around to the side. And if I can’t do it in a drawing, then I can do it by modeling it... in a small version of it. So that’s, that ability to see things... turn forms in your mind’s eye is really important, There’s a skill that’s really useful to have... and that’s something that I don’t have in particularly great measure, and that’s the ability to look at a form and to see it in one material. In other words clay has a particular color when it’s wet, when it’s dry, when it’s bisque fired, when you put the glaze on it... and then when it comes out of the kiln you’re like oh, OH, wow that changes everything. And I have a much stronger affinity for form than I have for color, and that’s changed over the years, that’s something that I’ve trained myself to be better at. In other words, when I first imagine a piece, I generally think about the shape, that’s more dominant in my imagination, than what the color of it is going to be, or what the texture from the resulting glaze or whatever I use on the surface... let’s just say glaze for the sake of clarity. But that ability to start to see the piece as a whole, both as shape and as color, or texture is also something that I teach and emphasize here. And another skill that is very important for students in this particular studio is the ability to... what they’ve learned about the material, and it has a very distinct set of working properties, and I just alluded to that a moment ago. As I said the clay when it’s wet is one color, when it’s dry it’s another color and it changes shape, it shrinks. Then it’s bisque fired and it changes color again and it shrinks some more. Then you put a glaze which looks like a dry powdery coating that’s pink. I comes out of the kiln and that pink has turned to a rich rusty black with rust flecks in it and the piece has shrunk yet again... and so it goes through a number of transformations that are invisible... that you can not see, so you have to have the ability to let go of the outcome to a certain extent, and to begin to develop a dialog with the material and with your process of firing that allows you to build, again, this empirical body of... an index of what it is that will be acceptable to you, and what it is that just doesn’t measure up to what your expectations are. And for students who come into the class with a strong painting and drawing background, they want to be able to put color in place, have it stay there, and have it be true when it comes out of the kiln. Well I am very often the only person firing the kiln because I don’t always have a bunch of students who are skillful enough at the advanced level to do the firing. This year it’s a little bit different, so I’m grateful for that, but each of us fires the kiln slightly differently which means that same piece glazed in the same manner can go into the kiln in one firing and look pretty different between that firing and another firing. So that’s another aspect of this work where you get to decide each time OK, is this different one that is a rich part of the tradition of ceramics, or did I just screw up royally? And that’s a question you get to ask yourself all the time. So, that dialog with the material and with your own design
goals is an important dialog that I think is a... not as frequently discussed. If I told my students that the bulk of their learning would be through failure, they’d probably drop the class and I’d be out of a job... but that’s kind of the way it is. That’s true in many, many, many disciplines, that’s especially true in the sciences where failure is just a huge part of experimentation; in fact if you don’t fail, you’re probably not trying hard enough. And that’s something I don’t necessarily tell students right away, because they need to feel like they’re actually going to do something right... or have it work. And then if they come close, and you get a lot of praise from the instructor, you think... well gee, she’s not... she’ll accept anything. But then after you’ve gone at it for a while, you realize, hmmm... yeah probably a good thing that I saved that piece; now I can throw it out and I can become more discerning in terms of what I expect... you know my standards can go up, so my experimentation becomes more sophisticated, and as students draw on their increasing body of experience and experimentation, (Note: set expectations for own work) they begin to become more sophisticated about what they’ll do with that knowledge... how they’ll apply it, and what they’ll accept, and what they’ll say “Whew, throw that out.” In the intermediate level in ceramics they embark on work that involves learning to throw... and from the time they start at the beginning of the semester, til the time they finish at the end of the semester, they go through an enormous transformation. None of them would believe it at the beginning of the semester, because the material and the demands are so great, but this repetition of activity over, and over, and over again is critical to learning again this physical language that is ceramics on the wheel; it’s also ceramics off the wheel, because there’s a fair amount of learning to manipulate the material, but the wheel is much more demanding; it’s a tool that is big and powerful. So students learn through repetition how to Ah, gradually refine their skills, and they have this dialog that’s going on with the tools, with the materials, and with what they’re learning. (Note: learn a kinesthetic language)

So you’ve got a massive amount of manipulative ability here. In many different ways... and that comprises that kinesthetic language that you’re talking about, but in the mean time... you just ran through a dozen – probably – really good knowledge bases and thinking skills. Just very quickly, I understand what we’re talking about when we’re talking about the manipulative ability and the kinesthetic properties of working with clay, I started as a ceramicist, so this makes sense to me... so I’m going to go in some other directions... other little things that I heard you say. You talked about drawing, and drawing from vantage points and I was really interested in that ability to see the form and then manipulate it in the mind. Can we characterize that thinking skill in a little more depth?

Well it has to do with several different... applications of cognitive ability, so if I imagine a sphere that has protuberances, and maybe it looks sort on like a Smurf and a glove that have mated... I can keep this going in my mind but until I commit to actually putting the form down on paper, it’s just floating around... at least that’s the way my mind works... it’s floating around in this sort of great alchemy, alchemical arena, and as soon as I commit it to paper I start to say, “Oh, how many of these protuberances am I going to have, are they going to be all the same diameter and length? Will it be open at the ends or closed, if they’re open at the end, they look like tube worms, if they’re closed at the
ends, does this thing look like I’m playing with jacks, or something? Does it start to look like a four. So, as soon as I put it down on paper, I also have a means by which I can communicate this to other people, and that’s critical. So the ability to do this drawing means that I take it out of that alchemical incubator of my brain and I make it something that I can commit to or not, but that I can start to say to someone, “Oh look, it’s a Smurf that mated with a glove,”... or whatever. And that communication is really critical, because as a person teaching the course if I don’t... if I can’t see what’s in your mind, I haven’t figured out yet quite how to read minds.

I remember someone telling me that once... So we’re seeing the drawing as two things really, it’s a means of communication, and as also a means of solidifying what is perhaps a little more fluid in your imagination.

Absolutely, good way to put it. (Summary)

And then we talked about the ability to be a self starter and to be self motivated, and that caused... and you even alluded to an art director or perhaps the head of an architectural firm, and that caused me to think for a moment, that many of the disciplines I talk to talk about the client, and this means I think that the studio artist has a rather different, and perhaps interesting relationship to the client... perhaps even in terms of who the client is... it might be the self.

Well, what I like to think about is a question that was posed to me by a teacher of mine in graduate school and he said to me, “What is the experience you want people to have?” And I’m like, “hunh,” Oh yeah, yeah, Ok, I’m not just doing this because it feels good – although I’ve got to say that’s part of it – but I’m doing this because somebody else is going to look at this and go, “Oh a Smurf that mated with a glove,” or “Oh that’s stupid,” or, “Wow, that’s so cool, I want twelve of those,” or, “Well my kid could do that.” But in any case, what I’m doing is thinking about – at some level – what’s going to happen. That’s not to say that I’m bringing that person into my mind as a critic, but just simply saying, it’s a basic of communication, is this piece designed to give people a sense of deep spiritual connection to universal truth in the world, is it designed to make someone laugh, do I know what this is about, sometimes I don’t... I just feel like I have to make it and it goes out there. I explain to my students that an awful lot of what I understand about my work is ipso facto realization, but at the time, going into making it, I like to have in the back of my mind that notion that somebody is going to look at this, and so I need to in some way be thinking about, you know, when I look at this... what do I see? And it’s more important, think, as a design tool, not so much for the content, but for the subject of it. If I looked at this thing that I’m working on right now, and I say, “Oh, ok... well that kind of looks like I don’t know what across there, but that (gesture) looks like a floating lollipop and it’s got these little ears, so maybe it has this sort of persona maybe if I drew little eyes here and a smiley face, it would say one thing, but in any case, the important part about being a studio artist is to be able to get back from the work and see what it’s saying design-wise, and then to be able to start to understand and tease out what is the content. What is the narrative that is going on here... ok? What am I saying... and
that isn’t really that different from working with a client, but it allows me to be all and
everything... giving rise to great megalomania on the part of artists.

*Well, I guess maybe I’m not going to ask any probes. What in your mind is the difference
between an entry level student and somebody who is a senior and they’re about to get out
of here? What should be the difference, or what are you wanting to see as the difference?*

Ah, well let’s see... the single biggest difference is a sense of confidence and
accomplishment that by the time a student is graduated that they have built a reasonable
portfolio of work ie. experiences with different materials, different media and that they
feel – there’s a great deal of uncertainty in the world regardless of whether you get a
degree in Architecture or a degree as a visual artist. Everybody always thinks Architects
get rich... make a ton of money... but I don’t think that’s a given. The important thing is
to feel some... well, a considerable degree of confidence and that confidence is
manifested in a body of work that has... that demonstrates all of those manipulative
knowledges that I mentioned, as well as having some degree of unique voice, that it’s not
just imitative or clichéd, and that it shows that the student has studied the history of
what’s coming forth and knows how to begin making their own unique contribution.

*A little bit ago, you talked about having an index of what is acceptable and not
acceptable to you, to me that’s a sense of evaluation, being able to look at your own work
and have some evaluative ability... how does that evolve from beginning to end?*

Yes, hopefully that evolves through the process of critique in class...

*Critique!*

... group critique, individual critique, so that students are led to a greater and greater
awareness what they’ve chosen to make, what they’ve chosen to design, why we’ve made
those choices, and what the outcome of those choices are... and that’s a really general
way of saying it. Why does this work well, here and not so well here? What’s the
difference between these projects and again why is this one more successful than this
one? I really think that a really large part of the responsibility we have as instructors is to
give very clear and unambiguous feedback at the beginning and introductory levels but
then to increasingly expect the students to begin be able to analyze their work and say
where it has strength, and where it needs improvement.

*So we would hope that one of the things we would see evolving from entry to exit level
would be an internalization of evaluative ability. At the entry level, you find you’re doing
more of the critiquing; at the exit level, you hope they’re doing more of it.*

They better be because they’re not going to be seeing me any time soon... No, I think
that’s very, very important, and students... the students that really succeed are the ones
that thrive on that critical dialog and are not... do not take it personally, in other words do
not internalize it in a negative sense, but that they sit there and say, “Oh, yeah, this needs
to be more round, this needs to be...” and those are constant struggles in the course of
being an artist whether you are at the beginning level or whether you have achieved a
great deal of success. You are never not thinking about what works well and what
doesn’t... it’s just a given. You never get to a point where the basics are not part of your
thinking. (Note define works... difference between working and liking)

There’s two things I’ve got to get in on this, first of all, relationship of critique to critical
thinking... is that the same thing, an application of it, a different kind of thing? Is it
similar, different...?

Well critique is what helps develop critical thinking skills, and if you don’t have an
opportunity to hear critique and have honest critique where if something is not working,
you are either led understand that by the instructor... and I can’t tell you how many times
students have said to me, “Well, I like it.”

Not the refrigerator... and the other thing that you’ve said a couple of times, and you
talked about the basics that are always with you. Do you have a short list of what the
basics are that are always with you?

Well as I said a little while ago, I’m a very shape oriented person...

Shape...

So shape, texture, line quality... so shape, texture, line quality, and then there are some
less tangible necessaries and that the relationship of the parts to the whole,

Oh yeah! That’s a thinking skill... good one.

... the relationship of the parts to the whole, and the ability to surprise myself by putting
together combinations of shapes and forms that feel right... and that’s a real hard thing to
clarify beyond that, but I think the best analogy I can come up with is to say that when
I’m composing sculptural forms, that’s exactly what I’m thinking about... is the
composition, it’s a little bit like jazz, because I use a family of shapes that I’m familiar
with, and they are variations on a theme, but the process of putting it together isn’t
always real linear, and really structured, it’s an improvisation... so it’s very much like
jazz in that I’ll start with the familiar and wind up with something that might be a
variation on what is familiar or I will possibly try to really, really push myself and go
outside of what I consider to be my comfort zone and work by changing one aspect of
what I am doing... so that changes everything else... and that could be. Change the size
relationship of the elements, it could be changing... instead of always working in one
material, challenging myself to add... to work in different media. But I don’t change
everything, I usually just change one aspect of what I’m doing so that I have an
opportunity to see what happens when the whole project responds to that particular
change. That make sense?

Um-hmm, We’ve talked about shape and we’ve talked about form a lot... which makes
sense, what is the relationship of form to space?
Well, form is what makes space take place. Because you can’t talk about space without talking about form... maybe a physicist could, but I can’t. You know there are all sorts of abstract arguments that can be made about that, but if talked about this room as a volume of space, then I get to say what happens when I look at that piece that’s on top of that area over the doorway that has that sort of tall torso-like form with little handles at the top, I get to look at that and think, how does that activate all this space, if that wasn’t there, as a shape or a form in this space, the space would look different if I took that away. I’ve always been very, very aware of that, and I don’t know if... I think that’s an aspect of the particular interest that I have. (Note: ability of form to determine space)

Actually, I think we’re going to find that a lot of people are very into that concept, that’s why I’m asking about it in some depth when the opportunity provides itself.

So, you can’t really talk about form without in some way identifying the space... now it’s rare that someone making a coffee cup will think about what happens with the room that that coffee cup sits in. Um... if you stay involved in this medium long enough, you get a chance to experience the medium, and the objects that made in the material, the medium, in a number of different ways, and that can let you think about what it means to make objects in clay in a way that you’ve... not necessarily have changed the way the object looked, but it might change your relationship to them, and that has to do with the way how they take up space in the world... and how they take up space in the world is why they are the way that they are.

Spatial thinking turns out to be a rather advanced skill...

xxxx

Ok, well this is a nice assortment of information here, is there something that I should have asked you about that you feel like I certainly would have talked about and didn’t?

I don’t think of anything, it sounds like... I would say this to you, I don’t imagine that you want to spend an enormous amount of time doing research, but I would certainly offer that if it you got back to your laboratory and were beginning to pull this together and went, “Well, for goodness sake, Stacy said this, but I wonder about how that impacts on X, Y, or Z.” You’re welcome to call me, or send an Email to me, and I’ll do my darndest to answer that, because I that think being part of a teaching university like this one, it’s really great to have this knowledge base that you’re working with expand and hopefully come back to inform us about our activities.

You know, actually I’m going to do a written description of each department which I’m going to ask you to comment on, on accuracy and omissions.

Oh, Ok... sure.
Stacy Part II
October 4, 2008

We agreed, after our last interview which ended up a little shorter than maybe we wished it would have been...

Sure did...

That we still had three or four topics that we really wished that we could treat in depth, so we’ve met again today to talk about those. Now the first of the topics that we wanted to talk about was critique and critical thinking... the role of critique in the development of the artist... and how critical thinking relates to critique. Those two things, shall we talk about the role of critique in the development of the artist first?

Yes, let’s do that. Critique is an activity that could also be described as a conversation, as a dialog, and in that dialog, as the teacher, I am using language and discussing concepts that have hopefully been presented in class.

To be exact, knowledge bases... probably affect

Correct, correct, and I’m using that language to discuss whether the outcomes that have been achieved indeed connect with the intent... the intention of the artist/designer meaning the student, so it’s important to make a connection between the intention and the outcome... and have the intention have some kind of connection to the assigned and expected outcomes. And the language that we work with is designed to have the student be able to say in terminology that relates to both the aesthetics and the technical goals as well as the conceptual goals... we have sort of a three part thrust to the conversation... that they can talk about what’s working well in the piece, where it has some success... my experience with students is that they are more happy to open a vein and bleed all over about what doesn’t work well but, generally they’ve made some progress; and they need to be able to assess the progress and where the work perhaps needs to change to be stronger. So that hopefully in the course of critique, their critical thinking, their ability to analyze, and to use the language that is specific to the aesthetics the technical, the technique... the aesthetics, the technical and conceptual structures with which they are working begins to make sense. Now this is really, really dry and very much taken apart way of looking at this, because when we’re sitting there talking, nine times out of ten they will start by saying... “Well what I really like about this....” Oh that word, “Like,” I could strike it from the dictionary... but they do say that, because of course you do like it, you made it. When beginning students start to talk, I don’t do as much override of what their conversation is, because here in Iowa we have what I call stoic Norwegians, and they’re not as fond of talking as the more culturally diverse students that I had in Los Angeles, who would talk at the drop of a hat, so it’s important for them to just have the experience of saying what they think. Now our Core program is designed to get them to this critical thinking stage as quickly as possible through critique, discussion, dialog in class and through writing, and the writing that is analytic helps them to strengthen their
vocabulary, their connection to what they see, and what they will say about what they see, and hopefully be able to... when they’re making work for themselves... be able to see connections among all of that, although my experience is that sometimes it takes students a while to see their own work, because they are still very close to the process of making decisions and being anxious about whether they’re going to get an “A.” ... Or, you know, whether they’re doing it right or not. So those are some of the things that I’m thinking about as I’m working with students...

_Do you find that it’s easier for them to critique unfamiliar work, or other students’ work than their own in the initial stages?_

It really depends on the student, and I’m not sure what makes that difference, I don’t know whether it’s coming from a high school or a family that encouraged a lot of dialog. If they were in a school setting or they have taken classes... some of them as transfer students have taken classes at DMACC or a community college, then they have the start of a vocabulary and some familiarity with this process. If I make it a requirement that their grade is based on how often they respond in class, in an attempt to get them to talk, they are careful not to personalize their criticisms, because they know this can come back and bite them... in the part they sit on... if they are really critical of someone else’s work, however, that being said, I really do encourage them to be blunt, to be direct, because I say to them, if you were doing everything right, what’s the point of being here? What job do I have? You are here to make a lot of mistakes in front of all of us, and we are here to help you learn how to make progress, so until they gain experience... and experience is built by multiple opportunities to talk... to express what they are doing, it really varies from student to student, for instance in the Core class I’m teaching this semester, I have some students who grasp the issue of seeing structural relationships within the composition... they get it like that (finger snap) ... and then I have students who get so caught in the narrative that they are experiencing, that I know right away that they have a different kind of intelligence, I do believe very much in the theory of multiple intelligences, and that I think one of the things that we have learned over time is how to teach what we do a number of different ways so that students who have a more emotionally based response to things aren’t penalized for not being able to be cold dried and...

_Now what you just said sounds to me to be a very fundamental artistic skill... seeing structural relationships within a composition..._

Yes, yes... I would agree, very fundamental skill, I think that is a very fundamental skill, something they need to develop in order to make anything. You can’t even do successful conceptual work... which may not ever take form... without being able to articulate what goes on with the materials and within a given framework... be it the confines of a paper or an object that will exist in space.

_How do we teach students to do that?_

Teach students... which part of that?
*To see structural relationships within a composition, because how can they create them if they can’t even see them?*

Well, some people can see them, it’s not foreign to our ability as humans, it’s an intrinsic part of our ability to maneuver through space, but that being said, if you give them tasks whereby they use the most obvious parts of a composition... where they have to see a vertical line, a horizontal line, or a diagonal line... or where they have to identify shapes... structures within that’s the start, and then you can say, what does it mean that all the shapes are gathered in this area, and that they are all blocky and stable, what does that mean, and why did the artist do that? What does that say? And then like Whoa! So they start to learn how they can manipulate those simple elements to create meaning. (Note: are we attracted to space because it invites navigation?)

*So not only the structure, but also the communicative value...*

Absolutely, absolutely, because there’s no point of learning this if you’re not going to be communicating... I mean that’s the whole reason for doing it.

*Now you see, there would be some who would say the communicative value is the realm of Graphic Design, but I do happen to know that there is message also in the arts. So then is critique anything more than thinking critically about visual things? If so what?*

Yes, that’s a large part of it, but critique is also a way to measure yourself against standards. To begin to say... Oh this is a design... Oh, this is a good design, Oh, this is a better design, OOOH, this is really neat! And so as those critical skills are building and the great luxury... there are certain disadvantages to teaching groups of people, and there are certain strong advantages. One of the great advantages is that one person’s success or problem informs the whole group. So I think that learning how you measure up overall is an important benefit of learning critical thinking, because if you can analyze what it is... why a really successful work of art works, you can then analyze why less successful works of art don’t work, and why one particular project you do works better than another. There are very gray areas in this, and that’s part of the pleasure of teaching and having critique with more than one faculty, or more than one expert present, because one person might say this aspect of the composition works really well... the other person might say yes, but... why isn’t this area treated; it’s been left behind, and then the other person says well that creates a dynamic solution, and the second person says no, it’s just blank. It’s rare that it’s an absolute black and white, it’s rare that two or three instructors wouldn’t agree fundamentally on things, but the great thing about art is that it is not brain surgery. If you move a line from here to here (gesture) you do not cut somebody’s motor functions, but you have changed the meaning of the piece. You have to know that; that’s your challenge as an artist, and that’s your challenge as a teacher to help students understand that... so it’s a combination of being able to – as you said - think critically about visual components, but it’s also a way to measure your own rate of progress and advance their own art.

*So after we teach them to think critically, we hope they apply it to their own work.*
They better be... because once they leave my class that’s it. It’s not like they won’t have a chance to learn in other settings, but once they leave the academy, they’re on their own, and they will have to bring all of their learned information to bear on the projects they engage as professionals outside of school

*You spoke in the context of critique about applying standards that have been learned...*

Right

*Could you give me a short list of some of the standards you hope they’re going to learn from you... so we have a concept of what kind of standards we’re talking about?*

Yeah, again not to sort of triangulate everything but there are kind of three...

*Sooner or later, it always comes back together...*

Not to triangulate everything, but students need to be able to understand where their pieces work well technically, and so there are standards that are presented about technique... that you can absolutely wrap your hands around. These are very tangible structural components.

*Would craft be another good word for technique?*

Yeah, yeah... good craft... careful attention to use of tools and the like. Then there is a somewhat greater area that has to do with the success of a piece aesthetically. How do the various component elements relate to one another, and what makes one piece successful, and another piece truly off the charts dynamic... and that’s a grayer area because you don’t have the absolutes... if you have not finished the surface material well, you can point to that and say you need to go back and do X, Y, or Z technique to bring that up to the standard that you were shown. If you talk about aesthetics, that comes down to personal expression, personal choice, which is the great pleasure of being an artist; because you have a whole world that you can create and that you give meaning to through your choice or color, form, etc. And most... the other area that puts these two together is the conceptual success of the piece which means did you meet your intentions? ... Or as often happens with students who are beginning, they start to work on something, they come across a problem, they abort their original intention because it was a little bit too hard to do, and they go with the cliché Easter bunny carrying basket, blah, blah, blah.

*Well, we seem to have arrived at concept and we’ve almost finished our discussion of the role of concept, but what should be the role of concept in the production of art?*

That’s a really good question because different schools of thought place different emphasis on the role of concept. I think it’s of equivalent importance to learning technical and aesthetic skills. If you do not have an interesting idea, you can make pieces
that will be successful technically and aesthetically, but they will not go beyond what has been done before, or they will not achieve a kind of uniqueness that I look for in my own work, and I, by extension, expect my students to look for that as well. That being said I’m also aware that it’s very much a cultural... it’s embedded in the culture of who I am and how I grew up and where I grew up. I had an interesting conversation with a group of six potters in Japan, when I was there, and they said that they envied the freedom that American potters have to do anything they want to do, to use any clay, to use any glaze, to make any form, and they felt very hobbled by the strong tradition of making within a given set of sizes, forms, surface treatments and functions of the work. And I said, “Oh my dear friends, we envy the depth of your historical connection to this material, and I think that it will interesting to me to see – should I live long enough – how we in the west think about the idea of self and concept, and how that then informs the choices that we make for design. And maybe I’ve digressed a little bit here, but in my... for beginning students it’s very important, that as they are learning technical skills and dealing with aesthetic concerns: shape, line, form, repetition, negative space, all those words, that they begin to understand how all this combines to create meaning... and understanding how to create meaning is the basis for knowing concept; because if you have no intention to create meaning, then your conceptual structure sort of becomes weaker.

Ok, first mention of what I think is a really significant concept; you talked about negative space, and I just have to ask about it, because there seems to be a theme going on in there. What would be... is there a difference between the concept of negative space in two dimensions and the concept of negative space in three dimensions?

Not really

It’s basically the same?

I really don’t feel like there’s a lot that differs. A lot of difference... there are differences in the final product, but underpinning any work that is done... I think that you can’t make something three dimensional without having the capacity to see it ... I’m a little bit uncomfortable with the idea of strictly two-dimensional, three-dimensional structures. However I understand that we teach like that because we break things down into what you can put on the paper which is flat, and what you make that takes up space in the room which is three dimensional... so you have 2D and 3D. But I think our brains actually hold those two at the same time. Some people have a stronger orientation toward one or the other, so the concept of negative space whether it exists in a drawing, of a person standing with an arm outstretched, or whether it exists in a sculpture of a person with the arm outstretched... the difference in the drawing and the difference in the sculpture is that in the drawing you have a perimeter, you have the page, it forms an edge and you have a really quick way to see the relationships, however if you can’t see a piece sitting on a pedestal in a room and see the space around it, you’ve got a problem as far as I’m concerned.

In your experience, is it an easy transition for someone who has a good sense of two dimensional space to move to three dimensional space or vice-versa? If you’ve got a
student who understands three dimensional space well, will they grasp two dimensional space readily also... Or, of course if you have a good feeling for two dimensional space, do you move easily to three?

Because I work personally back and forth between the two, or work in those realms, all the time, personally I don’t experience it as a challenge. I see students struggling to understand... partly because our most of the curriculum that we have in the K through 12 system does not allow for very much sculptural work. A lot... most students have had some experience with drawing or painting, or mark making on paper, or collage; because it’s just easier. You can stack forty drawings in a 12 X 18 inch space, that takes up five or six inches in height, but you take forty sculptures that these kids have made, and suddenly you’ve got a space problem. So we don’t teach that, and it really is interesting when students have had the benefit of some exposure either through outside classes or through the good fortune of the program that they were involved in to have some of those experiences it’s really great. The most successful students can work comfortably with both, and can go between them, and can start to see the relationships... I’m finding now for instance in my second semester class we’re doing a project where they have started with sketches, thumbnail sketches; and then they did a little bit more detailed drawing; and then they made a model of this piece. It’s going to be 24 inches high and seven inches in diameter somewhere. Although that seven inches in diameter... I titled the project 24-7, as a sort of clever way to bring in contemporary language, but the idea is that they are going to... many people are very, very skillful at doing little doodles and coming up with wonderful quirky ideas in a thumbnail sketch that they then, if they scale up directly from that, can make a very wonderful final piece. What often happens is that they make the sketch, it’s rich, it’s juicy, it’s wonderful, they start working on the piece, and it’s like Whoa, what happened here folks? And that is that lack of experience... I don’t think it’s an inability. I just think it’s a matter of having to do this over and over and over again, so you build... as an experience, and you say show me your original drawing, where is your model, where is this not meeting up? And I think that some of this happens because their technical skills are still so nascent... that they don’t have the ability to make the material do what they want it to do, and they most of the time feel like they aren’t going to get it to work... in any way shape or form.

But I think that there’s an important concept in there that I might have heard first from you, but I see it sometimes, it may be wise to do both a two dimensional sketch and a three dimensional sketch.

Yeah

In terms of a model, now the Interior Design people will talk about model-building, which is essentially the same thing as I think of it, but that concept of doing the two dimensional sketch and doing the three dimensional sketch as a means of understanding the relationship between the two... I think that’s a significant thought.

Well there’s also the importance of being able to take a form in a drawing and turn it to be able to draw the front, the back, the sides, the top... to be able to, in your mind’s eye,
to walk around the piece. Most students can successfully draw what they want to see when they look at it at first which is kinda like the face. And I say to them, Ok, now what happens if you go here, and what are you looking at from this vantage point?

*Indicating from the side or...*

So that’s a three dimensional sketch in a sense. If I have them take and make a small study in solid clay, that’s you know four inches high, then they are making the whole thing, and they’re Oh, wow, and it’s not... it’s just completely different. So that does provide them with some really valuable information to structure a deeper understanding of what they’re going to have to do.

*Well, we’ve worked our way through a bunch of really exciting concepts, here, I’ve got one more... establishing design goals. We’ve talked about some of them coming from concept, where do they go to get these goals and how do we teach it to them?*

That is often the place where having clearly stated learning outcomes or an assignment will help students understand why you’re bothering to do this, and it might be as simple as saying: Through this project you will learn to work from a sketch to a 3D model and scale up from that and use these techniques and build something that has these particular hallmarks of success at the end. So I think that clearly stating or having an objective for that helps students understand where they’re supposed to go with what they’re doing. And again, those objectives can be expressed in terms of the technical learning a body knowledge... a body of technical knowledge, those skills... how those skills incorporate the aesthetic language that they’ve learned, and the conceptual structures with which they’re operating. And when we talk about learning outcomes, I think one of the things we didn’t talk about quite as much... and I was thinking about it after we parted company, was the relationship between thinking two dimensionally and three dimensionally... and when I said earlier that I was a little uncomfortable with those as categories, it’s because of the reading and the research that I’ve done about how the brain works, and I wonder if we really separate those out quite as clearly as we make them separated in our teaching. However, that being said, it’s generally easier to break things down into discrete units to talk about them. In my experience, students as soon as they have achieved a certain level of experience with a material, and have had some failures and then built some successes, there is an exponential growth in their confidence and in their ability to be more critical of their own work. So one of the learning outcomes is to gain experience with the materials and the processes that are involved... the choreography of getting something from start to finish so that they have experiences that will allow them to go ahead, tackle the problem, and know they can succeed, and if they run into difficulties, not be thwarted by that or not be thrown off course. So getting them to that point... my task is to make it clear what it is that they are to do. If I say to them you are going to work from your drawing and your model, exactly... then I have to make them do that. That being said, sometimes in the course of working, things start to change, and they change for the better, and so we talk about being able to take advantage of the moment and what we’re learning and something that might look like a mistake or a side track might become a more successful resolution.
So at some point do we want to transfer the responsibility for setting the goals to the students... we hope that sooner or later some of these become internalized so we don’t have to hammer away at them anymore. I would think.

Absolutely... however saying absolutely, I can hear myself hesitating. Let’s say that’s the ideal... the reality is that until students have had a fair amount experience and have built that body of empirical knowledge...

The knowledge bases, yep...

The knowledge bases, right... until they have the knowledge bases, and until they have confidence that their ability to analyze what works well and what doesn’t work well, both technically, conceptually, aesthetically. That giving them free reign is sort of like throwing a kid into the deep end of the pool and saying, hey we emerged from the water eighteen billion years ago... swim. On the other hand it’s very important to me that students feel that they have autonomy, and that I don’t impose on them my design sensibilities, however, that’s again a negotiated situation, because I could certainly think of instances where students have said... I have student right now who is working on their thesis project, and this person has an interest in an aesthetic that I have no feeling for whatsoever, none... in fact I have a bias against it, but I have said to myself I am not going to stop this person from doing this because they are fulfilling the end product of getting as far as they can get, and while I might in my own mind think, NO WAY, would I want to do that. I have pointed out time and again the places where I feel like the choices are cliché or not, where they’re not pushing themselves enough, and I have had to accept that this is as far as this person is going to go, and if I constantly battle them, I just simply undermine their autonomy, so that’s a fairly fine point of transference. So, I have transferred the authority to the student to make these decisions, and I will nudge where I think I can, but I’ve also looked at and accepted a certain limit to what I’m going to be able to get this person to see and do. I don’t feel really good about this, because there is a part of me that’s saying maybe an instructor who is more rigorous than I am would just say you can’t do that, it’s been done before and it’s a stupid cliché, but there’s a part of me that says this is what this person has chosen to do, they have their aesthetic is built... I don’t know... kind of a gray area, but yes... in a very long winded way, yes. It is very critical that the student have that authority... And that they feel that they have the support to make those decisions... and I try to make it very, very clear if someone says do you like it, I say that’s not the issue; the issue is whether this works, and if it works, why... and if it doesn’t why not?

Now I say that all the time too, it works or it doesn’t work... but for people who aren’t used to hearing it works or it doesn’t work, what do you mean when you say it works?

Yeah, yeah, good question, when we talk about working, I can point to... almost always the first level of it works or it doesn’t work is aesthetic or visual. I mean something you can say, do you see how this work slumps here? If we carve a little bit of this away, do you see how that would create a different kind of line? Oh... yes, suddenly they can see
it... where it’s much more difficult as in the example I was just using with the student, whose work for me is extremely clichéd, they have said to me... I’ve seen these pieces and this is what I want to be doing; you know you can’t fight with city hall. But when I say it works, I can always point to what works and what doesn’t, I can always identify and put into words conceptually what works and what doesn’t... this doesn’t work because the idea, of a dying swan – just making up something –is very clichéd, it’s been done, the idea of a little round ball knob on top of a pot has been done a thousand times, don’t do it, have greater imagination, make something that is original. I find that in ceramics students struggle sometimes with the degree of difficulty that they experience in making progress technically... and the relationship between making technical progress and making work that is unique aesthetically. A lot of students are very, very thrilled to make something work and be able to make a recognizable object... so when I say, well that’s... you’ve done a good job there, but how does this go beyond what’s been done before? You say you want to do utilitarian ceramics, I support you a thousand percent, however here’s your challenge: you have to do it better than anyone who’s doing it now, if you are going to have any chance of success outside. If you are going to sculpt the figure, what will your contribution be, what will your unique contribution be? Big challenging stuff for undergraduate students, but important for them to hear this and to understand it and not be lulled into thinking oh my you’ve done such a nice job... it’s a good enough.

So we have to make uniqueness part of the goal structure?

Yep, and that’s part of being able to say whether it works or it doesn’t. and that’s also a responsibility to communicate about the history of aesthetics and have students become aware of precedents, and what’s been done... because a lot of people come up with ideas and think it’s the first time anybody has ever done something, and if I never see another pair of praying hands again in my life, it could be too soon. I just haven’t seen anything done recently that is very unique, which is not to say it couldn’t be... but you know what I’m talking about.

Ok, well, those were all the questions I had, that I thought we should probably revisit... oh, I do have one more down here... I said spatial thinking skills, but then we went into negative space... do you have anything more on spatial thinking skills that we should deal with... what is the nature of that in the production of art?

Yes, we had talked about last time we met, about the fact that you can not have form without creating or defining space, whether it’s two dimensional or three dimensional, it just doesn’t happen; and to create spatial thinking skills in students is actually pretty wonderful and pretty exciting, because it’s what puts everything together. It’s what makes it all happen, so if you talk about what happens between elements in a composition, what is the literal space, what is the implied space, you talk about what happens when the element has this particular size and texture relative to another kind of surface. you start to create different ways to express spatial awareness and spatial awareness is also a kinesthetic... a body related activity. And we don’t think about that very much... if we think about people working say on the computer and doing say a flat...
design – a typographic assignment, however, you can animate – not in the literal sense
but in the figurative sense – you could animate the composition by saying ok, here’s the
page, here’s the letter form on the page, how big is this letter form? What does it’s
outline say in relationship to everything else, and you can do all that...

That’s actually the first assignment I teach in the typography class...

Oh my gosh... I think I’m reading your mind... that’s really great.

So I think we’ve got another really fundamental thing. We said seeing structural
relationships within the composition, and second really fundamental thing is spatial
awareness and the ability to see and manipulate space.

Yes!

Yeah, I think those are really at the bottom of a lot of it.

Yeah, yeah, because quite frankly the biggest problem that my students have aesthetically
in this semester’s beginning ceramics class, they’re creating an article of clothing, which
has been great fun. And some of them understand right away that part of the pleasure of
this is all of the quirks and peculiarities that go into making up that shoe... and some of
them don’t get it at all and they make these kind of cartoon like simplified versions of
what they’re actually looking at in real time in front of them, and when I point out...

Sort of like those little diagrammatic drawings students make as beginning drawers...

Yeah, and so what I do is I point out to them, no, no, no, look at this edge. Look at the
way the material meets here at the seam, see how this comes out just a little bit, and so
that whole act of seeing, making the connection, putting it together, and being able to...
being willing to not settle for less. Getting them to not settle is huge, it’s just huge and
yeah.

So seeing the intricacies of form in three dimensions is as relevant as it is in two.

Oh absolutely, the thing about two dimensional space is that it’s always about three
dimensional space. Even the most abstract paintings... I’m thinking like something like
Clyfford Still, Mark Rothko, Helen Frankenthaler, even those works. And then I think
about people who do conceptual work... all of that still has to be assessed in its visual
strength by those principles of visual organization that we teach...that emphasize how
things have a relationship to each other... which always is about space. That’s my bias.

I think you’re right about that. Visual organization is about space. As a Graphic Artist,
we teach visual hierarchy, but you’re right, it can’t be taught without talking about
space.

Yes
Ok, the other thing that I have here that I’ve had people raise with me, and it becomes an interesting question, sometimes, is the role of iteration, doing something and then doing another one or a different version of it.

I am a big fan of repetition with slight variations, and that is maybe another way of saying iteration...

Same thing... I think.

And partly because it reinforces the skills that you’re learning, and partly because within slight variations you start to learn those critical thinking skills that we want to think we’re developing but we’re not always 100% sure how we’re doing it. So I could actually... I keep threatening to do this... but I probably won’t... but it’s kind of interesting to think about... I would love to give students in a class the same assignment for the whole semester, but give it to them four times, and to not say that it’s the same assignment, because if I had the students who are working on their large sculptural projects start now, to do it... holy moly what they could do, and what they’d with what they’d learn. But I am going to allow them to move on, and we’re doing a combination in second the semester ceramics of gaining greater skills in hand building, but also working on the wheel. Now the wheel is a place where iteration is very easy because of the speed at which you work and make things, and repetition is a hallmark of the skill. If you can repeat a form and have it look pretty much the same over and over again, you’ve achieved some mastery over the material. Then once you can draw a cow, then you can be Jackson Pollock, but you have to be able to draw that cow first. Jackson Pollock believed in drawing cows.

The arts are unique in one area, if I’ve understood correctly. The idea in the arts is to appreciate the uniqueness of what has been produced by the hand.

Yes

So when we go to produce a piece of artwork, do we want it to be a singleton and totally unique, or does it work to – at least in the initial stages – have students present a number of alternatives?

Oh, I think at all times a number of alternatives are critical, even if what you eventually come up with is a single form or idea, that becomes... the one that gets saved, for lack of a better word. And so that is that activity of giving students an assignment to do a minimum of five thumbnail sketches and 3D models... three dimensional models is a way to force them to take the idea that they started with and manipulate it and begin to play with those elements and thus... hopefully reinforcing some of the learning that is taking place, but also through that repetition, through that coming up with several variations, and discussing those with them, and discussing them within the context of the class... again this is a situation where the group mind contributes a lot... we were just going over the studies for their construction paper collage, in the 102 class, and as we talked about
the pieces, it was the rare student who knew which piece of theirs was strongest. And they would like a piece because they had an emotional response to part of it or they worked extra hard on it, and really what was going on in another composition was actually stronger and more in keeping with the message in the original, the precedent they were working from. So that’s just really, you know.

Ok... turned off the recorder
What I hope you will reflect on for me today are the qualities of a successful student in Art and Design, or perhaps in your case, perhaps Art History as it contributes to Art and Design... From your experience, and in your teaching, what things seem important to student success in Art? These things might include specific types of thinking, manipulative abilities, constructive skills or areas of knowledge. Now we can work with those one at a time – we’re trying to address three areas, but there’s nothing sacred about them, they’re mostly there for the purpose of making sure we get a broad perspective.

Well I’ll just plunge into that question and direct me further or elicit more things with your own questions but...

Perfect

My own training on the graduate level was in an Art History Department in a College of Art and Sciences, so the examples I had of teaching or training was basically of teaching people to be professional Art Historians, that is to work as professors of Art History or as museum curators or people in the art publication world – as editors, critics and so forth. Of course the situation I’m in now is very different from that. There is very little likelihood that any of the students that I am teaching are going to go on to get their Ph.D.’s in Art History and become Art History professors or museum curators... some of them maybe.

You know, I can think of at least one example...

And I could think of a couple too, but normally in this state, the institution that trains people to teach and work in the Art History and museum area is in Iowa City. And we are the design centered institution that is basically producing practitioners... whatever area that might be. So I should state that my own training has not been a great preparation for the kind of students that I deal with here at Iowa State and in some ways that’s a good thing. I wonder... I can not even imagine, at this point, of teaching in an Art History Department... training people to be Art Historians. To me that would be too narrow, too parochial and provincial and inbred that I can’t imagine doing that. I enjoy teaching students who are going or planning to be Graphic Designers, Interior Designers, or to work in the Fine Arts world as painters and sculptors. To me that’s a lot more enriching and I think that my function is much more practical and useful in that particular venue than just in producing another scholar of French Impressionism or 17th Century Baroque studies. And so having said that, I should point out then that the kind of scholarly, archival, linguistic and literary skills, that were expected of an Art History student, and that I would be emphasizing if I were teaching in a department of Art History and producing new Art History majors, is not that useful or important here. What the students who are working/studying here need the most, are critical, analytical, and
basically a sense of familiarity and of being an insider rather than an outsider in the Art world. Yes, they certainly should know how to read and study difficult texts, but in not being trained to write, difficult texts, yet they should know how to find their way in a library and to be able to use reference books, but they are not going to be scholars who will be digging up obscure information in rare book rooms or Art and cultural archives in Europe and America. So what I see my role as is giving the students a sense or being familiar and being able to use and utilize as model and exemplars, the great landmarks and personalities and interesting episodes of Art and Design History. Now I should say Art and Design History, because as I said, I was trained as an Art Historian, and a lot of the things that I teach about in this college were never touched upon by my professors at the University of Pennsylvania Art History Department... such things as furniture, costume or fashion, the various graphic arts and typography, and illustration, product design, and the mass produced industrial designs, consumer products, and mass communication, there was virtually nothing of that, that I was trained in. I had to learn a lot of that stuff all over again. And this is something, then that the students need to know... that what we call Art History is much more broad than what I was trained in... it just doesn’t mean painting sculpture and high architecture. It means just about everything that is created to be looked at or to be examined with the eyes including any kind of publication, including any kind of mass produced product, that’s not just not just practical but also is meant to send some kind of sign or signal about the status or personality of the user... in other words, just about anything we see around us in the man made world. What we are talking about really are the artifacts, rather than traditional objects of art. So in teaching students about these things, I’m basically teaching them how to deal with the things they have all around them, not just things in museums... and this is the kind of thing that they’ll be designing themselves in the professional world of graphics.

Ok, a lot of good information in there. First of all you were talking about... it seems to me as though much of what you’re talking about are knowledge bases... and these are knowledge bases that these students have to have if they’re going to be good designers. When you’re talking about critical thinking, analytical thinking, and familiarity, those are thinking skills, but I want to go back here and look a little more... you said you wanted to provide them with models and exemplars... in my experience that has been very useful to me, having had that historic background and those models on which to build, so therefore, these models and exemplars becomes part of the knowledge base that enables them to produce other designs... is that in the ballpark?

Yes, quite so, although again I need to emphasize the difference between what we might call our fathers’ Art History and the Art and Design History we teach today. Throughout the Art History profession, which only goes back a couple of hundred years, there... an important part of Art History Education has been the transmission of a canon of masterworks, however that canon would be defined in each generation. And so, certainly when I was a grad student, there was certain a population of important works of painting, sculpture, and architecture which any Art Historian was expected to know and recognize by sight, and we spent a lot of time memorizing images with flash cards and various manuals and textbooks in preparation for the Art History grad student’s
comprehensive exam which was largely made up of a slide show of paintings, statues, and buildings you were expected to identify by artist, title, date and a style label.

*I may have done something like that...*

So, that you could say is the traditional, definitely pure knowledge based Art History and it’s based – I mean if you look beyond that practice to I guess the justification of it, it’s based on the notion that education involves the acceptance of certain authorities of the past who have put together a repository of good things for us to know. Well we haven’t entirely escaped that... I would certainly feel I hadn’t done a good job if students come out of my ancient Greek and Roman Art class not being able to recognize the Pantheon in Rome or the Parthenon in Athens. But we’re in an age that is very suspicious and skeptical of authoritarian pronouncements, and what I would want my students to do is not just to know these masterworks, but have some idea why they have been selected, that is the sometimes political and economic reasons why a particular artist or work of art is the one that is given all the time in the textbooks... and every single one from these masterworks has a back story as to why it has been considered, by many generations, as an important reason for people to know. So, and those reasons usually involve political, social, religious, philosophical economic factors that have somehow made that particular artist or that particular work of art something that people are expected to know and that artists and designers are expected to imitate or emulate in their own work. I guess this falls in the category of being self-conscious or self-aware of why we do or have certain things, they didn’t drop out of heaven as a divinely ordained system; they were put together and promoted by fallible human beings who had their own motivations... sometimes not the most noble of motivations... and we need to recognize that because we’re doing the same thing now for future generations. So this process which years ago would have unconscious – you just learned the Pantheon, Parthenon – without trying to figure out why we have to know this particular temple instead of some other, but now we are more conscious that there is a why behind that authority. (Note: the rationale behind the canon) I mean we’re trying to open the curtain and show who is behind the great image and voice of Oz. There was someone manipulating a machine behind the curtain...and that person is also us, because of course we’re doing the same thing with our particular creations, and images, and works of art and design that we use and promote today.

*Ok, let’s take a look at these three thinking skills. You mentioned critical, analytical and familiarity... the familiarity, I think, is what we’ve been talking about up to this point. We want them to be familiar with what has been done, is being done, and how it relates. On the critical thinking... that’s one of those words that I’ve discovered has different meanings to different people, you want to talk a little about the kind of critical thinking that you want to see?*

Well, to me critical thinking is self-conscious, self-reflective thinking. It’s thinking that asks why and how, not just what, who, where and when... and the why and how always involves going behind the circus of things, so for example, a large population of the American people live in suburban communities, so that is a given that any architect or
urban designer or planner has to deal with, and there are descriptions, factors, commonalities from one suburban community to another... knowing how these communities are planned knowing what are the optimal plans for housing, traffic, utilities and services, transportation, and so forth, is all part of the kind of professional thinking or professional skills that we would try to create in this college, however what I do... I come in and I ask why are there suburban communities? What are the social, political, and cultural factors that caused people beginning in the 19th century... we often think of the growth of suburbia as a post World War II phenomenon, but, fact, we can trace it’s roots back to a certain romantic conception about getting out of the city and going back to the land... that goes way back to American Transandentalism, and other cultural factors associated with the Romantic movement of the 19th century... that’s what I’m trying to do, go back to the roots and figure out what are the social and cultural forces that created suburbia in the first place and are still at play and that are still in the unconscious mind of designers who are designing new suburban communities.(Note: Making the unconscious, conscious) So, that’s just one example of what I would consider critical thinking that is not accepting the phenomena that we deal with as a given, but rather going behind the scenes and exploring what are the causes which usually boil down to social, economic, cultural, intellectual that have come together to produce that particular phenomenon. On a more high art kind of plane, we can teach the students in an Art History Survey course about the different movements, that took place in America and fine art venues in New York from the 1940’s to the 1970’s and 80’s... Abstract Expressionism, Minimalism, Pop Art... right up to what we might call postmodernist or post avant garde art, but each of these movements has its own back story of cultural, intellectual, social, and political factors that are, you might say, behind the painting or behind the statue... so it’s going behind the statue and pulling out the little man or the little men who are actually running things behind what we try to do today... and that’s critical thinking... to me at least. Critical thinking, therefore, is always historic thinking... that is trying to find the roots and causes of things... which is usually a cause and effect factor that we call history.

That’s actually a nice thinking skill... understanding cause and effect. So, so far we’ve talked about critical thinking as an explanatory force, to understand why things are the way they are or were the way they were. Do they also apply this forward?

It would be of no practical use, and would merely be a xxx kind of airy game played by ivory tower intellectuals if it could not be applied to the actual practice the students are expected to do to earn their bread when they get out of here with their degrees. And this is a kind of shortcoming that I’ve never seen adequately addressed. I mean is there any follow-up to see if these critical thinking skills that we are trying to impart in the classroom here are actually continued and become part of the student’s thinking and practice later on. We would hope so... these students are going to go on to design web pages, graphic products, and mass produced images of one sort or another. Now I would like, as they sit down and begin putting their images and arranging illustrations with text, and deciding what the client needs in terms of a font, or whatever that they would somewhere in their minds be thinking, what are the social, economic, and cultural forces that are causing me to choose this particular font instead of some other. You know again and again when you talk or hear interviews of designers, they often act or behave as if
they are re-inventing the wheel and everything they are doing is coming out or their pure intuition, imagination, or whatever. I would like to see more designers who are very conscious of the reasons why they design the way they do... and that consciousness has to do with an understanding of what cultural, economic, and social factors have affected him or her as they’re sitting there at the drawing board, trying to meet the specifications and needs of a particular client or commission. So I guess the short answer is yes, we do expect students to carry this analytical habit forward and apply it to themselves and to the works of their contemporaries, peers and colleagues... as well as you might say dissecting cadavers... that is dead designers and why they did things the way they did.

Ok, we’ve also touched on analytical thinking skills; now when somebody says analytical to me, I think of breaking it down...what types of analysis are you looking for?

Well, we tend to think in terms of formal versus content analysis and formal analysis, of course, is what you use when you are critiquing a work of art or design in terms of its composition or visual design. That is the way the lines, spaces, colors, rhythm and so forth are put together, and whether those things are effective or not. And then there’s analysis of content, what is the message here, and how successful is the designer in conveying that particular message. Does the designer even know clearly what message he or she is conveying. Traditionally, these are considered separate analytical skills. but I’ve always felt that they are very much part of a unit, and that of course the composition that is put together in a particular design project often will depend on what content you are trying to convey, and the content in turn will be enhanced by the visual design. Now those are the analytical skills that I tend to think of when someone suggests design students need to know how to analyze better. There are, of course, literary analytical skills where a statement in writing is analyzed in order to parse exactly what the author is saying and whether what the author is saying is effective in conveying the message the author intends. These are things that can be taught, and should.

And, I would think these would be fundamental to student success, being able to do a formal analysis, being able to do a content analysis... and, once again, very probably, we would like to see the students turn around and apply these. But, I saw another thing that made me a little curious. What is the relationship of critique to critical thinking?

Hmm...

We tend to use them interchangeably sometimes, and I wonder if we should or shouldn’t...

I can only answer how I use the term critique, critique is a specific situation where you have a particular design problem or project before you and you have to determine how it should be evaluated in terms of its success... and of course you can only know that – that is whether it’s successful or not – if you are aware of what the requirements and parameters are originally. So, to me critique and critical thinking go together in the sense that critical thinking is what you bring to a critique. And skill in critical thinking is of no
use unless you can apply it in a specific real world critique situation. (Note: according to this, we may want to teach students critique)

Ok,

But I should also point out too... in applying our critical thinking here, Jane, to this particular situation... I’m no expert on pedagogy or educational methods, but I often see in the literature people making a distinction between knowledge based education and education that emphasizes critical thinking. I often wonder if instructors who are not teaching much in their class so that their students come out of their course without knowing too much, are justifying that by saying well I’m not so much interested in imparting a knowledge base to these students, but rather to train them in critical thinking. I am always amazed that there are people who can actually separate critical thinking and see it as something floating in the air without any kind of specific object, instances,

(Interrupted by a knock at the door)

...which often seems to me something that comes out of education colleges as you know there many people who criticize the education of teachers in that it’s all about theory or pedagogy, and the teachers don’t really learn any content. And that content is denigrated and dismissed by people who teach teachers... who say they want to teach critical thinking in the abstract... (Note: Can’t divorce critical thinking from content)

Well, as you know, I’m in both colleges...

Yes, and this is an issue, because if you haven’t encountered it already, you will encounter people who are very critical and skeptical of the very idea that there should be colleges of education, departments of education, and people who call themselves experts in education as if education was something that was divorced from the kind of content we’re trying to teach. So I should point out to me at least, I can’t even imagine teaching critical thinking... period, to me there’s no such thing. It would be like saying I teach religion, oh well, what kind of religion, Buddhism Christianity, Islam, no I just teach religion. Well gee, what is that. I would be very skeptical of someone who thought they were an expert on religion, but they didn’t know much about Islam, Buddhism, or whatever. So, I want to emphasize that for me, at least – and you may not find many people who feel as strongly as I do on this – there is no such thing as critical thinking... sitting there all by itself on the table top... it has to be... critical thinking is something that takes place when you’re dealing with a specific real world typical object oriented, image oriented situation. So when someone tells me yes, my students may not know who Michelangelo or Rembrandt is, but they definitely have critical thinking about art. I would roll my eyes and think that’s as nonsensical as it could possibly be; these students are being cheated here. (Note: they need to know some art objects)

The explanation that I’m using for purposes of this study is – and I didn’t give that to you up front because we didn’t quite get to that point – but I would characterize critical thinking as a thinking skill. Knowledge bases are fundamental things that people learn;
we could call them building blocks, thinking skills are the strategies we use for manipulating the building blocks. What you’ve just told me is entirely consistent with the way I would see it. No building blocks, nothing to manipulate, no thinking skill. So yes, you absolutely have to have something to manipulate with those thinking skills and that would be, in your case, the role of the concrete object but it could take a lot of forms for different people.

Oh, quite so... you know I often... one reason why this is something that I think about is that frequently I find in my student evaluations, and I don’t know how other people fare, is that in my courses there are too many specific things to know, and not enough general or big ideas or what we might say is the abstract things we need to know about Art History. To me, Art and Design History should not be abstract; it should be object oriented, and that the kinds of ideas we have that are big ideas... what good is it to have a definition of Romanticism if you don’t know any Romantic paintings, works of art, graphic design... or whatever? I would say that is probably the most useless kind of knowledge. Rather it be far more proper education for the student to know 100 examples of Romantic era works of art and design, and be able to take them and make the generalities themself... what do they have in common what kind of messages are they trying to convey that links a particular fashion statement with a particular poster design, with a particular type of locomotive design of that period. Because students seem to... many of them seem to come out of secondary school feeling that there are two kinds of information. There are the little rote memorization things that we’re not supposed to teach our students, that’s a waste of their time; and then there are these big concepts that are the things we’re supposed to teach them, and to me student whose head is filled with these big concepts but can not identify objects is a pretty useless kind of person. I mean they’re not going to be much use in designing things, they’re not going to be of much use in making their way through the world in recognizing things, I would say that student has been shortchanged in their education.

Do we want them... so identification of objects is a fundamental of student success? Do we want... and we’ve talked about... I think we’re working all the way around a couple more thinking skills here. We’ve talked about students being able to look at a variety of objects from a given period and develop their own big picture of what that period is about, is that correct?

...Which is a skill they could also bring to their own contemporary period and the objects they’re making, and are surrounded with themselves and their professional ideas.

So that’s a kind of a synthetic skill, where they’re constructing a fundamental idea of what this period was about.

Ok...

Ok, I lost something in there while we were talking about that... What would be... Ok, you’ve got your first pile of exams in your lap here, and you’re beginning to read through them... and you find one that you look at and, Oh, this student looks like they’re going to
be talented and you see another one where you say oh, this one is likely to struggle, what’s the difference between those two exams?

Hmm... At the risk of sounding very materialistic and simple minded, I would say a lot of it has to do with weight or volume or amount or abundance. Generally, a student who is going to do well is productive and voluable, they may not always say the right things or the appropriate things, but they have a willingness to produce... and this is something I emphasize from the first year onward. I mean I can literally look at two exams and almost within a few points determine which one is an ‘A’ and which one is a ‘C’ or ‘D’ simply by the amount of writing that they have done... or in their writing, the amount of specific examples. So, I tell students that when taking an exam or doing any kind of assignment, the three things they need to keep in mind most are relevance, abundance, and specificity. Relevance meaning that whatever they write should relate to... or respond to the question or problem, abundance means that there should be a lot of stuff that they write, and then specificity meaning that what they write should be as concrete and specific, and detail oriented as possible. So, whatever the subject, whether it’s a 100 level core course like Design Cultures or a 300 and 400 level Art History course like Greek and Roman Art, or a graduate course like the 501 Design Seminar, these principles are the same that distinguish between a successful and an unsuccessful student... at least in terms to of their response to exams and assignment projects. If I had to identify what are the causes of students failing, at least in my classes, I again turn to those three concepts. Often a student may fail because they don’t understand or pay attention to the particular question... they may be giving the right answer, but to the wrong question. This is often a problem of attention, or a problem where the student has not learned that everything they say is not equally important, and what they say should apply and be relevant to the topic/situation/problem at hand. Sometimes that involves people skills too, because the more mature the student is in terms of their dealing with peers and people on various levels that they have to deal with, the more likely they’re going to answer a question in a way that tries to address what the questioner is getting at. I’m not quite sure really, how to define that any better, and I don’t know how much discussion there is in educational circles... (Note: understand the implications of a question)

Well, you told me they have to address the problem stated...

Basically be relevant, and what they say should be relevant... and often that simply is a question of understanding... do they understand the question? And can they restate it and then answer it. And then abundance, meaning that there should be a lot of information, a lot of writing, a lot of opinion or whatever... and then the specificity. I would say the abundance is the area that’s the most problematic in terms of students in my classes at least. I often get the impression there are many students have been trained before they come here to be as reticent as possible, and to believe that a short answer is better than a long one... and I guess we do tell students do not be verbose, and try to keep your responses succinct and to the point, but in the field of Art and Design History, there is no end to relevant and significant things you can say about a particular designed object or artifact. You can talk about its style, you can talk about its content, you can talk about the biographical factors of the designer that caused that particular object to look the way
it is. So you could virtually go on and on until someone pulls the paper out from under you... and the best students do that. At any exam that I give, most students tend to finish early, and the eager beaver ambitious go-getter students are sitting there writing and writing while I’m saying Ok, folks, we’re overtime here, there’s another class that wants to come in... and you can be pretty sure those are the students that are going to be most successful. In some ways you can almost see a certain moral code that is somewhere hidden in here, although someone who is more expert in affects would be better than I in figuring that out... but we would like people to be generous and giving, you know to go the extra mile, to not be stingy and close fisted... and being generous and giving in a student situation, usually means giving as much information as possible. So I sometimes tell students, I grade by the pound, you know, pretty much the more you write, the more likely that you’re going to be covering all the different facts and terms and examples that will add up points for that answer... you get the maximum number of points for that particular answer on the test.

I found something interesting in your comments about abundance, because I hear the people in the studio areas talking about iteration... and what they’re wanting there is for the students to produce lots of possible designs, or design ideas. And when you speak about abundance as a quality necessary to Art History, I wonder if there’s a relationship between those two? Do you have a thought on that?

Well that’s a good point... in terms of... I would imagine a painting or drawing teacher would like to see a student who is drawing and sketching all the time, and so that... it’s not that they produce three drawings a week that fulfills the assignment, but that they’ve got a sketchbook... I would bet, although I can’t guarantee it, that a drawing teacher would tell you, you know you’ve got a good student when you have someone who is just always carrying their sketchbook around. And they’ll stop and sketch things... and you, know they’ll interrupt their lives to draw something that caught their eye or that popped into their head. I mean, writers do the same thing, they carry around their notebooks, and they’re always writing and making notes and whatever. So, I guess part of that idea is you can’t be good at anything unless you do it a lot, what professional musician isn’t playing on their instrument all the time, even carrying it around, unless it’s a piano... and strumming it or tuning into it or whatever, you know, when they’re not engaged in something else. I once went to a dance class... you know, I’m getting as far off the topic here as possible, and the dancing instructor said well if you really want to be good at this you have to be dancing all the time... when you go from the kitchen to the dining room, waltz from the kitchen to the dining room. I mean you should be tangoing up and down the stairs of the Post Office. You should be doing the Fox Trot getting on the bus and off. You know, that’s how you become an expert dances... well I’m a long way from doing the Fox Trot up and down the steps of the bus, but I can see what he’s talking about, he’s talking about iteration, if you want to be good at the Fox Trot, you don’t just do it on the ballroom floor, you’re doing it in your dreams so to speak, and you’re doing it as you’re hiking through the woods. But that’s kind of a trivial example of this very general principle that somehow abundance and productivity is associated with high quality in a field. I mean you wouldn’t want to go into surgery with someone who only
does surgery once in a while when they get around to it in their spare time... you want someone who is a surgeon every day. We should expect that of designers as well.

Note: ideation as practice vs. ideation. Will practice improve ideation? Maybe.

I remembered what I forgot earlier... when we were talking about the ability to construct a larger idea from many examples, of course the contrary to that was the one I was thinking of; the ability to offer examples of a certain type of thinking or a certain response to a cultural phenomenon. Both of those are relevant? I think I heard you talking about both of those...

Falling back on the concrete... I’m trying to think of specific examples if I showed a student a painting by Braque or Leger, I would like them to be able to say, oh, that’s Cubism, but I would also like that student to sit down, and at my request make a sketch of something that’s Cubist, in other words they know what Cubism is, not just because it’s a label attached to that painting, that painting, and that painting. But that it does have, in a sense, an independent life of its own, and that they could make a new Cubist design based on those three or four principles common to all Cubist designs. Of course in order to know those three or four principles, they must first study the actual examples of Cubism that are out there from the early 20th century to the 1930’s and 40’s or whatever... they went out of style and were replaced by other movements... and then they can see how Picasso does this, Braque does this, Leger does this, Chagall does this and although had their particular different hands or personal styles or obsessions, they were painting in a particular way that could be called the Cubist style... and here are the one, two three maybe four elements that are common to all of that...(Notes: extracting the underlying principles, seeing similarities and differences) now having extracted those, we’ll say three elements of Cubism they can then take this rarified vial of pure essence of Cubism, and then use it to create more Cubist themselves... that is, should they want to recreate it... Now why would they want to recreate it, because they’re forging a Picasso or a Chagall... NO! Because Cubism is associated with a particular type of thinking or ideology and their client, or the particular commission that they’re working on may consider that particular way of thinking or ideology appropriate to this product of to this design problem... and therefore the student can say, well what you are asking me to do sounds a lot like something where a Cubist look would be very appropriate, and I happen to know the principles of Cubism because I studied them in Stan’s Modern class and I could make a cell phone or a web page that looks Cubist. (Apply the communicative value of a style) That might be an example that might never come up, but you can see where I’m going on that. To me, the specific always comes first, I mean there is no such thing as Cubist style which Picasso then takes from the air and applies to his own painting, there is no such thing as the Cubist style until he started painting, and it didn’t even have a name at first. I mean it was some critic a couple of years later who came along and thought up that name and eventually it stuck. How often has that happened in our history? A lot, so to me, the specific has precedence over the general, but once you know the general; then you can create new specifics
So the flow of thinking here is to know the specific, extract the essence, and then we have the possibility of reapplication?

Yes, and of course... being someone who tries to be as careful as possible with terminology, because of course every word that you use has its back story and its own connection with certain ideologies... you know I’m a little wary of the idea of ‘essence.’ I mean we talk about essentialism as being a way of thinking and to imagine that there are certain essences, and then you can categorize things according to whether they have this essence or that. This is a way of thinking that people are often wary of because it is associated with fascism and racism and so forth... sexism, you know there’s a male and a female essence, and if you’re a female you have to do certain things or act in a certain way in accordance with your essence; you can’t escape that. Well we would like to educate our students out of that kind of thinking if they happen to have it. So, when we use the word essence there, we want to careful that we are not being essentialists, we’re using it not as something that really exists in itself before and beyond the specific, but something that doesn’t exist without the specific. Someone who knows Philosophy, and the history of Western Philosophy better than I would probably say, oh what we’re really talking about here is Aristotle versus Plato. Aristotle feeling that you should go out into nature and study the various things there and then come up with generalities about them, whereas Plato felt that the generalities existed already in the mind of god long before the specifics were created and those were what the thinker should concentrate on. Historians of Philosophy say that there are different periods you know, pendulum shifts between Aristotelian and Platonic way of thinking... well I guess I’m much more in the Aristotle camp, and believe that there is no such thing as an Athens, or an ideal, or a perfect form, that is somehow divorced or separate from the specifics that give rise to it. So in actual classroom practice, that means I won’t stand there and say, ok students here’s what Cubism is... let’s look at some examples of Cubism, NO, to me that would be imparting a very wrong way of thinking...rather I would say let’s see what Picasso did in 1907 and why he did what he did. and what he came up with, and why people attached the label of Cubism to that, and how other artists imitated him and then Picasso and these other imitators all had these same characteristics which fit in with a particular way of thinking, world view or ideology of that particular period and we call that Cubism.

That makes sense to me I think... and I think it would make sense to some of the people who teach painting and drawing... because they also speak about the necessity to observe before one is able to draw... one must draw observationally, which to me would be to understand the specific, before they are prepared to draw from the imagination or from the... (Note specific to constructed / abstracted)

That’s a good point, Jane, because I think the drawing teacher would say that there is a strong bond between those two activities, because you observe and then you try and draw, but as you draw, you start observing more, you may be seeing things you would not have seen if you did not give yourself the task of drawing that particular object or composition. So we would like to say that learning how to draw is also learning how to look and that makes a person a better observer since they’ll be seeing details including variations of light and shade and texture that a non-draftsman might not bother to notice
or might think are unimportant, but of course to someone trying to render that image or object, on a piece of paper, that’s very important, where the light and shade falls... or how well you can see the contours and such. Now in the course of Art and Design History Theory and Criticism, if you are in a gallery and you just look at a painting because you’ve got to know this painting or whatever, you’re not going to look at it very critically, but what if you had to write about that painting? What if you were sent there on an assignment by an editor who says we need a review of this show, so go and write 500 words on it... then you’re going to be looking at it with a... your much more analytical and critical eye. You’ll be noticing things about the color the shape the quality and craftsmanship that might not have been of great importance to you. So just as drawing makes you a better observer, written activities involving analyzing the form, style, and content of a work of art, makes you a much better observer and critic of designed objects.

So writing is an important skill... what would you hope to see would be the difference between an entry level student and an exit level student? What kind of difference are we hoping to make?

Well that’s interesting because of course what we like most in entry level students is their innocence and naïveté, we would like to think that they are a blank slates and that they are coming into here and they will get the right methods, information and canon of knowledge which will then make them successful upper level students applying those basic concepts and core values to a specific area or media. The... of course all of that is ideological based, you’re going back to academic and modern art education... when we were designing the various courses of the core, several years

(interruption – flip tape)

But let’s go on talking about Bauhaus Masters...

They had their own ideology witch was that there is a commonality among all of the different media and forms of design, whether you’re talking about Photography or Architecture, making furniture or making cities, that could be taught and given students in training... in their first year. And then, these students then would go on to pick their particular major whether it was Photography, Stage Design, Architecture or whatever having learned these basic principles of Art and Design. So, what we’re trying to do in the College of Design with these core classes is teach these common basic values of design and the culture of design, which is what I’m involved in with Design Studies 183, now is that really valid. Can you find any number of problems and even anachronisms in that idea that there is a certain list of skills information and experiences that all designers should have before they start branching out into their different area professions. I can think of any number of reasons why some people might think that’s not valid, and is not a good way of xxx beginning design students, but anyway it is our philosophy that students coming in here should see themselves as you might say unformed and potential designers of any sort, and that during their first year or first two years, however you define the core, that they will be learning all the things that all designers should know or should be able to
do... which includes, for example, drawing. And just about everyone is in agreement—well maybe some people in CRP might be a little skeptical about that—but knowing how to draw should be the basis of anyone in any field or area in design. And there are certain compositional and design principles that also would apply whether you’re designing a stadium or designing a teapot... and those are all Bauhaus notions. Now with 183, there is a certain idea that there are attitudes, methods, approaches, and precedents that all designers need to know about the history and culture of design and our present day world that will make them better designers or that will help them understand the commonality they have with people who design those different things. Is that a possible task, or is it an impossible task? I have a lot of problems with what I’m teaching in the sense that it’s philosophical and pedagogical principle type problems whether this is real and true... um, in a helpful or useful situation. I would like to believe that what I’m teaching my students is stuff that they will find useful... about Art, about how designers work, stories and examples of how design gets commissioned, public art, this campus we’re on and so forth. Of course there are many other things that might also be useful, these things tend to be very selective. So while we can all agree that everyone should know how to draw and everyone should know certain principles of good composition... the stuff that’s taught in 102 or 131, or whatever, drawing and the design core classes, it’s much harder to pin down what are the things they should know about Art History, Theory, and Criticism. And one problem too with this particular course, is that it was originally conceived and put together by people who weren’t Art Historians or Design Historians, but who had their own ideas of what a course like this should be based on case study models and then handed over to me and Prof. XXX and other design historians to teach... and I have a lot of problems with that... but I guess that’s a round about way of answering your question, is that we would like students coming in their first year to feel and to share this ideology that there are commonalities and basic family ties among all designers who work in all four departments here.... and those are the things that they will learn and should be ready to learn in their first couple of years... before they diverge from one another as they become Planners, Architects, Graphic Designers, Painters and so forth.

Ok, and then, what do you hope they’re going to look like at the exit level then, as a result of... if the early level you’re laying in a sense of commonality... and some knowledge bases... and then what are we hoping that they can do at the exit level that is different than what they could do at the entry level?

That’s where real world application comes in; supposedly at the exit level they are ready and prepared to launch into their particular professions or to go on to higher training and more specific training in that particular profession. And yet, they will all have that family resemblance in the sense that they all have the skills, values, and exemplars that they were taught in that first year, and they continue to think about those things and apply them in their own studio situations. We would like them to come in basically as generalists and to – in a way – also exit as generalists who are also specialists. Enter generalist and exit specialist – NO. Enter generalist and exit generalist plus specialist.

Exit generalist with a specialty.
I am a designer with a capital ‘D’ who happens to specialize in Graphic Design; I am a designer with a capital ‘D’ who happens to make his or her living designing Interiors; I am a designer with a capital ‘D’ who designs buildings... some people call me an Architect, but I think of myself as a designer who works in Architecture. Is that a fantasy, yes... that’s not going to happen, but that’s what we would like to happen.

Ok... well, I think I’ve asked all the questions except for one... what did I forget to ask?

Good question, am I satisfied with the way we are educating students? No, and I don’t think I should be... I don’t think anyone should be. You should always have that little gnawing kind of critical voice within ourselves that says over and over again: you could do better, you could do better. I think Design Studies 183, which is what I’m contributing to the Core, has many problems both in terms of the pedagogical and ideological values that underpin it... and also in the specifics that we give those students. I think there’s probably a lot of separation between theory and practice in the upper levels as to how much collaboration, and between-area osmosis is going on, because we still have the same faculty who have been trained with the idea that being professional means being very specific and focusing on your own particular area and not poking your nose into somebody else’s area... or pretending that you’re something that you’re not. I mean that’s the essence... as we’ve all been taught in the past about professionalism. So I think there’s a lot of resistance to the idea of making students generalists first, and then keeping them generalists who also have specific professional skills at the end.
Stella
Integrated Studio Art
August 6, 2008

Ok, then, this is my main interview question, which will have some follow-ups. Now, what I hope you will reflect on for me today are the qualities of a successful student in Studio Art. From your experience and in your teaching, what things seem important to student success in Studio Art. These things might include specific types of thinking… we’re going to ask about thinking… manipulative and constructive skills, if you were to doing, for example, Fashion Design, one of those skills would certainly be guiding material through a sewing machine… or areas of knowledge. So we actually want to talk about three areas: thinking skills, knowledge bases, and manipulative abilities. A knowledge base – if I can go way back to building blocks – a knowledge base would be a block, a thinking skill would be a strategy for arranging the blocks… and it really doesn’t matter which way we go with those… um, you don’t have to list them by group like that, because it does tend to work out that one brings to mind another… so then the question really is: what do students need to have in order to be good at what you teach?

Well, I think if you’re talking about building blocks… basics, of course they need to have some basic organizing structure, like for instance, principles of design and the elements of design. Those are good for talking about how to organize their, their ideas. Their visual ideas, um… so, even though I teach all the levels, you know those are mentioned, I think sometimes when you get into the upper levels, however, it’s assumed, although I do try to repeat those things, or give some kind of handout that has that information, because I find that repetition is good. I think a genius probably could get it right away, but the average person probably needs to hear something at least a half a dozen times, before it’s either engrained in their mind, or before they actually write it down and think that it’s significant to what they’re doing… and this may take a period of years, too… so....

Anything else that comes to mind as basic… they’re really not going to progress until they can do this…?

Well, I think that it’s important… if their intention is to be a designer… or a studio artist, that they’re completely aware of the commitment it takes… truly a passion that it takes, and what kind of… I really talk to them about the kind of support that they need to surround themselves with, too, because particularly in the studio arts, it’s not a field that everyone… their friends and family are going to go, “Oh GREAT, you’re going to make a living being a poor artist, so I actually talk a lot to students about forming some kind of a support group… in order to build up the stamina to keep going and believing in their creativity.

Ok, there’s a nice thought… believe in creativity.

Yeah, and you know that might vary with each student some may be extremely talented, and some may have a kind of an average ability, but a passion so strong appearing so strong that I think some creativity can be developed… certainly.
**Integrated Studio Art - Stella**

_I agree with you... what kinds of strategies do you use, or should they use to arrive at that point?_

To arrive at the more creative point?

*At having some confidence in their creativity... their ability to produce something.*

I think that comes with experience in doing and try... well I talk about leaving your ego outside a lot... not comparing yourself with the student next to you... and being a sponge... of life. And I really feel if you truly are... have of any level of creativity, that you are a person who should never be bored.

*Ok, when they’re out there soaking up life, what are some of those sources? Where does this take us when we’re doing this?*

Uh well I talk about everything... and I have a vast collection of books that I pass out and spread all over the table and say look at this... look at this or a journal that I selected and keep in a cabinet and students have access to that, and I also try to get them to keep some form of journal... not like a formal journal, but a journal just to dump their brain’s contents and ideas into... in no particular organized manner... unless that’s the personality of the student, to be very organized. Not all students care to do that. Obviously in nature too... I talk to them about are you the one that... are you the person that is out there and notices the most unusual details out there... and so I’m talking to them about every aspect, even photographing your food, you know, your beautiful plate of food before you dive into it. Or how creative it can be to sit in an Art History lecture... with a lot of... there are many students that don’t like Art History... Make it enjoyable by attempting to draw every single slide that is put up on the screen. I mean that’s an activity, an interactive activity that not only puts information in your head, but you’re drawing and you know, you get... sometimes these interesting little... little thumbnail studies of compositions. (Note: build a visual vocabulary)

*So a lot of what you’re talking about is visual research; looking at images, seeing images in Art History...*

Well um... I am... I talk to students a lot about just plain reading, novels, fiction, nonfiction, and talk to them about how we’ve been inundated by this new technology, and some students know what the movie Blade Runner is, and there’s more movies like that now, but I think that was one of the first ones... where there are images just everywhere and the cultures and societies were stacked on top of each other, and you know it’s like visual overload... sound sense overload is what Blade Runner is. And you know that’s where we’re headed, and so I bring up an idea like the Tolkien trilogy, if you’ve gone to see that, or if you saw the first Tolkien movie where it was an animation, and if you’ve read those books, is that what you were thinking in your head everything looked like, when I first saw that first animation it was unh-unh, this is not my visual of that, and so unless they’re reading books that have no visual imagery, other than what is
stated via the written word, then, it’s really hard to kind of formulate some of your own images... and so I really try to encourage students to read. I’ll ask them are you reading, what are you reading? And I’ll tell them what I’m reading. (Note: generate mental images from text)

You’re looking for them... even making images in their mind, from the things they read and things that are non-image based.

Right, right, I think that’s very important.

You’re the first person that’s said that, that’s really interesting...

I love books, you know, and I want them to love books... I don’t know that they do... ha ha, I can just appear to be the goofy professor that’s just over the top with books, that’s alright, I don’t care.

I think having a loony professor in the room is really one of the things that’s essential, actually. You have to be willing to be a little odd in order to take them out of their ordinary way of thinking.

Sure...

I’ve been described as a bit eccentric too. Ok, that’s a start on where we go to find sources and things, other thoughts?

Yeah, I had another thing... I think aesthetics is very broad and I think that we all have idiosyncratic aesthetic in addition to cultural aesthetic. So I think students need to revel in their own aesthetic, how they see, how they organize, how their culture organizes, but in that, you know, they truly have to be open enough to see that they’re truly creating balance in their aesthetic.

And you’ve got two aesthetics here, one which is idiosyncratic and individual...

Right...

... and one which probably stems from the things going on in the culture

Right, right...

...Which, of course, necessitates some knowledge of culture...

Right, yeah, well I think, I think the more idiosyncratic aesthetic is based on their own life experience... I don’t know, maybe that’s more related to subject and feelings and emotions, I don’t know...

Those are possible knowledge bases if that’s the way you see them...
Oh sure... Oh yeah, absolutely, life experiences... I mean I tell students it’s best to make art that comes from what you know, too, and not just adapt something else. I mean you have to put yourself into it, otherwise it’s not really an honest work of art, it doesn’t come out... it doesn’t come out as well as something that is more related to their own life experience.

*Well now, that’s a place I see a contrast sometimes... Ah what is the relationship or the balance that should exist between drawing or painting, or sculpting or producing from things we know and have observed as compared to things we have never seen, but have to imagine? Is there a right balance there?*

No, I don’t think there’s a right balance, but I think that things you have never seen and you imagine come from somewhere... life experience...

*Like reading...*

Right, yeah, you don’t live in a vacuum, so you can’t help but be affected by your surroundings so that feeds into that imagination that creativity that appears to be more pure and not based on something... like your own interpretation of Starry Night of something like that, you know, so I don’t know if that explains it.

*Yeah, sort of... Are there some... Let’s try and pick up a couple of thinking skills. Here and there we’ve got some of them here... we’ve got kind of a mix, but are there some ways that students need to be able to think about the aesthetic, and make it interact with experience, and make it interact with elements and principles; what are those larger thinking skills that enable them to maneuver all these things? We’ve already said creative, that’s one of them.*

Umm-hm, explain that again... you mean what allows them to see that it is visually balanced? or...

*Well, that would be one of them, maybe, I’m kind of looking for the overarching things they do upstairs to maneuver all these things around.*

Um, I would say to maneuver these things around, I think of doing little studies, thumbnail studies, or even... yeah you could do thumbnail studies, you could do layering of transparencies to reorganize and shift things around, you could in this day and age you could take a digital camera and, you know, process an idea that way... through various...

*Ok, so I’ve got all my layers of tissue here, and I’ve got this one, and I’ve got this one, and I’ve got this one... how am I going to decide which one I want to follow?*

Um, well, then you are truly looking for some kind of visual balance within a given space, so you know what... things I do with the student is have them... if that first like is a small study, maybe try blowing it up, larger, and then getting away from it is essential,
because I find that a lot of students just stay right on top of their work and therefore they’re not getting, and I talk about this... they’re not getting a very objective view so I say get up, put it on a vertical surface so you can clearly see it, stand back, go out of the room, get yourself a cup of pop or a drink of water, come back; or I say take it home, put it up where you eat your meal or where you sleep, pin it up on the wall, and while you’re doing something else, you may happen to glance up – this is good practice for them – to decipher without me whether they can see balance or not. Or, you know, look in a mirror at it in reverse, or turn it all four directions. I mean if you can get something to balance all four sides... I’m talking two dimensionally, obviously... but, I mean it makes sense that three dimensionally that you would want to balance all the way around too.

So there is a very nice thinking skill, the ability to get an objective view of one’s own work.

Yeah,

Then we hope, I think that they make appropriate modifications if need be...

Yeah, well that’s another thing... I try to get students out of precious thinking, you know...

Ah yes...

This is you know not a lot of money they’re investing in this, and I also talk to them about uh, if you’re a photographer... you don’t expect that every single shot is a masterpiece, you might lucky if you get one that is great. The difference between being a photographer and manually drawing, physically drawing, or painting is that it takes you longer, but, I mean you love your craft. I talk about how photographers... very selective which frame they choose, if it’s even on that roll... who knows? Don’t think just because you’re snapping a picture means you’re getting beautiful things.

I’ve got a couple of things to come back across, you spoke about the craft, um, are there elements to it, are there parts to it?

Craft? Oh I talk about beautiful crafting to my students, with my students... frozen xxx, mostly xxx because I love fine crafting, even to the point of presentation, like I’ll talk to students... if two students both entering a competition... both beautiful drawings or beautiful paintings, and if it comes down that the juror can only select one more, and it they have to select between these two... you know, they might decide by looking at the overall crafting... turning it around, looking how the student put it together, um, yeah. You know, and I talk to them about again, life, if you go to the store, and you’re going to buy something that’s packaged, and you have two identical things, which one are you going to pick if one, the outer packaging is a little marred and scuffed?

You talked about you working in a two dimensional media, but these things apply in a three dimensional media too, and you also talked about students creating a balance
within a space; what is the nature of spatial thinking skills in two and three dimensions? What do they have to be able to think about?

A lot of things: the effects of a positive form on the negative surrounding space, how it fits into that space, and that works with both two and three dimensions. I mean you wouldn’t want to take a tiny little sculpture and set it out in the middle of a room... unless there was a specific concept based on that, but it would have to be a pretty strong concept (chuckle)

There’s another big word, concept...

I mean certainly you have the idea of less is more so... you know, so if for instance you’re working on... well Ok, I talk to students... students are more object oriented, so they’re thinking more about the positive, shape, the form. And I say well how do you think you’d get around in this world? You’re walking through negative space.

(chuckle) We’re not going to walk into chairs and tables...

I said: you better start thinking that’s just as important as that positive space. That’s pretty funny, I love saying that... how do you get around? Boom, boom, boom, like the new room-bot, you know.

While we were talking about that, you said another thing that’s fairly significant...um, that in some ways the art and the concept must relate to each other as a small sculpture in a big room should have a strong concept that supports that. What is the role of concept in art making?

Well I think early on, maybe, it takes a back seat and xxx, I mean you can talk about it, it’s important, but I think first it’s important to learn to manipulate the tools and learn how to see forms, and interpret form onto a two-dimensional..., or into three dimensions. So you have some concept working with that interpretation of form, sometimes.

Those are all good knowledge bases, right there, nice list... manipulating the tools, seeing the form, interpreting the form... in 3D if need be... and interpreting the form in 3D, does that apply to both 3 dimensional art and 2 dimensional art?

Well sure, yeah, everyone has their own unique way of interpreting form and seeing...

Well they’re just plain learning to see... yep, absolutely

Well, yeah... and that’s one of the main skills, that I teach to beginning students is how to draw what you perceive in reality, that perception...

Major knowledge base: perception... it isn’t exactly knowledge, but it’s a base. (Note knowledge bases are more skill bases in ISA, I find myself wondering if these are
manipulative abilities, knowledge bases, or if there are skill bases – response: these are psychomotor abilities)

I feel like I’m kind of all over the...

That’s normal... natural.

It is with me...

That’s the way people think this stuff... one thinking skill leads to another, leads to another thing, you’re got to get into it a while before you start to catch it. Ok, so we’ve got these real basic skills and then working with concept comes later?

It becomes more of a focus once they learn the skills of manipulating materials and surfaces.

Well... we seem to have arrived at manipulative abilities, we’re talking about them. What are those things that they need to be able to do?

Not have preconceived notions about a pencil, because they have essentially grown up with a pencil as... Well I don’t know that they are anymore... I think it’s becoming more rare that a student even knows how to write in cursive... read in cursive, because of, you know... the computer is slowly like shluuwup

They live in them don’t they?

Right, yeah... but I think that...

Manipulating drawing tools of various sorts...

Yeah drawing tools and yeah, and not being afraid of making a wrong mark (Note: precious thinking = willingness to iterate) is a big thing, and not thinking of erasers as mistake... as using only for mistakes... to rid the surface of what they conceive as a mistake, to think of them as another mark-making tool, a subtractive mark-making tool... that’s what I talk to students about... and try never to talk about... well, I mean I talk about seeing incorrectly, but...

Ok, so certainly drawing is one of those manipulative abilities that they have to have...

Yeah, the various mediums that you encounter in a drawing class... the same with painting, using the tools right... papers, well again with drawing, papers various drawing tools both dry and the wet medium that are sometimes associated with drawing... color.

Oh yeah, color... there’s a nice knowledge base...

Yeah
Ok, we’re looking at a class of students... they’re sophomore, junior, um, are there some red flags that would suggest to you that this student isn’t going to be real good at this?

Well certainly... ones that aren’t open minded, yeah certainly. Ones that are not willing to explore, uh, students that are... I would maybe say that is the... students that can’t focus, and be still in their drawing or art making activity.

They need to be able to immerse themselves in what they’re doing...?

Yeah, right... sure, but personally I never say this isn’t going to work out, I talk about other things... like either attendance or their inability to focus, their level of commitment, and you know, my hope is that people figure that out for themselves, either they turn around and kick their own selves, I mean... obviously grades reflect...

What you’re thinking...?

Yeah, right.

What do you hope is going to be the difference between your entry level student and your exit level student, how should they change?

I think they should be more than willing to work beyond the scope of the assignment. Be self motivated, do their own self guided research and exploration... their concept should be coming along quite strongly.

What would be the conceptual thinking of an advanced student, what should they be able to do?

Sustain subject matter, and there should be cohesiveness in their work also.

Are we talking about cohesiveness within a piece or from piece to piece?

I think in an advanced student, one that intends on going to the next level, perhaps in graduate work, there is naturally a cohesiveness in their work... from series to series, from subject to subject there’s some cohesiveness just some natural... even if it’s just a thin thread that...

They have some kind of a thin thread that runs through their work whether it’s an idea or a style, or a skill, or a technique, or something...

Yeah, right... It’s kind of like looking at, well maybe this isn’t a good analogy... like their handwriting, you might be able to tell that this is this person.

Well actually, I think that’s a very GOOD analogy... it looks like you in some way.
Right, yeah... yeah... and there’s honesty in the work, I mean you just feel it’s not... just the latest thing or whatever... I don’t know how to explain that... you just know. They’re working from some deeper place, rather than superficial concepts.

Ok, and that probably goes back to our emotive concepts, and some of those other things. What’s the purpose of telling them to leave their ego outside? How does that work?

Oh, well personally, I’ve found through my life that dropping... I don’t want to say all, but I think it’s almost healthier to get rid of most of your competitiveness, I don’t know... this is going to come out wrong... not compare yourself... to beat yourself up, because you’re not as good... but certainly to be able to look at someone else’s work and think... they did this amazingly well, and either be able to ask that person, how do you arrive at this kind of mark. You know there’s some artists that will share, and some that will not... and I tell students that I really want everyone to succeed, but in my mind I know I’m not going to make artists out of every single... it would be impossible... and it would be ridiculous, but at the very least, we’re going to have some very strong patrons of the arts, maybe, come out or their experience. And usually, no matter how you teach, you get a handful that become the artists, and you can spoon feed them all you want, but there’s no way you’re going to make all twenty of those students in your class successful artists, or if they’re even going to stick with it... but I think just giving them a positive experience where they know how to give and take, and not compare, is more important than setting up a just very strong competitive drive... but that’s my personal kind of approach to teaching.

I think you’ve described kind of a nice studio environment. I have probed my way through the whole list I think, but there are some things I should have asked you about the things you teach that I didn’t mention or ask about?

I think, you know, if you’re talking about the whole issue of design within the College of Design, and all the various departments, I don’t know that all of those areas... disciplines think about this, but I think technology has definitely made an impact on how some people teach, but I also think that it’s important that all students understand the importance of the hand in manipulating tools and that if you’re exclusively working on the computer, I think you start to get this mass-produced image that is really difficult to get away, unless some way you are able to bring the hand back in, then have that become a part of your technology too... (Note: integration of hand and technology) and I’m talking about real hand work that is done, and then maybe scanned in or photographed, and then added into... I mean from building, from architecture, for interiors or landscape architecture, graphic design, and even in the visual fine arts area too. I think that’s where avant garde is, is in the technology, but I don’t think... I think there becomes kind of a stamp of how that technology looks after a certain point, you know, someone catches onto this new way of doing technology, pretty soon it’s all looking the same...

Something I tell my students often...
Yeah, and then, you know, I think the creative person that is able to use the hand and make it work has a much broader range and capacity and opportunity than someone who is just totally technology oriented.

*Oh, I agree, I make my students draw... and I’m a Graphic Designer.*

Yeah, yeah...

*Is there a role for technology in studio art? What is the role of technology in studio art?*

Oh, I see it as a tool, I mean I use it a little bit as a tool, but personally I would never give up the hand, I’m old school too... and also like I said, I think that’s where avant garde is. Anything else is really derivative art. I mean nothing’s wrong with derivative art, cause everyone has their own unique fingerprint of what that might look like... and I think that’s fine. People can make a living doing derivative art, teaching. Not everyone’s going to be avant garde. My son just finished his MFA at San Francisco Art Institute, and I know after one of the reviews, somebody said, “Well it’s not very 2006,” to him about a particular piece... and he rolls with the punches. I think I wrote something down about that... somewhere... Oh ok maybe I’m not making something 2006 in the year 2006, but I’m making something that is truthful and creative, you know and not derivative art... you know which is fine... maybe they don’t make anything really avant garde or at least new until they are long out of school, you know... but that doesn’t mean you give up because you’re not making something avant garde... and maybe you never will, but maybe in the year 2020, you’ll make something that... whatever, it doesn’t matter, he’s good at what he does... and I talk to students about that. Not everyone can be avant garde.

*Ok, so you started to talk about critique a little, how do you like to do that?*

Well one of the ways that we critique is I give a handout about how a student would go about critiquing, and I have like the principles of design on that sheet, and I have the elements of design, and I talk about rules. The critique is never personal, it’s only about the art work, and you should never apologize for work that you’ve done, but you should be open enough to accept criticism... and this is all constructive criticism, and be able to process that, think about it, see if you can understand what they might have criticized... and one way that I do it a little more informally, and I try to do it in groups where we’ll break the class into three or four groups, depending on the size of the class. So that we’ll have one group shift their bodies over to the next group of students work... and so I have three groups of students that have shifted around so that they’re never critiquing their own work... not right away... and so I have them as a group each write at least three things that are working within the composition, even if they’re minor tiny little things, and three things that need improvement, and I talk about critique being a way to improve your work and a way to get a broader opinion, other than just your own opinion of your work... so it’s like a check of yourself. So once all the groups are finished critiquing, and there’s a scribe within each group they’re writing this information down in order to give it to the student... because otherwise they hear it and then it just like floats away, so then we have a whole class critique based on those notes. First before the student even gets
that piece of paper, they’re up there talking about their work and telling us what they think is working and where they need improvement, so that’s a way for them to express or to show us what they already know about their work. what they’ve learned, and then we have somebody from that group that critiqued that particular student’s work go up and present the comments, and so the students can compare those comments to what they just said and how close... or if they missed something that was obvious... and that’s a really good way to check for critical thinking. And then after that we open it up to the whole class to debate whether anything was incorrectly criticized. It works really well. Students tend to like that, and I also do it with a timer so that students don’t get... like one student gets 10 to 15 minutes and another gets 5. So it works out really well.

Yes, and one of the interesting things I think you told me is the student presents their work and they tell what they think is good about it, and what perhaps bothers them about it, and then someone who has independently... another student... looked at the work gets up and tells what they have seen as a critic.

Yeah, yeah, right, and actually that student is presenting comments that were formulated by a small group... so it’s a kind of a group think tank... and I’ve found that that is the best critique for the way I like to run a class.

And before you do this, you tell them to take a look at the elements and principles as a grounds for critique, and some other things?

Well... for using formal language

OH, they should learn formal language.

Yeah, right, right

And by that, I think you mean, let me verify that, I think you mean a way of talking about form and space and...

Yeah, yeah, and the principles and the elements of design, and not just going off and saying, “Oh, I think this is cool.” Well why do you think it’s cool?

I like it...

And then as they get into the upper levels, then it becomes more of an open critique where you expect the student to stand up there and be able to verbalize and talk about their work or where they’re stuck in their work as well... without feeling ashamed or... and really trying to get answers because they can’t figure out a particular problem within their work.

So seeing critique as an opportunity to improve...?

Oh yeah, absolutely, right...
That’s a thinking skill.

Yeah right... I don’t know why we didn’t get to that.
The question that I have for you, get ready it’s a long one:

What I hope you will reflect on for me today are the qualities of a successful student in Integrated Studio Arts. From your experience... we’re working with your experience so it’s going to be subjective... and in your teaching, what things seem most important to student success in Integrated Studio Arts. These things might include specific types of thinking, manipulative abilities, constructive skills... now I’m going to continually use examples from outside College of Design disciplines, so a manipulative ability in Fashion Design, might be guiding material through a sewing machine. So as students work their way through Integrated Studio Arts, what do they need in their tool box? In terms of being purposeful in covering all the bases, we’re going to try and talk about the manipulative abilities, the knowledge bases, and the thinking skills. And we don’t really have to treat those in any specific order, it tends to work out that if you think of one, there’s an accompanying knowledge base or something like that... the things they do well as well as the things they don’t do so well.

Ok, let me just ask a question to help me think a little bit particular to what your goals are. There are sets of skills and abilities and competencies that a student needs to succeed as a student in Art and Design. There are additional skills and competencies a graduate needs to have in order to be successful as an artist. Are you talking about those as well, or are you talking mostly about success as it relates to being a student.

Primarily in the student area, but we do hope that in the long run as they progress upward the skills that make them a successful student lead to success in the professional arena.

Ok, because I don’t see... they’re not necessarily, um, well sometimes there’s an overlap, but there’s some other things that I can think of off the top of my head that a person would need to have that we don’t really teach... they are qualities that you want to try to instill... but there is not necessarily coursework that says I built these competencies in my students so that when they come out they have a better chance of being successful as a professional.

We probably want to hear about those too.

Ok...alright. Alright... well I can tell you that, and I do talk about this to the first year students, in the context of the 131 class, there are basically four areas that I think are important, and specifically to drawing, but also more generically to all areas within a studio arts curriculum...and those be, kind of fall into four categories: one would be perceptual skills... the student would need to be able to see things in a particular way that would involve kind of seeing the big picture, seeing the Gestalt of relationships between forms and space; to be able to see space; to be able to see relationships, I guess I would
say; and it would also be kind of in a sequence from seeing the whole to kind of being able to see more specifically, smaller and smaller relationships or smaller and smaller parts. So one of the things that I think students need to be able to do is see and perceive visual experience in a particular way. In drawing, we usually talk about in terms of representation of looking at something and then translating that as a drawing, but it would apply just as importantly to a person that is making an object from their imagination and being able to kind of evaluate and assess that. In order to do that, you need to first be able to see in a particular way. Anyway, we call it kind of generally developing a perceptual skill. Another would be what you refer to as a manipulative skill... I call it a manual skill... learning how to get materials to do what you want them to do. And again, I’m talking about drawing materials, but it would apply just as much, I would say, in the digital realm as well... you’re trying to create some digital sort of form using a certain set of tools, and so you need to be able to become familiar how those tools work, and how you use them, combine those tools to generate a form.

You want to give me a short list of types of skills that would make the materials behave for you?

Yeah... I guess I have to think a little bit about it. You have to become familiar with the inherent properties of the materials that you are using. Materials will, you know, behave in different ways. I guess an example is a painter there are certain pigments that are very opaque when they come out of the tube, and I know that they are going to do certain things. There are other pigments that are really transparent and in order get them to have a similar effect; I might have to add white in order to... So you have to become... and again it depends how much depth of expertise you want in a particular medium, but you have to become familiar with the inherent properties of the materials that you are using. You have to become familiar with the tools that you use that manipulate those materials, and, to me, part of that is, you know, learning not only the abilities of the tools, but their limitations as well. You have to develop a sense of touch as working with materials in a physical way is a tactile experience, and you have to become sensitive as to how your touch with the use of the tools... what kind of result that will get. Part of that, you might say generically is technique, you know there are different ways to... you know I can use pencil, and I can use that in a variety of different ways to create marks or tones or whatever, the same with paints. So there are a lot of different techniques that you can use in any particular medium that will give a certain result... you know, particular characteristics that you might want. A third skill would be what I call compositional skill or design skill... how you... what kinds of knowledge you have about design fundamentals that inform the choices that you make as to how you organize form and space. We talk about that generally as design or composition... compositional skill. So principles of design, elements of design, having a kind of a foundational knowledge base about what those principles are that guide you into making decisions... and then you can choose to use them or not use them but knowing what they are... and basically they become a way of helping you later on... but kind of another skill that I didn’t talk about yet would be critical skills, you have to be able to evaluate what you’re doing, in progress and upon completion... to determine whether or not you succeeded in your aim, whatever that might be, so you need to be able to use compositional design skills, basically, that
inform your critical skills... self critique to be able to figure out where the strengths and weaknesses of the results are. And then there’s one there that really falls much earlier, in terms of those skills... and that would be basically conceptual skill.

Oh, tell me about that one...

Well, generating an idea or generating a problem. I think one thing that we do generally in our curriculum is that in the first year or two, most programs are generating the problem for the student, and then the student, their task is to try and solve those problems. Ultimately, in the studio arts, and this might deviate from some of the other programs, but ultimately, a artist has to generate their own problems... some artists don’t like talking about it in that particular way because it’s too academic for them, but being an academic, I think that way in terms of my own studio work too... so you’re trying to generate an idea... or if you are presented with a problem, you’re trying to generate multiple solutions to an idea. And I think the key work there is multiple... you want to try develop individuals who don’t just come up with an answer, but come up with multiple answers by which then they can make some choices there, or recombine their solutions in a way to come up with a better solution, a better answer to a problem.

Ah...

So that would be kind of the umbrella of what... and I talk about that in 131, that’s my first lecture, basically, and I show examples of that to drawing.

Those are right down the line, you’ve hit a lot of major skills right away, with that. Now let’s go back and take a look at some of these.

Ok,

Critical thinking skills... you want to tell me how you see critical thinking?

Well, I think you know, in order to be able to critique what you’re doing you have to first understand what your goal is, so part of critical thinking in my mind is being able to define an objective... to define a goal... what was the purpose? What is the purpose of what you’re making... a design? I don’t really have to worry too much in my area about functionality, so that’s not... functionality in the traditional sense of something that’s a utilitarian object. Everything functions in some way, but in that way, I don’t have to worry if I’m making a drawing, if it obeys the laws of physics or not, it doesn’t matter to me. If I were an architect, I wouldn’t have that luxury probably if I were going to actually do something constructed.

But if you were a ceramicist, you might well have some functional issues...

Right and structural issues, and physical issues, and also some functional issues too, if I was going to make something you actually have to eat or drink out of, yeah, I’d have to make some choices about what places I can and can’t do this...
...And whether or not you want to lift it.

Yeah, right, exactly... and so, I think the first part of developing a critical skill is to able
to define what your objective was... what was it that you were trying to do? Because...
everything that follows from that has to be in a sense a response to whether you’ve
addressed that kind of fundamental goal. Beyond that, for an artist, I think it has to then
move into things that are more aesthetic, if you’ve solved, kind of the basic problem of
what you’re tried to do... you can solve that, in a number of ways, but some are less
interesting visually than others, so that’s where I start to rely on kind of a foundation
understanding of principles of organization. What kinds of elements have I brought
together in the making of this object? Are all of those elements... are they competing
with each other? Are they working together cohesively? For example, if I’m very much
interested in a beautiful form, but I’ve camouflaged that form with some sort of surface
treatment that contradicts or hides, or obscures that form, then I’ve used two different
elements that are at odds with one another. So I have to be able to kind of set up a
hierarchy of the elements that I’m using. What are the most important ones, what are
playing kind of secondary roles, are they all kind of combined and orchestrated in a way,
you know, that seems to be making some sense? So, you know, I’m thinking about
aesthetic aspects of the form that I’m making. And the critical awareness or the critical
thinking, there, has to do with how I’m organizing the elements that I’m using. And that
would also extend, as part of that too, to the materials that I’m using. There are going to
be certain materials that are going to lend themselves to the thing that I’m trying to
make... and now. For me, a lot of the critical thinking, I think happens – it’s different, I
think probably for different artists – I tend to be very methodical in the way I approach
something which is really kind of loaded very much at the front end. Before I actually
make a piece, I go through a process of preliminary work. A lot of it is research things.
Basically, you know, I’m trying to find out other people that have kind of answered my
problem in their own way to get an idea about what possible answers I might be able to
use as well... gets me to think about things other than my normal pattern of thinking
would not... maybe naturally allow me to. I think the longer that an artist works, the
more they are able to recognize where their own patterns are... and they can see through a
body of work where they are doing, kind of, the same answer every time. And at some
point usually artists get restless, and they start to think about other ways to think, and so
for me that’s what research is about. It’s about looking for different ways of thinking
than the patterns that I normally fall into... and that’s a part of the critical thinking as
opposed to other artists who might actually have a kind of a general idea about what
they’re starting out... the critical thinking comes in reaction to the process as they’re
working. I don’t work that way so much, but I know a lot of colleagues who do. They
don’t have a clear idea at the very beginning, but they get into the work and they react
and respond to the choices that they’re making, and the work goes through a number of
changes and evolves, in sometimes very dramatic ways as they’re working. That’s not
really the way that I work, but I recognize the different... You know when I’m working
with a student in an upper level or an intermediate level course, I realize that my way of
working isn’t necessarily the way that they think, and so I think part of that critical
thinking is something that you kind of evolve through practice... on your own... try to
find certain patterns in the way that you think, and the way that you evaluate what you’re doing as you go. And then at the end for me, is that usually I’m able to think about what I’ve done after it’s been done... after a period of time. Critical thinking for what I think a lot of artists do is that you kind of put all your energy into the work, you’ve evaluated the work in progress, you get the work to a point of where it’s resolved, but two years later you’ll look at that work in a different way than you did when you recently completed it, and you’ll say to yourself... ah, if I had this over to do, I’d do this differently or that differently... and that informs the stuff that you’re going to make, you know, next. So for me there’s always that opportunity to learn from the past experience... there are other parts of that too, like there are certain times when you’ll look at that stuff and say wow, I really did that, you know, really well, and I and I haven’t done it very much since, and I want to try to use that again.

I was also interested that you evaluated... and I think you just explained that for me... you evaluate in progress, and you evaluated upon completion, with your critical thinking skills.

I think another part of critical thinking for me involves... always involves comparison. I’m always looking at... and I’ll personalize this... but I do it in my teaching as well, when you’re teaching, I can remember the first portfolios I got... and when I started teaching, I was a teaching assistant and I would photograph most of what I’d get back because I didn’t have much of a... I was trying to fill the portfolio. And the things that I look back on that at the time looked really great as student work, to me now looks pretty mediocre. And so after having taught for a number of years, you have a broader range of experience and a broader range of standard, to where the highest standard is now where it started somewhere here (gesture) maybe, you might have some hot shot students, but over so many years you know you can have a lot more of that really great work... and so there’s a comparison that happens there... that comes in there and informs my teaching... it also informs evaluation of the work that I’m doing as well. And in part, it’s self comparison, it’s looking at my work as compared to the work that I was doing prior to that, to see if in fact it’s getting better in some way... but it’s also comparing it to other people that I hold as a high standard... people that I admire as artists, that I consider to be influences on my work, somewhat... so I make some kind of comparison. Not that I’m trying to imitate what they’re doing, but that informs the assessment of what I’ve done.

And another thing that you talked about that is one of those areas I know I need to ask more about is form and space. Tell me a little more about that kind of interaction and the kind of space that you work with.

Well, you know, I work two dimensionally, in terms of what I make, but I really think three dimensionally when I’m drawing, and this is something that drawing instructors all talk to our students about. In order to create... most of my work is with an illusionary space, and in order to create that illusion, I have to be able to understand how an actual three dimensional space is structured... you know the parameters of those three dimensions. I don’t really work... well I do... in my own work with time, but I’m not dealing with moving pictures so much, but one of the things that we talk very much about
in drawing is getting... and this is part of the perceptual skill as well... is getting the student to draw through form in other words as though the forms were made out of something transparent, so that you’re not only drawing the edges that are visible on an opaque object, but you’re also drawing the edges that are on the other side of that. We talk about and teach how you construct those things, that you don’t see. We talk ellipses a lot of course in a course... in the beginning drawing course because we know that there are certain common problems that show up in drawings when I’m drawing a cup and I don’t understand what the ellipse, the other side of that circle looks like in perspective then the side that I draw has a problem with it that I’m not aware of, because I haven’t drawn the whole form... the whole shape... the whole contour of what’s on the opposite side of that. You know, one of the paradoxes of drawing I think is that it’s thought of, and it’s defined as being really primarily a two dimensional art form... but... and that’s kind of the tradition of drawing, although obviously the digital tools... that’s maybe not so much the case anymore... because you’re still dealing with a flat screen. And one of the things that I find kind of interesting is that students talk about that image as being three dimensional... it’s physically never three dimensional, it’s always a flat image on a flat screen... we can move around the space, you know we’ve got tools... digital tools that allow us to experience it in a kind of a virtual space... but it’s still virtual, it’s not real. So anyway, I, you know, I think it’s necessary for drawing or representing any kind of three dimensional space, that you have... that you have an acute awareness of real space even though you’re a drawer or a painter working with illusionary space. You’re also thinking about empty space too. You know... a lot of the times I think that one of the things that we try to emphasize in the way of developing an awareness of space... a true perception... is to get young artists to think about the negative space that surrounds the object as an equal and important part of that experience. They tend to look at the object because it has a name to it. They tend not to look at the empty space around it because it’s not easily namable. And you know, obviously the kind of experience that they’ve had in terms of their education is that kind of categorization... those things that you can easily categorize the name and emptiness isn’t really, generally, one of those things. But, in order for you to understand the three dimensional form, that an object occupies of space, you also have to understand... kind of ... the envelope around that... that emptiness around it. So... and that also informs what you do in terms of compositional decisions as well. If I... and if and I’m not a graphic designer, but I know enough from experience to know that the white space that exists between image and text and page is an important... you know that’s the canvas that the page is designed on right? So there has to be given just as much consideration to that... might call that negative space as well.... that emptiness that exists around it as you do of the text and of the images that go on the page. So, we talk a lot about space in the drawing class, obviously, when we get into spatial conventions. We talk about things like placement, and overlapping, and size gradation. We talk about perspective systems. We talk about atmospheric perspective. All of these are tools that you become aware of and manipulate in the context of making a graphic image that can create either a flat space, a deep space, or an ambiguous space, and all of those have their place. My tendency is to make a space that is very tangible and very understandable, whereas another artist might be dealing with spatial contradiction and ambiguity. And understanding those fundamentals as to how to manipulate a logical space equally
informs the choices that you make when you’re trying to make an illogical space or an ambiguous space.

*Ok, two other things that I thought were quite intriguing when you said them... hierarchy. What is the nature of hierarchy when you have students working?*

Well...I can talk about it within the context... well; let me talk first about the context within a beginning drawing class. A lot of times what we have are these really large still lives that are built for a reason. We want those students to see multiple relationships rather than an isolated one. We’re wanting to try to create an experience that will lead them to more possibilities with regard to the compositional choices that they have. But the arrangements that we make are usually objects that are fairly mundane, they have no personal connection to the student. Typically a student will complain that they think the still life is boring, and then your reaction would be – as a teacher – it would be, well what would you... you build a still life at home, that you find interesting, and you make a drawing of it and come back. And a lot of times those drawings that come back are really laden with kind of trite and sentimental kinds of objects that have a personal connection to that person, you know, teddy bears and stuffed toys they got at a carnival... and they have a memory of that experience and so there’s an importance that they have that an outside viewer – disinterested viewer - would not have. So, when you talk about hierarchy, you know, there’s a subjective aspect to that. When one student looks at a still life that’s got a lot of objects... you know, kind of an array of forms, they’re going to hone in on certain qualities of the form, or certain aspects that they find important that another student wouldn’t see. So there’s a certain element of subjectivity that informs each person’s hierarchy. And I think what I try to get the students to think about would be what are the characteristics of those choices... because usually there’s a certain kind of pattern that you will see in that. For example, a lot of times we’ll put postcards with master reproductions... there might be a portrait, or there might be... or you know we have these planar heads... things like that...so there will be figurative elements, you know hand castings, we have some of those, some of these elements that are in a still life. So you will have certain students that will gravitate to those figurative aspects... you know as opposed to things that are inanimate or non-anthropomorphic, and so there’s a connection that they have with the human form. You’ll have other students that might gravitate towards something because it has a particular pattern; we get a lot of fabrics and a lot of vases... and things like that, that have kind of ornate elements so to speak. So what I try to get the student to think about is what is it, and what are the qualities... and why did you pick this area as opposed to picking this area over here.... (Note: framing)what was it about this part of the larger arrangement that you found interesting. That doesn’t always become immediately apparent in the first year. You know, for me... if I think about the kinds of things that kind of defined the hierarchical patterns that I had in my own work... it didn’t become apparent to me until I made more work. You know, then you start to... oh I see this and here it is again, and here it is again. But generally what... if I kind of defined that, is that if I am making something, I have to... in terms of the organizational aspect of it, I am generally finding whether – I’m doing it consciously now – but I think that before that, as a student I did it intuitively, you have some element in a design that plays the key role... that’s kind of an important element...the thing that has to be in the
work. And then you’ve got other things that play kind of secondary roles or maybe they’re completely unimportant. Maybe ultimately they’re certain aspects of something in an arrangement that I’m looking at... that I edit out completely, because they’re not important, or they’re distractions... they take attention away from things that I want the viewer to see in the work that I’m making. And so when you’re talking about hierarchy, you have to kind of understand, you know, what is it that’s important in the design, or what is it that’s important to the work that you’re making... what aspects of form or space or pattern or whatever that element is... what is it, and are there other things – and this has to do again with critical thinking – are there other things in there that detract or take away from my seeing or experiencing those things that are of most importance.

Ok, you talked about a sense of the tactile... that’s the first time I’ve actually heard that one, but it maybe doesn’t surprise me. Tell me a little more about the role of the tactile in art.

Well I tell a story to my students – it’s kind of related to both sound and touch. You know, I got a pair of headphones when I was about my senior year in college. I didn’t have a stereo... I had a roommate though that had a stereo, and I had a space that I ran a long extension to my bedroom which I used as a studio at home as well. And that way I could listen to music on the set of headphones at night. And one of the things I noticed when I first started working with headphones – and I still do – it seemed as though there was something that was missing, and the thing that was missing was the sound of my pencil on the paper. Now I don’t know... I couldn’t tell you exactly how that sound informed my technique, but I noticed that when it wasn’t there, at first, it seemed like there was something awkward or something missing about that. And when you have a sensation of sound that tells you something about the way that you’re using the material, that’s an aural experience that, obviously was something that in some way helped guide my kind of way that I manipulate material. ...Very much the case with touch, because with what I do, the pressure that I exert on a point on a sheet of paper has a direct bearing on what the result in going to be. So, for me, unlike a person working with clay, whose actually... their hands are in physical contact with the material, with me it’s not, it’s kind or transmitted through a brush or transmitted through a pencil, but nevertheless, there’s still that sense of movement and pressure. And those, together, I would say, including the kinetic aspect of it, is part of the tactile experience. The speed at which I draw, or the speed at which I make a mark... put a slow mark, will give me different result, as well as the pressure, as well as the direction of the stroke. There’s a lot of things that happen in terms of kind of the ergonomics of working with material. So that for me there are certain times when I’m turning the painting on an easel either upside down or sideways, because the direction of an edge that doesn’t hit my sweet spot... which I talk about a lot with my drawing students. There’s a certain range in direction of motion that we all have control over, and then there’s also a certain range of movement that we have less control over... or little control over. And sometimes when you have an edge that’s moving in that direction, it’s very clumsy to try to get the material... to manipulate the material in a tactile way... so we rotate the piece, or you rotate your body, and try to find a way to play to your sweet spot. And so that’s part of kind of the kinetic experience of working too. But on top of that, for me, as with space, all texture in the things that I make is illusional,
it’s not tactile, I don’t work impasto in paint. There is no true physicality to the surface, but there is a lot of texture in the resulting work, even though it is physically smooth. And again that kind of tactile experience comes out of a perceptual experience... being able to look how light plays across a three dimensional textured surface and then being able to basically imitate that experience through illusory or implied texture.

So transforming this, what is it that we teach students that allows them to understand that tactile experience?

You... we... You know, it’s not really frustrating, because I accept it, it’s an experience that you have to have, you can talk about it and we do, but you really... it’s not one of those things that you can read about... or watch somebody else do... and then be able to do yourself... you have to... it has to be a direct hands on experience in order to understand what that stuff does. Now I have another story I tell; I teach charcoal drawing in 131, a lot of us do... and it’s different from other media because or it can be... a lot of students that worked with charcoal in high school, usually will work with a charcoal pencil, which isn’t a lot different than working with a graphite pencil, you’re basically working with different grades, hard to soft, and pressure and you’re building additively which is layering to develop a gradation in tone. But we teach also toning the paper with line charcoal and then working subtractively so you build a kind of middle tone on the page with an erasable line charcoal, and then you block in shapes, and then you start to lift up charcoal to create the lighter gradations to the highlights... and that’s a very different material that behaves in a very different way and requires a different set of tools and a different set of techniques, and it’s very heavily dependant on sensitivity to touch. And students struggle with that...it’s different than anything else, that material. And I tell the story... one of my professors... when I was taught as a freshman, I had a demonstration, it was done by a professor who had worked for years with charcoal. He did a demonstration in about an hour and it was just a quite a performance to watch. And it looked very easy, and so we were all kind of excited to get into this. Well once we started to do this, we were immediately insecure because it wasn’t doing what it did for this guy...and the difference was that we didn’t have the set of experiences, and we didn’t have the touch that this person had developed after repeated years and years of experience. Now does it years of experience to develop those skills... no, but it probably would take years of experience to develop the speed and facility at which he did that well. But with us it took about a month of working with the material before you kinda got a sense of confidence of how the material was going to respond to know what was going to happen, and to get things to do what you wanted them to do. And this professor was an excellent professor... there was no detail that was too small or mundane for him to explain, but it still wasn’t a substitute for doing it yourself. And so teaching that is really something that really has to come with... it’s basically practice... it depends on practice, and as a teacher you can watch a student draw, and you can say well, try this or try that. A lot of times what I do – I don’t like drawing on student work – but every so often with charcoal I will take a corner that is kind of inconsequential, and I’ll say well listen... you’re trying to... getting all these marks and surface quality here that you don’t want, we want to try to control that, and I might take a little area and I might show them how to manipulate that. More often I’m doing the drawing, and usually what I do is I get the...
drawing kind of started up to a point where I think it’s going to take the class maybe thirty or forty minutes to get to, and then I let them work to that point, and then I bring them back to my table, and I pick up the drawing from where we left off... so that I’m not overwhelming them with a completed demonstration from start to finish. That was kind of the sense I had from my experience was that, you know, the drawing was beautiful at the end, and it became extremely frustrating because we couldn’t make a beautiful drawing in the time that we had. So what I try to do is – I don’t like to use the words spoon feed, but in a way, I do it incrementally. You know, kind of do a demonstration in stages, and so they’ll draw and then they’ll break and then the demonstration will take another ten minutes, and I’ll explain a little bit more and then they’ll do that, and so we do it kind of in stages.

Now there were a lot of interesting things in there... first I think you told me... you began to break down the teaching of drawing, into some of the sensibilities and skills that you would like to have. You talked to me about a sense of touch, gradation of tone, blocking shapes, producing highlights or using highlights. All of those, I think... let’s see if we can figure out what they are part of... For a lot of people working in design they would be knowledge bases... I think maybe... are these knowledge bases or manipulative abilities?

Well I’m not sure... define what you mean by a knowledge base... because... the short answer is I think that they’re all manipulative abilities, but I don’t know that they’re not knowledge bases, but I want to be sure.

This is the first time I’ve seen the manipulative abilities broken into parts, and that intrigues me. The knowledge bases are the things that you have to know before you can arrange them. When you talked about elements and principles of design...

That’s a knowledge base..

Right, you’ve got to know what those are before you can arrange them.

Right, right, right...

The composition, then becomes the thinking skill, and the elements and principles are the knowledge base.

Right. well, I guess maybe this would be a knowledge base with what you’re talking about... when you’re working with value...

Working with value... Oh yeah, there’s one...

...Which has to do with light and shade and space and surface quality, all of those things are kind of part of that. You know, we talk about how light plays across form in space. On form we talk about these categories of light and shadow... so you mentioned highlights, and we talk about the six categories of light and shade...
That's a knowledge base...

Ok, now the knowledge base is something that in 131... one of the things that we are doing differently than what we did when it was 130, which was the old drawing one. A lot of the programs said, well, you know, we don’t see the relevance of drawing from observation, because the rest of us are going to be drawing from their imagination. They’re going to be drawing and representing things that don’t exist. And this was kind of a surprising comment to hear from colleagues, because in order to draw something that doesn’t exist, you have to kind of understand how... if you try to represent something in a kind of convincing way you have to kind of understand what you would see in real life. So we talk about these categories of light and shade, highlight, light, half tone, shadow, core, reflected light, cast shadow. And we point those out then we build a still life and we get into value... we control the light... I mean one of the things that you will notice in the drawing rooms is the first half of the semester all the fluorescents are on. The second half of the semester in those drawing classes, all the lights are off, and all we have are spot lights and then we’ve got some bounced lights... and the students have ambient light to work from. But we’re trying to set up a very dramatic, a very clear, very easily represented lighting situation for them. And then what we do... what we’re doing in 131 is we say ok, now we want you to invent form based upon some of the things that we’ve taught you, both in terms of working with line drawing, drawing through forms, and also in representing things in light and shadow... and then later in color. We don’t really have very much time... we do, do color drawing, but usually it’s limited to working from observation... cause we just don’t have enough time to get to it in much depth. But... I should have some student sketchbooks here... so... we have things that students are drawing from their imaginations... a lot of times what we do is we have them do these sphere studies in black and white, and then in color... and then we have them take that to xxx. (holding up a drawing)

Yes, I’ve actually seen these, I used to share an office with Nancy... and in point of fact, I make them do these digitally.

Oh you do? We’re trying to get that... what we’re trying to get them to do is to get away from... so these are complementary schemes, so again what we talk about are color combinations, color cords... these are analogous schemes, so now you’re talking about elements of design and some very fundamental color theory. Most students are basically going to use white and black, and then a color. So they’re going to think of an apple as being red, and what we’re trying to do is to get them to think about warm, cool, gradation and hue. So as they’re working with a three dimensional element like color, that they’re working in all three dimensions and not just in terms of value and intensity, but also in terms of gradation and hue. So, you know, what we’re trying to do is use observation as a point of information, and then apply that to things that are imagined.

So, in your mind, let me clarify this... what I think I hear you saying, drawing from observation informs drawing from imagination.

Yes, exactly...
To draw from imagination... the learning experience for that is drawing from observation.

Yes... or drawing from some other form of research. Imagination is always limited by your experience. So the idea is that you want... I think of kind of my experience is like this kind of warehouse and I see it every year with new students... Like when I see guys... I... there are a lot of guys that come into my drawing class... and they’ve drawn a lot, but basically they’re doodlers, and they’ve drawn same thing over and over again. It might be hot rods or it might be buxom women, or muscle guys, you know super hero kinds of stuff... and they’ve learned a certain pattern, right, and they’ve practiced that to the point of becoming kind of good at that one thing... and that’s all they really know. And, you know, being self aware, I think about the things I was doing when I was a teenager, and drawing as an artist, and I think well yeah, you know, there was a lot of lame stuff there, but it was basically... it represented kind of the extent of my experience. So what you try to do is you try to think of that experience as being something that’s cumulative over a lifetime. So that as you experience drawing shiny objects, from observation, that you understand at a certain point how reflections play off of a form that’s concave and convex or it’s planar or whatever, so that when you’re inventing something that’s concave or convex, or planar, or conical, that you kind of know from that observational experience how light is going to play on those so that you can invent those things and make them look believable. When it comes to working from a more whimsical playful aspect, which I think is another... we haven’t really talked about that... but if you talk about creativity as an important...skill...

We’ve got to go there, that’s a thinking skill...

Yeah, right... to me creativity involves a form of playfulness, of... I’d set it up as a game of what if, rather than trying to find an answer to something that you know, I know, I’m basically going through a process of kind of searching... searching for a problem... if I don’t know what I want to do, I’m done with a piece, and I’ve got to make something new, and I don’t know what I want to make, I go through this process of kind of playing what if. It might start out with that kind of hierarchical thinking... what kinds of things would I really like to do, you know, and that might start me out, kind of thinking whatever it is that I make, it’s got to have elements of the human figure in it, or it’s got to have certain animal forms in it, or it’s got to have certain architectural qualities to it... there’s got to be a certain kind of matrix that might get me started thinking, (Note: identify factors)and then within that... I might think I want to create some sort of architectural space then my thinking becomes a little bit more directed, and I start thinking, Ok well what if I make... design an architectural space that’s not geometric? And I start playing with that, and I think, well I’m going to go to the library and I’m just going to basically look at animals today. Not geometric forms, I’m going to look at animal forms, and I’m going to see what is the way that they’re structured... well a lot of them have tails and they’ve got four legs, you know, and they’ve got some kind of ears... and I’m going to be drawing those things and later on, I’m going to take that, and put it into a different context and that’s going to be a building. Kind of cross breed things that
normally don’t associate... so what I’m trying to do, is I’m trying to find a way of thinking that isn’t kind of rote and obvious. So I kind of got a little bit side tracked... where did this thing start from?

Creativity... creative thinking, and you just told me about cross-association and recombination.

Yeah, right, right... and there’s different kinds of patterns that we use in terms of creativity... we can think about metaphor...

That’s a thinking skill...

This is one thing that I would share with you. When I taught 131 it didn’t... I’d have to say that one thing that is always a bit of a risk, and it does involve risk taking, by the way, creativity always involves taking a chance that it’s not going to work... or risk. Part of the pressure that our students have in 131, is that their portfolio, depending on the programs, is going to make a big difference in terms of whether they get into their program. So there is some pressure in designing work that has a reasonable chance for a reasonable percentage of students to succeed to a reasonable degree.

Laugh

And what a lot of us find challenging is that when you start to get into those more kind of sophisticated problems, you find that a lot of times your students don’t have the kind of experience and skills that they need in order to make those work. So with that as kind of a preamble, I’m going to show you an assignment that I gave... I don’t have any examples of the student stuff, but I will be honest with you and tell you that the results were not as strong as I would have hoped. I gave each student a plaster casting... they were pretty small, and they were a plaster face... I got this at Hobby Lobby (a mold) and I poured 25 of them in class, and I gave them one each in the section, and I said this is yours, you can do whatever you want with it, you can break it, you can paint it, it’s yours. But it’s going to be the main subject of your final drawing... and what I’m wanting you to do, is I’m wanting you to do some brainstorming, and I want you to recontextualize this face. I don’t want you to simply make the drawing of the plaster cast in still life, I’m wanting you to place that face in some sort of different context. So what I did is... when I give these new assignments, I go through the assignment myself. So they did a couple of pages of brainstorming, and basically what these were... they started out really as kind of word lists... and we did this really as a class. Now this is mine (showing page of sketches) that I did prior, so I did some things that I was thinking about Archamboldo.... This is the guy that did the heads constructed or thematic elements he did fire and the harvest and stuff like that. But then we started thinking about what these things... we can think of a face as a robot, or a mannequin, mask a landscape, something with scale... monumentality with miniature people We started talking about visual analogs... the mask looked like a tortoise shell, it could be a vehicle weave, it could be an egg, it could be a hot air balloon, so we started to think about what the form was similar to as a form... to other forms. So we started thinking about what I call visual analogs, xxx similar to that,
we thought about metamorphosis of something that would become something else, we talked about metaphor something that is a symbol for something else. The one way that I always think about creative...creatively is to think of opposites, if I think about something that’s hot, then I think about cold, you know so I’m always thinking about ways to represent opposites. If I think about developing word lists, I think about it kind of from the same standpoint that you might if you were a reporter or a journalist... who, what, when, where, how, why... gets you to think about some questions to ask about what it is that you’re trying to represent. So we did this kind of word list of things so... and we talked about here I have metamorphosis, and talk about something on fire... on stilts, something on an animal, something that’s a vehicle, something that’s wrapped, something that was a puppet, something that was a surprising juxtaposition, where you put this with into context... so we started with this brainstorming. And then what I had them do, was I had them break down into groups of four, and they kind of fleshed out their list... and what I was wanting them to do, was not necessarily write down other people’s ideas, but to bounce their ideas off other people... so if somebody else comes up with the idea that the head looks like kind of like a tennis racket, that they might have an association with that... it might become the oar for a row boat, it might be something else that they remind them of, and then there might be another idea or another suggestion to generates off of that. So the idea of having them break down into these groups was just a way to get them to bounce the ideas off of each other, to offer some suggestions to each other, but as importantly to flesh out ideas with new associations that they hadn’t considered before.

So, I think what I hear you saying here is that what we’re wanting them to do is see similarities in form and understand the potential of those...

Well that would be in terms of thinking about visual analogs, yeah. If you’re thinking about things that are visually analogous to what it is that you have as an object, then that can get you to think about other things in which you can recontextualize it too.

Ok, those are both thinking skills... I would not have seen that in the term visual analog before.

And then what they did was they began to do these rough preliminaries... this is where they did pretty good on the first step... on the second step they... we had to work with them, they weren’t very strong at the early stages. And the thing that I noticed about all beginning drawing students, not just at Iowa State is that students generally tend to be pretty good at the second half of the drawing finishing a drawing. They tend to be weak at starting the drawing and visualizing the drawing, especially from their imagination. The early stages of... and I’m not even just talking about a more difficult problem like this, which this was the final assignment for the semester. If they’re looking through a viewfinder at a still life and trying to compose it, usually we have to go through this process in the earlier drawings of getting them to think about how they use the outer edge of the composition. Because they’re usually thinking about the page as a box, and there’s this empty space that happens around it because they want to get everything in, Ok. And
we say, well think of the picture pane more as a window than as a box... and if you have shapes that you’re cropping, how do those shapes lead your eye into the drawing?

*Cropping*

Yeah, so also this has to do with that idea of hierarchy... you’ve got this big still life and you’ve got a little window viewfinder, that’s a three inch by four inch cut out of a piece of cardboard, and you have the choice of vertical or horizontal and you’ve got a distance as to how much stuff or how little stuff, and then you also have to move it around, and you have multiple points to get set up around that still life.

(tape ended, brief interruption to change the tape)

Ok, there we go again... and we had just finished talking about... one of the things that you mentioned in there that I thought was rather interesting was cropping, and then you began to talk about working through the viewfinder, and I think we brought all of that back to hierarchy. Because when you are working through the viewfinder is it not the case that what you’re trying to do is select the most important part?

That’s right,

So that’s a tool that we use in order to teach them to develop a hierarchy or a more interesting part of the image?

Yeah, it does that and it also will... we want them to be aware of what their compositional choice options would be. So usually when you’re drawing from a big set up like that, what we do is we have them move around the room, so they’re not fixed to one location. We want them to view the subject from more than one point of view, and we’re wanting them... usually we force them – all of these choices at the beginning level are forced upon them – we’re instructing them to go through this. So we’re telling them that that they need to move, we’re telling them that we want them to have a minimum of anywhere from six to ten thumbnails... some instructors will have students do 20 thumbnails. We’re telling them that they have a rectangular viewfinder that matches the shape of the large sheet of paper that they’re going to be doing a more completed drawing on... so we want basically a similar number of vertical designs and horizontal designs to choose from. We want all of the designs to have certain qualities of design certain aspects of organization. Typically what I’ll tell my students is that I don’t want them to focus in on too small of an area. So I want there to be a minimum of maybe eight forms that are in the design because I’m also wanting them to see in the relationships of size and space and between them I’m wanting them to balance the composition. That would be another criteria. And I’m wanting them to think about how elements that might be partially cropped by the edges of the page lead the eye into the page, and I also want them to think about kind of unfortunate points of cropping this is something we talk about... it’s a little easier sometimes when your dealing with a figure in life drawing. Students that are cropping the figures at the ankles...you know... at a joint, at any joint really... you wanna try to avoid... you know... that kind of coincidental cropping. Sometimes it’s not coincidental. Sometimes they’re afraid of drawing feet right. Uh but you know we want
them to think if I hit an inanimate object, there’s gonna be a certain place where I can crop it...where it might be like where if I only show that edge it might be frustrating for the viewer because you’re showing us not enough...so it might be better to eliminate it completely or to move the edge over so that we can see a little bit more...so you’re making some choices there.

I’ve gotta ask the other two little questions here so that I get this done. Is there what would be the first red flag if you had a student in your class that would cause you suspect might not be cut out for studio art?

Well...It would probably be uh....the inability to concentrate over an extended period of time would be one big concern.

What types of things do you have them concentrating on?

Well there, you know, in the context of the beginning drawing classes it’s basically about all aspects of seeing and then translating what is seen into a graphic image. And that requires a period of time that um...and it also involves uh...correction and revision. You know that would be another quality...a student that would be uh...kind of unwilling or uninterested to correct or adjust or edit their work. Somebody that has an answer and then is basically um you know...not wanting to change that answer even though there could be a better answer

Well there’s one that you’re gonna have in common with a lot of disciplines.

It would have nothing to do with...it would have little to do with skill. Cause skill is something that can be built...but in order to build a skill you have to be able to concentrate you have to be able to stay focused on a task.

Ok, it’s a way of working more

Yeah, Yeah, Yeah

Ok. What is the difference, or what do you hope is going to be the difference between an entry level...and you’re working at the entry level a lot of the time...between an entry level student and exit level student? What should be the difference or even between your entry level students, and your life drawing students? what should be the difference between those? What difference are we trying to make?

Well I see the kind of the task of a foundation curriculum is to...uh teach the fundamental um... skills uh and those are the things that we talked about at the very beginning

The elements and principles, perceptual skills...

Compositional skills, tactile, perceptual skills, critical, being able to think critically, about their work. And I think... and it’s not, and this is the thing that is so frustrating for people
who teach in the foundation... as I’m sure it has been for you, there is some types of sense that I get from comments that faculty that are teaching in upper level classes assume must already know... should know all of that stuff, by the time they get into their Junior and Senior year. They’re learning that beyond their undergraduate work. That’s not something that stops at the end of the first year. In other words I’m still learning this stuff... I’m still conscious of this stuff in terms of my own practice, and the things that I’m teaching inform what I’m doing now. And um... the difference with an upper level student should be that they are well into practicing those skills to a point where it has become or is becoming habit... to where it’s not becoming something that they have to be reminded of... and if they fall short, of that... and I have a lot of students that do... compositionally, I have a lot of students in my life drawing class that are so focused on drawing the figure that they’re not thinking about the object that they’re designing. And so, I have to...you know, well we do come back to that... we still talk about that stuff in the upper level stuff. But I would expect an upper level student to start making that their habit with the goal of it becoming kind of second nature. To where it isn’t something that’s maybe necessarily foremost in their mind, but it’s not forgotten, and it’s not buried, and it’s certainly not seen as irrelevant.

What are some of those things that should be second nature as we get to the upper level?

Well certainly an awareness of how to organize form and space, the choices that you have in terms of how you organize space and how you organize form... would be one. That would probably be... on a visual level, that would probably be kind of the biggest one. And then I could break it down into the other elements there, but I would say that that should be second nature. There should be... I would expect... one of the differences for an upper level student should be that they should be at a point where they’re generating their own problems...that they’re starting to kind of... that’s where their own work starts to emerge... where they start to say these are the things that I’m most interested in trying to do through my work. And so I’m going to set up kind of the parameters of what I’m going to do with my own self-imposed goals in mind. And I don’t know that that’s necessarily relevant for other programs, but in the Studio Arts...

Sounds like it is...

Well, in the Studio Arts... the only reason that I’m thinking... the only thing that comes to mind is that a lot of our students are working for... they have a client who is determining a lot of that... maybe a good part of that stuff. Those parameters for an Interior Designer are imposed... it’s not like they can say, hey design any interior you want, no, you’ve got this square footage, and it’s got this use, and you’ve got these kinds of things that you have to work under. Whereas as a painter, I don’t have to worry about that... I might have a commission, and if I have a commission, I have a client and the client might say I want you to do a portrait of my family and this and that, and make me look thinner, and you know, all of this other stuff. But you understand that there are just going to be differences, but I would expect that a student in the upper level course would be able to become... is more self directed about what they’re doing. And that’s not to say that
they’re throwing... without throwing out the knowledge base that they’ve developed through instruction and the curriculum that they’ve had before, but rather applying that.

So, at the entry level, you hope that you’re instilling the knowledge base, and at the upper level, you hope they’re using it.

Yes, exactly, exactly... yeah. You know and I would think... I would hope that by their last year in a program that they have discovered through the experience of the previous three or four years. They start from that to be able to recognize in their own work... aspects in their own work that are kind of characteristic... not necessarily their style, that’s a little too superficial, but their primary concerns as a designer, as an artist. In terms of a painter, for example, what would be... what kind of subject matter would I be interested in? Am I working representationally or am I working non-objectively or abstractly? You know there are going to be certain qualities and characteristics that start to emerge from multiple works... that a student should be able to look at and say oh yeah, I kind of see the thread now that ties this stuff together, and that starts to define, at least at this point in my development, what my primary modes and interests are. And then also to develop as part of the habit that they’ve at least learned a couple of problem solving approaches, strategies to approach new problems so that it’s not like every new problem, new experience is kind of like starting over again.

Strategies...

Yeah, there’s a certain strategies would probably be the best way I would describe it.

Give me a couple of examples...

Well, as an example for me, what I tried to do with this assignment that I showed you is that the strategy starts out basically with writing. You know, and that’s pretty typical for a lot of designers... they start out with words, maybe some definitions, maybe the goal... what is the problem...define the problem, what is the objective? And then from there, what kinds of options do I have... and usually very quickly moves to playfulness. The kind of creative... ideation... is the word that people like to use these days, I think. How am I... what kind of... what is the what-if thing? If I’ve got this problem, what if I tried this, what if I did this? I’ll go to the library... I’ll look at different maybe artists, or maybe I’ll look at subjects or things... visual things usually for me. How do I do my research... for a visual artist... for me it’s usually looking at images. I do a lot of things on the net... you know, I do a lot of image searches. And usually as I go through that, it’s kind of like a library, you know... usually when I tell my students to use the library, I say ok, you’re going to want to look at things that have to do with carnivals... merry-go-rounds, you’re making... you’re designing a table and you’ve got the idea of a merry-go-round, somehow as an analogous form, so you go look in the catalog and you look for carousels, merry-go-rounds. And rather than write down the call number of that book, you write down that call number, but when you go to the shelf, rather than being set on just that book, you’re looking in that area, and you’re finding five or six or twelve books and you’re paging through them... cause the book that you want is probably not the book...
that you’re going to check out... you’re going to check out others and say hey, these merry-go-rounds have these kinds of forms and shapes and stuff like that, and these are going to inform the design of this table that I’m going to be making. So then it very quickly goes to that... so that’s an example of a strategy. You kind of go through this working process and you do some preliminary sketches and then you play around with size proportion... that’s a lot of what I do. In other words I might say I want these elements and these elements but I want to play around with the size of these elements and some of these are going to be real big or real small and I’m going to change these things around... and then I start to work on the actual piece.

Yeah, I think those are what we would call design process.

Yeah

Ok... boy I’ve filled up a lot of note papers... is there something I should have asked you about that I forgot to ask you?

No, you had said in your Email that you were just... part of what you were trying to do was to understand what it... was the characteristics of a successful person in our program. And again I think the thing that I would say is that is talent and skill important... yeah, but it’s not the most important, what’s most important, I think for our... for the Studio Artist is to... is kind of self-discipline... more than a lot of the other programs, because the other programs in a lot of ways are... there’s a lot of external motivation that’s built into those professions. Whereas with a studio artist and I can go to my studio and I can waste a day and nobody’s going to be hanging over me and saying... well what did you get done today... right? So it takes very much a person who has kind of self discipline... they’re self motivated, they set their own goals, they set their own problems... they can set their own deadlines and work within those deadlines. So it does take... these are the kinds of skills that sometimes we don’t really teach so much in a curriculum, but are the things that will make a difference in a person five years after graduation who is working as an artist and one who has moved into something... you know, else.

Is there a difference between foundation drawing and studio drawing?

By that, do you mean in terms of upper level work?

Yeah, in some ways... yes.

I would say that generally the difference would again have to be with... there might be an overlap with students, there are a lot of students that as seniors are working representationally, that are working from observation, and there’s a very close connection with what they did in the first year... with what they’re doing in their senior year... but with an equal number... maybe even a higher number, there is maybe more differences than similarities. stylistically to what they did in their first year. But the overlap there is that experience that they had in terms of becoming aware of composition and design, becoming aware of different types of ways of creating space, because of the experiences
they had in 130 to go from anything that very flat to something that’s extremely three dimensional. So they have the experience of working with different types of space there. You know, obviously they’re carrying some experience that they’ve had with materials that they’ve worked maybe from their first year on. But the main difference would be that by their senior year, if they’re taking advanced drawing, Kathy Gibbs who teaches that class isn’t giving them an assignment. She’s saying I want you to develop a portfolio... I don’t know what she exactly says, but if were teaching the course, I’d be telling the class you need to have five or six pieces included by the end of the semester, those pieces should have some sort of thread that connects them, so that you’re not thinking about an individual piece as a stand-alone, but as it relates to the other things that you’re doing in developing a body of related work. Each work should stand alone as a resolved piece, but there should be some thread of commonality between them, and that commonality is self determined. The individual student is responsible for the direction of their work and... yeah, obviously there’s in-progress critique that happens with that, that helps the student make different choices or better choices in terms of what they end up with.

*What you just described is what I’ve been taught to call a design system... everything has something that makes it like the others, and everything has something that makes it unique. Ok, well thank you very much.*
Voices from Integrated Landscape Architecture
Ok, that brings me to what is the main research question. As I told you earlier, What I’d like you to reflect on for me today are the qualities of a successful student in Landscape Architecture. From your experience, which is considerable, and in your teaching, what things seem important… or key, to student success in Landscape Architecture? And we want to talk about ways they need to think, knowledge bases, and manipulative abilities, mostly for the purpose of diversification, but we want to be sure and try to treat those three areas. So, therefore, what do they need to have, think, know, and be able to do if they’re going to be good in this discipline?

When they graduate?

Yes... although... even to advance from one step to the next... what do they have to have, and feel free to deal with the things that they tend to do well as well as the things they seem not to do so well.

Ok, would it be more useful to talk about ... I was thinking actually to talk about xxx students, and what it means to be a successful student later because I noticed the other two questions have to do more directly with that, and so I was actually thinking that it would be more useful to talk about success measures following graduation, actually...

They should be the same...?

Well, I think they are slightly different... yeah, I think there are some parallels between the student period and the professional period, but I think that there are very different issues also... so why don’t I just jump in to what makes a successful Landscape Architect when they graduate. As I was thinking about this question, I think the first question one needs to ask is what does success mean, and that is a very open question, because I mean, I think for everyone success probably is different... amidst different things I think that for some people success means a lot of money, and for other people success means sort of just being content with happy about your work, professional functioning and other people... what I’m leaning toward it might be really about making some kind of a difference that is both in terms of just promoting our profession or discipline and making a difference in terms of people’s lives. So, I think the question of what success means is one that I would certainly think about as a kind of a challenge to make some kind of a difference, alright, not just to serve people and sort of simply work with the status quo about what this profession might be doing or falling into the prevalent perceptions of
Landscape Architecture - Vanessa

what the profession is all about. It’s really about sort of pushing both sort of what is possible and what this discipline can actually provide and coming up with new ideas, new challenges, I just want to step back and tell you that for me this profession is certainly a service profession in the sense of having a client and trying to respond to certain needs that have to be in the physical environment, however I should say that as importantly for me is another issue which is really about the discipline being or serving as a critique of culture. So with that in mind you can understand why I perceive success to be something that makes a difference, pushes boundaries, and if needed shapes different kinds of perceptions what people think they need... a beautiful lawn, you know... a park with a great lawn in the middle of the neighborhood versus the real need. So I think that that to me defines success. In order to be able to be successful... if that is what we’re shooting for, I think that one needs to be conversed with the issue of what makes a good environment and... I mean Landscape Architecture is not exclusive to the bio... the biotics, the... Landscape Architecture to me is a discipline that engages a variety of issues that are planning issues, architectural issues, engage issues of culture, economics, politics... I know it sounds like a lot but in some ways it’s really one needs to be conversant in the issues that engage all these facets. Now that means that one needs to understand our related disciplines, and this is to me a very important fact... I think that we often carve for our self a certain niche that isolates us both in terms of the issues and the language that we speak, and I think that one of the things that I’m interested in, in my practice is the notion of making sure that I know how to speak architectural language as well. So I think... so being able to understand what kind of discourses and what kind of issues are ongoing in ours and as well as the other disciplines is very, very important because this is where the foundation xxx energize... it’s about what can make a difference. So, in terms of being just simply articulate, I mean to me articulate should be very, very big thing... So I would say that... what are the things that we do? Obviously people know that we draw... that’s our primary tool. I’m talking about what we do... we don’t write it necessarily, though some of us do, because most architects don’t write, they draw, but I think that concurrent with drawing needs to be a level of articulation that is able to convey... communicate, and so I think that we are definitely, you know, as instructors emphasizing that as well... So again, I think some kind of a... being conversant with the issues and the discourses that xxx not find in Iowa sometimes, being able to articulate ... make judgments about things, I think that what makes... two other things that I think really make to my mind a successful Landscape Architect is the curiosity goes beyond what we do and how we do it. And I think all of these... all of these attributes and qualities... I think they contribute to what I consider to be important which is kind of maybe even perceived as not a desired feature but to me competitiveness is very important. So, you know, I think even though being competitive is kind of xxed as a negative, I find it to be... I’m not using this word so much with my students, but I think competitiveness is what really puts one in a position to strive for more, and then to also to my mind make something... to create something new and make some kind of a difference and for both the discipline and for people in general.

Well, in the meantime, you’ve said some things that I want to investigate just a little more. I was very interested that you talked about interdisciplinary languages and I’m going to get to that, but we talked about an ability to be articulate, and I think we’ve talked about

LA - A2
two kinds of communication here, you talked about drawing as communication... and I suspect that we’re also talking about another kind of communication. Would you like to elaborate on the kinds of communication you find useful in Landscape Architecture... I’m going to ask more about drawing in a minute. You said not writing... so I’m thinking maybe we’re talking about speaking, but I don’t just know.

... And verbal... I am definitely... I’m talking about verbal communication... I’m talking about, you know, I think that articulation really boils down to two things... really three, one is having something to say, two is being able to say it, you know, in a clear and sometimes even bold way... and three is having the willingness to say it. You know one of the things again... and I think there is some kind of a regional differences in terms of explicieity and that’s something that again I feel... I think that in general people here... and I say people in general not just in design... are trying to say less, because there is a sense that you might say something that some other people might not like. And you know in the peer group there is always this kind of a pressure so you’re very careful. Now there are eccentric individuals that need to talk and don’t care about what other people say about them, and it’s very, very rare... you know people make sure what they say and how they say it, and even the clarity is good enough so as, you know, others would feel it to be polite. I think there is new... if you step out of this student period into the world... people are going to notice you only if you have what to say, you say it clearly and you’re not afraid to say it. So I think... it’s really important, I mean how do you nurture that, how do you promote it? I mean you can get to this, but it’s not so easy you certainly in class try to make sure that the students are talking xxx. But I think it probably is something that goes beyond so even our abilities xxx to make a huge difference. I think it’s a question of how they come. Now I want to say that students who come from urban areas, and I include the Chicago suburbs, are much more ready to say things, they’re much more competitive... I don’t mean much more, but they’re more competitive, those students are more competitive.

Ok, and now let's turn to the drawing, because as I’m learning, and perhaps as I suspected initially, there are lots of different kinds of drawing, this is one of the manipulative abilities, that certainly we’re going to need to address. What are kinds of drawing are you doing?

The kind of drawing that we do is part and parcel of the kind of tools we have, and I think that... and the kind of technology that’s available at any period of time. I have done a whole range of drawing, throughout my life/career, and I pushed drawing very strongly when I came here and I did any number of things and, you know, not just... I mean... we can use the word representation in kind of a broader sense...

That’s a good word, Um-hmm

Because, I mean drawings are, we think about them as two dimensional, I did all kinds of even dioramas and xxx and collages, and through models, which are three dimensional, and sometimes even include drawings. So I think the range of representation has been very broad when I came in I started to work with people from Xeroxes, and worked
directly on the Xeroxes... you know it was new, I worked a lot with collages, and the actual media was again very much broad range you know watercolor to crayons, pencils to we did some chalk, we did some pastels, and Xerox and all of that, but I think that what we’re doing now is moving... because all of this has now basically fallen in different computer programs. My goal is right now to move the students from freehand and technical manual drawing into digital. So, now computer drawings are... I mean computer drawing programs or modeling, really, I mean what computers are opening for us is a veritable world and for a while... and for a little bit, xxx xxx there was an older... certainly a more mature, I mean there was a period of skepticism, but there is no question now that we’re not losing much by simply just exploring the possibilities that are available through the computer programs.. Computer programs today, there is no distinction actually between 2D and 3D in computer drawing... in some programs... I mean of course Photoshop is two dimensional, and there of course can be all kinds of effects with that, but I think that... other programs...but even Photoshop can be animated, so... but you know, you move on to what we call the three dimensional kind of modeling, and that’s where it all blends, and the simulation, the yeah, simulated abilities of computer programming is just already... it’s going to be, I mean at the pace that it’s going it’s going to be absolutely phenomenal, in I think, you know, five or ten years but, I think even now, it is absolutely transcending all we could ever do with drawing. I mean I think that the appeal of two dimensional drawings and paintings will not go away, but I think all we can do as designers and design things in the computer program is absolutely... it’s a xxx. And so moving now to work with this is something I do because we don’t design for a two dimensional world, we design for a three dimensional world, number one... number two, what the computer does for us is giving us the ability to design in time, that is to animate... in three dimensional, and at this point at least the ultimate is sound... so we may not quite have the smell and the tactile, of course is still represented in the sketches, but I think that there is that an absolute advantage to starting to work just with whatever xxx.

Is hand drawing in any way fundamental to computer drawing?

That is if you’re asking me if it is important to know hand drawing?

Yes, before you would attempt to or... ahh, that’s not right, I don’t want to make it a precondition... many people will contend that you need a sense of how to do it by hand which would facilitate doing it on the computer, do you have that sense?

No, not any more, I did, because you’re still using your hands, you’re just instead of grabbing the pencil, you’re grabbing the mouse, and the computer becomes your paper... so nothing has changed, I mean the connections between the mind oh, the brain and the hand, and the eye exists the very same way. I don’t see any difference, Ok. Yes, definitely I know that I have been using them.

So at this point you would say that some mastery of technology is fundamental to good practice?
Oh yes

One of the things we are looking for then

Right, right, I should say just one thing, that we still don’t have in the computer, and I am wondering if it will ever be able to be replaced... one of the things that you know, I mean obviously the computer is pixels, and when you hold different tools in your hand, there is also different results and different relativeness to the tools, Ok, where the mouse is a mouse, is a mouse... the pencil is different than pastels and brush, so I think that there is, but again I think that artists this is going to be more important than for the kind of work that we Landscape Architects do. Because we... drawings or representations are only secondary to the product for us, I mean the primary product is actually the physical landscape... and we will build it anyway, so I think the sensibility that’s associated with media and possibly the experience of the hand and its relationship to the tool, that may not be overcome by the computer as it relates to art.

Ok... as I said earlier, I also was interested when you spoke about interdisciplinary languages, because as I read my way through the accreditation documents, Landscape Architecture was the only one that didn’t want interdisciplinary understanding. Yeah, and I thought that was very...

Where did you see that?

Landscape Architecture Accreditation Board documents.

So based on the Accreditation documents?

It didn’t mention it.

Are you talking about the documents that we prepare for our presentation ...

No, no I’m talking about the one that the Landscape Architecture Board prepares as a recommended curriculum document.

The Clark... (unsure of spelling)

Probably, so I would rather like for you to elaborate on what the interdisciplinary linkages are for the Landscape Architect. This would be precisely the kind of thing I’d be looking for with the interviews... the things that have been left out of the documents.

Right...

Architecture left out aesthetics...

Right... right... chuckle you know
I think what they’re doing is they’re assuming these are things that people automatically do...

Exactly...

...or automatically should know... but when you come into it cold, then you should ask people...

No, definitely, that’s an indication...you know I think... I am simply convinced about the solution... I would say that it exists specifically because of what we were all about.

And I should naturally know that, only thing is I’m an outsider reading the documents

Because if you really... what is Landscape Architecture, if you really just look at the word, it’s already combining two things which is kind of absurd.... and absurd in some way and perfect in others. But I think that... and what is landscape... nobody can tell precisely what landscape is anyway, but you know our discipline... if you ask anybody well what comprises this discipline, people would include three things, just in a very broad sense. They would say that it combines Ecology, it combines Sociology, and it combines Design... or Art let’s put it this way as the kind of imaginative portion of it. So you’re already made up of these... Art and Architecture are centuries old professions and disciplines...

The Gardens of Versailles aren’t all that new...

I think that... but Landscape Architecture is a new discipline, it’s a sort of a hybrid, of different things so it can not possibly escape it. In terms of... depending on what you think this composite is now obviously you’re going need to make sure that you have this language. Our problem is that we are again because of the hybridity that we’re made up of, we’re sort of not good at anything...

Jack of all trades and master of none...

Right, and I think that those that pretend and work you know with kind of the ecological factors, they’re doing a lot of what we call pseudo-science. I mean it’s not science, and they hardly ever have the good tools... scientific tools to actually make... to master that part of the ecology of the landscape xxx and you know very well. So the question is... and you know their design or art sort of knowledge you know is not... is also compromised, and there are those that are kind of involved with the sociology, you know the behavioral part how people behave in the landscape, you know out of doors... I mean that’s a big problem we have as a discipline but obviously I am much more interested in the cultural and design dimensions of the profession, and the discipline, and for me in order to be able to engage in the significant discourse, one needs to understand the language of Art and the language of Architecture, and the language of urbanism which is basically kind of a convergence of Architecture and xxx. So, I mean these are the kind of languages that I’m involved in and I like to participate in quite a bit.
When we’re talking about the language of Art, are we talking about aesthetic properties?

We’re talking about aesthetic properties, and we’re talking about... to me Art is not just about producing objects, it’s about engaging in a cultural discourse...so to me it’s really about cultural critique and of art making. Art making, ah... both of them have to do with aesthetics but they also has to do with I would say ethics with cultural biases with... it depends, with, you know, political, and social aspects, and cultural.

So you would be working with the communicative potential of Landscape Architecture?

Yeah...

Oh fun... as a Graphic Designer I can totally relate to that... as with the cultural discourse... there’s one I haven’t heard before. I want to clarify one thing I heard a moment ago... you said they do CO design ,is that what you said... is that the letters “C, O,” I want to make sure I get that spelled right... the people who are ecology based... you said they...

Pseudo...

Spelled...?

P...S...E...U...

Oh, pseudo

Sorry...

That’s Ok, if I don’t understand it; I want to make sure I do.

Yeah

Yeah, we’re beginning to get into the knowledge bases when we’re talking about ecology, sociology, design, and so on and so forth... so let’s look at those students for a minute... got to ask about clients eventually too. Let’s treat this one even before we go to students. We’re talking about cultural critique and making judgments about the dialogs that are out there in the culture, I see this as a thinking skill... what kind of thinking are we after... what kind of a thought process would that have to be?

Well you know, I think that there is as students come into the program they are going through several phases right, and they sort of hopefully have the time to xxx get out.

Ok, if we’re going there let’s do it. You want to trace the student’s progress from entry level to exit level? What are they gaining as they proceed?
Yeah, I’ll talk about it in general terms right now xxx. I think that there... I think that maybe there are sort of three phases. One is the phase where they are acquainted with and able to answer questions such as who and what... you know what... What do Landscape Architects do? Who does it? ...and they begin to engage in the how to make it. In the second phase they are to do a more/model... and that’s you know the raw test requiring some kind of basic understanding of the issues. Of course all these are continuing in there you have a lot of complexities when you move on to the second phase, but I think the second phase has a lot more to do with questions of xxx why... why do you do that, and more questions about the how. How do you do it to a higher level of degree and inventiveness? I think that the last phase which sometimes we get to get there, and sometimes we don’t... and it also depends on the level of evolvement of our students... and that is the kind of critical level, it’s where you begin to ask questions such as: Why not? What if? ... and the ethical questions of who benefits and who’s not benefiting, who manipulates, who loses, who gains. I think these are questions because it is only when you begin to probe these questions that you are able to make judgments and so I think you know, and that’s at sometimes the level of kind of seniors and sometimes it’s the level of grads... it really depends on the individual developmental level of the students.

So what we’re really talking about here... we’re talking about critical thinking when we begin to talk about questioning and understanding advantages... who will benefit, who will gain and who will not. It sounds like what we’re talking about here is your entry level students are gaining knowledge, your phase two students are beginning to be able to use it, and your phase three students are beginning to see the implications of it. No question.

Ok, let’s talk about the fundamental knowledge bases... that we’re hoping we get into them before they are qualified to deal with phase two. What do we have to teach them before they have anything to think about?

We have to teach them what we call the foundation, sort of writings...and you know sort of texts. We have to teach them who have written or practiced... there is a foundation type work for the foundation project, it’s sort of looking at the conception part of the profession and the crafting... the implementation part of the profession... physically doing the whole gammut. And then... so this is the knowledge, the kind of the more practical knowledge that has to do with the question of beginning to... I guess it’s implementation, which is... it’s the drawing, it’s the making, it’s the xxx and writing...

So, you say they have to be familiar with the foundation texts and projects, are we talking about an understanding of history and perhaps seeing that which is current so that they have a visual vocabulary of what is being done and has been done in Landscape Architecture?

Sure
Ok, and then you also talked about conception and implementation. You want to talk about the conceptual process... where do the concepts come from and how should a student process that?

Well the concepts come from the same things that we talked about, it’s just getting integrated...(brief interruption something dropped) the cultural issues, the cultural discourses, the... and the questions... I mean the texts that they are going to read are going to be explained with the same language. These are the texts that begin to conceive something new at a certain point in time, and we need to have this kind of basis for them to build on, right... as we go along.

Ok, so what we’re actually talking about... when I do this I call this stuff food, because I will do is I will go out and create or study a lot of things that are related and then I recombine them relevant to what I’m trying to do... that isn’t a very good description of it, but Ok. So then, how do our entry level students compare to our exit level students? What kind of change should we... or do you see between entry and exit?

It’s sort of the change between not knowing and knowing... knowing and then knowing how to act. I think the exit level students are confident about their understanding of what we can do, how we can do it... how we are doing it... and are able to at least step in... let’s say this is maybe enough and as I said maybe others would say this is still what needs to be done... we need to just go right at it. I mean a lot of students just end up with I know how to do it, I know how to do it well, and I’m going to start doing it, so they begin to practice. And I think that it takes a little bit of time... I mean the good thing is that integrated into our curriculum is a semester where they go off to practice and intern... and this is the part where they, you know, kind of get immersed in what practice is all about. Different xxx... and that’s really important... because until you really understand how practice works... first of all you just need to do that to kind of see how all thinks come together in some way. So I think that’s a very important...

What is the nature of the relationship of the Landscape Architect to the client and what client groups are you working with?

Well I think there are two big broad categories, the public and the private and in the private there are the big corporations all the way from really very big clients to individuals... and the public has to range from city government to local government, all the way up to Federal Government... so we work for the Federal Government... that’s national parks... forest service, I mean it’s endless its so broad.

And then how should the Landscape Architect relate to the client?

They should challenge the client... so it’s... they should always take what the client says they need and question it and relate it back with an xxx ear... xxx ... solution. And I think there is always one more hidden client... I don’t know if I would call it client, but it certainly is an audience and that is the audience of the actual discipline of any profession.
that are not directed at clients... but they’re going to... I mean do if you are going to make
a difference. (lengthy unintelligible section)

*If you were looking at a studio full of students, would there be some things that would
function as a red flag that would cause you to worry if this student was going to work out
as a Landscape Architect?*

You mean with regard to...you’re asking about practice or as a student?

*The one that you worry... am I ever going to get you graduated as a Landscape
Architect... what would that student look like?*

You know, I think that there is... I’m hesitating for a reason...

*Most people do... it isn’t meant to be a poison arrow*

Well you know... we kind of... One can talk about bad students and these are very
obvious symptoms.

*That’s what I’d like to see, what would be the symptoms of the student that’s going to
have problems?*

... That has problems. Well the symptoms of the student that has problems are all the
way from not meeting deadlines to really not coming to classes or doing poor process...
excuses as to why things didn’t get done on time or you know attendance... these are kind
of the most obvious, but those various issues of quality of work and attitude...and the
students who do some things that really indicate that they have not explored any
possibilities, they haven’t gone beyond any... well not even... I guess...Students who just
don’t meet minimum expectations for any particular project xxx work that’s done You
know if it’s a seminar class then they don’t do the readings... studio they don’t produce....
just very obvious things. This kind of a person when they go out to work probably would
just turn to some kind of a catalog and produce... I mean if they still wanted to stay in the
profession other than do something.... I mean the red flag student is the student that is
just not going to be able to make it, I think. I mean there is a second tier which is
students who are just going to make it... they’re just going to (large unintelligible section)
give something to whoever wants something and pay for it. You can go at a minimum to
a nursery and xxx... but this is not what I would consider to be Landscape Architecture.

*So the reason for the question is because I can always turn it inside out and find out from
it what they should be, and I think what I heard you say is that lack of exploration is a
problem therefore a willingness to explore should characterize the Landscape
Architecture student right?*

Yes
...and you also talked about just doing what someone is telling you to do and going beyond that to do something inventive

Right

Now these are major thinking skills and those are what we were looking for. So tell me a little about what a willingness to explore looks like in a student, how can you tell if you’ve got that there... what do they do?

Oh, what do they do? They do what I didn’t think about or didn’t direct them to do you know they ask more questions. They... it depends... in a class there is a different dynamic, there is a lot of peer pressure going on and you’ll see students really not wanting to do their own thinking... I mean they would love to do it, but you know because it’s not xxx, So you know, I think that... I mean I know what it looks like, but how in effect it works and what effect you expect is a function of the dynamics that you knew, and the class, and the dynamics within the class and... I think that students have... I think that there is a way of... a kind of a maybe... a portion of the class that has these abilities and that it’s really great for a teacher if he should be able tap into these abilities... to then help the entire class to do it.

I think what you’ve told me is that this willingness to explore means a willingness to try things that are probably not necessarily in the assignment... that maybe you haven’t thought of... that they might not have thought of before. And from this exploration, this would be a source for invention.

Right

We’re talking at some level about creative thinking here and where they go for it.

Right, and I think some expression beyond, but also I think they’ve got to make some connections between what they’ve studied over time and xxxx what they are learning now... (phone call)

So this is really a very interesting topic that we’ve entered into...

I’m going to have a student come in, pretty soon will this take much longer?

It shouldn’t... if it is we’ll just quit... but this ability to make connections, and what are we connecting? So we’ve got two things going here. We’ve got the assignment that you give them... where you give them some criteria, we’ve got those that they go out and find for themselves, and then we’ve got the ability to make connections among them. And I’d like to get into that process a little. Where do they go for the criteria, and the connection making ability?
First of all, it’s not just between what I deliver and what they find, outside; it’s between what I deliver today, what I may have delivered a year ago, what they’ve studied in other courses and so on...

... and internalized

Right, right, that’s what I’m talking about compartmentalized knowledge... so it comes from all directions... I think that how do they make those connections... I think that how do you acquire critical skills... um, we probably teach critical skills... we try to help to do that at some level. Some of it is in obviously gained much earlier, xxx xxx. So I think that... we’re... based on how we’re modeling our own exercises, our own curriculum, and our own syllabi... and the kind of assignment we bring to class, hopefully they’re inspiring and give them a sense of direction.

So they’re making connections between things they’ve learned previously, among things you’re telling them now, among the requirements of the assignment... it’s a very broad group of things that they’re connecting in their final product or products.

Yes

And this, of course is the kind of thinking we might call synthetic or creative. When they come to you with their first project... or with one of their projects, are you wanting to see one good example or several possibilities?

Yeah, I always prefer several ... I mean one needs to be definitive but it depends at what level... at what point in the process? You know our design process is usually a very long process, and this idea of iterations, we’re all about iterations, I mean in design there is no perfect or ultimate answer... solution to the problem.

So what’s the advantage of iteration?

What is the advantage of iteration?

Um-hmm, what should it be doing for us?

Iteration?

Um-hmm, not that I don’t know, but that I want to clarify it.

Well, iterations give us, for one, the time to continue to flesh out, to add on, to edit, you know to elaborate. Because the tasks are maybe are complex, because they come from and with a host of knowledge bases... and maybe because culture is so complicated. I think that one needs the time to develop ideas, and I think one of the things that is happening at each step in the iteration is the kind of feedback or critique that is taking place where you stop, you present your ideas and you get feedback... and you turn those
into new questions.... So I think it’s a feedback process and it’s at least some kind of development and with some complexity involved.

*In about a two or three word answer, is there one design process or are there several?*

Oh, there are millions

*Ok there are some people who would say that design process is step one, two, three, four, five... so, Ok, that’s what I wanted to know... but everyone should have A process of some sort?*

Right

*That’s a knowledge base...*

Yeah, I don’t think there is a it’s not a xxx for me

*Ok, is there anything I should have asked you that I didn’t... or something that you wanted me to know about Landscape Architecture?*

*Tape ended, Vanessa said there was nothing significant so we ended the interview.*
In your experience and from your teaching, what are the qualities of a successful – and I mean just a student that seemed to work out well in your class – a successful student in Landscape Architecture. And we want to try and talk about three areas, mostly for the purpose of diversification; we want to talk about it in terms of thinking skills, knowledge bases, and manipulative abilities, or constructive abilities. Now if we were to talk about the knowledge bases... if we might use a building block analogy, the knowledge bases would be the blocks themselves. The thinking skills would be the strategies for arranging them into some greater whole. The manipulative abilities... say we’re in fashion design; one of those abilities would be guiding material through a sewing machine. Now we can deal with those one at a time... we can just ramble back and forth across what you’ve noticed about students and what they have to have, because eventually they tend to sort themselves out anyway.

Well, a couple of ways to answer, one is: within the Landscape Architecture Department, I’m known among the other faculty and among the students as having an orientation toward process more than product, so I put a lot of emphasis, I put value on helping the students with strategies to solve problems, and to...strategies, procedures, steps, organization, data, data bases, inputs, interviews, background readings, precedent studies... these and other strategies that help students to deal with all the inputs that are required... sometimes thrust upon them, sometimes figure out what to seek out... and then how to analyze those and have that guide their creative process or processes, so that they can then produce some kind of product... so I’m the process guy.

Right off the top, process skills...

Yep

I’ve got to pin it down because process tends to differentiate itself

Oh yes, oh yes

Um, what in your mind are the steps in a process?

Yeah, good question, good question, typically the most important at the beginning is an understanding of who the client or clients are... that comes back to audience... we’re talking about what their needs are. So that really leads into program so you’re starting the program, also a knowledge of site, study area... the context and in Landscape Architecture, more than other design disciplines I would say, site is a very important concept in guidance... because what we do... a design that’s appropriate for one location may be completely inappropriate for another location. Even if it’s the same client and the
same use... context... connectivity, and that’s connectivity in a cultural sense and in a 
natural sense, in an environmental sense, in a visual sense, that has an influence on design. 
So I would say those are two of the most important at the beginning.

Who the client is, programming, and then understanding who the client is, and then 
understanding of the site....

...Site and the context, the region, the surroundings... social context, physical context, 
biological context.

What goes into the design program?

Gee...

These are things I’ve learned I must ask.

Yeah, the design program, typically people think about client needs... and when you have 
one or two clients, usually you can get quite specific on what those needs are. but when 
the client groups are less well defined, a neighborhood, for example, then it’s more of a 
challenge to find out what the needs are. And of course that’s why surveys are great, field 
work is great, site observation works great... but then also in addition to knowing the 
client... the client group, needs and situation, here’s where professional ethics enters in 
and you need to also, in addition to client needs, you need to think about larger societal 
needs or environmental needs like energy efficiency, and the environmental impacts of 
things. So you need to think in terms of your ethical responsibilities... things that perhaps 
the client didn’t ask for but are really needed. For example the client may not be aware 
that what they’re needing in terms of site changes, xxx changes would produce off site 
unintended consequences like flooding

Hmmmm...

...been a hot topic here in the last six weeks or so. So as a Landscape Architect, one of 
your ethical responsibilities is to educate and to incorporate in design ecological 
approaches to strong water management, so if the client is working with oh lets see a park 
or if you might be working for a municipality, designing some parks, or if the client is 
developing a subdivision, or if the client has a commercial parking lot so you have lots of 
impervious surfaces like xxx that can produce a lot of run-off in a hurry, particularly with 
the intense rainfall like we’ve had here the last six weeks... so one of your ethical 
responsibilities, environmental ethics, is to handle that run off in a way that it minimizes 
the flooding potential of the site, in fact that’s why some municipalities have what’s 
called a zero-run-off ordinance... it really doesn’t mean no run-off, what it means is no 
increased run-off, so if you change the site, create a park, for example, or a sports 
complex, or a shopping mall or an office park or a housing site, or something... that you 
have to design ways to retain that... make that running water walk... slow it down...let it 
infiltrate so it that doesn’t run off and cause problems like we’re seeing Cedar Rapids and 
Iowa City are experiencing.
So sometimes the Landscape Architect, perhaps more than some of the other design disciplines, might be in the position of going to the client and saying, well if we do this the way you want to do it, then we also have to do something else here in order to prevent that.

Right, and it may not be necessarily telling the client because of the way you want it done, they might not say the way they want it done, they just might say I want to do it this way, or I want this as the end result. You as a Landscape Architect might have to say, well business as usual we would simply put that in a storm sewer, or put it in pipe or channel it, kind of zip it off site as fast as we can that’s been what has happened, over the last sixty, seventy years, but you might say, ethically, we need to design that a different way you might not have even thought about. Or they might have asked to do it the wrong way and you say well...no, we really need to do it a more ethical way and treat that storm water as a resource and hold it on site... so here are some strategies for doing that... and I use that as an example because a course that I taught every year without exception... is a third year course, it’s an intermediate design course, an ecological design approaches for regional landscape design problems, so these are ethical responsibilities that we need to include into our programming, that’s why I brought it up, into our design program in addition to the specific things that the client or group might want.

So your client-designer interaction is really quite intricate... Um-hmm, and oftentimes in Landscape Architecture, particularly the kind of Landscape Architecture practice that I get, the client group is very large and very diverse...

...requiring research...?

Requiring research and interviews, and many times conflicting needs, you know, where you have to have a trade-off and you can’t have everything, so you might be... (note filter) here’s an example. A few years ago one of my upper level undergraduate classes, working with the City of Perry, that has a now abandoned railroad yard on the west edge of town between Perry and XXX side of town 143 acres... and originally the railroad’s asking price was half a million. Then it came down to $200,000 roughly $200,000... so that’s a pretty good price... but they also know that that site has problems because it was a railroad yard. It had pollution issues... an old roundhouse where they take care of steam engines had what we called an asbestos check because they used asbestos to insulate the fireboxes of the steam locomotives... there was a lot of asbestos on the site and petroleum hydrocarbons, so there was gas and grease and oil from the steam engines, plus they had sidings where they used to put cars and form trains... so whatever would drip out of tank cars for example was on that site. Plus the western part of the site the school district, the Perry School District used, with permission, to landfill demolition material because when they took down three or four old brick grade schools to build one newer grade school. A lot of that demolition material had asbestos type insulation. So our class worked with several environmental consultants and the EPA to learn more about ground fills and pollution. But we also talked to a number of user groups. So we talked to members of
the local bicycle club and the softball association, and the soccer group. And we talked to representatives of a group of workers at the Tyson Food plant who looked at that site as a potential place where they could have a day care facility for the workers children...

...At an asbestos site... yeah this is going to be fun...

Yeah...and a group of local history buffs who were really interested in interpreting the railroad history of that site... and dog walkers who really wanted a wonderful trail system and a dog park... dog exercise... and talked to representatives of a statewide ATV group who had been using the western part of the site illegally to drive up and down the hills on their four-wheelers, and they wanted to get permission to continue doing that, and a group that wanted to see a campground with hook-ups. Well not all these uses are compatible, compatible with each other or compatible with the polluted portions of the site, and even after some clean-up, you know, there’s still some health concerns there. And also we found out that two of the six city wells are located within fifty feet of this property...

Aie-yi-yi

So actually the main motivation of the City to buy this area is... they call it wellhead protection. They know that there are pollutants that are close to these city wells and they want to clean them up, and one way to do that is to buy the land and clean it up, you know, with their own funds and with some... so there’s an example where in a project, when you’re working on programming, and you’re doing a great job of research, you have sometimes competing interests or incompatible potential uses, and you’re not able to serve all of them. So you have to make some decisions as a designer as to which ones are compatible... which ones you want to include in your final design product... (note screening)

And who’s going to be mad at you when you’re done...

That’s right, who are you going to please... of course in that case, it was pretty clear that the client was the City government, and more specifically it was the Water Department Board. The citizens who helped make the decisions for the City water.

So your program is going to come out of the research process and defining the needs?

Yes, and sometimes your own set of values... your own environmental ethics... your own professional judgment. I used to have quite a few students who used the term, “professional opinion.” I said well, I don’t think of it as opinion... I think of it as judgment, because to me opinion doesn’t always have a rationale, and often has emotion tied to it. But professional judgment or rationale... that’s one reason why you are here getting an undergraduate degree or a graduate degree is to develop that professional judgment. So there are a lot of inputs xxx....

Well, we’ve sort of started in with thinking skills.
Good

Process is all about thinking skills, and research is a thinking skill, and assessing needs and establishing a program... those are all thinking skills. What is the difference, if any between establishing criteria for a design and developing a design program?

Well, to me the criteria is what you use to evaluate your success. To me the program is different than that in the sense that it’s defining goals.

Goals?

This is what I’d like to do... this is what the client would want, this is what the neighbors would want, this is what the ATV association would want... so to me program is more defining goals and objectives, but the criteria really you use to evaluate your design. And that’s what I apply, for example, when I’m grading.

Yes, or critiquing...

Yeah or critiquing... first of all I try to find out what their goals are, and then second, try to evaluate how many...or how much of the goals that they have set would be satisfied or achieved by implementing...

Ok, before they’re ready to develop advanced strategies and produce strong comprehensive designs, what basic essentials do they have to know?

That’s more of the knowledge bases...

...That’s what I’m asking.

You know, as you are telling me the gist of the question, one of the things that ran through my mind is what I think about when I am hiring a student to work for me on a research assistant.

Ok

And the kinds of questions I get from potential employers... so when students are working on their portfolio, resume, and cover letter, they ask permission to put me on as a job reference. I often get calls from potential employers who ask about the students’ skills... and so I’ve thought a lot about knowledge base versus let’s say learning ability..

Ok...

When I hire students, I put a lot more emphasis on learning ability than I do on knowledge bases...because I can teach them knowledge bases; what I can’t teach them to be a good learner, or good work habits, or when and how to ask questions if they get stuck, or if they... how to realize that they need to ask questions or seek my help. Or
interpersonal communication skills... if they can come with good work habits, good learning skills, the ability to ask questions, with self motivation... with the desire to succeed... I can teach them the knowledge base. That’s easier to teach than how to be a reliable research assistant... you have to come with that so that’s what I look for when I’m hiring. And when potential employers are asking questions about students... they sometimes ask about those issues, sometimes they ask about knowledge base and skills... you know... do they know which buttons to push. But they also ask about ability to work in a team situation, are they cooperative, personable, do they contribute, are they motivated in team situations, and their work habits... do they finish on time, are they conscientious workers? You know are they reliable, did they have regular attendance in studio? So I get as many questions about their work habits and their learning abilities as I do about...

Ok, let’s deal with the manipulative abilities...

Push the right button?

Ok... So sometimes it’s technology...

Yeah, In fact I’m very sensitive to that because since 1976 I’ve taught computer graphics... long before we had these great desktop computers and laptops. We’ve been using a variety of technology and digital tools, including imaging devices...

Like what?

Like cameras and film, and scanners, and also other communication devices like Global Positioning System, GPS, so I’m also, in addition to being known as a process guy, I’m also known as the technology guy... so I’ve enjoyed helping students find out what the advantages and disadvantages are of different kinds of technology... you know what’s appropriate... what kind of technology is appropriate for a particular project...particular client and timeline... budget. For example in this intermediate level course that I’ve described to you, Ecological Design or Regional and State Design... it’s had different names over the years, but we’ve used a variety of different technologies for this, and one in particular that we’ve focused on every year since 1976 is GIS or Geographic Information Systems. Now, and for the last... oh 10 years, almost all use of GIS technology has been digital. But in all of my classes I still teach mental, manual, and digital techniques... tools for making spatial decisions, integrating data about soils, and slope, topography and drainage and watersheds, land cover and habitat, transportation...all these variables that we have to deal with, particularly on larger study areas... watersheds for example or green belt parks and stuff. It’s pretty complicated so sometimes we’re able to do it all mentally, and sometimes we can do it manually through manual drawings...

Are you talking about hand drawings...?

Yep, hand drawings, but there are times when the complexity is so great that we work with digital tools. So every year since 1976, we use all of those in the class. In the early
years we used more mental and manual approaches to do that, in the last ten to fifteen
years we’ve done more with digital...but one of the common themes is mental. I always
try to help students mentally to integrate patterns in their head... in their brains. And I
say it’s a great skill to have. Sometimes when the study area is relatively small, and
variable patterns are not too complex, and you’ve got enough time, you can integrate all
of those mentally. Basically, it’s a way to do your research about the study area...
patterns...and then analyze or integrate those, and make some design decisions from that
data. Well sometimes the projects are small and not very complex... you can do it all
mentally. Sometimes you can do it mentally plus do some drawing... increasingly,
though, being done digitally with better and better digital tools to do that. But I still help
students to do that kind of integration mentally... in part because it’s a check it’s like a
big mental estimator... mentally estimating distance or area, or mentally estimating the
grocery bill. You go through and you pick up ten items and you get to the check-out, and
you do a self check-out... or a cashier and your grocery bill is $450. Well that doesn’t
seem right! So mental estimate is a really good skill to have... even if you have digital
tools...even if you have surveying tools, it’s still good to have a mental estimate to know
whether you used the technology right... whether that scanner xxx. So we work on
mental, manual and digital, all at the same time.

Ok, you talked about integration a little... that’s a nice thinking skill. You want to give
me an example of a couple things that you might have to integrate on a regular basis?

Ummm, yeah One example is in that intermediate class I was talking about, that third
year class, oftentimes, part of the program, either instigated by a client need or request, or
something that is from designers xxx. Oftentimes there’s a landscape or an ecological
community restoration... the term restoration is very common although sometimes it
really should be reconstruction or enhancement. But basically, here’s the thought: Iowa
150 years ago was covered 90% by native grassland called mid-grass prairie, and on that
map of the state (pointing to a map on the wall) it’s the straw yellow color, so that map
was the result of a four year research project that I worked on. And one of the things that
we did was we read the notes and maps that were created by the Federal Government
surveyors 1832 to 1859. And we digitized either from their maps or from the notes or
both, digitized the vegetation types that existed in the 1840’s and 50’s, so as the Euro-
Americans settled. And many times that model... what the vegetation was like, is
regarded as an ideal by ecologists, because they say that offered – what was there
naturally 150 years ago – offered a combination of values: valuable habitat, maximum
water quality, minimum erosion, great groundwater filtration capacity. So in many
projects, there is either an expressed need of an implied need to as we change the
landscape to include some of those woodland, wetland, grassland; and so designers
oftentimes need to think about how do I find out what was here 150 years ago. Let’s
assume that a portion of the site is appropriate to reconstruct or recreate that ecological
community or mix of communities from the past... woodland, wetland, grassland? How
do I find out about it; how do I determine what should go where? And particularly if I
have conflicting sources of information, how do I resolve the conflict, or if I have a
number of different sources, all giving me a piece of information that I need, how do I
integrate those? And make decisions about what kinds of plants, what species of plants.
So I’ve heard you talk about actually two different kinds of integration: integrating research sources that might be saying different things, and also integrating past – when you’re trying to reconstruct – with present needs.

Yeah,

Those are all types of integration that you practice?

Right, in fact, integration is a term that I’ve used a lot in curriculum development here. In part because you remember at the beginning I said I have a joint appointment, so part of my responsibility – not that anybody told me I had to do this – but it’s just something I feel strongly that needs to be done, we need to integrate information from the sciences, specifically soil science, because that’s the group that I’m most actively involved with in agronomy, but we need to integrate science and art xxx... and that’s one of the reasons why – after trying several other majors – I ended up in Landscape Architecture, because I enjoy integrating the science and the art of landscape. And in a similar sense, you mentioned Community and Regional Planning; I work a lot with faculty and students in CRP on research and extension classes. Planners call me a Landscape Architect, and Landscape Architects call me a Planner. So I bridge, again I bridge or integrate, Planning and Design, if fact, for many years, the aspect of Landscape Architecture, that I was teaching in along with my professional practice was called Landscape Planning. So that’s kind of a blend of Landscape Architecture and Community and Regional Planning. So that’s another aspect of integration... so I feel like one of my responsibilities as a faculty member is to integrate Landscape Design.

Well, in the meantime, you took me in three different directions... right in there; we’re going to have to go get them all.

Alright

First of all you started to talk about soil science, art, and design, well now, those are beginning to be knowledge bases.

Yeah, right

Do we want to pick a few elements out of those? What should people really know about the soil before they become a Landscape Architect? What should the Landscape Architect know about Art and Design? What are a few of those elements that are really important?

Well one way to describe that is to describe one of my colleagues; his name is Lee Burras, and I’m invited to Lee’s classes occasionally, and he comes to my classes occasionally. Sometimes he comes as a reviewer when we’ve got some preliminary products to show or some final products to show. Other times he comes earlier in the design process when we’re doing some research to understand some of that knowledge base, or we do some readings that are conflicting in their advice, and we need his help in sorting out the merits
of both arguments. In fact one of the things he’s said before, just in terms of let’s say the historic vegetation issue... now this is one aspect of the information, but we often have soil maps that tell us about vegetation history as well. And students will investigate what does this government survey database tell them about vegetation in the past, what does the soil map tell them about vegetation in the past. Sometimes they don’t agree, in fact many times they don’t agree. Ok, so I went and asked two experts, two authorities here, now what do I do. Lee says, “Get used to it.”

*Laugh*

He said in your professional practice that will probably happen, many, many times. But it’s really helpful to have Lee come, because not only can he help us with the knowledge base, like some of the issues of soil quality. There’s a debate within... among soil scientists over the past ten years about the concept of soil quality and measuring soil quality. Of course soil scientists...

*See, I didn’t know you could measure soil quality...*

Well yeah, they’re very quantitative, and the idea of soil quality uses some quantitative measures but it also uses more qualitative professional judgments, and some soil scientists don’t like that. So as we’ve read about issues related to soil quality – and soil quality has interesting aspects to it that remind me a great deal of the debates surrounding visual quality of the 1970’s and 80’s when federal agencies in particular, like the US Forrest Service, National Park Service, The Bureau of Land Management, The Fish and Wildlife Service, they tried to incorporate in their land management planning processes a variable of visual quality. In the National Forrest Service for example... clear cutting, that is removing all trees in large – for many years it was rectangular areas – was visually disturbing to campers, hikers, hunters... other people that use the national parks. So it became a lot of interest in, not only the environmental impacts, biological impacts, but also the social impacts, visual quality. Well in a way soil science and soil quality takes up that banner but without the benefit of a lot of the quantitative measurements that soil scientists are used to... so that really makes some soil scientists xxx soil quality. So I’ve had Lee come to class, not only to help us with knowledge base, but to help us with some of these conceptual and ethical issues. So I find he’s very interested in Design, because unlike some of our colleagues over in Agronomy, Lee is not interested in soil for soil’s sake. He’s interested more in soil for society’s sake.

*So he has a sense of purpose working in there...*

Yeah, and he brings up a lot of interesting issues, challenges the students, gets them thinking about... and not just simply accepting something that is a knowledge base...

*( Interruption to change the tape) *

*Ok, because you have been talking to me about using line, form, color and texture to make a scene, and these remind me of a visual concept that we work with called the*
elements and principles of design... they’re very... very similar, and nonetheless, this is probably the first time I’ve heard anyone in this area, from either the Architecture or the Landscape Architecture begin to talk about those. So yes, tell me how those begin to produce a scene.

Well it’s important for us to pay attention to line, form, color, and texture because it helps us interpret the existing landscape, and, it helps us create our own vision, and communicate that vision of some future landscape... of what a plaza might look like if we changed it. You know, if we changed this part of the city hall parking lot to a plaza with seating, with tables where people can eat their lunch and to have planters which can be used to plant trees to provide shade so that you moderate some of the temperature swings and to make the microclimate closer to the comfort zone that we, as humans, desire, that comfort zone is usually defined as a range of comfortable temperatures, over a range of time.

Now earlier, we talked about the difference between criteria and program, and I find myself now saying... are there also, because when I talk about elements, usually the next thing out of my mouth is principles, are there also principles that apply to the way you use those factors, in which case, I’m thinking that might that might possibly be the difference between the program and the criteria... because the principles would factor into the criteria.

Yeah, I suppose one way to think about principles is those would be guides to modifying changing line, form, color, and texture... so it would help make us think about things like balance or symmetry. But also you know, what I find that to me there’s not one set of principles, or a cook book, that we follow. Often to me what it boils down to is deciding how we want people to feel when they’re experiencing the design that we’re proposing, do we want people to feel a sense of awe... inspiration, do we want people to feel a sense of comfort... ahh, relaxation, do we want people to feel a sense of curiosity? One famous landscape architect from the Wisconsin and Illinois region was named Jens Jensen, he emigrated from Denmark in the late 1800’s. He was very active in the Chicago area... actually he first went to Florida as a dairy farmer, and then ended up in Chicago. Eventually, after being a day laborer, maintenance of the landscape, he ended up as Superintendent of Parks in Chicago. And he designed and created not only many parks in the City of Chicago, and parkways, but he designed many state parks and natural areas and a lot of estates... In fact I found out when I was an undergrad studying ... a Landscape History course, studying Jens Jenson, that he designed an estate that my Great Uncle maintained after my Great Uncle retired from farming. He worked in town, did landscaping... he worked on an estate that Jens Jensen had designed. Jens Jensen he often was... well actually later in his career he started a school in Wisconsin, Door County, called The Clearing. And one of the things that he really emphasized was how do you about want people to feel, and he was one in his design, he used curves both as lines and as forms and the idea of revealing some hidden area, to peak people’s curiosity, to encourage them to move through a design... move through a landscape, not be static, sit or stand in one place, but to move through. So he was not one who used much in the way of formal design or formal axis, most of the time... that would provide a long view or an
overview. He was one who used curved form and artfully hidden portions of his design that would peak people’s curiosity and they would say, hmm, I wonder what’s around that next bend in the sidewalk or the road... and that would keep people moving. So there’s another emotion that we as designers could include as one of our goals or what type of emotions we want people to feel... if fact for about 12 or 13 years, I taught the first design course, in our Landscape Architecture sequence, and whenever we would draw perspectives... I had an assignment to draw perspectives. This was a course that dealt primarily with pedestrian level spaces... so a lot of plazas and smaller parks. I would require that students represent in their perspective drawings at least 100 people... doesn’t have to be complete people, you know... you could have a crowd scene and show heads, but the reason why we did that was we spent a lot of time in the class encouraging students to xxx xxx users, visitors when they’re in that space that we design. And that really guides them... the principles that you use, how you apply the principles to line, form, color, and texture to create a new landscape.

So the principles are extracted from how you want people to feel?

Yeah, I think that...

Is that a concept base, or is that an emotive type base?

I certainly think it has elements of both, in fact, that first course we taught a few years ago... that first course in the design sequence, we used a reading xxx, but it essentially was a short reading about different bases for making design decisions and one is a rational basis: that I decide to restore Mesic prairie with these species because I consulted some literature and some experts described the species that are in that prairie community, on those types of soils...so that’s a rational basis for design. The others that we talked about were arbitrary and intuitive, and oftentimes the emotional aspect comes out in the arbitrary and intuitive basis for design. And some projects some clients, some sites, you know the arbitrary or intuitive basis for design plays the greatest role. In other projects, other clients, other sites, rational basis can play the greatest role in terms of making design decisions. So when we are in a review, for example, I ask the student what material did you specify for that place under the swing, oh I see, I intended to use woodchips, why did you use woodchips, and that’s really the question that gets at that basis for design. They could say, I used a rational basis, because I consulted playground safety records, and I found out that the surface with the least injuries, fewest injuries, or the least number of emergency room calls was woodchips... safety is important, so that’s it. Or, they could say because woodchips are the cheapest; or they could say, from my experience, I’ve been in a lot of playgrounds and playground surfaces, and woodchips feel the best to me. Or they could say... oh, I just like the texture, I like the way they look. So those could be potential answers.

Ok, so what you have told me is that in terms of how to use the elements that you are working with... whatever they be, whether they’re plants, or colors, or textures, or whatever, you want students to have multiple basis on which to make those decisions...?
Not that they have to have multiple basis. As they’re making decisions they need to
decide what basis. They need to think about the client, the site, the project, they need to
think about which one, or which ones of these would be most appropriate. It’s similar to
our discussion earlier about technology, particularly using GIS technology, or let’s say in
the process of integrating my research on soils and wildlife, vegetation, topography and
drainage, circulation, transportation, where we work on mental, manual, and digital
techniques... and then on each project, that we get involved in, in the future, we need to
think about which one or ones are most appropriate... so in that sense it’s appropriate
technologies. And I’m making a similar statement about the basis for making design
decisions.

*Choosing appropriate strategies...*

Yeah, they’re not automatically good or bad, but it depends on which is most appropriate
for the client, the project, the timeframe that you have, the size study area, the context of
the study. You know, there are times when all of your decisions could be arbitrary, and
that could be appropriate for a particular project or client, but there are other times when
it needs to be rational. In fact, in my interest and expertise concerned about teaching
process, I often help students with different ways that they can make rational decisions...
that’s one of my roles in the department. There are other faculty who do a wonderful job
of helping students with the arbitrary and intuitive basis for design.

*Knowing the Dean, I’ve got a feeling he sent me to them too.*

(chuckle) Yeah.

*Diversity seems to be the nature of this group*

Amen

I’ve got two other questions I usually ask for purposes of comparison. What would be the
first red flag you might run into in a student in the first or second year where you wonder
if they’re right in the discipline?

Oh, that’s a good question... I’ve thought a lot about that the last 13 years.

*Is there an oh oh factor?*

You know usually the red flag is not inability, because one of the things that I’ve found is
there is a great diversity of backgrounds, but in general, the students who find us... find
our department, they have the abilities to succeed, academically and professionally.
What’s more of a red flag to me is typically their desire and motivation, their attitude.
And here’s an example, every few years I run into a student that talking with them I find
out that... or maybe a prospectus... I find out that their interest in Landscape Architecture
comes from a desire to design golf courses...
OK,

And I said, Ok, it’s wonderful that you have that desire and that interest, however, in our department, and with the type of accreditation standards, that we have, you would not be able to graduate if you limited your learning to only those things that you think apply to golf courses. You really need to be open to a wider range of practice... a wider range of tools, techniques, knowledge base, processes. Now it’s certainly good, and we’ve had many that have had that intense interest, and who have succeeded both academically and professionally, but every once in a while, I run into someone it wouldn’t necessarily be golf courses, but who has a very intense interest and they say, I only want to learn about this kind of stuff... and usually it’s things that they decide apply or don’t apply. And oftentimes I encourage them to approach being a student as a more inclusive, less restrictive, more open... change their attitude to one of a broader curiosity, and to have learning experiences. I said in part, it’s because, you know... you keep more options open about your professional life so you know it might affect your employability. In part it’s because there may be an aspect of Landscape Architecture that could be even more interesting to you... than golf course design, and by being open to a wider range of topics, concepts, approaches, methods, tools that you discover that. And in part, it’s because as a student with that interest it’s really difficult for you to figure out which things apply and which things don’t... you might have an image of what you think golf course architects know that may be much more limited than what golf course architects actually do and know and have to deal with as a professional... so don’t limit yourself. I guess one way to summarize this is to me the red flag is more an issue of attitude or application, or motivation rather than ability. As almost every student I’ve worked with, now getting close to 1500 students... almost all of them have the ability to succeed academically and professionally.

I’ve got one question on something you said, and then I need to ask the value-added question. You talked about the ability to make spatial decisions... spatial thinking is kind of a recurrent theme through these interviews, but each department kind of has its own definition of spatial thinking... and I have found very few descriptions of spatial thinking in Landscape Architecture, so I was kind of glad when you talked about it. What is the nature of that spatial thinking skill?

There are several aspects of spatial thinking that we work with... probably the one that is most universal amongst Landscape Architects is the ability to think in three dimensions, ...to imagine spaces with three dimensional qualities. So think even when we’re working in plan view to be able to imagine vertical aspects... vertical dimensions, and xxx xxx. That’s not easy for everyone to do, for example I mentioned that for many of the first dozen years or so, I taught that introductory course in design skills... I also taught also taught the introductory course in technology... construction technology skills. Oftentimes the skill that we worked on the most... concepts and skills, was site grading. And that is working with contour maps... contour maps of existing landforms and then deciding how we wanted to change those landforms by xxx xxx. And that takes advanced cognitive skills to be able to look at lines... both continuous lines and broken lines in plan view, and imagine what that three dimensional surface looks like. And
when you move a contour... two contours close together, what would that resulting
landform look like... and is it something that you could walk on or ride your ride your
bicycle on, or maneuver a car on... or open a car door, particularly on the uphill side... the
upslope side of a car, particularly when it’s a two door car. So part of that is that three
dimensional ability, the ability to imagine three dimensional forms, spaces, lines and
textures... so that’s part of spatial thinking. Another part of it that I deal with a lot in my
intermediate level course is being able to imagine different locations within a larger study
area. Like a large municipal park system, a xxx court yard, a highway court xxx... being
to imagine and see in the mind’s eye what that area might look like or could look like. So
that’s part of spatial thinking, also... it’s really understanding locations and also another
aspect that relates to that a great deal is wayfinding. Spatial thinking is very helpful in
being able to navigate through a space. And of course as designers, everyone is xxx aid
to wayfinding by using color, line, form, texture to provide orientation, to provide visual
cues to help people get from one point to another... so that’s another aspect.

What do you hope is the value added... the difference between the entry level student and
the exit level student. What difference are you hoping transpires from level A to level B?

Yeah, yeah... well several expectations or several issues or several kinds of value, I
suppose. One, I think of one of my longtime colleagues, Bob Harvey, who retired here a
couple of years ago... for many years taught design courses, graphic communication
courses, best known for teaching history... as an expert. He’s an international expert...
Landscape History... particularly European and North American xxx xxx. One of the
things Bob said was, “I’ve always thought Landscape Architecture was a good Liberal
Arts Degree.” So in one respect, because our curriculum includes not only a third of the
credits or so in Landscape Architecture, but it includes Liberal Arts and Sciences; it
includes some Engineering courses, it includes some Agriculture courses. You know,
students get Social Science and Math, English... not a lot of it, but they get a good general
education. That’s one reason why we’re a five year degree; about half of the approaching
70 accredited programs in North America, about half of them are five year programs. We
tend to be a little bit less of a training institute and a little bit more of a university
education in our Landscape Architecture Department. So, first response is I agree with
Bob, I think it is a good general education in Liberal Arts.

So they acquire a usable knowledge base

Yeah,

Ok, and it’s broad...it’s liberal arts.

Broad, right, and in another aspect, I think that any student that graduates from our
program would be able to find a job, maybe even get a couple of job offers... in
something that somebody would describe as Landscape Architecture. It’s a rather broad
discipline, in part because of that bridge... you know I said earlier I was interested in
Landscape Architecture as a student because it integrated Art and Science. And
oftentimes these kinds of integrated disciplines are a little bit difficult to define. It’s
almost easier to define what they are not rather than what they are... in fact one reason why I became a Landscape Architect and I could teach was because in the undergraduate program I was involved in the faculty, in general, had a rather inclusive concept of what Landscape Architecture is rather than exclusive. So rather than the faculty having lots of blinders on, they saw it as a very integrated opportunity... and there are many different careers and jobs that Landscape Architects can be involved in. So I think any student who graduates from our program is employable. Now, whether they can get a job with exactly the size, type, and location of office that they might like, whether they could get a job in Seattle of the exact type they want... maybe eventually, but probably not at the time that they graduate. But somewhere in the Pacific Northwest, yeah, probably. so it depends on how specific they make their job hunt.

So one of those transitions is not so employable as a Landscape Architect to Employable as a Landscape Architect.

Yeah, another type of value that comes from this... and it’s related to the second one primarily is that Landscape Architecture in general, and Landscape Architects in particular are licensed and registered now in about 45 or 46 states. Forty-five or forty-six states license Landscape Architects in a similar way to the way that they license Architects, Engineers, realtors. Not all of our graduates become professionally licensed professionals. In fact in a survey that I completed about three years ago of our graduates, I found out that 72% of the respondents are professionally licensed or registered... but not all of them are. And not all responsibilities and jobs require or need professional licensure. Professional licensure, typically is very specific in terms of dealing with health safety and welfare. So particularly responsibilities in Landscape Architecture that involve hard form design, construction, and construction for retention, those are the kinds of jobs and job responsibilities that professional licensure or registration is required... and there are other jobs where it’s... Of course there is no guarantee, we don’t tell our graduates, oh yeah come here for a five year program and graduate, and we guarantee that you’ll become licensed or registered... that’s a separate process... that’s a separate exam... fortunately it’s uniform for all of the students, there is a national exam and there is an experience requirement as well. So we can’t guarantee that value, but the opportunity is that they have a good basis or background through their degree in LA to become licensed or registered professionals.

How do you hope the students change from the time they come in to the time they go out?

I hope they learn good strategies to learn, because lifelong learning is going to be with them whether they are part of the Landscape Architecture profession or not. And the easier it is for you to learn, and the more quickly you can learn, the more successful you can be... as a citizen of the world... or as a professional. So that’s one thing... another thing is I hope they become more open... and that kind of goes back to that red flag we were talking about where I’m not quite so concerned about ability, almost all of our students have abilities, it’s more the attitude. Approach to being professional or being a contributing member or society, and that they be more aware and conscious of the impacts of their decisions, their life decisions... you know, which vehicle to buy or
refrigerator to buy; buy that energy star appliance; because it requires less energy and is more energy efficient and less fossil fuel. You know, or even reduce, reuse, recycle... that kind of an approach to life is something valuable.

5 Ok, well is there something that I should have asked you that is really relevant and I need to know?

Oooh, we’ve covered quite a bit, I really can’t think of anything.
Ok... in that case, I need to ask you: I want you to tell me about the qualities of students who tend to be or become successful in Landscape Architecture. With regard – and this is mostly to diversify the response a little – to three areas: knowledge bases, thinking skills, and manipulative abilities. Now the knowledge bases tend to be like the building blocks and the thinking skills tend to be the strategies for maneuvering the building blocks. In other words, your knowledge bases are going to be quite fundamental or sometimes are, there are also upper level knowledge bases. And then your manipulative skills... if we were doing fashion design that might be like guiding material through a sewing machine.. but largely things you push and pull around with fingers, arms, stuff like that. So... from your experience, what does it take to be or become a good Landscape Architecture student?

Um, I think it takes fundamentals, I mean there’s some fundamental skills like understanding some math, understanding communication,

You want to characterize that communication a little?

Yeah, I would characterize it both in oral and graphic form. They have to be able to conceptualize an idea and articulate that concept in a variety of forms, so what’s the significance to the particular topic, project, site, um goal and then being able to articulate how a given idea improves, or makes better, or broadens the topic in understanding

That ought to bring xxx in a hurry

Yeah, I think, you know if you want to carve away at all the knowledge and skills... I’m trying to think of all the skills that we teach them... I think there’s also just a basic understanding of how things relate, and I can’t identify one particular skill or trait, but it’s just understanding how one main type, you know, A might relate to B and vice versa, and also how A relates to B, to create C. A very simple example is: if the soil is bad, and you want a particular plant there, and you don’t plant the right plant there, the plant dies. Right, that’s a very specific knowledge... bigger issues would be, you know, adjacencies, and dealing with public adjacencies, if you have residential area adjacent to an industrial area, or if you’re building an industrial area in a flood zone... those things relate. And...

That to me seems to be a parts-to-whole relationship.

Yep, definitely parts-to-whole, um-hmm.

The one with the soil and the tree that doesn’t go, that might be something else though.

That might be something else, but like I said, it’s a very specific example.
Um, so far we’re talking about... in a lot of ways... how we establish... I hesitate to use the word... you used goals, I’ll use that one, how we establish goals for the design.

um-hmm, right, I mean there’s some fundamental listening skills too. Where you know I think the successful student um, has the ability to listen to what is said in a factual manner, informative information, you know, this person stated this. But then it’s also being able to...this is probably getting more into the thinking skills...

That’s ok.

When you hear the information, how you can read further into the information as a way of relating it to Landscape Architecture. Um, you know, relating to design, relating it to some idea, introducing knowledge and information that a Landscape Architect has that relates to what somebody is saying about that information.

You want to give me a few examples of that kind of knowledge, that would cause you to go yep on your checklist as you’re listening?

Um... I’ll have to think about it, it might come out later on

That often happens by the way, that often happens

Yeah,

Um, Ok, lets talk about the role of conceptualization, then. What role does that play in Landscape Architecture?

I think it plays multiple roles one primarily would be the creative role... creative slash innovative. Anybody can, I think, push objects around on the ground, like a pool, a terrace, and a house, but if you want to deal with it creatively and innovatively, there are some knowledge skills that we have, but then you just have to be... what’s the word... innovative, willing, and experimental.

Experimental will work

Experimental in the ways of... you know, you want to try, you know, some new material... um, and it’s not something that’s typically used... for instance that could be... um, glass... crushed glass. You might not think because somebody might say glass on a paving or a surface would not be a thing for feet, but you’re making a sculpture garden and you want to make that as a bedding material, not something that you’d be using... you have to overcome somebody’s perception...

...of cut glass as dangerous...
Yes, glass, feet, bare skin, cut, and then say, oh, innovatively, you might use this because of its color, its balance in relationship to some other elements and then maybe some other... innovative idea.

So that one is a thinking skill, um... the ability to be creative, innovative, experimental and you mentioned another one there, too, I think, you said pushing materials around... or pushing things around, and that, I think, that’s probably one too... How does that skill work?

Yep, Oh it works on a knowledge base that you don’t put a uh... you have to use your knowledge... you can’t put a pool on a steep site, Right... but you have to use your knowledge to understand how that pool doesn’t sit like this, (gesture) but actually has to sit like that (gesture)... and then how you actually put that back in... how you sit it into the ground, and move material around, um, is important... And it might be done differently from another discipline, Landscape might want to deal more with the topography of the earth as opposed to structure.

Alright

Yeah, so... there’s, there’s some basic knowledge of topography that you can use creatively and innovatively and then you can move it around to be successful at the level Does that sound good?

And a while ago you mentioned soil too, and I’m guessing that’s another knowledge base that has to be there.

Um-hmm, right

Because as you say if they don’t live where you plant them, it’s not good.

Right, or, you know, the same thing goes if you want to plant a structure in a particular area, and the soils are not conducive for that structure, then that structure should not be there... or you have to do something to make that structure be there.

I have done soil borings for things that weren’t supposed to stand on that soil... I know just what you’re talking about. Let’s see, we’re beginning to accumulate some knowledge bases, uh...let’s branch away from that for a little and maybe we’ll talk about manipulative abilities, what do they have to be able to do physically with hands... maybe even feet.

I guess they draw...

Draw, yes that’s a big one...

Both by hand and as well as using digital means, and they have to draw in different ways, conceptualizing is one, developing design is another, going into further detail,
understanding the relationships of materials, and then actually drawing in ways that become documents for construction.

*The documents for construction... most of them aren’t the ones show to the client...*

Yep!

*They are...?*

They’re a different stage in the project... they may not understand them as well as a perspective drawing... depends on the client... but they’re also valuable in that it meets... it takes that perspective drawing and puts it into a language that follows a logical order, and that a contractor can provide the correct costs, or provide the estimates, a schedule, and then actually build it.

*You said you also do perspective drawings that... they enable the client to visualize?*

Umm-hmm

*... And you do construction documents that enable the contractor to produce, or create, or estimate...?*

Right, right

*Ok, that’s a bunch of drawing skills, um*

I think Landscape Architects have to write too...

*Write, that’s a knowledge base? What kind of things?*

I would say anything from... well they have to be able to write in a way that presents themselves, so um whether it be in a letter format, proposal, portfolio. They have to be able to write, you know, in a way that their ideas that are drawn match their ideas that are written, so they can use it as a set of communication tools to explain ideas...

*Now this is probably the first time I’ve heard about this dual communication method where we use the visual AND we use the written*

Umm-hmm, Um, writing also involves... well if you take it from the idea that you conceptualize and you visualize through drawing, you do the same thing a written word; you conceptualize and write about it, and then as you produce documents, you also write specifications... which are a means that can assess the products and the execution of the construction documents, by the contractor. So they spell out, you know, the requirements for the contractor.
So far we’ve talked about two dimensional representation; is there also three dimensional representation?

Yeah, there’s three dimensional representation in the perspective drawings, and computer modeling... physical models

What is the role of model building in the educational process?

I think it’s an active role, I think that it allows students to visualize what they’re thinking in a different way than two dimensional representation. That you know, the hands-on experience of actually building something, and putting materials together... understanding how material might represent real materials, um... how it might... I was just looking at models...(indicates a pile of models)

That’s alright, go ahead

How it’s also a way in which to develop an idea and to test... test ideas.

Ok, in organizing your curriculum, do you tend to use model making to enable drawing or the other way around?

Well I don’t think it’s linear, I think it’s circular, I actually think that we use them both back and forth. You might do a model to work on a drawing, or be able to see a drawing come from it, or you might do it vice-versa. And you might... well the one aspect is the model might analyze what the drawing has done, to a certain point, and then expand the idea, and the same thing, and then say cut a section, which is a type of drawing, that analyzes that model.

...Section drawing... another kind of drawing. Ok, so you’ve got a constant integration of the model building with the drawing skills in order to full visualize the idea.

Umm-hmm

Ok, good group of manipulative abilities right there. If nothing else occurs to us, that’s still a good group. Um, how about... we talked about some thinking skills, we talked about we talked about creative thinking, we talked about experimental thinking, we talked about seeing relationships, we talked about parts-to-whole thinking; are there other big ideas that they should be able to manipulate?

Well there’s analytical thinking skills,

Another one...¹

For example, you have a 50 acre site you have to be able to look at the site, analyze the existing features, soils, tree, vegetation, topography, structures, context... individually,
and then also be able to compile that analysis together to... arriving at not answers, but arriving at what the site is... what are the components of the site, and how does it relate to the project. *(note factor and filtration)* Analysis can be just pretty straight forward, and I think that analysis comes from the interpretive aspect of somebody’s ideas. Your information is given to you, and you analyze what’s been given to you to relate it...

*What comes after the analysis?*

The design comes next...

*Ok after we analyze, we’re going to design it. What would be... this is just another way of trying to think about this, but what would be the first red flag if you’re teaching, oh a sophomore or a junior level course, you have a student that you think is going to have problems learning this discipline.*

Well, drawing skills are very good indicator. If they’re having problems or finding it difficult to... like an observation sketch... if they’re having difficulty drawing a three dimensional environment on a piece of paper, that, to me, is a red flag that they don’t have strong visual skills.

*Visual skills... what is the nature of visual skills?*

What do you mean?

*I don’t know, what does it look like in your head?*

I’m not sure how it works in my head, cause it doesn’t start working until I draw

*What does it look like if they have good visual skills, then, are there some features that show you that?*

I think one particular feature is that they independently are able to... um use different drawings to explain their ideas. *(note because the real image is in their mind)*

*Ah, different drawings...*

Well they learn, I mentioned section drawings, one type of drawing; and then plan drawings is another. If they are consistent in just using plan, to develop ideas, then I see that as a red flag that they’re not looking thoroughly at their idea. If they are using the plan and section together to communicate ideas, but also to investigate the ideas, then I’m starting to see them develop visual skills... that they have the ability to look at a particular idea in a different way.
As I recall, a plan drawing tends to be a flat thing that shows where things are, a section drawing tends to intersect it on the perpendicular, or at some particular angle so as to show interior, or qualities that are above the flat area...

Yep,

So if they’re working with the section drawing, and the plan drawing, they should be looking at this thing (gesture) this way and this way. So it begins to have 3 dimensions. It has the length and the width, and it also has, in this case, height, but perhaps also depth.

Depth, right,

So in many ways, we’re after 3 dimensional visual skills? What is the nature of that 3 dimensional thinking?

I’m not sure I know what to say

Maybe you already said... You said that if they are able to use the section and the plan, and see those interchangeably, then you know, anyway, then you know anyway that they’re able to visualize this thing in 3 dimensions.

Yep

Ok is there anything else that would bother you a little... if you saw a student that wasn’t able to do that, or something that they do sometimes that you think is going to be a problem?

Well... if they’re not working, that’s a problem.

Not working...

...Because I equate that to not thinking... they may be thinking about it, but they’re just thinking about it, they’re not actively engaged.

Engagement, that’s ...

I mean I guess there would be some specific skills, you know if you have a knowledge base of grading...

Knowledge base...

... a knowledge base of grading, and a certain set of rules to follow, um, you can follow those innovatively... and the goal is to be very creative and innovative with it... but if you just follow those rules, you’ll be successful. You’ll be more successful if you can push the rules in the media, in ways that still follow in the logic, but also can be creative. And
I mean there are red flags when they don’t understand the relationship of the graph—... the visual skills... the graphics of a grading plan which is just a line drawing, but the idea that you can insert a wall or a stair in a particular place, as opposed to another place then, if they’re putting in... this is getting too specific... but if there’s a stand of trees, on the site, and they’re putting their wall right in the middle of the trees, then understanding that all those trees are going to go away, right, as opposed to saving those stand of trees by sliding the wall, or changing the grading around so they can stay. That’s a very specific skill, but the red flag would be if they don’t... if they can’t see that relationship.

So actually, what I think you just told me is seeing alternatives and consequences

Umm-hmm, right, yeah

If they put the wall in the middle of the trees, then probably the trees can’t stay, but there is another place that they could put the wall.

Right,

OK... and um, is there some way that you try to encourage them to generate alternatives, or to think about alternatives?

Well, it’s in requirements... in the studio project, we may require them very initially at the very beginnings of the project, to come up with three alternative ideas... that are different, three different ideas... that resolve or address the problem in the project... and then from that they can hone on one, combine two, or what not, to develop further, into a more direct idea of theirs, but it’s always better to come up with more than one... and more than one that are different, that you can... so that they can. “A” understand what they are really interested in, and “B,” be able to understand that the alternatives might be better than the initial idea,

...frequently

... and then, “C,” would be to just test... uh, test their ability to think in broader terms than just the initial idea that comes out of the head when they run, and I think that might be a way that they combine analytical skills with creative skills.

That taking the first idea and running with it, that bothers you? (said with a smile)

Umm-hmm, yeah

Yeah,

Unless it’s a really dynamite idea... and maybe after they do two more alternatives they come back to that, but the fact that they’ve done the other two either reinforces that first one or gets them... gets the wheels rolling... as opposed to thinking, Oh, I have to write
something... pick up a pencil; you know, you can write in other ways, not just with a pencil. That’s kind of an abstract example...

Comparatively, what do you hope to see in the way of difference between an entry level student and an exit level student? What kind of changes do you try to make from beginning to end?

I think in the end, they should be complex thinkers, their ideas should be a little more complex... um, they should be able to get to the idea faster, they should be able to understand their ideas conceptually, and in a detailed way... and I guess that would go back to the consequences... I’m trying to think of a simple example... if they want to put a wall in the project, in the design... what are the consequences of putting in a bolder wall, a concrete wall... just saying a wall at the entry level is great, because you know they understand how to make that happen... or probably second year... these fifth years, they say, Ok, a wall... it can be any number of things, and so now they’re thinking in more detail than just to have a simple... yeah I guess simple wall.

Step one is knowing that you’ve got a wall, and step two is knowing what kind of wall it is, and step three is able to visualize the wall in the material and situations and so forth...

Umm-hmm, um-hmm, Yep

Ok, I think that makes sense...um, are there other things that you want to see in terms of change? You can think a little bit about what it’s like for you teaching first year students, and then what it’s like teaching fifth year students...

Yeah, I think probably one of the major changes will be the understanding of what Landscape Architecture actually is. Initially, they come in thinking its fairly landscaping-like and they leave, they understand that, that is a very... that’s an important component, and a viable component, but it’s related to all these other things that are huge possibilities. You know, so they may come in initially thinking that when they’re done, they’re going to be working at a nursery, and when they leave, they’re working at an urban design firm, working on projects across the world. And that they understand that because of the value of education, and their ability to use these visual skills, that they actually can be in different places and understand different elements, ideas or projects.

What are some of the elements?

Of landscape? ..... I think social issues, environmental issues... beyond just the buzz words in the system today, um, cultural issues, historic... present as well as future...

That’s an interesting one, understanding future

Um-hmm, that goes back to... I really think, that the actions and consequences is an important element.
**So throughout their career, would they be growing in their understanding of possible consequences?**

Yeah, for sure, and growing and being to learn further about what the consequences might be and the impact of environment... or actions... they want to be, ..... one pretty simple example of this.... in Grading Class, they think that to be environmental in this class; you don’t do anything to the site. You don’t... you grade as little as possible, but that’s where they would learn, as an introductory course, they would start to understand that... which is a good place to start. When they’re done with the class, and graduating, they realize that anything you can do to the site is going to be manipulated um, and grading can be... you can be conservative when you grade... you can act in a conserving way, but you’re going to disturb the site, in more ways than thinking that you won’t touch the site at all, and I think that’s a pretty big jump for them to get. And the actions, their designs, and the way they communicate their designs to clients and contractors can actually be beneficial to the environment, but it’s going to take some WORK, in construction to make that happen.

*What is the... I’m thinking that maybe Landscape Architecture works with sense of site more than perhaps any other program in the College. What is the nature of that sense of site that you want them to demonstrate?*

Well I think that it’s you know important for them to, understand physical characteristics of the site: trees, soils, bedrock, or stone, or what’s the subsurface. What’s below the surface that might affect what’s going on at the surface? Um... water

*Oh yes,*

Those are physical features, but then to match those with cultural features... actually how people have used are using, and will use the site. And then how those two elements aren’t looked at vertically, meaning the use of the site should not undermine the physical characteristics of the site. And the physical characteristics of the site should not dominate... there should be a more harmonious relationship between them.

*There was another word that slipped in there that we should probably stop and take a look at for a minute... people... people, and we talked about them also in terms of listening, but people in terms of users, and people in terms of clients, are they the same, are they different, and what is the Landscape Architect’s relationship to both or those groups?*

It’s going to vary on the project, if it’s a private project uh...... well if it’s a single family home for an individual client that might be the user. If it’s a public client, that’s not necessarily the user, you know if it’s a government project... national park, state park, even a civic project, the end user isn’t always the client, or just the client. The second part was how do the two relate?
How the Landscape Architect has to relate to those groups

I think... to the client, making sure the relationship is... the client understands what the Landscape Architect is going to do, and that the Landscape Architect understands what the client wants. So it’s understanding xxx for wants and needs, and being able to articulate those.

And the user...

I’m still thinking on that

Thinking on that?

I’m still thinking, cause it gets tricky there. One of the aspects of the user that is important to understand is... you kinda have to understand who the user is. You’re not going to specifically identify... I mean to visually identify the user, but you make some general investigations and assumptions for a civic project, for instance. Understanding the user in terms of places to sit, places to walk, um... matching those types of use, sitting and walking, standing or laying down... speaking, and matching those to particular site qualities... you wouldn’t put an amphitheatre, right at a major highway interchange unless you provided some sort of sound barrier or addressed the sound in some fashion. It might be better suited somewhere else, or not at that site at all. And so I think Landscape Architecture students should understand how that relates to the user... Some of the behavioral aspects, social aspects...

Ok, we’re getting close to done... ah... I’m going to back up and talk about a couple of... I got the site here, a minute ago, and that’s good, complex thinking... you’re looking for some complex thinking, at the advanced level. What kinds of thinking would cause you to believe that there was complexity there?

Um, hmm... I’m not sure on that, I’m trying to think of a few projects that will help me... So what I see happening is... for example I teach a Professional Practice Class...

Ok...

And the straightforward way of teaching the class would be just to talk to them about how we go out and get a job. What they’re going to be doing at entry level, how they’re going to move up in the company, what the actual company structure is... related to different types of practice, and then within the firm how you go and get projects, market, deal with human resource issues, and the course could be done at that point. Oh then talk about the actual design services, what it is the actual firm is doing xxx, and that’s the professional practice class. In my opinion, and the way I structure that particular class is I do that... those aspects, but I’m really more interested in how the individual develops their own attitudes about being a professional, and how those particular attitudes can relate to all those practice issues and ideas. And to me to be successful is to be able to
understand... the complexity comes from understanding one particular idea... this all goes back to parts-to-whole...

That might be the main thinking skill...

Yeah, I think that is actually, might be, because I draw from not just Landscape Architects in that class. I draw from Industrial Designers, Architects, Artists, and try to make a point of how practice can be, not just how practice is run. And I think that the complexity really comes from when they can start to really take their individual experiences, individual knowledge, relate it to a particular topic, discuss it, as a class or within a classroom environment, and then learn from that particular exercise... or discussion. There, they can start to... I think it’s still about relationships, how they can relate their ideas to other ideas.

Ok, well then you know if you keep coming back to it, it’s probably a primary thinking skill that you’re working with. Ok, is there anything that I should have asked you about this discipline and I didn’t think of it... something you just really wanted me to know about it?

I can’t really think of anything.

Ok, in that case, I can turn those machines off.
Other Voices
Ok, that should certainly give you the kind of broad experience base that I’m looking for, for this particular question... and what we’re hoping that you can enlighten me on today are the qualities of a successful student in architecture? From your experience and in your teaching, what things seem to be most important to student success in architecture? These things might include specific types of thinking, manipulative or constructive skills, like guiding material through a sewing machine, or knowledge bases... so as students work their way through architecture, what do they need in their toolbox, both things that they seem to do easily, and things that they seem to struggle with. We can break those into categories, or you can just wander across them.

I’ll wander a little, but feel free to interrupt me if my wandering isn’t constructive for your purposes.

Well that’s the good thing about an interview,

OK, there’s two of us, it’s amazing. The first thing I would say, and I’m going to say this is such a sprightly way, because, I was just thinking about it yesterday, is the first and foremost among the qualities is what I would call a persistent curiosity. Or maybe I should call it a persevering curiosity. That means a curiosity about what the project means, because I really don’t understand this project, or a curiosity because this is a challenge that’s driving me crazy, and I need a break, but actually I need to keep banging my head against the wall, so a kind of stick-to-itiveness, but not in just a dogged way, combined with curiosity, a stick-to-itiveness, that you are compelled to do by your own curiosity. After that, what else would I say? One has to... holding oneself to a high standard... and internalizing the high standard of the so-called teacher. So you’re not working for the teacher’s high standard, you’re working for yourself. I’m going to say that’s actually number two. Number two is feeling that you’re not just working for the teacher, you’re working for yourself. If you don’t feel that way; it’s not going to happen. Ok, now I’m not going to number them, but I will say surely an interest in, or a passion for materials, and the ways in which they perform. So that includes curiosity about um you know about whether it’s paper or ice, it should be interesting, um, well I’m goona say those are my top. Those are tops, and I realize that they’re maybe not as, how can I say, discipline specific be thinking.

That’s OK we’re going to dig into them a little deeper after a while. First impressions, and they’re always interesting, what people will tell you right off the top...

OK

Let’s start to break them a little bit now, and I think maybe I’ll start from the bottom up. Before they can begin to manipulate in their mind – do the thinking – about the things that are architecture, what knowledge bases have to be in place?
Do the thinking about the things that are architecture...

*There should be certain modes of thinking, challenging thought patterns...*

Right!

*We’re going to ask about those later, but what has to be in place before they can even begin to do that?*

Hmm

*Stuff they should know in order to manipulate it.*

Manipulate things...?

*Mentally, We’ll talk about that other kind too eventually*

I’m not sure, you know, I think I’m being a little bit slow this morning. Maybe you should stop it for a minute.

OK

(resume) **OK knowledge bases that are extremely relevant in your field.**

Ah, you know, that’s a very good question, because for the starting student, I would say that there are things... like...you know I could say, for instance, basic geometry, but on the other hand I also want to say that I’ve seen students – Oh, I’m going to be a very slippery interview subject because I’m going to say also that I’ve also seen students who really have an instinctive feel for geometry. In other words, by experimentation, can figure out that if you put three pieces together, it becomes a triangle, and look how stable it is. ... And they may not know why, although they can intuit, they’ve intuited it and intuition will lead them to logic. So, I would say that a feel for geometry, but I can’t say a knowledge of geometry, I’m going to say a feel for geometry, which also can come from just living in the world, I mean observing the world, and being a body. Um, a feel for... it’s all going to be feeling here, yeah...

No, I totally understand what you’re saying... I might have understood geometry that way.

OK, good, exactly, you don’t have to be able to say but you know it’s isosceles, it’s not what’s important, you don’t have to know... OK. I would also say a feel for the concept of positive and negative, two and three dimensionally. Ok a feel for the relationship between two and three dimensions, I’m also goona say a feel for, a feel for structures, and here I really mean a feel for, because nobody comes in... but if everybody understands that if you’re wearing a running shoe, your balance is better that if you’re wearing a stiletto heel.
Yes

I mean, if you have to, if the police pull you out of your can, would you rather be wearing a running shoe or a stiletto?

Yeah, OK

And then, I would also say um... I’m not sure how much farther I can go, there are some intellectual issues... and language issues, but they’re not there for me yet.

Well, actually, some of those tend to come out when you start to talk about other things.

OK

In addition to knowledge bases, there are some things that I would call thinking skills, and these are the mental tools that they use to manipulate things and eventually produce... Uh, what are some of those modes of thought, or thinking skills that they have to have? I know we used some of them before...

Um, well clearly, the first one is the idea to reflect upon your own work. If you can not reflect upon your own work, you will not get from step one to step two. So the ability to reflect upon your own work, The, um, I don’t know if I should call it the ability to... to or the will to repeat. Maybe those are the two that are so big.

OK, when you talk about repeat, are you talking about iteration?

Yes, I’m talking about iteration, I don’t mean repeat, I mean reiterate. Thank you.

OK, and um, I’m going to ask about reflective thinking skills because that goes to John Dewey for me, but I’m wondering how that relates to critical thinking.

Um, I would say really, it’s the same thing. I would say critical thinking is a newer and broader... I don’t know if its broader, I’ll just say it’s a newer way to say reflective thinking.

OK, it’s a current research topic of mine, and you’re right, it’s a very slippery concept.

Yeah, Yeah, and it’s become very politicized, but I would say that it was, you know, related early to critique and cultural critique, and intellectual critique. I would say that on the most basic and purest and most important level, it means being reflective and self-reflective. You know, goes to really to personal self-awareness which is why I always think that, you know, the relationship between psychological and psychoanalytic thinking, and design and design teaching thinking are so close that I can’t believe we’re not all over it, but that’s another story.
Well actually, one tends to drive the other.

Umm-hmm

...throughout history, and it makes an area of interest that I study.

Umm-hmm; we’ll talk about that sometime

Yes, we’ll have some fun with that someday

Yes, I’m very interested

What I’m learning as I’m interviewing you is that you and I are fairly interest in some of the same things. So yes, we must visit sometime.

Umm-hmm

I’m going to move on to manipulative, and then we’re going to come back over some of these things. What kinds of things do they need to be able to push and pull around with their fingers? If we were talking about fashion design, we’d be talking run material through a sewing machine in straight lines and curves. What kinds of things do they need to be able to do in terms of manipulations?

It doesn’t matter

It doesn’t matter?

Well, I’m going to assume that anybody who can run material through a sewing machine and be precise with stitching, can also, sooner or later, be precise with thinking about how a bolt goes through a hole or cutting a chamf for a joint on a piece of model wood, maybe I’m assuming too broadly, but it is my observation having taught core and other first year courses, and also having taught also across the curriculum, that’s it’s all the same, that craft is craft.

So there’s one of them... that one, that one, craft is a funny thing, it’s half knowledge base and half determination.

Yes, exactly right. Absolutely right.

First they have to know what they’re trying to do, and then they have to want to do it.

YES, yah, yah, it takes a commitment.

How about other things that they do with their fingers?

You want me to be more specific about...
Yeah, I would

OK, you see, for me, it is hard because when I teach first year, and also the way that I teach and we teach, architecture more and more, it might be that someone in the fifth year is sewing, you know, is sewing something that holds space and maybe is inhabitable, and so do we call it architecture? It’s architecture, but it’s also involves sewing, I mean, architecture is becoming, you know architecture is not just post and beam anymore, you know architecture is not just like can you... it’s really become so much more versatile in terms of materiality, and in terms of skills, in terms of the ways that things are put together, and the kinds of things that are put together, that it would really not be true to current thinking and practice in architecture to talk about, you know, the idea to you know, cut a beautiful joint in wood. Lots of architects never cut joints in wood anyway. They may draw joints in wood, but they don’t cut ‘em themselves, machines cut ‘em.

That actually might be a knowledge base, yah, in this day and age, ah knowing how to run those machines that cut the wood accurately.

Yes, absolutely,

Because they’re using the accurately cut wood to build...

Yes

...probably what, models?

Yes, well, at this point surely, well at this point in terms of the knowledge base they need to have, what is that, let’s go back to the original question, ask the original question again?

We’re, working with manipulatives, what things do they need to be able... in order to move ahead in the second, third, and fourth years, what do they need to be able to do with their fingers... push, pull?

OK, they need to be able to build models

Build

OK, now I’m backing away from the intricacies of the question, build models, they need to be able to do freehand drawing, I don’t mean immaculate magnificent portraits, I mean quick sketching, both, I’m going to say pictorial, both representational, and analytic, and maybe analytic more important than pictorial. Many, many students and architects can not do this, and that is a big problem. But ok, so this is my opinion, what they need... and obviously, they need to be able to manipulate the computer.

The computer
Yes, there we go, I know

*Ok and what types of computer manipulations are we talking about?*

Well, we’re talking about a host of programs there are programs that are, well for me personally, this is my opinion, right, the representational programs, there are programs that do representation, and there are programs that ah whew... help solve problems in design. And at this point, in terms of your possibilities, they’re both important.

*Now, you see, that’s a nice list of manipulatives, there...*

Good, OK, I’m happy

*Those are things that they’re supposed to manipulate, I especially appreciate the detail with the drawing.*

Yah

*Because I think as we move across these, and across departments, we’re going to find out that frequently one word means something to someone and something else entirely different to someone else.*

Yeah right, and when I say representational and pictorial, I just want to clarify that further...

*Oh please!*

I don’t mean so your mom can frame it and hang it in the living room. I mean more like a kind of scribbling note-taking thinking drawing. As opposed to, I mean an analytical drawing is also note-taking and thinking, but I mean also a kind of umm, as you travel, as you look in the world, needing to collect observations, for future, to be mined in the future.

*And then, what is it that you present to a client?*

Well, you may or may not, it depends on what kind of client you have. Very often, you don’t present those kinds of scribbles, unless, you know, they are also beautiful and pictorial and the client is going to appreciate them. And you also may present diagrams to a client, simple diagrams which help the client understand things about orientation, dimension, and so on. I mean that’s may or may not, depending on what the stuff looks like and all the personalities involved. But not necessarily, that’s not the point, that’s the internal work of the designer.

*OK, That, you see, that’s a nice description*
Yeah, and I wanted to pursue if farther because I know everyone will say drawing, but meaning, we really do mean different things, you’re right.

*Well that, that takes me back to another thing that I’m already learning people mean different things when they say it, and we went past reflective or critical thinking a little while ago. Do you want to take that into a little bit of depth for me? What type of a thinking skill is that for you?*

Well I don’t know if I’m answering correctly, but I will say that

*But there isn’t any correct answer...there’s only opinion*

Well, you know when you see a therapist, when you see a therapist, one of the goals of the therapy, at which point you can stop being in therapy, is that you have internalized the therapist. Right, and in the same way that as a child growing up, hopefully you’ve internalized the mother, and its a good mother, and so then you can you know leave the breast and you know go to work and all those things without feeling bereft and alone, in the world, but feeling cared for. And I’m going to say that critical thinking and teaching is very similar, because one of the things that needs to happen is you need to internalize the critic, so the teacher comes to the desk and says, “I don’t know, you know, doesn’t, don’t you think that drawing, you know, if you kind of back away, you see how that drawing looks like its falling off the page? You know and it doesn’t look like it’s.... I’m very distracted by the way, by how close it is to the bottom, and you don’t really want me to notice that, and blah, blah, blah... and hopefully, the next time the person does the drawing, they say, “Oh, but I remember she said to me last time, I drew...is this one also too close to the bottom?” And then, to extend it farther, no, it’s too close to the top. And so on, and so on. So there’s an intern.... So beginning literally by saying what did she say last time, is this happening here too, next step, what would she say if she were here? And then you hear the little voice right, just like you hear your Mom’s voice, or whoever’s voice, and then ultimately it’s not personified in the teacher, it’s you yourself being able to ask those questions.

*So an internalized... element one, at least, is an internalized sense of what can be wrong?*

Yes,

*OK,*

...and number two is an ability to talk to yourself, you know there’s some kind of... I don’t want to call it splitting or separation between the you and the you, you know, the person who makes and the person who reflects, they’re clearly the same person, but I think you have to kind of... designers need to be multiple personalities in order to have various parts of themselves in action around the design process. The person who makes impulsively... just shllerew, the person who then stands back and says, “hmmm,” the
person who takes deliberate action, the person, I mean all of these different characters have to coexist within the designer.

*Ok, so there’s a little look at reflective critical thinking.*

Um-hmm

*Um, what kind of a difference do you hope you’re making between a student at the entry level, and a student at the exit level.*

Phshewww, what a question... great question, real good question... great question. Wow, well the student at the entry level, well the student at the entry level is being introduced or is going through an introduction to the field, I mean the field, the whole field and being helped to find their way in. The student at the end, I think that you know, my concerns are much narrower, my concerns at the end, well you know the end, I guess I still also am hoping that in the fifth year or whatever it is, I’m helping the person strengthen their own relationship to that field. I never thought of it this way, and I might disagree with myself in ten minutes, but that’s the way that I feel, you know, to define and to clarify their own um their own issues, their own interests, their own voice within that field. Because you know fifth year students, students at the very end should no longer be um, should be self-directed... and I’m helping them with self-direction. It’s very interesting how I’m realizing that sort of finding your way through the field and self direction, those are very similar but very different at the same time.

*OK, so the first quality would be a difference in the amount of guidance required?... or the kind of guidance?*

Yes, yes both.

*Um, let’s differentiate a little bit*

OK

*The amount, I think we’ve kind of covered*

Yes

*What kind of guidance?*

Well, um in the first ... that’s interesting, I have the feeling already that my comments are going to keep converging, conceptually on themselves. Ah, because in the beginning, the guidance is to... um, I have to tell the student what I see, and how I see it and explain it to them in depth and hope that I’m helping them to see what I see. I need to to instruct them in basic skills... um which I don’t expect to be doing at the... I mean still, I’m still giving a lot, I’m giving a lot of instruction in the beginning, I mean instruction is essential; it’s
not simply helping them. I’m teaching, and then I’m helping them do what I’m teaching. Um, at the, at the upper level, I’m... you know we’re still talking about the lower level?

Well, I’m going to go back and dive into this just a little more, because you say you’re instructing more, at the entry level...

Demonstrating,

... demonstrating, OK, what kinds of things, what kinds of inputs do you find that you do more of there?

I draw for them, I show them how I draw, I take their models out of their hands and show... I mean in a friendly way, and I show them things that they can do with the materials that they may not have thought of. I demonstrate... usually as group stuff, right, I demonstrate properties of the materials, the ways of manipulating the materials they may not have thought of. I show them how paper in one condition, is completely floppy, but when folded, can become structural. I fold the paper multiple times and I explain to them the principle of corrugation, which I point out they’re already familiar with, but they may not know that’s it’s called corrugation, and they too can do it with this paper, so there’s a lot of demonstrating. there’s a lot of showing... and there’s a lot of doing on my part. So... I may actually say, “Yes, but what if you did this with your model?” ... and then proceed to manipulate, so I model for them, but very literally and specifically.

OK, Now, let’s characterize the type of teaching at the upper level... or getting close to the upper level.

Sure, well clearly, some of that same stuff goes on, some of that same stuff goes on, but I think that um... you don’t touch and draw as much. I may play with the student in making a model, we may play together, at sort of pushing things around, but its less me demonstrating than it is a kind of collaborative play? Um, and uh... this is hard,

I think you’re telling me something, I’m just trying to wait til you get there

No, its hard... the play is more a collaborative play, and the demo...I’m not demonstrating for them, I may be in a dialog... in more of a dialog... with.... It’s a different role, and maybe, I may be drawing, I may be, you know crunching your xxx, but it’s more of a dialog. I expect them to then crunch again, I mean I expect us to be moving things around like on a chess board... so it’s more of a dialog, and um, and I’m also hitting them harder, I’m making them, I’m making them ... gosh this is really hard. I’m making them, I’m working harder to make them clarify their own goals. That’s a huge difference... how can I not say that immediately? In the first year, it’s very clear that I have set out the goals. The student must meet my goals... in the process of meeting my goals, I’m hoping that my goals begin also to feel like their own goals. Very important... maybe I didn’t say that earlier, right? They need to take on the goals? Yes they need to feel that... if they feel that the goals are just my goals, it’s not so great. They need feel that my... they need to sign of so that my goals become their goals too, and we have
common goals. By the time we’re in the fifth year, I have to assume that in general, we have common goals, and the student is establishing certain goals for her or his project, that I, hopefully, sign on to... and that we then move forward with. So the student has to articulate their own particular goals much more clearly, and their much more particular than they are in the first year.

_**Ok, and goal setting, of course is another thinking skill.**_

Yes, thank you.

_I think what you’re telling me is that at the entry level, you’re doing more laying knowledge bases, and in the upper level, you’re expecting them to use them more._

Thank you
_I think that’s what you just told me._

No, that was wonderful the way you said that...

_So you’ve kind of got a progression going on there from knowledge bases to thinking._

Umm-hmm..... Umm-hmm

_OK, So... I want to funnel all of those things that we’re doing, I think we’ve kind of covered the model making pretty well already, its a lot more physical, its a lot more hands on at the entry level, and you’re doing a lot more showing them how to do it._

Umm-hmm

_So that’s at least one of the manipulative skills that seems to have progressed or changed, what are some other differences in the manipulative ability from entry to exit?_

Of the students… the students’ manipulative ability?

Umm-hmm

Um, um...

_Just picture two critiques somewhere about the second year and somewhere about the fourth or fifth year, and think what they might have rendered differently_

Are we talking about things as specific as line weight, or are we talking about...

_Oh sure, that could be some of it_

OK, ok, well clearly there’s an issue of visual communication, that’s huge, so write that down.
That changes a lot?

YES, that changes a lot, and it better change a lot. Visual communication, uh, vocabulary, both in the most concrete sense and in the conceptual sense

Could you elaborate a little please... what’s concrete and what’s conceptual?

Well, I mean they need to know... they need to be able to say that they’re using a triangle, because a triangle is a stable structure, and they need to know what kind of a triangle it is. I mean, right, ok, they need know the names of materials and how to use them, but in a conceptual way, they need to be able to articulate their own goals... and their own process.

OK... concrete could be literal in this case

Oh yes, yes, it is literal, I like concrete

So we might see some differences in what they can manipulate that way... what would be the differences in the modes of thought they might be capable of?

What’s a mode of thought?

Well a mode of thought is another word for a thinking skill... how can they think?

OK, you can see I’m like a combination of...

We’re talking about mental gymnastics here

Well clearly... now we’re talking about the successful student...

Well yes, and the contrast, the difference made because that kind of shows me what they had to do in order to be good. We would kind of hope that if they’re a good exit level student, they’re also going to be successful at the professional level.

Um, well, uh, first of course there is the self-critical...

Yep, self critique

Self critique is numero uno, without which they don’t go anywhere, the second is iteration, and reiteration you know those two are so fundamental again,

Well obviously, there should be a big difference in those yah

YES, well for the successful student later on, those are like breathing,

OK
So um...

Or maybe things they have to think about?

Oh, ok, well again, I would say spatial qualities, spatial quality, they should be able to, they should, ok, here’s something I haven’t said before... they need to have... a lively and animate sense of space.

I’ve been waiting for you to say that...

I can’t believe I haven’t said it yet

Chuckle

... a lively and animate sense of space so that you can think about space and put many adjectives to it so its not just dimension, distance, you know, or the nothing in between solids, but that it has character and personality, and qualities, yes,

The lady who designs a project that defines space should sooner or later say space (chuckle together)

Aii yi yi,

And you said something really interesting, in there, just a minute ago, uh that they should be able to apply an adjective to space.

Yes,

...Should be able to describe space

Yes, and I work on this in first year too

Um-hmm, are we talking about verbal description or are there other kinds of description that are included in here?

Oh, I was thinking of verbal description, as in they should be able to say, “This space is turbulent,” without referring to a wind tunnel, turbulent, ah compressed, static, uh, etc... filtered, and... Wait there was another part of that question OH, other ways of describing it, YES, absolutely, if I ask a student can you draw a diagram of the space, not a diagram of the walls, but a diagram of the void, can you do that? ... and can you also make a kind of gestural... if I gave you a piece of chocolate or a lump of coal, could you draw a gestural drawing of the space?

OK

OK
Yes, those things make sense to me. And we talked a little about the fact that at the entry level we’re teaching... ah, we’re laying a lot of knowledge bases in there, and at the exit level, we’re doing a lot more thinking about them...

Um-hmm

Are there still knowledge bases that we’re adding at that level?

Yes, and there are also things that I haven’t talked about that I want to...

OK

Well, for one, I think, you know, architecture as a cultural... architecture in relation to culture, now this, of course is my opinion, because there are many successful students and successful architects, I mean, successful in their careers, who really don’t give a damn about architecture in relation to culture, but that is not my goal... for... if I’m teaching students, I judge their success also by their understanding of architecture as it engages in culture. And by that, I mean something as simple as... I’ll give you an absolutely clear example, if a fourth year student is designing an office building, and the boss always has the corner office, and I say to the student, why does the boss have the corner office? ... and they give me a blank stare, like... what are you talking about, bosses always have corner offices, that’s what I mean about someone who can not think about architecture in relation to culture.

OK, because they would not be able to explain why...

Because they are not rethinking the convention, being aware of, and rethinking conventions... Yah, I don’t just want to talk about success in architecture in terms of the formal and aesthetic, and structural, they have to be able to examine and consider, and think critically, conventions in architecture... and by that, I mean all the conventions, I mean, they need to think about the fact that it’s normal to take a section that is parallel and perpendicular, but maybe I need a curved section, which maybe doesn’t exist, but I need to make it up, because it’s the best way to show my space. So they need to be able to rethink the literal codes and modes and conventions... conventions of drawing, conventions of building, clearly; they need to rethink conventions of building, this is a really good student who goes beyond just the knowledge base and is able to manipulate the knowledge base, um, but mostly I’m going to say they need to rethink conventions like the boss always has the corner office, and that’s where architecture and culture come together, because that has to do with power and hierarchy.

And that would have been a cultural convention

Yes
In the mean time, you’ve hit another thinking skill, and I predicted that this would happen, that as you begin to get into these things...

Warm up

...They tend to pop out. We started to talk about rethinking the conventional, and departing from the conventional, or not departing from the conventional

Yes, this is one of the things, of course, that a beginning student needs to be able to do as well.

OK, but looking at the development, I’d just like to hear a little bit more about this rethinking process, because it’s beginning to get interesting...

Umm-hmm, Well, I think its something that needs to become automatic, and instinctive, and also be understood as part of the responsibility of the architect. ... And this is a, well, you know, this again kind of goes to the question of whether architecture is kind of a service industry, or if it is something else...

Good question

... Yeah, and by something else, I don’t mean you know, an artistic, glorious artistic, I don’t mean is the, is the architect, uh, a noble artist or a waiter... those are sort of paradigms that I’m not talking about. Uh... rethinking is necessary for a successful, in my terms, architect because um, well, in every sense it’s necessary, and I assume that rethinking... You know, I don’t know if I’m goona say.... surely is can be encouraged, surely it can be encouraged, but I want to say that I have never seen a student, and now I can say some really shocking things, but I have never seen a student not... who was not thinking critically by the end of their first semester in first year, who... well almost never, Almost never, I have very rarely seen a student who can not think critically in first year who is thinking critically in fourth year.

That’s interesting...

Yeah, I feel that I can predict in a horrible way

Well, you know, sometimes I ask that as a question... what be the first red flag that would say this one isn’t going to make it?

Right, OH, the first red flag in first year, is that a question you want to ask?

Yes, I can ask... you’re into it that question, so I think I’ll use it

The first red flag is the student who um, is really discouraged and can’t push past the discouragement, or is really tired and can’t push past the fatigue. Now I don’t ... I’m not talking about literally, you know, hasn’t slept in two days, and can’t... I’m not talking
about that, I’m just talking about the person whose interest flags, whose passion flags, whose interest flags you know.

*Now, in my work... what I think we’ve tip-toed all the way around, so I think I’m going to ask about it, um what seems to drive, what seems to cause that lack of passion, and I think that relates to your rethinking concept here too, is when there isn’t enough creative input, if they’re not clicking away on the creative side, then the passion isn’t there... and to me that sort of seems to link with your rethinking?

I’ll go back... and I’ll actually go back to my very first comment and say, whether we call it passion or interest or creative input, or whatever we call it, if they don’t have persistent curiosity, that’s kind of the first think, you know.

*How would you see that curiosity manifest itself? ... What would be the evidence that it’s there?

They keep going back to work, even when they’re frustrated.

OK so a...

Actually, I did not say a high tolerance for frustration, but that needs to go back in, you need to forgive me and insert that into the first year... qualities of first year... and that’s very hard to teach. You can’t teach a high... I mean that’s something that either emerges or doesn’t. I’m not saying a person, a student can not develop it, perhaps they can, but one can not teach a high... one can reassure the students a high tol... that frustration is a normal part of the game, but one can not instill a high tolerance for frustration in my experience. One can call it forth, but it has to be produced by the student. ... and a high, a high tolerance for frustration is obviously linked to persistent curiosity, because, I mean, you know, I think they’re in a balance. If you have a lot of frustration, your persistent curiosity... that’s the person who said, uh, you know I wanted to throw it out the window, I can’t stand it anymore, and so, you know, I went to watch television, but I couldn’t stop thinking about it and so damn it I went back to my desk and I worked on it again another hour. ... And then I wanted to, you know, just burn it up... Ok, that’s persistent curiosity. That’s like Oh, it nags you and dogs you. The other one is, in the balance between the two, you could have a very high tolerance for frustration, and have less persistent curiosity. But the high tolerance for frustration allows you to not, you know, throw the thing down and stomp away from the desk. One or the other keeps you going.

*Ok, and those would be the ones that tell me that they wake up in the middle of the night and they have an idea...

Exactly, and fifth year students also will say Oh, I remember how I kept going to sleep and waking up thinking, and it’s always about the space container.

...Of the pattern or whatever. OK, well, we’ve pretty well run through the list of things I usually ask, I would like to back up on space a little bit.
Yes,

*That spatial quality, because that’s another one of those terms that I hear it, and then when people talk about it, it varies widely. Tell me what the sense of space is that we’re after here.*

OK, I already was talking about it when I spoke about the adjectives, I mean space should be itself like a character, right, like, you need to have, you know, I, I’m not religious, but I am, and I would say if I had to have a religion I would be an animist, (chuckle) believing in the life of inanimate objects, you know, like people who talk to trees, or, you know, chairs, and stuff like that. OK, not just natural... and I feel that way about space too, that we have to be able to, I don’t mean literally, believe, I mean I do not literally believe that space is talking or jumping, or doing any of those things, but in imaginatively, in my imagination, I need to be able to think about space imaginatively as alive, in the same way, you know I used to laugh, when I was in architecture school and I used to hear, I didn’t used to understand in the beginning when I heard my critics and professors say, “Two walls are having a dialog,” you know... or, you know, these things aren’t talking to each other, or what... especially with the dialog thing, that really killed me, because, I thought what are they talking about, now, of course, I know what they’re talking about. The way that I understand it in myself is to imagine that these things are in some way alive, and have personality, have character, have qualities of living things. And it has to be the same way about space; you have to be able to, you have to be able to imagine, not literally, that space is whirling, or crunched or sliding or weaving, but you have to be able to imagine that. That’s called, imagination.

*I, I think one of my least favorite kinds is what I call oppressed space.*

Sure, we talk all the time about oppressive space, that gives it a quality, right?

*Yeah,*

But oppressed space, that’s really dramatic, you know, but you’re right, because we talk about this, we say the space is oppressive, just in a normal way, and, you know, it’s interesting to ask what we mean... cause obviously we’re not really...ok, you get the point.

*Ok, I’ve even covered now the things I thought were interesting as I went through them. Rethinking, oh, let’s answer your own question: You said the difference is, is architecture service or something else... artistic uh where would you fall on that continuum?*

OH, well, I mean I like to believe that it’s all of those things. But I can believe that it’s some kind of combination of those things. I would say that, you know, clearly, Ok, here’s my schpiel, here’s my manifesto on... architecture needs to accommodate the needs of its users. Right, so I need to go to the toilet, I need the toilet to be there, if I need light, I want to have a window. Now, I’m putting this basically in kind of the
most... I mean many people would be horrified to hear me say this because I’m kind of it’s at such a base level, it’s such a base definition of architecture that says that architecture is a service, right, architecture needs to serve the needs of its users, but I prefer the word, “accommodate,” but that also sounds like architecture is very accommodating, that it just does whatever it needs to do, and it just fulfills the needs of the user, but I want um exalt the word, “accommodate.” ... And um I have to do this, by example which is that uh, I was in training to be a hospice volunteer, and this physical therapist showed us with, using one of us as a volunteer, to demonstrate, that if you’re, if you’re massaging someone’s leg, or you’re lifting someone’s leg, who’s a patient in bed, you can just lift their leg, like that, just like pick it up, in a sort of matter of fact way, or you can pick up their leg like that, and what I’m doing now is I’m kind of cradling the leg with one arm underneath, and then I’m putting my whole hand on the top of the leg so my fingers don’t like dig into the flesh, and, you know, you can lift it up, and you... and she said, you know, these are two ways to accomplish the same goal. And in one of them, maybe the person doesn’t have anything wrong with their leg, it’s not like they’re in pain and they can’t xxx their leg, but what does it feel like? To have their leg lifted like this or to have their leg lifted in this much more tender and compassionate way. And so they’re both accomplishing the same goal, and so, I’m going to say that I think accommodation in the same way.

_What I think you just told me, I think, is that your definition of need is broader than physical._

Yes, and my definition of accommodation is broader than physical. So it can be something very beautiful, and meaningful... and should be, expressive.

_Ok, and that concept of need, that’s a thinking skill._

Ah, thank you, are you telling me something? By the way, what time is it?

_It’s 10:30, and we probably need to wrap it up._

That’s Ok, I can call downstairs and just say I’ll be a little bit late.

(Recorder off for a phone call)

(Resume) _Let’s talk about need for a for a minute, um, and what I’m goona ask is where does this flow into the growth of the student?_

Oh, this is a vast territory that I didn’t talk about, shame, which has to do with awareness of others, awareness of others, awareness of architecture as a discipline, which involves everyday human needs and wants. This is huge. Shame on me...

_How do you extract, how do you teach them to extract a building out of that?_
Well, I don’t think that you extract a building out of that, I think that that is one of the major forces upon the building. I mean there are many pressures, I like to call them pressures, there are many pressures that call a building forth, just like if you were, you know, working on a piece of clay, you would push with one hand, and you would push with the other hand, I think that a building emerges out of a process in which it is subjected to many pressures.

_Name a few_

Well one of the pressures, Oh God, you’re going to have to interview me for another hour I have to correct the record. Well, there’s what’s called the program, the program, right, and we haven’t talked about the environment! ...And the future of the earth, if there is such a future. Um, well, the program is the uh, traditionally, typically, the quote, unquote, list of uh spaces required. OK So in the most typical banal scenario, the program is, OK, program of a house, is, you know; Master bedroom, so many square feet more or less; two smaller bedrooms, so many square feet; living room; foyer, perhaps; I want a sun room; a kitchen, and it should be very big because I entertain a lot, but I’d also like it to be open; but this stuff turns itself into a list.

_Um-hmm_

Now, that the most is in my opinion, narrow minded way to think about what architecture must fulfill. Ok, so I’m designing you the house, right. You’ve given me this list; I want a big master bedroom, very grand, and I would like it to face East if possible... you’ve given me this list which then becomes chi, chi, chi... That, I think, again, is the most skeletal aspect, because, if I were then a thoughtful, critical architect, who had learned to intensify my thinking skills, and my critical nature in architecture school, I would then say to you as a client, um wait a minute, you’re coming to me with this sort of packaged list, or maybe you’re not coming to me with this packaged list, maybe you’re saying to me, “I want a house,”... and I say, Ok, what kind of house do you want? And you say to me, well, you know, I have two and a half children, so I need two and a half bedrooms, and ah I want my own bathroom, and ah... OK, I say Ok, well let’s take that a little bit farther, what, what, like do you like to do? Like what kind of, you know, I would start to pry into the rituals, interests, concerns and issues of your family, as individuals and as a collective. Maybe I would end up finding something really different, maybe you would come to me thinking, well, of course the house needs a master bedroom because every house needs a master bedroom, I’m the master, and so I get that bedroom. But maybe you would go away and after we talked, it would turn out that you know, really, you just like to sleep in there, right, you don’t really hang out in there, do you hang out in there? No, because you’re really one of those people who hangs out in the kitchen. You know, and so what we need is not the kitchen that you originally thought; maybe we need a kitchen that also has couch space. Whoever thought of a couch in the kitchen, I mean it’s Ok, but maybe your bedroom just needs to be very tiny. Maybe, also, you’re a person who really likes to hang out in the bathtub, maybe you need a bathtub that isn’t even in the same place, maybe you don’t need four bathrooms, a bathroom for each person, maybe what you need is a toilet which is in its own little
room... so that the person taking a bath so that the bath right in the bath isn’t it’s own... maybe we need to separate toilet, sink and bathtub because people don’t spend a long time washing their hands, but they do spend a long time in the tub. etc.. Ok?

*Ok, so you have just run by the art of asking probing questions?*

Right.

*Characterizing this, I wrote down three words, I think they’re all in there: research evaluation, and critical, I’m, I’m going to call it evaluation, critical evaluation.*

I didn’t talk about ability to do research!

*Well yes you did, you just talked all the way around it, that’s why I mentioned it.*

Yes, but I mean so far we haven’t even used that word... sorry, I’m really a little bit tired today.

*That’s why I do them as interviews, because...*

Does everyone wake up like this in an interview...

... Half-way through? Yeah, usually it works out that the best stuff comes later, after you get talking about it.

I can’t believe I didn’t say anything about research...

Could we actually, could we... I think I’m going to have to go on about this... more than five minutes, can we re... do you have a deadline, or can we reconvene.

*No, I don’t have a deadline, we could do more of this, if you want...*

No, I love it, no, I think that what I just opened up, which is the question of need, accommodation, program and research and all of that is that is something that I would like to talk about.

*Yeah, I see a massive, when, when you say program, I see knowledge bases, first of all they’ve got to have, they’ve got to have a list, a list in...in their head...*

Absolutely,

*...and then they have to figure out which of these are relevant or not relevant, or if they need to totally abandon that..*

...To which extent, it’s also manipulable, and to which extent it’s missing stuff, that’s very important. I mean, if you’ve ever spent a lot of time in a hospital... I spent a lot of time in a hospital as a family member, where are the damn tissues? You know, and why don’t the bathroom stalls in public restrooms, I mean in open restrooms, not private, why
don’t the bathrooms have ... in the restrooms of the hallways of hospitals, have stalls with walls that go from floor to ceiling, just like they do in Europe, it’s not like that sort of knowledge doesn’t exist, right, in Europe you can’t see people’s feet, Europe you have sound-proof little booths... well they’re much shyer about bathroom activities... Why can’t you go in there... because people are crying in hospitals all the time. Why can’t you leave your loved one at the bed, go into one of these toilet stalls, have a nice cry, you don’t have to repress yourself... so the person next to you doesn’t hear you. Why don’t they have tissues in those stalls. It’s outrageous, I mean, it’s basically about being so narrow minded, in looking at the reality of what goes on in a hospital, and having a kind of functional checklist... enough said. You see why I need to go on?

Yes

**Rachael - Part 2**

A week later I returned to Rachael’s office, this was to be the second half of the interview. The first day our interview was cut short just as we began to explore our topic in depth. I found Rachael eager to address the questions, having heard them once, and now having pondered them to herself.

*We were going to continue our examination of thinking skills, knowledge bases, and manipulative abilities that were pertinent to architecture, in particular, those that are relevant to student success and hopefully, past the student level into the profession.*

**OK**

*And uh, perhaps we can do those either talking about all thinking skills or talking about all knowledge bases, or we can just kind of hop back and forth.*

Have you listened to this tape again by the way, so do you remember where we left off?

*Uh, no I haven’t ... where we, where we actually left off was all of a sudden, ideas started to come to you...*

I know, and of course, I don’t have them right now.

*I remember you talked a little bit about space, and you felt like you finally hit on something... and you talked about research a little and uh, at that point you said, “Oh I’ve got to talk about research.”*

**Right**

*Let’s start with some of the fundamentals maybe.*

**OK**
What things do they have to know... if I would take these as building blocks, and uh the thinking skills would be the method of arranging them...

Um-hmm

uh, the knowledge bases would be the building blocks. What are the substantive things they need to know in order to make other things out of them?

Um, damn... I think I’m going to have to warm up myself up to the question... But in order to lets say, start to lets say, to make something..., you mean for instance, let’s say beginning to design a simple building... can we give a for example what the thing we want to make is? Because we are talking architecture specific...

Yeah, we are, and we’re talking studenting skills too somewhat. What do they have to know in order to think architecturally?

OK, uh, well the constant they have to have let’s see a living concept of space, I think I talked about that. Conceptually, they have to have a concept of space, and a concept of solid and void, positive and negative, inside and outside...

That’s a good one,,

....inside and outside ... and some sense that these might not be absolute categories.

What effect does that lack of absoluteness have?

Oh, that’s crucially important, I would say, well I would say this is true for everyone in a creative endeavor, and so it’s true for architecture students as well, and it’s something that has been in the 102 syllabus, Architecture 102 syllabus, from the beginning, and now it’s in the course syllabus, the ability to tolerate ambiguity.

Ahhh,

...and I think that is something we didn’t talk about last time at all. But anyway that surely needs to be you know, most essential, list of most essentials. Ability to tolerate ambiguity which means two things: one is to be able to work and move forward without an absolute sense of correct or incorrect, understanding that correct and incorrect... that we’re not really operating in that kind of a system... in which the things you design will be right or wrong, but that there are other much, OTHER, much more complex kinds of judgments that we make, and this also then, I would say, should extend itself into the work, into the conceptual attitude towards architecture, towards space and form, but there is ambiguity between inside and outside, its goona happen every time you open the door, and um, you know, just as its not an air tight conceptual system, it’s also not physically air tight. ... and so that invariably you’re dealing with ambiguity and flux... so the Lack of absolute categories.

Yeah, that makes perfect sense to me actually.
OK, OK, it just happens also to be literally true in architecture

*Yes it is, and I would find ways that it would be true also in graphics.*

Yeah

This tolerance for ambiguity that one is a powerful thinking skill... and that’s kinda the way it always works. As soon as you think of a couple of good knowledge bases, a thinking skill naturally follows.

OK, yeah Ok, so to go back to the knowledge bases, you would have to say some very fundamental concepts and I think I talked a little bit about a sense of geometry, which um also I’m goona say, well I’m goona say its a fundamental sense of geometry, very fundamental, very basic, and the will - the ability to experiment with materials, *Yes, you did talk about materials before...*

... and I would say that when you have materials, and any kind of very fundamental and basic geometries, you start to have structures, I mean the combination of those two things will lead you to structures, because then you start to have... where you have materiality, you have weight, when you have weight, you have gravity... when you have gravity, you have the problem of things falling down... and so on and so on.

*Geometry plus materials leads immediately to structures?*

Let’s say geometry, material and gravity...

*Gravity?*

Gravity, gravity is extremely important in architecture.

*OK, Well that’s actually quite a nice list of knowledge bases.*

It is isn’t it?

*An understanding of solid and void, inside and outside, space and form, geometry and materials. That works pretty well for me... You may think of a couple of other things as we go along...*

I’m goona add just a few things just for the sake of... because I’m saying things that are useful for me in the future...

*That’s good...*
So where you have materials and structure plus geometry... where you have materials and geometry plus gravity, you have structures, and where you have gravity, you have the horizon, and when you have gravity and horizon, you have site.

True...

And where you have site, you have above and below... and I’m goona stop there before I become too metaphysical and cosmological.

*But you have hit on another thinking skill, I think, as soon as you’ve said, “Site.”*

Umm humm, right, I know... so it has to do with thinking skill, an ability to collect through whatever means necessary, through whatever instruments available, information about the site.

*Now how do they use that information about site in their work...*

Very good question, Um...

*You know obviously, you know, I called an interior design student a while ago on not having considered the site, but...*

The possibilities are so... you know the ways in which the site plays a role, or may play a role it’s many, many, I won’t say its infinite, but I’d certainly say its immornful, starting from the most obvious, like if its you know, obvious, the most obvious issues of shelter and protection; shelter, protection, comfort; shelter, safety, protection, comfort.... Um and then going on from there to subtle issues of uh, more subtle issues, I would say beyond comfort, and you go on from there, incrementally in steps, I would say issues of pleasure, issues of you know obviously also issues of concern for the environment... impact, of one’s impact on the site... because as soon as you put something on the site, you change the site. So there’s also a sense of responsibility there.

*There’s another very interesting thought. Are there knowledge bases that are fundamental to that understanding?*

Yeah, and they have to do with the ethics of responsibility I would say.

*OK*

Ethics yah

*That’s a whole another field, but people are saying that to me every now and then, so I’m thinking I’m starting to keep a record of it.*

yah, yah
OK, Given all of these things, what kind of mental gymnastics does it take to turn knowledge bases into buildings?

OK, but there is something else, did we talk about play last time?

No, but let’s talk about play, that sounds like good fun...

We did... I think we talked a little, oh no, we talked about winicot a little bit, but I we didn’t talk about play. Well if you don’t have the ability to play, all the rest of this stuff isn’t going to do you any good at all. What I want to say about play, because I’ve been thinking about it a lot lately is that play... you could say many things about play, but I think one thing is that it is an activity that has no uh goal, it is an end in and of itself. It is a non-goal oriented activity. And if you can not do design work... if you can not do creative work, if you can not engage in creative work or creative activity, or whatever you want to call it, for its own sake, for the sake of what is going on while you’re doing it, as opposed to for the sake of what you’re going to be able to produce at the end of doing it, then I don’t think you’re going to be a very good artist or architect.

So I’m going to say that’s fundamental. Now how you get there, I actually, personally don’t think it has anything to do with school. You know, I’m sure that there’s a long psychoanalytic slash sociological, you know... Oh, I’m sure there’s research that’s been done on this subject. Including mine

OK, You know, you got it or you don’t, and where you get it, I don’t know, but by the time you come to college, you got it or you don’t and if you don’t, I don’t think I can help... I could maybe help someone in awakening it, if they haven’t found out that they have it... So that’s another one of the essentials.

I’d like to go a little deeper into this, we’re talking about play, and we’re talking about creative. Are these separate, different, similar...

No, creative is play, I mean obviously... there’s more....

Paul Rand would agree with you...

Well I think that creative is play... although obviously it’s not only play, its play plus, but without play, it’s not creative. It might be problem solving... I mean there is also problem solving, problem solving is a very important part of architecture, if you don’t have a sense of problem solving, but if it’s all about problem solving, then, I don’t know what it is, but I’m not going to call it architecture... might call it building, this is where I would say is the distinction of people always fighting over the distinction between buildings and architecture, and between problem solving and creativity and so, I mean, I personally do not like to call architecture an exercise in problem solving, although some people do.
But problem solving I’m thinking is one of the things that you use?

Yes, thank you, and you can put this down on my list too, of course.

Yes, yes, absolutely

Absolutely, yes

And that brings me to a question that I frequently ask about this point in time, because I think you kind of edged around it: what would be your first clue that a student, in let’s say a sophomore level class, what would be your first clue that this student was, or perhaps wasn’t meant for architecture. What would be the red flag?

Not having fun...

NOT having fun...
Not having fun.............. not having the ability to do self critique. Regarding it as... not having some, not having taken the work on board as part of the person’s self, in other words dealing with it more as kind of a requirement, as homework rather than some work of the self. You understand what I mean?

Yes I do

I don’t know if everyone is going to... It has to be work of the self, which is ... it isn’t always expressed in such dramatic terms, but I guess I would say that I need to have this sense of some kind of work of the self.

OK... um, manipulative abilities

Manipulative abilities, OK

The things they need to be able to push and pull around with their fingers and toes...

Well, you know just about... correct me if you’re asking me more questions about skills they should have at this point, because it would seem to me that they should be able to push and pull just about anything that they are given, it doesn’t really matter what the material is. I’m not that fixated on materials, I don’t think that materials... clearly some materials lend themselves more than other, I mean if you’re given a sheet of steel, there’s probably a limit to what you can... you need more and more instruments to deal with it. But it would seem to me that it’s more about their attitude towards the material than the material itself. So they should be able to test materials, let’s put it that way. To test material to see what the limits of the material are, but the possibilities of it too...

Do you have any things in the rendering line?
What do you mean in the rendering line?

*I don’t want to be too specific, cause I don’t want to influence your,*

I know you do, dang it,

*I don’t want to influence your your, your*

What do I want to say about the ability to make pictures?

*That would be one possibility, representation of various sorts maybe, assuming they do it with their fingers... or maybe the hold the paint brush in their teeth....*

Sure, at the sophomore level are we talking about desirable or potential

*We’re trying to move students upward and be successful in Architecture.*

OK,

*I don’t care if it’s at the sophomore level, the junior level, or even moving into the graduate level. We’re looking for the basic tools that...*

Well you know, it’s really getting harder and harder to say what that is, because now, we have such a range of tools available to us. I’ve seen very successful students who draw fantastically well, but don’t make models; I’ve seen students who... OK have to be able to have some kind of hand skill; it could be drawing really well or making models. It does not necessarily have to be both. Could be either, but they have to do one of them. In my experience thus far, I have not seen students do really well whose only expertise is in digital.

*OK*

Maybe that’s going to happen, so far I haven’t seen it.

*OK, I have a theory on that, but you might be right.*

OK, maybe it’s going to happen, I’m just speaking on my own experience thus far. They don’t have to be fluent or fluid in drawing, here I don’t mean drawing as in picture making, I mean drawing as a design tool, drawing as sort of to evolve a project. They either have to be fluent or fluid, fluent is a good word actually, in drawing, as a way to talk with themselves and others about the evolution of the design. Or they have to be fluent, meaning very conversant with model-making as a way to evolve the design and discuss it with themselves and others. One or the other, and hopefully both.
See, now these are basic manipulatives, definitely... these are things that we hope they can do in order to be successful, and they probably aren’t going to be successful if they can’t do one or the other.

Ummm-humm

Ok, what difference are you hoping you get between an entry level student and an exit level student?

OH.... hmmm, (thoughtful silence) ...what a question

That’s a curriculum developer’s question...

You want to turn off the machine while I think?

Sure, we can turn it off.

Ok, well I’m going to name first the obvious things...

That’s OK, that’s part of it

It seems I’m not as interested in those; I keep overlooking them. clearly I want them to be able to represent their work. To have mastered a number of forms of representation, two dimensional and three dimensional.

When they come in, they probably can’t, when they leave, they should have representational skills.

They should have representational skills, they should have verbal skills, so that they can explain their own work, and be in a reasonably sophisticated dialog with others about it. They should be able to be critical of their own work, They should... do you want me to say things like they need to understand heating, ventilating, air conditioning and plumbing? Because obviously they need to understand the mechanical systems of a building... now I could really on

These are knowledge bases...

Absolutely, they need to have a basic, and I will just say basic knowledge of mechanical systems, they need to have an understanding, more than basic, of structural options that are available, as well as a sense, as well as an ability to experiment through whatever means they like, with the possibilities of structural, with the possibilities of inventing new structures, other than the ones they have learned to analyze. They should be able to analyze, and they should be able to begin to invent structural systems, They should have a sense of the ethical responsibilities of an architect, this could go on forever...
Yes, but you’re actually right into the core of the things we talked about... at what point do the ethics enter into the education? Is it kind of across the curriculum, a little everywhere?

It should be across the curriculum, a little everywhere, there is a specific class which they take, Professional Practice, which informs them of ethical issues, but in a narrow way, because it has to do with... in a sort of a legalistic sense. Right, or in terms that have been defined by the profession, but I think all of their classes should ask them, should be pushing them to think ethically, and also about the relationship between being an architect and a citizen. Because an architect is, coincidentally, also a person and a citizen, and what is the relation between those two... and they should not be split, should not be bifurcated. Then obviously, they need to be able to think about the environmental impact of what they are doing... on multiple scales; on the smallest scale, like whose light they’re blocking out next door, as well as, you know, how much energy they’re using by importing their materials from Spain. They should be able to think about architecture in its cultural and historic context,

Ahh, a knowledge of history

Yes, a knowledge of history
... and also a thought process...

umm-hmmm

applying it...

Yes, understanding what you design in its historical or cultural context. Understanding that this moment in which we are designing is also history,

(chuckle) Someday

I mean it’s just on its way to becoming history. And what else do I need to say, there was something I wanted to come back to... Oh yeah they need to be able to self critique, I can’t remember if I said that... And they should have some understanding of their own design process.

Process

A student who leaves school and looks back at their work um, I’m sure that if you go through the whole fifth year and interview, all the architecture students, the students who are quote, unquote “good students,” strong students, will be able to trace a connective thread, I mean even if it was just post-ration, not that they knew all along, but they will be able to trace themes and interests, and preoccupations through all of their work. Maybe not all the way down to first year, but into second year at least, into third year. Then there will be other students who basically look back at their own work and don’t see
the connections. It could have all been done by different people, and those are not the architecture strong students.

*Is the process designated, or does it tend to be more intuitive?*

Well... It better be intuitive, whether or not it’s intuitive because it was designated and then they took it on because it worked or whether or not it arose from the interior, it has to become intuitive. So... you get the point.

*Yeah, and what I was really wondering about there - and you answered it for me - was is it geometric, or is it more organic.*

Could be either.

*Ok, well, in quite a flurry here, we’ve covered a lot of that stuff.*

Yeah good

*Is there something that I should have asked you that I forgot to ask?*

No, I don’t think so, I mean, I’d love...do you do that transcribing, is that how you work? *Many of them I do, I try to do five in every department, at least, and then I, I at least transcribe major ideas from the other people I talk to.*

OK

*You want to see this back somewhere?*

I do, because I think I said things that I haven’t said before. I think I had some new thoughts,

*That’s good*

...so at some point, I would like to hear it or read it... and maybe then I will have some new comments, but right now I don’t.

*Well I will try and be sure I transcribe yours.*