Alcohol with an attitude: Reducing aggression in drinking establishments through interior design

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Alcohol with an attitude: Reducing aggression in drinking establishments through interior design

by

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A thesis submitted to the graduate faculty in partial fulfillment of the requirements for the degree of

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ABSTRACT

Aggression in drinking establishments has been found to be associated with poorly maintained, unclean, unattractive environments including poor ventilation, smoky air, inconvenient bar access and inadequate seating, high noise level, and crowding (Graham, 1980). Macintyre and Homel (1992) concluded that the key feature of high aggression drinking establishments was intersecting traffic flows created by inappropriate design, especially poor location of toilets and bars, and the use of the same door as both entrance and exit. Aggression has also been found to increase with such activities as dancing and pool playing (Graham, 1980). Likewise, Radcliffe and Nutter (1979) concluded that people who engaged in social activities such as games tended to drink more slowly; however, they also tended to stay in the drinking establishment longer, ultimately consuming more alcohol than non-players. Thus, the activities found in a drinking establishment can impact the amount of drinking and aggression. Therefore, if this research shows that certain design decisions increase negative behaviors (aggression) then it should be possible to create guidelines to help designers, owners, and managers make decisions that decrease negative behaviors (aggression). This study examines the creation of such design and management guidelines, with the goal of making drinking establishments safer and less aggressive for their patrons through design.

In addition, most owners, managers, and patrons consider drinking establishments not only as places of alcohol consumption, but also as social spaces or spaces of social interaction. Therefore, in addition to reducing aggressive behaviors which are seen as negative, designers, owners, and managers should be interested in increasing the potential for
sociability or positive social interaction in drinking establishments. Thus, the communication between patrons is also examined in this study. The likelihood of strangers interacting at a drinking establishment depends on the distance between them. As a general rule, a span of three bar stools is the maximum distance over which patrons would attempt to initiate an encounter (Sommer, 1969). Therefore, the design of a drinking establishment should support or encourage social interaction among individuals and groups. Just as distance is important, so is having a layout where patrons face one another. A patron can still arrange to be alone, bunching himself up at the end of a bar and staring down at his drink, or sitting at a remote table. But [if the bar is designed correctly] these postures must be maintained rigorously (Sommer, 1969).

This paper examines previous studies and proposes a set of guidelines which clearly point out the main ideas, targeting drinking establishment owners and interior designers. As a researcher and someone who has worked in a drinking establishment environment, multiple anecdotal incidents have been noted that could be reduced or even avoided if the design and management of the drinking establishment was better. This topic can benefit humankind by potentially changing the drinking patterns of patrons, and reducing “negative” behaviors (aggression) while increasing behaviors that are seen as more positive (greater sociability and activities in addition to the consumption of alcohol).
CHAPTER 1. OVERVIEW

Introduction

A substantial proportion of incidents of aggression and violent crime involve one or more participants who have been drinking (Murdoch, Pihl, and Ross, 1990; Pernanen, 1991; Wells, Graham, and West, 2000). Aggression involving injury is also more likely to involve alcohol (Gerson and Preson, 1979; Martin and Bachman, 1997; Sharps et al., 2001) which may be due, at least in part, to pharmacological effects of alcohol, such as increased power concerns (McClelland et al., 1972), increased emotional liability (Graham, West, and Wells, 2000), decreased awareness of internal cues or less self-awareness (Hull, 1981), decreased ability to consider consequences (Hull and Bond, 1986; Pihl, Peterson, and Lau, 1993; Ito, Miller, and Pollock, 1996) or reduced ability to problem solve (Sayette, Wilson, and Elias, 1993). When drunkenness is mixed with stressors, it can lead to high levels of aggression.

Drunkenness does not in itself lead to aggression unless there is triggers present (Homel and Clark, 1994). It usually only leads to violence when other risk factors, such as aggressive bouncers or high levels of frustration due to a lack of food and comfortable seating, are also present (Homel and Clark, 1994). Therefore, it is important to acknowledge that drinking establishments have the possibility of being high-risk environments if not designed and managed properly.

While some of the risks of aggression may be associated with bar clientele (e.g. a high proportion of patrons are male and heavy drinkers) (Lang et al., 1995; Martin et al., 1992; Quigley et al., 2003), the physical design of a drinking establishment may also lead to
aggression and injury (Graham and Homel, 1997). Aggression in nightclubs has been found to be associated with a number of physical environmental features. Graham et al. (1980) and Graham (2006) documented the following physical features as associated with or leading to aggression in nightclubs or drinking establishments:

- Poor ventilation
- Smoky air
- Inconvenient bar access
- Inadequate seating
- High noise level
- Crowding (on the dance floor, in particular)
- Lines to get into the drinking establishment
- Movement (or lack thereof)
- Noise level
- Unclean and messy premises
- Social environment and activities
- Sexual activity
- Intoxication of patrons
- Rowdiness and permissiveness
- Overall decorum/behavioral expectations
- Whether there were pool tables in use
- Whether there was dancing taking place
- Whether security staff (‘bouncers’) were present
- Lack of staff coordination
- Lack of monitoring by staff
- Lack of professional boundaries by servers/bartenders
- Closing time variables

While this research paper considers all of these factors, its primary focus are those factors most influenced by design decisions. Incidents of aggression are not necessarily the result of any single variable, but rather the subtle interaction in one time and place of several variables (Homel et al., 1992). Thus, this research paper aims to give suggestions for performance guidelines for designing drinking establishments.
This research paper also suggests the role of some other environmental factors that might interact with crowding to heighten the risk of aggression and violence. Konecni (1975), Glass and Singer (1972), and Donnerstein and Wilson (1976) all found a strong link between an adversely loud environment and aggression, while Zillman et al. (1981) observed that some individuals display anger and aggression when someone smokes in an inappropriate way in their immediate space. The interaction of the stressors of crowding, heat, loudness of music and tobacco smoke result in the consumption of alcohol, which may bring temporary relief but in the longer term increases the risk of drunkenness and aggressive behaviors, as Homel et al. (1992) observed. Of course, with today’s public bans on smoking, this problem has reduced much aggression, but also created unexpected results as we will discuss later.

Over the years there have been many proposals for drinking establishment safety guides. Macintyre and Homel (1997) proposed that architectural guidelines for licensed premises should be produced to minimize the risks and potential of aggressive incidents. Later, Graham et al. (2004) started a “Safer Bars” initiative in Toronto, Canada, helping owners and managers identify ways to reduce environmental risks. Graham and her colleagues suggested that environmental changes for reducing aggression in bars should be easier to market to owners and managers than interventions that focus primarily on serving less alcohol. And finally, in 2006, Forsyth stated that there is a need for a disorder risk tool kit for appropriate agencies such as the police, licensing boards, researchers and the drinks industry itself, indeed to all those with a vested interest in reducing alcohol-related harm.
This research paper aims at producing a manual intended primarily for architects and designers, as well as drinking establishment owners, managers and staff.

This topic is very critical because it directly affects the health, safety, and welfare of drinking establishment patrons. The decisions made in designing a drinking establishment can be related to evidence-based healthcare. Evidence-based healthcare, where health professionals use the best evidence possible (i.e. the most appropriate information available) to make clinical decisions for individual patients, involves complex and conscientious decision-making based not only on the available evidence but also on patient characteristics, situations, and preferences (McKibbon, 1998). It recognizes that health care is individualized and ever changing and involves uncertainties and probabilities. Similar to evidence-based healthcare, the design of a drinking establishment is completely dependent on an interaction of individual factors, such as the location, clientele, etc. Each of these factors should be acknowledged and taken into consideration.

The Evolution of Drinking Establishments

In the United States and other Westernized cultures, drinking establishments have evolved from local taverns and brewpubs, into multimillion dollar corporations, aiming for the highest profit regardless of risk. Traditional drinking environments are being displaced by "gentrified nightlife environments that consciously sanitize and exclude the poor and disenfranchised . . . reinforced through subtle demarcations based around dress and style codes, interior design, drink prices, and entry requirements (Hollands and Chatterton, 2003). The ‘new’ urban entertainment economy is distinguishable by an emerging mode of production including a concentration of corporate ownership, increased use of branding and
theming, and conscious attempts to segment its markets, especially through the gentrification and sanitization of leisure activities (Hollands and Chatterton, 2003). These new establishments create a party atmosphere with loud music, dancing, sexual images, and cheap drink specials. In the party atmosphere, one feels obliged to participate and by not participating in getting drunk he or she feels “out of place” (Forsyth and Cloonan, 2008).

Capital is flowing towards the production of more goods and services that are ephemeral and spectacular (a live music concert; a casino), disposable (beer; fast food), lifestyle-based (branded venues and products), and even ‘virtual’ (internet, virtual reality parks, computer games). In other words, ‘fast moving consumer goods and services’ as they are known in the business world (du Chernatony and McDonald, 1998) epitomized by entertainment, popular culture and night life activity require constant replenishment and are a particularly effective tool for speeding up capital accumulation (Hollands and Chatterton, 2003).

Gottdiener et al. (1999: 256) have referred to the spread of the entertainment ethos and architecture in the USA as ‘the Las Vegasization of city downtowns’. There is a trend towards developing a city epicenter, satisfying all of the liberal, wild and crazy nighttime needs of the citizens.

There is an increase in developments containing casinos, multiple genres of restaurants, comedy clubs, bowling alleys, and more all combined into one structure, for example, The Seminole Hardrock Hotel and Casino in Fort Lauderdale, Florida. In addition to the casino, there are 16 dining facilities and restaurants, 17 retail stores selling everything from perfumes to sunglasses, 15 entertainment facilities and clubs, and more. The drinking establishment has become a place of corporate identity, branding its patrons with everything including what
clothing, perfume, shoes, and sunglasses they wear, and satisfying all of their food and drink cravings. Multifunctionality is now the cornerstone of many leisure developments (Gottdiener, 2001: 101). Such multifunctionality requires new spaces and avenues for combined profit-making in urban entertainment destinations which combine sports bars, internet cafes, licensed merchandise shops and generate hybrids such as “edutainment”, “eatertainment”, and “shopertainment” (Hannigan, 1998). The behaviors of outlets and consumers have co-evolved, mutually benefiting one another with profit and drink (Gruenewald, 2008).

**Drinking Establishments as Third Environments**

Nightclubs aim to provide entertainment and an opportunity to engage in “time-out” activities in a stimulating environment in which many of the rules of everyday life are relaxed or ignored (Macintyre and Homel, 1997).

Ray Oldenburg (1999) emphasized the importance of neighborhood gathering places in enhancing the lives of people. He defined these gathering places as *third places*, and further explained that these places are not home or work, but the places that help people get through the day. Oldenburg describes the *third place* as “a generic designation for a great variety of public places that host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work” (p. 16). Third places provide a place to connect with the people in communities as well as a place to exchange ideas and news. Many third places draw their identity from the beverages they serve.
To successfully design spaces that serve as third places and community gathering places, designers should understand the social and physical characteristics of place that enhance the patron’s experience (Waxman, 2006).
CHAPTER 2. DEFINITIONS

Defining aggression as well as various genres of drinking establishments is important in this study. It is important that all readers have the same understanding of terms used in the research. Various sources have been referenced for providing definitions of drinking establishment genres.

Defining Aggression

Aggression can be both physical (e.g. pushing, shoving, pulling, grabbing, holding, unwanted sexual contact, slapping, punching) and non-physical aggression (e.g. expressing anger, swearing at, insulting or demeaning someone, threatening, challenging, aggressive rule-breaking) (Graham et al., 2006). For this study we are also concerned with the overall safety of bar clientele. Perceived dangers can also lead to higher levels of frustration and aggression.

Defining a Drinking Establishment

When designing a drinking establishment, it is important to know the type so risks can be properly addressed. There are many types of drinking establishments, and the various types have different issues of safety and/or aggressive incidents, and different physical feature and qualities. Many researchers have tried to categorize the different genres of drinking establishments. In 1966, Cavan developed a four-category typology to demonstrate how behavioral norms vary for different types of drinking establishments:
1. "Convenience Bars" – A setting where drinks can be purchased or consumed when the need or desire arises. This type includes many “downtown” bars, as well as those drinking establishments in areas where there is an influx of large numbers of people (e.g., in the vicinity of a football stadium).

2. "Nightspot Bars" – A setting where entertainment, rather than just the consumption of alcohol, is the primary draw. The appeal of this type of establishment is focused on the entertainment offered: stage shows, live music, dancing, etc.

3. "Marketplace Bars" – A setting where patrons go with the hope of meeting someone, most often with the intention of pursuing a romantic or sexual encounter, as well as bars where commercial transactions of sex, drugs, gambling, and stolen goods take place.

4. "Home Territory Bars" – A setting where bars are grouped together on the basis of the shared characteristics of the patrons (e.g. class, race), including neighborhood pubs and “skid-row” taverns.

Even though that categorization was conducted in 1966, it still remains useful. In 2002, Chatterton and Hollands divided “nightlife spaces” in large U.K. cities into three categories of establishments:

1. "Mainstream" spaces, which denote the proliferation of corporately owned bars and clubs in the city centers that promote "upmarket" identities and specifically target rich groups such as professionals and high-level service sector workers. These mainstream bars and clubs, characterized by smart attire, commercial chart music, and pleasure-
seeking and hedonistic behavior, have become the dominant mode of young-adult participation in urban nightlife culture.

2. "Residual" spaces, consisting of the traditional pubs, ale houses, and market taverns, formerly a common feature of city centers, but now in decline or disappearing altogether due to the changing priorities of nightlife operators.

3. "Alternative" spaces, which cater specifically to youth cultures and tastes and are primarily organized around identities such as ethnicity, sexuality, or politics, or are related to style or dress (e.g., rock, Goth, hip-hop).
Table 1. Definitions of drinking establishment genres

| Cavan’s (1966) four-category typology | Convenience bars | • Drinks can be purchased or consumed when the need or desire arises  
                                     |                   | • Includes many “downtown” bars, as well as those in areas where there is an influx of large numbers of people (e.g., in the vicinity of a football stadium) |
| Nightspot bars | • Entertainment, rather than just the consumption of alcohol, is the primary draw  
                  |                   | • Focused on the entertainment offered: stage shows, live music, dancing, etc. |
| Marketplace bars | • Patrons go with the hope of meeting someone, most often with the intention of pursuing a romantic or sexual encounter  
                        |                   | • Commercial transactions of sex, drugs, gambling, and stolen goods occur |
| Home territory bars | • Bars are grouped together on the basis of the shared characteristics of the patrons (e.g. class, race)  
                                 |                   | • Includes neighborhood pubs and “skid-row” taverns |

Chatterton and Hollands’ (2002) three categories of “nightlife spaces”

| “Mainstream” spaces | • Corporately owned bars and clubs in the city centers that promote "upmarket" identities  
                           |                   | • Specifically target rich groups such as professionals and high-level service sector workers  
                           |                   | • Characterized by smart attire, commercial chart music, and pleasure-seeking and hedonistic behavior |
| “Residual” spaces | • Consist of the traditional pubs, ale houses, and market taverns |
| “Alternative” spaces | • Cater specifically to youth cultures and tastes  
                           |                   | • Primarily organized around identities such as ethnicity, sexuality, or politics, or are related to style or dress (e.g., rock, Goth, hip-hop) |
Both studies contain the mainstream nightclub genre, and the typical local brewpub or tavern, as well as other genres.

It was also found that aggression was more likely in specific types or genres of drinking establishments. Roberts (2007) found that aggression was more likely to occur in drinking establishments other than what he describes as, “watering holes.” Watering holes provide no real entertainment other than prerecorded music and the occasional dartboard or pool table. “Other” bar types, on the other hand, attracted customers through some specialized type of entertainment, such as live bands, disc jockeys, and televised sporting events. Dancing, a common feature of “other” bar types, also demonstrated a statistically significant relationship with aggression, as we will discuss later.

Nightclubs, noted for their slick and stylized décor, usually have elaborate light shows, provocatively dressed dancers and bar staff, strong security presence, and popular DJs (Purcell and Graham, 2005). The act of going to a nightclub has even formed its own name, “Clubbing”. Clubbing describes the experience of attending nightclubs, dance clubs, or lounges, and commonly involves dancing to music played by a disc jockey (DJ), "scoping" (i.e., appraising other patrons to identify prospective romantic/sexual partners), socializing, and choosing from a wide array of intoxicants to heighten one's pleasure (Purcell and Graham, 2005). Nightclubs are noted by Purcell and Graham (2005) as having the highest levels of aggression as compared to all other genres of drinking establishments.

For this study, the term “drinking establishment” will be used to encompass all genres in order to generalize the design and management recommendations.
CHAPTER 3. REVIEW OF LITERATURE

There are many non-design factors which can increase aggression in a drinking establishment, such as the quantity of alcoholic beverages consumed, an individual’s tolerance, ethnicity, gender, staff attitudes, and so on. As Graham et al. (1998) point out, alcohol-related aggression is typically an interactional process that involves multiple contributing factors, including the characteristics of the drinker, the effects of alcohol and the characteristics of the environment in which drinking occurs. According to researchers (Macintyre and Homel, 1997; Graham et al., 1998), no single factor – not even level of intoxication – is of preeminent importance as a predictor of aggression. Violent occasions are characterized by subtle interactions of several variables (Macintyre and Homel, 1997).

This research paper focuses on design aspects as a means of reducing, if not necessarily eliminating aggression. In previous studies it is noted that there is considerable variability among bars and clubs in level of aggression (Graham et al., 1980; Lang et al., 1995; Macintyre and Homel, 1997). Therefore, different measures should be taken in designing each and every drinking establishment. As mentioned before, similar to evidence-based healthcare, the design of a drinking establishment should evolve, recognizing establishment individuality, uncertainties and probabilities.

The following topics will be discussed: non-design factors; environmental factors; music and activities; and notes for management.

Non-Design Factors

Individual Factors
Individuals bring to drinking episodes a variety of unique individual characteristics, including unique propensities for aggression (Roberts, 2007). How much a person drinks and his or her tolerance level can contribute to the level of aggression in a drinking establishment. While alcohol consumption does not predict the occurrence of aggression, heavy alcohol consumption by the participant and the opponent is associated with aggression severity and physical harm (Leonard et al., 2003). Not everyone who drinks alcohol is aggressive. A pharmacological effect of alcohol, however, can increase aggressive behavior (Pihl et al., 1997). This could be due to the expectancies of aggression when alcohol is consumed. Alcohol expectancies may facilitate the occurrence of aggression (Leonard et al., 2003). Certain individuals have aggressive behavior, and are often described as “looking for a fight”. When these persons are under the influence of alcohol they often become a problem in a drinking establishment. Alcohol might increase aggression among heavy drinkers who expect alcohol to increase aggression or who are dispositionally aggressive (Barnwell et al., 2006). Not everyone who drinks alcohol, however, has the ability to become aggressive. Expectancies for alcohol-induced aggression and dispositional aggression vary from person to person (Barnwell et al., 2006).

Age

A study by Buddie and Parks (2003) found that women experienced more severe aggression when they frequented bars containing younger rather than older patrons. Thus, age can also play a role in drinking establishment aggression. Based on observations, bars with younger patrons, particularly younger males, tend to be more aggressive than bars populated by older patrons (Fagan, 1993; Lang et al., 1995; Stockwell et al., 1993). This
could, however, be due to the fact that younger patrons are less experienced in handling aggression provoking situations. Your elders can probably sit down and tell you a story about a bar fight he or she once experienced back in his or her younger days (and some can be quite comical!). Younger individuals are more likely than older individuals to lack the self-control necessary to avoid becoming involved in aggressive situations (Stafford and Gibbs, 1993). This self control comes with time and experience. One time in jail is usually enough!

**Pre-Nightlife Drinking**

Pre-nightlife drinking can also vary among individuals. Many bar patrons drink in private places before going out to public drinking establishments. Hughes (et al., 2007) found that over half of drinkers use alcohol before going on a night out and genders do not differ significantly in units consumed pre-nightlife. Prenightlife alcohol consumption may be undertaken to help people prepare for a night out or to accelerate drunkenness (Engineer et al., 2003). It may also be motivated financially due to lower off-licensed alcohol prices (Mintel, 2003). This pre-drinking activity could lead to higher levels of intoxication and thus aggression upon reaching drinking establishments (e.g., long lines to enter the drinking establishment, high cover-prices). Drinking before going out is associated with greater involvement in fighting in nightlife (Hughes et al., 2007). Violence is also more likely to occur in public (e.g., bars) versus private drinking settings (Fagan, 1993; Parker, 1993; Pernanen, 1991).

Consequently, the first preventative step in reducing aggression in a drinking establishment would be to ensure that bar patrons are not already highly intoxicated upon entering. Individuals who drink before going out may be more attracted to venues that are
permissive to drunkenness and consequently linked with higher levels of aggression (Graham et al., 2006; Homel et al., 2004). Therefore, pressures must be placed on bar and nightclub management to improve practice (e.g., train staff, end cheap alcohol promotions) and prevent any harm associated with their customers’ drinking (Hughes et al., 2007).

**Gender: Men**

As with age, gender strongly contributes to aggression in drinking establishments. A study done by Wells and Graham (2003) found that alcohol-related incidents were more likely to involve only males, respondents who were aged 30 or less, three or more people and strangers, and were more likely to occur after midnight, at weekends and at bars or social events. Males are more likely to fight with strangers whom they will never see again as compared to their everyday friends. Friends, however, can contribute and “egg on” the male to be aggressive. This is caused by expectancy for the males to follow through with their first aggressive instinct. If the male backs out, his friends could possibly view him as a less “macho” person.

The type of drinking establishment could also contribute to aggression in males. Masculine drinking environments, such as those that feature violent sporting events on large-screen TVs, may set up expectations that aggressive behavior is expected and will be tolerated (Graham and Wells, 2001). As we will see in future readings, games such as pool or darts could also contribute to this macho competitiveness.

Male competition, however, is not only found in sports and games. An atmosphere of sexual competition may increase risk of aggression due to aggression arising out of sexual
overtures, especially when patrons are intoxicated (Abbey et al., 2002; Abbey et al., 2003; Norris et al., 2002).

**Gender: Women**

Women cannot be excluded when examining the aggressive drinking establishment. Several environmental characteristics (e.g., young patrons, pool playing) and social behaviors (e.g., alcohol consumption, leaving the bar with strangers) are associated with more severe bar related aggression experienced by women (Buddie and Parks, 2003). Hutton (2004) found that factors such as alcohol use and self esteem are crucial in determining risk taking behavior in women.

Unfortunately, double standards between men and women still exist and have to be taken into consideration. A woman who speaks to many individuals, particularly many strangers and/or many men, may be at an increased likelihood of experiencing aggression. Such women are at an increased risk of encountering men who may mis perceive their friendliness as sexual intent (Abbey, 1987; Abbey et al., 1998) thereby leading to frustration or anger and perhaps aggression.

**Culture**

Alcohol-related aggression is also known to vary greatly by culture (MacAndrew and Edgerton, 1969). African Americans in general and young African American males in particular have a greater involvement in crime than European Americans (Pallone and Hennessy, 2000). Conversely, one can wonder how much of this statistic deals directly with culture and how much deals with the neighborhood or socioeconomic status of the
neighborhood, or with unjust enforcement. Collins (1992) found that ethnicity is often less important as a predictor than other factors that can be confounded with ethnicity such as socioeconomic status.

There are limited design choices to be made that can affect these non-design factors, but each factor should be taken into consideration when making design decisions.

**Circulation**

**Crowding**

Upon entering the drinking establishment a patron must decide where to circulate. This can be especially difficult when a bar is crowded. Every bar patron wants to find a bar which is busy and popular. After all, who wants to go to a dance club only to be the single person on the dance floor? The difference between a poorly designed drinking establishment and a properly designed one is how well the crowd can move through the space. Macintyre and Homel (1997) found that crowding appears to arise at least partly from inappropriate pedestrian flow patterns caused by poor location of entry and exit doors, dance floors, bars and restrooms.

The International Building Code requires establishments to have patron capacities based on square footage, usage of the space and patron density. Patron density is defined as the number of people per unit area. However, this does not begin to capture the intricacies of the concept of crowding. A realistic explanation of how crowding affects aggression must include an analysis of how a given density affects the way in which patrons perceive that density as positive or negative, and this may be related to how patrons are able to interact
with the environment inside the drinking establishment. As Macintyre and Homel (1997) documented, many establishments have similar patron limits and floor areas but different levels of aggression, making a simple “density increase = violence increase” model inadequate (Macintyre and Homel, 1997).

“Crowding”, on the other hand, is understood as a negative subjective experience of too much density in an area (Macintyre and Homel, 1997). In Rapoport’s (1975) words, crowding is “… a subjective experience of sensory and social overload.” Crowding lowers the irritation tolerance of people that leads to frustration and then possibly to conflict (Macintyre and Homel, 1997). Other negative effects of crowding include lower levels of comfort and ease (Langer and Saegers, 1997), negative feelings toward other subjects (Paulus et al., 1976) and psychological pathologies (Lepore et al., 1992).

As previously mentioned, patrons desire to go to drinking establishments that have a crowd. One of the major reasons to go to a drinking establishment is to “see and be seen.” In this sense, a crowd can be exhilarating, especially when it is populated with unfamiliar people: A sense of risk is implied. Yi-Fu Tuan (2007) best explains the effects of crowding in his book, Space and Place: the Perspective of Experience. He states that proximity to others is desired: People are social beings. We appreciate the company of our own kind. People crowd us, but they can also enlarge our world. Heart and mind expand in the presence of those we admire and love (Tuan, 2007).

Nonetheless, how physically close we tolerate or enjoy the presence of others, for how long, and under what conditions varies noticeably from culture to culture (Hall, 1989; Tuan, 2007). In a drinking establishment, we are surrounded by people. As much as people
please us, they are also a common cause of our frustration: their will thwarts ours. Take for example the bar patron who wants to get a drink, but must compete with other patrons at the bar for the attention of the bartender. The same people you were dancing with immediately become your rivals in a fierce battle, worsened by scorching temperatures and deafening music. All of a sudden, the drinking establishment is not as fun of a place as it was when you entered. As Tuan (2007) points out, the world feels spacious and friendly when it accommodates our desires, and cramped when it frustrates them.

So how does a sense of crowding arise if the drinking establishment is meeting density capacity requirements? Khisty (1985) explains that excessive crowding occurs in certain locations because designs are determined generally by building codes rather than with respect to pedestrian traffic demand. The same building codes that are intended to increase patron safety can also be a causal factor. Thus, proper care must be taken in designing a drinking establishment so that the patrons can properly circulate through the space. It is conflicting activities which generate a sense of crowding (Tuan 2007). For example, a person trying to move through a crowd to get to the restroom is similar to a fish swimming upstream. It can become frustrating for a patron and cause his or her aggression levels to rise, leading to pushing or shoving to get through.

Aggression also arises from patrons bumping into one another while moving about a space. Similar to an intersection in a road without any stop signs or lights, pedestrians crossing the paths of one another in opposite directions can be detrimental. Having fewer major pedestrian cross-flows will decrease the amount of high-risk areas. As Macintyre and Homel (1997) concluded, a low-risk drinking establishment might have entry through a
single door, and exit through a separate door. It would also have a circular traffic flow: patrons always moving predominantly in one direction, since they come through the entrance and then around toward the exit to leave.

**Smoking Ban**

Circulation problems have also arisen with the current ban of smoking. Smokers are forced to exit the drinking establishment and re-enter, creating a perpetual revolving door. This can frustrate people who are waiting in line to enter the drinking establishment, as they must wait while smokers freely exit for periods of 5 minutes or more and socialize. On the other hand, some drinking establishments require the smokers to get back in line, increasing aggression of the smoker. Smoking bans have also created stress for the door staff as they must keep tabs on whom outside was already granted entrance to the drinking establishment. One possible solution would be to create a separate exit for smokers with a chained in or fenced area, such as a patio. Another solution would be to stamp the hand of the smoker with a time, only allowing the smoker to re-enter within a specific duration, such as 10 minutes.

**Closing Time**

The act of exiting a drinking establishment can also cause aggression. The drinking establishment can be a fun, exciting, and energetic place to be. Unfortunately, the fun all comes to a sudden end at closing time. This is when most violence is observed (Forsyth, Cloonan, and Barr, 2005). Once the music stops/lights come on – it suddenly becomes a less friendly place to be. Two factors that contribute to aggression at closing time are over-serving prior to closing time and patrons not leaving the area (Plant and Plant, 2005). Patrons
are likely to become aggressive if they are being urged to leave soon after purchasing drinks, even if they are not intoxicated (Graham et al., 2006). As we will see in future chapters, music can greatly affect the closing time experience.

Certain factors within the bar vicinity, such as a lack of availability of public transport (Homel and Clark, 1994; Marsh and Kibby, 1992) and people loitering outside the bar at closing (Marsh and Kibby, 1992), may also affect the likelihood of aggression. Graham (et al., 2006) found that rowdiness/permitive environment and people hanging around after closing predicted both frequency and severity of aggression.

### Environmental Factors

#### Air Quality

Environmental factors such as temperature, ventilation, and air quality can play a large role in reducing aggression in drinking establishments. Quigley et al. (2003) found that excessive heat and smoke provoked aggressive behaviors among bar patrons. Baron and Bell (1975) found that increases in ambient temperature caused increases in the consumption of “cooling drinks.” In Baron and Bell’s (1975) study, however, the cooling drink was an 8-oz. glass of lemonade; in a nightclub the cooling drink is predominantly alcohol based. While a higher temperature leads to higher drinking levels and thus higher profit, it also leads to higher levels of aggression. Therefore, the temperature at a drinking establishment should be kept cool, and it should be decreased as the number of patrons increases.

While reducing aggression is important, it is also important to maintain profit for the drinking establishment owner or management. The ban on smoking has been an ongoing
debate in many states. In New Zealand, between 2004 and 2005, public support for smokefree bars rose from 56% to 69%. In the same period, support for the rights of bar workers to have smokefree workplaces rose from 81% to 91% (Thomson and Wilson, 2006). Seasonally adjusted sales in bars and clubs changed little (0.6% increase) between the first three quarters of 2004 and 2005 (Thomson and Wilson, 2006). Overall the smoking ban has had a positive impact on drinking establishments.

Furthermore as a result of the smoking ban, unexpected sensorial changes have occurred in the drinking establishment. Cigarette smoke is most often perceived as a negative odor: It embeds itself into our clothing and hair and makes the drinking establishment smell stale. It also, however, masks any other odors, both unpleasant and pleasant. Without the smoke, smells which would otherwise go unnoticed have emerged, including bacteria growth in the beer lines and bodily odors (once again, both unpleasant and pleasant).

One drinking establishment observed prior to this study was located next to a pizza shop. After the smoking ban, the bar was infused with the smell of pizza crust baking in the ovens, and before you knew it sales boosted at the pizza shop. The owners of the drinking establishment, however, weren’t too pleased.

A lot can be learned by examining other high-odor environments. Waxman (2006) found that ventilating systems in coffee shops could be designed to keep desirable smells in the space rather than venting them out (Waxman, 2006). The same principle could be applied to a drinking establishment. Just as smoking rooms at airports have separate ventilation systems, a drinking establishment could as well to filter the smoke out. Other businesses, such as one trendy retail clothing company, have a signature perfume sprayed into the air to
instill the smell into all of their clothing, thus increasing the store’s branding. A drinking establishment could also use this marketing tactic, but creating their own scent, or even diffusing pheromones, making clients happy and aroused.

**Lighting**

Most designers believe that warm colors on a wall lead to a warm interior. Multiple color studies have been done to understand their influence on people’s emotions. It is true that warm colors on wall so do make people feel good, but so do cool colors such as blue and green. Thus, it is not the color of the surfaces which make a place warm or cold, but the color of the light (Alexander, 1977). If the lamp is a cool hue, everything will feel cool: people’s faces, shirts, beverages, etc.

**Tidiness**

The tidiness of a drinking establishment can also incite permissive and aggressive behavior. Aggression is more likely to occur when bars are unattractive, uncomfortable, smoky, hot, noisy, crowded, difficult to move around in, and unclean (tables, ledges, and bar surfaces littered with trash, bottles, and glasses) (Roberts, 2007). Wortley (2001) suggests that aversive environmental stimuli (e.g. crowding, untidiness, loud music, smoky air) are problematic in that they provide situational cues that promote normally proscribed behavior. He likens the influence of these variables on patron behavior to the contagious effect of “Broken Windows” (Newman, 1972). Just as a single broken window left unattended may lead to further disorder and eventually increased criminal activity in some neighborhoods, a
single broken bottle left unattended may lead to further disorder and eventually increased problems with violence and aggression in some barrooms.

An untidy drinking establishment also reflects poorly upon the owner or management. According to Leather and Lawrence (1995), aggressors are judged less harshly in an environment that is untidy and disordered. In a study by Graham et al. (1980), public houses in which there were frequent exhibitions of aggression were characterized by shabby and untidy settings. The presence of an untidy interior will lead to more negative perceptions of the licensee (victim) and an increased perception that the public house depicted is prone to violent behavior.

While designers cannot make sure that bar staff picks up bottles and glass-wear or cleans up spills, designers can influence cleanliness to an extent through the finish materials that are specified for floors, walls, and furniture, as well as the fabrics selected for upholstery (Waxman, 2006).

**Territoriality**

When certain drinking establishment patrons become regular visitors, they can become territorial over the environment. Such territoriality can lead to aggression towards other patrons, or “newcomers”. Territoriality also increases as crowding increases (Macintyre and Homel, 1997). Bower (1980) describes territoriality as “the relationship between an individual or group and a particular setting that is characterized by a feeling of possessiveness and by attempts to control the appearance and use of space”. As previously explained, humans crave their own personal space.
A similar yet slightly different experience would be “place attachment”. Place attachment involves positively experienced bonds, sometimes occurring without awareness, that are developed over time from the behavioral, affective, and cognitive ties between individuals and/or groups and their sociophysical environment (Brown and Perkins, 1992). It has the potential to offer predictability in a daily routine, a place to relax from the more formal roles of life, and the opportunity for control in various areas of life (Low and Altman, 1992). It also provides the opportunity to link with friends and community in a visible and concrete way. A drinking establishment can become that place of attachment, as described earlier: It becomes a third-place. Not only can a drinking establishment become a place of attachment, but a specific spot inside the drinking establishment can also become personal. Take, for example, the patron who has decided to go to the drinking establishment on their own. Most likely, he or she will sit at one of the stools at the bar, or in a lonely corner. The patron is not necessarily looking for a direct confrontation, but to observe how others act. Waxman’s (2006) study on coffee shop place attachment can be used to examine this phenomenon. She states that not all patrons in coffee shops choose to interact, yet many receive the benefits that one would expect from a social experience. For these patrons, the outing to the coffee shop is more about being in the presence of familiar strangers. These are people who opt out rather than interact with other patrons (Waxman, 2006).

One possible design solution would be to properly install a variety of seating types and arrangements. This would attempt to cater to many needs. Of course if the drinking establishment is being built in an existing space, the layout of the existing space can cause problems. Waxman (2006) also explains this in relation to a coffee shop. The layout of any
coffee shop is influenced by a number of things, including the original purpose of the building, size and shape of the space, architectural features, level changes, availability and location of windows, availability of views, the available seating, and the location of the coffee bar and service areas (Waxman, 2006). One layout issue to discuss is how the interior space and the arrangement of furniture related to the seating preference of the patrons. Case studies can be used to examine what types of seats and arrangements drinking establishment patrons prefer. As we see in restaurant designs, most people prefer to sit with their backs to the wall. Patrons prefer seats that shelter them on at least one side (Waxman, 2006). Careful consideration and planning can be made to satisfy the needs of patrons.

**Music and Activities**

**The Importance of Music**

Music is used in many ways by a drinking establishment – ranging from day-to-day crowd control to the founding of an establishment’s identity (Forsyth and Cloonan, 2008). It is used primarily for its ability to attract thirsty customers and structure their behavior, while simultaneously deterring other potential clients (Forsyth and Cloonan, 2008). The sounds a patron hears in a drinking establishment can strongly influence his or her experience of the environment. Popular music plays a key role in framing the drinking experience as it is used by staff and clients alike to mark out territory and signal that certain patterns of behavior are (or are not) acceptable (Forsyth and Cloonan, 2008). Music is used to attract clients to pubs, to retain them, to mold their behavior, and finally to ensure that they leave when required to (and/or deterring them from attending in the first place) (Forsyth and Cloonan, 2008). The type of music played can be critical in branding the drinking establishment: It determines the
type of clientele which would be attracted. Some establishments base music on familiarity to the clientele (Forsyth and Cloonan, 2008).

**Genres of Music**

Webster et al. (2002) and Malbon (1999) both differentiated nightclubs by genres of music, with different forms of music attracting different groups of patrons. For example, the nightclub is characterized by much stronger music than the local pub. As the patron passes through the door of a nightclub the boom of the bass slaps them in the face. It is a wakeup call to the fact that you have entered an intense sensory environment, where music, rather than existing as a background hum, has leapt to the forefront of perception (Jackson, 2004).

Malbon (1999) concedes that clubs are far more likely to offer an eclectic blend of music within a single club than just one choice. Purcell and Graham (2005) developed a typology of clubs using the types and styles of music, social atmosphere, and alcohol and drug use patterns:

- **Techno (originally coded as dance/rave)**
  - This is an umbrella term used to describe a number of electronic genres. Techno's foremost intention is ease of dancing (McCall, 2001). It is characterized by stripped-down drumbeats and bass lines (Fritz, 1999). Techno marks the first genre of popular music that is built around a voiceless, faceless artist. Within this category are various subgenres:
    - *House*: Evolved from 1970s disco. Defined as 120 beats per minute (bpm) and uses a 4/4 time sequence and an eight-bar repeating cycle. (Fritz, 1999)

- **Ambient**: Essentially electronic atmosphere music designed to relax the listener with its soothing vibes. Generally under 90 bpm. (Fritz, 1999)

- **Bhangra**: Meshes traditional Punjabi folk songs and drumming with electronic rhythms. (Fritz, 1999)

- **Rap/hip-hop**
  - This is a form of dance music in which vocalists speak in rhythm and rhyme. It originated in the mid-1970s in the discos of New York City's black neighborhoods. The original rappers were spinners—disco DJs who segued songs for dancers. (Romanowski and George-Warren, 1995) Examples include Puff Daddy and Eminem.

- **Reggae**

- **Pop/rock**
  - For the present purposes, pop was defined as commercial chart music that appeals to a large audience—the so-called "mainstream," often by virtue of its softer, blander, easy-to listen-to sound. (Ammer, 1992) Pop in nightclubs is typified by distinctive syncopation, danceable rhythms, and melodic
emphasis. (Romanowski and George-Warren, 1995) Contemporary examples include Madonna and various "boy bands." This category includes

- **Punk** which is defined as raw, abrasive, basic and very fast, forced rhythms (e.g., Sex Pistols, Clash, Ramones) (Romanowski and George-Warren, 1995),

- **Garage**, an electronic music genre indigenous to London, characteristic of having deep bass lines and incredibly paced emceeing

- **Goth** (e.g., Marilyn Manson, Southern Death Cult),

- **New Wave** (U2, Depeche Mode, B-52). This genre is typified by heavily amplified, blues-based, electric guitar-driven rock (Romanowski and George-Warren, 1995), and

- **Classic Rock** which includes bands such as Led Zeppelin, Black Sabbath, AC/DC, Metallica, and Guns 'n' Roses.

- **Salsa**
  - Describes a recent trend in music comprised of Latin American popular music that incorporates elements of jazz, R&B, and Caribbean music (Gammond, 1991).

**Music and Drug Usage**

Music genre in drinking establishments has also been found to be linked with illegal drug usage. Webster et al. (2002) noted that preferences in the choice of drug among patrons were associated with sub-genres of clubs based on music. For example, “techno” music was
associated with Ecstasy, amphetamines, and ketamine, while patrons of premises where “garage” music was played were more likely to consume alcohol, cocaine, and Ecstasy.

Methods of Playing Music

A drinking establishment’s music policy is essentially part of a broader promotional strategy which might include cheap drink offers, food offers, charity nights, and so on (Forsyth and Cloonan, 2008). Music is played in drinking establishments through a variety of methods. Recorded music is used in drinking establishments in three ways: background music, music played by DJs, and karaoke (Forsyth and Cloonan, 2008). While DJs are typically more expensive than pre-recorded music, investment in better quality entertainment reduces reliance on sexual titillation and alcohol promotion to attract patrons to pubs whilst minimizing risks of disorder (Homel and Clark, 1994). DJs give the advantage of being able to vary their play-list in accordance with the type of clientele in the pub (Forsyth and Cloonan, 2008). They can easily change the tempo and type of music based on the attitudes of the patrons. Music policy is a clever form of manipulation that most people do not recognize, even people in the [alcohol] industry. Inexperienced managers, DJs and security staff often don’t pick up on the first signs of having discontent within a venue and thus music is an important control measure. It is much more important to control the crowd with music than it is to control the crowd with security staff because if you have to constantly control the crowd with security staff you’ve lost the ambiance of the venue (Hadfield, 2006).

One apparent function of the DJ in the super-club is to create/market a drinks party atmosphere, characterized by “sexy” dancing. Music is augmented by high-tech lighting/sound systems and video/plasma screens which could alternate between showing
music videos and promotional material (Forsyth and Cloonan, 2008). In the case of a branded chain, the same sequence of music videos is played in each pub. Music and videos are generally supplied from the head office and are either piped (leaving little control over content other than volume level) or comprised of a computerized system with pre-set play list depending on clientele, time of day, etc (Forsyth and Cloonan, 2008).

The Pros and Cons of Music

Music also has the ability to either promote promiscuous, disorderly behavior, or to ease the tension of a potentially aggressive situation. In the first case, music and related entertainments seem to encourage drinking and can even act as catalysts for disorder. This includes disputes over karaoke and certain types of music, but in particular, “sexy” dancing (Forsyth and Cloonan, 2008). In the karaoke lounge, those with the mike have the power of communication/influence over the situation (Forsyth and Cloonan, 2008). Musical entertainment could result in disorderly incidents because of an interaction between the entertainment and the drinking environment (including sound levels, lack of space, dancing behaviors, and intoxication) (Forsyth and Cloonan, 2008).

On the other side, music can ease the tension of potentially aggressive situations, for example at closing time. As previously mentioned, a different type of music can be used to signal the end of the drinking night. Songs with slower tempos or easy listening songs have been used prior to closing time to reduce the adrenaline and excitement of the patrons. Music could be used as a way to get rid of unwanted customers or clientele (Forsyth and Cloonan, 2008). It might be used to potentially deter some customers. The role of the musical entertainment would thus appear to be a double edged sword. On the one hand, certain types
of music and related activities (e.g. dancing) may increase the risk of alcohol-related
disorder. On the other hand, there also appear to be opportunities for music (or interventions
by entertainers) to be used to reduce this risk, perhaps even as a tool to help quell disorder
when it has broken out (Forsyth and Cloonan, 2008).

**Volume Levels of Music**

Finally, the volume of music in a drinking establishment is also something that should
be monitored. A high volume of music can stymie any attempts at conversation, thus
increasing rates of alcohol consumption (Knibbe, van de Goor, and Drop, 1993; Lang et al.,
1995). It could also create frustration for customers attempting to be served at the bar. As
Macintyre and Homel (1997) have pointed out, it is reasonable to assume that music would
be of a high-decibel level in most nightclubs, and that its stressful effects would be amplified
by bumping and restricted space for movement. Therefore, the proper installation of
acoustical panels and sound control are important in the design of a drinking establishment.
When planning a drinking establishment, designers should discuss music type and audio
levels with the establishment proprietors.

**Games and Activities**

The recreational activities in a drinking establishment can also encourage or
discourage aggressive situations. Legal activities such as dancing and pool playing are
positively correlated with aggression in bars due to arguments over games and bumping
during dancing (Graham et al., 1980). As mentioned before, masculine drinking
environments such as those that show sports on television or have various games can
promote competitiveness which can lead to fighting (Graham and Wells, 2001). In contrast,
Homel et al. (1992) found evidence that activities that reduced boredom (e.g., live bands, juke boxes, games) were associated with slower alcohol consumption and reduced aggression in bars.

**Alternative Food and Beverage**

Particular attention can also be paid to alternative food and beverage choices. Homel and Clark (1994) found that a lack of the availability of food was correlated with aggression. This might be because of food's effect on the absorption of alcohol and related intoxication levels as well as patron comfort. Designers should provide a space for alternative food and beverage choices to be properly displayed.

**Notes for Management**

Although this research paper is primarily concerned with designed aspects of a drinking establishment interior, special mention must also be made of certain managerial aspects. Drinking establishment licensees are in a position to influence environmental variables; specifically, the interior tidiness and presence or absence of door supervisors. Their judgments relating to these variables may be important precursors to the decision-making processes during an aggressive incident (Novaco and Welsh, 1989).

**Staff**

Staff form an important part of the bar-room environment both through their contribution to the social environment (e.g. permissive behavioral expectations) and more directly through their behavior (Graham et al. 2006). Roberts (2007) found that aggression
was more likely to occur when bar staff regularly checked patrons’ identification at the front door.

Perceptions of barroom staff also differ between the patrons and the proprietor. Licensees’ judgments of the prevailing climate should match that of customer groups, as any mismatch could result in licensees creating an environment that they may believe is calming, but that customers perceive as inflammatory (Novaco and Welsh, 1989). The presence of door supervisors, for example, may serve to frame the perception of violent incidents, making violent events more expected, as well as making the entire pub atmosphere seem to be less friendly and significantly tenser. Licensees, on the other hand, may perceive door supervisors as a sign that the licensee in the vignette is taking action to ensure the peaceful running of the pub (Leather and Lawrence, 1995).

The ratio of barroom staff to patrons is also important. Although a higher staff-patron ratio and better coordinated staff was expected to be associated with less aggression (Homel and Clark, 1994), these were found to be related positively to more severe aggression by staff (Graham et al., 2006). Having more staff increases aggression because some staff actually cause aggression (Wells et al., 1998).

Bar staff must also be properly trained to handle aggressive incidents, not only to reduce physical confrontation, but to also reduce the potential for legal troubles. Because bar staff can inflict serious injury at times (Solomon and Payne, 1997), factors such as how staff enforce the rules, preserve order and deal with aggression deserve further attention in developing prevention and programming and policies in the area of bar violence. Coordination of staff will not have the expected positive impact if the staff is creating a
confrontational rather than friendly and cooperative environment (Tomsen, 1997). Staff members often become offenders when responding to incidents of patron aggression rather than serving in the preventive role of the guardian (Graham et al., 2005). More severe aggression may escalate from lower-level rowdiness in permissive environments when combined with poor control of minor incidents by staff (Graham et al., 2006).

Barroom staff, in addition, is responsible for being role models to patrons for how to behave in the drinking environment. The sight of bar staff openly drinking alcoholic beverages while working, for example, conveys to patrons that the establishment is a place where “anything goes” (Roberts, 2007).

**Drink Specials**

While the major goal of this research paper is to reduce aggression in drinking establishments, it is also important not to reduce profitability to the proprietors. Reduced sales in on-licensed premises may lead managers to increase prices, further promoting home drinking or to increase irresponsible promotions (e.g. two-for-one offers) and cut costs elsewhere (e.g. fewer staff) (Hughes, Anderson, Morleo, and Bellis, 2007).

Availability of cheap alcohol is linked to greater consumption (Kuo et al., 2003) and drinking venues that are poorly managed, uncomfortable and tolerant towards drunkenness experience higher levels of aggression (Graham et al., 2006; Homel et al., 2004; Quigley et al., 2003). Variables such as price per drink, drink specials, and rate of service probably all contribute to drinking in bar settings (Clapp et al., 2006).
CHAPTER 4. METHODS AND PROCEDURES

Method

A thorough literature review was conducted so as to find important research in the safe design of drinking establishments, as well as aggression and psychology. Design books were then used to find relevant options for how to reduce problematic areas in a drinking establishment.

 Procedures

Key points from the literature review were narrowed down and simplified in language in order to be easily understood by all people (see Table 1 on following page for content). Finally, visual cues were implemented to aid in the explanation (see Appendix for final product). In order to fully educate bar owners, management and designers on the importance of designing a drinking establishment properly, a series of “brochures” were created. There are twenty-five brochures under the main title of “Guide to Designing a Drinking Establishment” with subtitles under the following categories: Circulation, Wayfinding, Design, Environment, Music, and Other. Each brochure was designed to look like a cocktail napkin with handwriting on it. The napkins were packaged into a bar napkin holder, and followed the organization of the pattern language books of Christopher Alexander (1977).

*A Pattern Language: Towns, Buildings, Construction* is a 1977 book on architecture, authored by Christopher Alexander. The book is a substantive, illustrated discussion of a pattern language derived from traditional architecture, consisting of a set of rules invoked by circumstances. Alexander’s works are strictly theoretical and based on observations in
architecture. Each of the rules are numbered, have a short and catchy title, theoretical sentence describing the principle, followed by a thorough analysis and description of the rule, and accompanying illustrations, pictures, or diagrams.

Similarly, the front of each of the “Guide to Designing a Drinking Establishment” napkins has the main title, rule number for categorical organization, short subtitle, simplified picture, and a one sentence overview of the rule. Inside the napkin is a longer explanation of the rule, including a general background, description of how it relates to the reduction of aggression, inference or “therefore” statement, and a literary source.
Table 2. Content of Brochures

<table>
<thead>
<tr>
<th>Placement of Doors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Separate entrance and exit doors reduce congestion and physical jostling, thereby eliminating a common source of interpersonal conflict.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>Because the density of patron traffic through them and the tendency for patrons to bunch up after they have passed through an entry or exit to get their bearings, adjust to changing light levels, or make destination decisions, the areas just inside main entries may be virtually impossible to move through. The result is often a negative and erroneous first impression of the rest of a bar.</td>
</tr>
<tr>
<td><strong>[Relevancy to Aggression]</strong></td>
</tr>
<tr>
<td>The physical crowding, the seemingly erratic and unpredictable movement of other patrons and the conflict of entering and exiting traffic makes entries unusually troublesome as sites for combative behavior.</td>
</tr>
<tr>
<td><strong>[Inference—Therefore,...]</strong></td>
</tr>
<tr>
<td>Therefore, designers should attempt to achieve a more circular flow of traffic, ideally including a good deal of separation between entering and departing patrons.</td>
</tr>
</tbody>
</table>

Sources

Table 2. (continued)

**Area for Smokers**

*[Theory]*

A place for smokers, such as a patio, reduces tension at the entrance of an establishment.

*[General Background]*

Circulation problems have arisen with the implementation of the smoking ban. Smokers are forced to exit the drinking establishment and re-enter, creating a perpetual revolving door. The smoking ban has also created stress for the door staff as they must keep tabs on who outside was already granted entrance to the drinking establishment.

*[Relation to Aggression]*

The need to exit a drinking establishment and attempt to reenter, facing the line or door staff, could aggravate a smoker. People who are waiting in line to enter the drinking establishment can also become frustrated, as they must wait while smokers freely exit for periods of 5 minutes or more and socialize.

*[Inference – Therefore,…]*

Therefore, designers should create a separate exit for smokers with a chained in or fenced area, such as a patio.

**Sources**

Personal observation.
Table 2. (continued)

<table>
<thead>
<tr>
<th>Circular Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Traffic flowing in a circular motion allows patrons to be in constant movement.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>Upon entering the drinking establishment a patron must decide where to circulate. This can be especially difficult when a bar is crowded. Every bar patron wants to find a bar which is busy and popular. The difference between a poorly designed drinking establishment and a properly designed one is how well the crowd can move through the space.</td>
</tr>
<tr>
<td><strong>[Relevance to Aggression]</strong></td>
</tr>
<tr>
<td>A drinking establishment which has an unorganized direction of movement becomes stagnant and chaotic, causing extreme frustration and aggression.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore,…]</strong></td>
</tr>
<tr>
<td>Therefore, the designer should implement a circular traffic flow, allowing the patrons to move predominantly in one direction, thus reducing the occurrence of bumping into one another.</td>
</tr>
</tbody>
</table>

Sources:

Table 2. (continued)

<table>
<thead>
<tr>
<th>Static vs. Dynamic</th>
</tr>
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<tbody>
<tr>
<td>[Theory]</td>
</tr>
<tr>
<td>[General Background]</td>
</tr>
<tr>
<td>[Relation to Aggression]</td>
</tr>
<tr>
<td>[Inference – Therefore,…]</td>
</tr>
</tbody>
</table>

Sources
Table 2. (continued)

<table>
<thead>
<tr>
<th>Crossroads</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Traffic which crosses the dance floor to get from one place to another can cause unnecessary bumping.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>The dance floor is a place where all patrons lose inhibitions. They are free to move about and be themselves, unaware of their surroundings.</td>
</tr>
<tr>
<td><strong>[Relation to Aggression]</strong></td>
</tr>
<tr>
<td>Dance floors which are placed in the center of the drinking establishment and have no barriers allow patrons to cross about them freely, often pushing and shoving to get through, provoking acts of aggression.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore, …]</strong></td>
</tr>
<tr>
<td>Therefore, traffic should not cross the dance floor to get from one place to the other.</td>
</tr>
</tbody>
</table>

**Sources**
Table 2. (continued)

<table>
<thead>
<tr>
<th>Restroom Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Restrooms placed out of the way of the major traffic areas results in a more private space.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>Restrooms which are close to the bar area can cause traffic related issues. For example, a line to the restrooms could occur and interfere with people waiting to order a drink or patrons who are trying to navigate through the space. Restrooms are also an area of extreme privacy, and thus, should have a transitional space in front of them.</td>
</tr>
<tr>
<td><strong>[Relation to Aggression]</strong></td>
</tr>
<tr>
<td>If a patron feels that his or her privacy is being invaded by having the restroom area near other activities, he or she could feel threatened and hostile.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore,…]</strong></td>
</tr>
<tr>
<td>Therefore, drinking establishment restrooms should be placed out of the path of traffic and other activities, and should have a transitional space.</td>
</tr>
</tbody>
</table>

Sources
Table 2. (continued)

<table>
<thead>
<tr>
<th>Alternative Routes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Alternative routes allow patrons the ability to avoid unwanted confrontations.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>Having alternative routes to various destinations (bar, entrance/exit, etc.) in drinking establishments lets patrons avoid temporary obstruction or bottlenecks which require waiting. It also provides greater variety of experiences in the space.</td>
</tr>
<tr>
<td><strong>[Relevancy to Aggression]</strong></td>
</tr>
<tr>
<td>An important bonus afforded by numerous route alternatives is the ability for patrons to select alternate pathways through spaces so as to avoid challenging confrontations or unwanted sexual advances from another patron.</td>
</tr>
<tr>
<td><strong>[Inference—Therefore,…]</strong></td>
</tr>
<tr>
<td>Therefore, designers should plan spaces with multiple pathways, especially between the most popular destinations.</td>
</tr>
</tbody>
</table>

![Diagram]

**Sources**

Personal observation.
Table 2. (continued)

**Dead-End Corridors**

**[Theory]**
Open-ended corridors, as compared to dead-end corridors, decrease the possibility of sexual discomfort or assault.

**[General Background]**
Dead-end corridors are pathways which do not lead to a specific place and have no exit route. They are often unsupervised by barroom staff, and thus have a high rate of activities such as drug use and sexual contact.

**[Relation to aggression]**
Having these corridors could result in a patron feeling nervous or tense. If a patron feels tense, he or she is more likely to act out in an aggressive manner.

**[Inference – Therefore,…]**
Therefore, dead-ends should be avoided as well as dark corridors which could increase the tension of patrons. See “Circular Movement.”

---

**Sources**
### Table 2. (continued)

**Wayfinding**

**[Theory]**
Multiple clues for wayfinding, such as signage or landmarks, guide patrons.

**[General Background]**
Finding one’s way around a drinking establishment can be a challenge, especially whilst under the influence of alcohol. Orienting oneself is based on many various pieces of information and visual clues, and also the ability to reason.

**[Relation to Aggression]**
Unsuccessful orientation in a space or inability to locate a space can easily cause stress.

**[Inference – Therefore,…]**
Therefore, designers should incorporate multiple wayfinding clues into the drinking establishment, including signage and landmarks.

---

**Sources**


Table 2. (continued)

**Signage**

*Theory*

Signage which is consistent, well lit, and clutter-free can provide clarity to patrons.

*General Background*

Patrons who are intoxicated may have difficulty trying to read or understand signage.

*Relation to Aggression*

Signage in a drinking establishment should do more than just casually direct patrons towards a destination. The signs should also reduce stress and combat the confusion that comes during calamity of navigating through a crowded space.

*Inference – Therefore,…*

Therefore, signs in a drinking establishment should be well designed, easy to read, consistent, and well lit.

*Sources*

Personal observation.
Table 2. (continued)

<table>
<thead>
<tr>
<th>Restroom Lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Restrooms that are well lit and have proper signage are easily identifiable.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>Restrooms can be one of the most difficult places to find in any environment, especially a hospitality environment. Add alcohol to the equation, and it becomes even more difficult.</td>
</tr>
<tr>
<td><strong>[Relation to Aggression]</strong></td>
</tr>
<tr>
<td>When a patron needs to use the restroom, yet cannot find it or it is difficult to reach due to traffic, his or her aggression levels can rise.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore,...]</strong></td>
</tr>
<tr>
<td>Therefore, designers should make the restroom area well lit and have ample, clear signage.</td>
</tr>
</tbody>
</table>

**Sources**

Personal observation.
Table 2. (continued)

<table>
<thead>
<tr>
<th>Seating Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Seating arrangements which accommodate those in groups or the lone bar patron provide comfort for all.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>A drinking establishment provides the opportunity to link with friends and community in a visible and concrete way. People go there to see and to be seen. The majority go with friends. However, some patrons choose to go to the drinking establishment by themselves. Most likely, he or she will sit at one of the stools at the bar, or in a lonely corner. The patron is not necessarily looking for a direct confrontation, but to observe how others act. Take, for example, the coffee shop. Not all patrons in coffee shops choose to interact, yet many receive the benefits that one would expect from a social experience.</td>
</tr>
<tr>
<td><strong>[Relation to Aggression]</strong></td>
</tr>
<tr>
<td>Providing all patrons with a place to sit or drink allows each person to feel comfortable in his or her surroundings.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore,…]</strong></td>
</tr>
<tr>
<td>Therefore, a drinking establishment should be designed to accommodate all patrons - including those by themselves.</td>
</tr>
</tbody>
</table>

---

**Sources**


Table 2. (continued)

<table>
<thead>
<tr>
<th>Bar Efficiency</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
<td>Keeping an uncluttered area at the bar allows patrons to efficiently order beverages.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
<td>Having stools around the bar is nice for the lone patron, however, it makes it difficult for someone who would like to order a drink. The bartender and patron ordering must reach and talk around the person sitting at the bar.</td>
</tr>
<tr>
<td><strong>[Relevance to Aggression]</strong></td>
<td>Having patrons seated around the bar could also cause either patron to accidentally bump into the other or spill a drink, resulting in an act of aggression.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore,…]</strong></td>
<td>Therefore, designers should keep an area at the bar clear of bar stools, defined by architectural features such as a lower ceiling height, so that patrons may efficiently order beverages.</td>
</tr>
</tbody>
</table>

**Sources**
Personal observation.
Table 2. (continued)

**Ceiling Heights**

**[Theory]**
A lower ceiling height, such as in conversation areas, has the ability to provide intimacy.

**[General Background]**
The variation of ceiling heights in a drinking establishment has an effect on social relationships, and allows the patron to move to a space given the amount of intimacy he or she seeks. In general, a lower ceiling makes the patron feel closer to others around, and a higher ceiling makes the patron feel as if he or she has more space.

**[Relation to Aggression]**
Increasing comfort levels and providing areas for various types of social interactions could reduce feelings of aggression in the drinking establishment.

**[Inference – Therefore,…]**
Therefore, the designer should lower the ceiling in places which are of utmost intimacy, especially conversation areas, and heighten the ceiling in the most public areas.

**Sources**
Table 2. (continued)

<table>
<thead>
<tr>
<th>Warmth of Lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>The warmth of a room is determined not by color, but by the tone of lighting.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>Most designers believe that warm colors on a wall lead to a warm interior. Multiple color studies have been done to understand their influence on people’s emotions. It is true that warm colors on walls do make people feel good, but so do cool colors such as blue and green. Thus, it is not the color of the surfaces which make a place warm or cold, but the color of the light. If the lamp is a cool hue, everything will feel cool: people’s faces, shirts, beverages, etc.</td>
</tr>
<tr>
<td><strong>[Relation to Aggression]</strong></td>
</tr>
<tr>
<td>Warm tones of lighting can improve a person’s self-image and sprit.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore,…]</strong></td>
</tr>
<tr>
<td>Therefore, designers should choose lamps with warm light.</td>
</tr>
</tbody>
</table>

Sources
Table 2. (continued)

<table>
<thead>
<tr>
<th>Floor Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Variations in flooring levels and material thickness increase the possibility of falls and injury.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>Even the slightest change in flooring level can go unnoticed by someone, especially a person who is intoxicated. It is important to increase the safety of patrons, as well as important to give the patrons a feeling of comfort and ease.</td>
</tr>
<tr>
<td><strong>[Relation to Aggression]</strong></td>
</tr>
<tr>
<td>Part of reducing aggression in a drinking establishment is reducing tension and anxiety in the patrons. The thought of the possibility of falling and causing embarrassment upon a patron can put him or her in a state of discomfort.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore,...]</strong></td>
</tr>
<tr>
<td>Therefore, flooring should be kept at one level if at all possible. Floor materials should be kept at the same thickness so patrons do not have the risk of falling.</td>
</tr>
</tbody>
</table>

**Sources**

Personal observation.
Table 2. (continued)

<table>
<thead>
<tr>
<th>Floor Material</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theory</strong></td>
</tr>
<tr>
<td>Flooring materials which are wear resistant and also provide traction reduce the chance of patrons slipping or falling.</td>
</tr>
<tr>
<td><strong>General Background</strong></td>
</tr>
<tr>
<td>New traction flooring has become available and is widely used in the service industry, including in restaurant kitchens. Drinking establishments, however, have yet to jump on board. The majority of current establishments have hardwood, tile, or other slick materials that, when spilled on, can be extremely dangerous for patrons.</td>
</tr>
<tr>
<td><strong>Relation to Aggression</strong></td>
</tr>
<tr>
<td>If a patron slips or falls, he or she could become embarrassed and thus become hostile or aggressive towards other patrons or the staff.</td>
</tr>
<tr>
<td><strong>Inference – Therefore,…</strong></td>
</tr>
<tr>
<td>Therefore, designers should install traction flooring to prevent injuries in the drinking establishment.</td>
</tr>
</tbody>
</table>

Sources
Personal observation.
Table 2. (continued)

<table>
<thead>
<tr>
<th>Material Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Wear-resistant materials help keep establishments tidy and maintained at all times.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>While designers cannot make sure that bar staff picks up bottles and glass-wear or cleans up spills, designers can influence cleanliness to an extent through the finish materials that are specified for floors, walls, and furniture, as well as the fabrics selected for upholstery.</td>
</tr>
<tr>
<td><strong>[Relation to Aggression]</strong></td>
</tr>
<tr>
<td>The tidiness of a drinking establishment has the ability to incite permissive and aggressive behavior. This is similar to the “Broken Window” effect: Just as a single broken window left unattended may lead to increased criminal activity in some neighborhoods, a single broken bottle left unattended may lead to further disorder and eventually increased problems with violence and aggression in some barrooms.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore,…]</strong></td>
</tr>
<tr>
<td>Therefore, designers should select wear-resistant materials which are also easy and efficient to replace.</td>
</tr>
</tbody>
</table>

Sources


Table 2. (continued)

**Temperature Control**

**[Theory]**
The temperature of the drinking establishment increases as the number of patrons increases.

**[General Background]**
An increase in ambient temperature causes an increase in the consumption of “cooling drinks” and the possibility of patrons removing articles of clothing.

**[Relation to aggression]**
While a higher temperature leads to higher drinking levels and thus higher profit, it also leads to higher levels of aggression.

**[Inference – Therefore,…]**
Therefore, the temperature at a drinking establishment should be kept cool, and decrease as the number of patrons increases.

Sources
<table>
<thead>
<tr>
<th>Odors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Air systems that remove unwanted odors and introduce more pleasant masking aromas reduce environmental stress and enhance patience.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>Cigarette smells once masked virtually all other odors in drinking establishments. However, as widespread bans on smoking have been introduced, other odors have been “unmasked.” The previously less obvious odors of stale beer, strong perfume, mildew, bacterial growth and worse have become more prominent.</td>
</tr>
<tr>
<td><strong>[Relevancy to Aggression]</strong></td>
</tr>
<tr>
<td>Such odors heighten irritability, interpersonal volatility and potential violence.</td>
</tr>
<tr>
<td><strong>[Inference—Therefore,…]</strong></td>
</tr>
<tr>
<td>Bar designers should consider steps to replace the previous masking function of cigarette smoke with more acceptable alternatives. Following the example of some coffee and food specialty shops, designers might employ a range of aromatic interior materials and consider recommending specialized odor-reducing ventilation, perhaps including equipment to introduce branded scents or other pleasant fragrances into the barroom atmosphere.</td>
</tr>
</tbody>
</table>

**Sources**

Table 2. (continued)

<table>
<thead>
<tr>
<th>The Power of DJs</th>
</tr>
</thead>
</table>

**[Theory]**
By changing the type, volume and tempo of music played, when necessary, an experienced DJ or musician can soothe tensions and de-fuse hostilities.

**[General Background]**
Music policy is a more valuable business variable than most people realize, even people in the alcohol industry. Attentive DJs bring the advantage of being able to tailor their selections quickly to the listening preferences of the patrons, adding to the pleasure of their experience.

**[Relevancy to Aggression]**
Valuable as they may be to the general ambiance of an establish, live DJs and musicians may be most valuable in terms of their ability to exercise a tranquilizing influence on crowds, soothing tensions and reducing the threat of violent behavior. Live music is generally more expensive than pre-recorded music, however, the value of investing in better quality entertainment can be substantially multiplied when considering the live musician’s potential for subduing the volatile combination of today’s sexually titillating lyrics and alcohol consumption, minimizing the risk of disorder.

**[Inference—Therefore,…]**
Therefore, designers are encouraged to call attention to the potential role of live music and DJs, where the risk of disturbances is high, include provisions for their performance as a means of regulating aggressive behavior.

---

**Sources**
Table 2. (continued)

**Sound Levels**

**[Theory]**
Sound-absorbing materials can help improve clarity in conversation areas, such as around the bar.

**[General Background]**
The volume of music in a drinking establishment should always be monitored. It is reasonable to assume that music would be of a high-decibel level in most nightclubs, and that its stressful effects would be amplified by bumping and restricted space for movement.

**[Relation to Aggression]**
A high volume of music can stymie any attempts at conversation, thus increasing rates of alcohol consumption. It could also create frustration for customers attempting to be served at the bar.

**[Inference – Therefore,…]**
Therefore, the proper installation of acoustical panels and sound control are important in the design of a drinking establishment.

---

**Sources**


Table 2. (continued)

<table>
<thead>
<tr>
<th>Closing Time Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Variations in lighting and music slowing in tempo and energy towards the end of the night have the ability to wind down patrons.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>The drinking establishment can, and generally should, be a fun, exciting and energetic place to be. Unfortunately, the fun all comes to a sudden end at closing time. Patrons may be reluctant and potentially resistant to leaving the “party” scene.</td>
</tr>
<tr>
<td><strong>[Relation to Aggression]</strong></td>
</tr>
<tr>
<td>Songs with slower tempos or easy listening songs have been used prior to closing time to reduce the adrenaline and excitement of the patrons, thus preventing the possibility of aggression or hostility upon being asked to leave.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore,…]</strong></td>
</tr>
<tr>
<td>Therefore, the designer should encourage the management to implement a different type of music and lighting, signaling the end of the drinking night.</td>
</tr>
</tbody>
</table>

Sources
Table 2. (continued)

<table>
<thead>
<tr>
<th>Alternative Food</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Displaying alternative food and beverage gives the patron options other than alcoholic beverages.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>Having non-alcoholic beverages and an assortment of foods in a drinking establishment lets patrons choose between alcoholic and non-alcoholic beverages as desired, as well as to satiate hunger cravings.</td>
</tr>
<tr>
<td><strong>[Relevancy to Aggression]</strong></td>
</tr>
<tr>
<td>The lack of availability of food in a drinking establishment has been found to be correlated with aggression. This might be because of food’s effect on the absorption of alcohol and related intoxication levels as well as patron comfort.</td>
</tr>
<tr>
<td><strong>[Inference – Therefore,…]</strong></td>
</tr>
<tr>
<td>Therefore, designers should inform managers of the desirability of providing a space for alternative food and beverage choices to be properly displayed.</td>
</tr>
</tbody>
</table>

Sources
Table 2. (continued)

<table>
<thead>
<tr>
<th>Transportation Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[Theory]</strong></td>
</tr>
<tr>
<td>Providing outdoor information about courtesy cars and public transportation can reduce loitering, interpersonal contact and altercations.</td>
</tr>
<tr>
<td><strong>[General Background]</strong></td>
</tr>
<tr>
<td>A rowdy or permissive environment and people “hanging around” after closing time has proven to increase both the frequency and severity of aggression.</td>
</tr>
<tr>
<td>Especially at closing time, clearly defined pick-up points for public transportation outside bar exits speeds the departure of customers.</td>
</tr>
<tr>
<td><strong>[Relation to Aggression]</strong></td>
</tr>
<tr>
<td>Besides providing convenience for customers and discouraging intoxicated driving, such provisions reduce congestion at exits and minimize accidental contact and confrontations, thereby minimizing aggression.</td>
</tr>
<tr>
<td><strong>[Inference—Therefore,…]</strong></td>
</tr>
<tr>
<td>Therefore, in addition to providing alternative transportation, special attention should be given to making sure that transportation availability and its location(s) are clearly defined both inside and out. Stops for buses, taxis, courtesy cars, etc., should be well lit, clearly visible and preferably somewhat away from exits, to draw crowds out of heavy traffic routes.</td>
</tr>
</tbody>
</table>

Sources
CHAPTER 5. CONCLUSION AND DISCUSSION

Drinking establishments will always be prevalent, whether the economy is high or low, people are happy or sad. As stated by Sommer (1969), “Generally it is cheaper for a person to drink at home than in the local tavern. The raison d'être of the tavern goes beyond the opportunity for people to drink alcoholic beverages. This fact must be understood before one can understand the social and physical form of the tavern. A man goes to a bar to drink, to see and meet other people. It is a place to avoid boredom and existential loneliness. A bar allows for the transformation of loneliness into alienation with the availability of oblivion through alcohol.” In addition, the drinking establishment is the prime space to observe aggression as a result of design: it is where people congregate in the least organized manner. In a drinking establishment, behavior is free to come out, and free for this study to observe and use to propose designs that might help reduce aggressive behaviors or the reduce the severity of such behavior. This topic is important and allows the possibility of designing drinking establishments where there is less aggression expressed.

Most studies conducted on aggression and design have examined bars or taverns such as Graham and Homel’s (1997), or examined nightclubs in a different culture such as Macintyre and Homel’s (1992). Those studies have provided guidance and insight into this research project. All studies examined supported one hypothesis: Aggression in drinking establishments is at least partially the result of inappropriate design, including poor ventilation, smoky air, inconvenient bar access and inadequate seating, high noise levels, intersecting traffic flows, and density levels that are perceived by patrons as crowded. In
response, I believe each drinking establishment needs different design measures to alleviate aggression.

Ernest Boyer (1990), an American educator dedicated to teaching methods and scholarship, discussed the scholarship of discovery, integration, application, and, finally, teaching. The scholarship of discovery explains that research contributes to the intellectual climate of the university, and is crucial if scholarship is to advance. Boyer then encourages the scholarship of integration – the process of making connections within and across disciplines. It involves fitting one’s own research with that of others into one larger intellectual pattern. Applying the research is the next key step. Thus, simple design solutions were connected to the research of aggression in drinking establishments. Finally, it is important to teach and share what has been learned.

To this end, I created a final product of a series of brochures for architects, interior designers, and proprietors of drinking establishments which list possible solutions to reducing aggression through design. The brochures have followed the styles of Boyer and Alexander, integrating multiple sources and research theories into one collection.

Limitations

As Graham et al. (2006) point out, a major limitation of this research has been the inability to determine whether the associations between aggression and the environment are due to effects of the immediate environment (i.e. characteristics of the environment on any particular occasion) or to the effects associated with the usual features of a bar (i.e. invariant characteristics of the bar-room environment such as location as well as characteristics of the usual bar environment that vary across but not within bars). For example, the association
between aggression and permissive social environments could be due to the type of patrons attracted to permissive environments rather than to the specific effects of permissiveness on any particular night.

Macintyre and Homel (1997) also pointed out that there are significant problems inherent in attempting to link design, crowding, and aggression. As they mention, it could be argued, for example, that the better-designed venues have had more money invested in them and are better managed, or that because they are better designed they attract less troublesome patrons than the more poorly designed establishments.

Once again, a designer does not have control over a drinking establishment’s management. This study did not implement any designs or alterations of previous drinking establishment designs, and thus did not conduct any post-occupancy evaluations to test the information. Thus, all information remains a hypothesis.

**Follow-up**

The research for this topic has multiple pathways in which it can progress. One desire is to take the brochures to various drinking establishments and designers and obtain input or feedback. This would allow the brochures to be further refined.

The theories could also be implemented in drinking establishments to be tested. Many of the proposed hypotheses would require very little cost to retrofit into an existing establishment.

Finally, this subject could be brought into a continuing education program to inform and educate designers about this ever-evolving topic.
APPENDIX. CREATIVE COMPONENT

The brochures in completed form can be found on the website, www.public.iastate.edu/~jessica7.
Separate entrance and exit doors reduce congestion and physical jostling, thereby eliminating a common source of interpersonal conflict.

Rule 17: Placement of Doors

Because the density of patron traffic increases and decreases throughout the day, a strategic decision needs to be made about the location of the doors. In some cases, it may be more efficient to maintain a consistent flow of traffic through the doors, while in others, reducing wait times may be more important. Therefore, designers should attempt to achieve a more circular flow of traffic, ideally including a good deal of separation between entering and departing patrons.

Guide to Designing a Drinking Establishment

Rule 1.2 - A Place for Smokers

A place for smokers, such as a patio, reduces tension at the entrance of an establishment.
Traffic flowing in a circular motion allows patrons to be in constant movement.
Guide to Designing a Drinking Establishment

Rule 1.4 - Static vs. Dynamic

Stationary activities such as games or seating areas should be placed out of the flow of traffic.

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Rule 1.5 - Crossroads

Traffic which crosses the dance floor to get from one place to another can cause unnecessary damage.

The dance floor is a place where all patrons lose inhibitions, they may be consumed with the desire to cross to the center of the dancer's dance and have no barriers as alcohol and dancing allow patrons to cross and lose control of their surroundings. Therefore, traffic should not cross the dance floor to get from one place to the other.
Restrooms placed out of the way of the major traffic areas result in a more private space.

Therefore, drinking establishments should have their restrooms placed out of the way of major traffic areas, and should have a transitional space.

Restrooms which are close to the bar area can create traffic problems, as patrons can choose to use either restroom, creating a line or traffic problem. To prevent this, restrooms should be placed in transitional areas, away from the bar area. Restrooms which are close to the bar area can create traffic problems, as patrons can choose to use either restroom, creating a line or traffic problem. To prevent this, restrooms should be placed in transitional areas, away from the bar area.

Rule 6.4: Restroom Placement

A patron feels that his or her privacy is being invaded by having the restroom area near other activities, or he or she could feel threatened and hostile.
Alternative routes allow patrons the ability to avoid unwanted interactions. Therefore, designers should plan spaces with multiple pathways, especially near popular destinations.

Rule 1.7: Alternative Routes

Having alternative routes to various destinations makes walking easier and less stressful. Designing multiple pathways through the space allows patrons to avoid temporary obstructions or bottlenecks which require waiting. It also provides greater variety of experiences in the space.

An important bonus afforded by alternative pathways is the ability for patrons to select alternate pathways through challenging spaces so as to avoid unwanted sexual encounters from another patron.
Therefore, dead-ends should be avoided as well as dark corridors in an aggressive manner. If a patron feels tense, or if a patron feels tense result in a patron feeling nervous, having these corridors could make her or she more likely to act out.

Sexual assault activities such as drug use and sexual assault and drugs have high rates of occurrence unsupervised by bartenders which do not lead to a specification. Dead-end corridors are pathways which do not lead to a specification.

Open-ended corridors, as compared to dead-end corridors, decrease the possibility of sexual discomfort or assault.
Incorporate multiple wayfinding clues into the drinking establishment.

Therefore, designers should choose and also the ability to piece of information and visual cues to help on many variables. Asking the location of alcohol. Montage the information effectively. Multiple clues for wayfinding, such as signage or landmarks, guide patrons.
Signage which is consistent, well-lit, and clutter-free can provide clarity to patrons.

Rule 2.2 - Signage

Patrons who are intoxicated may have difficulty reading signage. Therefore, signs in a drinking establishment should be designed, easy to read, consistent, and well-lit. Suitable signs should be placed in a prominent location, ensuring they are visible from a distance. The signage should direct patrons towards a destination, reduce stress and the risk of accidents, and inform patrons of parking and other facility details.
Restrooms that are well lit and have proper signage are easily identifiable.

Rule 2.3 - Restroom Lighting

Restrooms can be one of the most difficult places to find in any hospitality environment. Add alcohol to the equation and it becomes even more difficult. When a patron needs to use the restroom, yet cannot find it or it is difficult to reach due to heavy patronage, levels can rise. Therefore, designers should make the restroom area well lit and have ample, clear signage.
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Guide to Designing a Drinking Establishment

Rule 3.1 - Seating Arrangements

Seating arrangements which accommodate those in groups or the lone bar patron provide comfort for all.
Guide to Designing a Drinking Establishment

Rule 3.2 - Bar Efficiency

Keeping an uncluttered area at the bar allows patrons to efficiently order beverages.
A lower ceiling height, such as in conversation areas, has the ability to provide intimacy.

Rale 3.3 - Ceiling Heights

The variation of ceiling heights in a drinking establishment can allow the patron to move from one level to another, or from a higher ceiling to a lower ceiling, depending on what type of social interaction they seek. In general, a lower ceiling makes the patron feel closer to others around, and a higher ceiling makes them feel more space. Increasing comfort levels and providing areas for various types of social interactions could reduce feelings of aggression in the drinking establishment.
Rule 3.4 - Warmth of Lighting

Most designers believe that warm colors are characteristic of a warm environment. Warm colors on walls and objects can make people feel good, but so do cool colors such as blue and green. Thus, it is not the color of the light which makes the color of the light. If the lamp is a cool color, everything will feel cool. People's faces, shirts, beverages, etc.

The warmth of a room is determined not by color, but by the tone of lighting.
Variations in flooring levels and material thickness increase the possibility of falls and injury.

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Rule 3.6 - Floor Material

Flooring materials which are wear resistant and also provide traction reduce the chance of patrons slipping or falling.
Single broken window left
Broken window effect: Just as a
behavior. This is similar to the
emotion permitting an aggressive
establishment has the ability to
The fliesess of a drinking

material resistant to wear and tear,
select the fabric for upholstery.

Additional issues with violence
inappropriate design and controllable
bottle is broken, allowing easy lead to
neighborhoods, a single broken
material activity in some

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Rule 3.7 - Material Maintenance
Near-resistant materials help
keep establishments tidy and
maintained at all times.
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Rule 4.2 - Odors

Air systems that remove unwanted odors and introduce more pleasant masking aromas reduce environmental stress and enhance patience.
Guidelines for Designing a Drinking Establishment:

**Rule 5.1 – Power of DJs**

By changing the type, volume and tempo of music played, when necessary, an experienced DJ or musician can soothe tensions and de-fuse hostilities.

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Rule 5.2 - Sound Levels

Sound-absorbing materials can help improve clarity in conversation areas, such as around the bar.
The drinking night and lighting, signaling the end of a session and encouraging the management to use slower, more soothing songs. Therefore, the designer should:

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Rule 5.3 - Closing Time Transitions

Variations in lighting and music slowing in tempo and energy toward the end of the night have the ability to wind down patrons.
Providing outdoor information about public transportation can reduce boarding times.]

\[\text{Rule 6.2 - Transportation} \]

A variety of environment-friendly transportation options can reduce carbon emissions and congestion. Such options can also help in reducing the frequency and severity of traffic-related aggression. Especially at close contact points, clearly defined pick-up points for public transportation outside of high-traffic areas can help in minimizing aggression.

Besides, providing convenience for public transportation, such as providing information and minimizing congestion, can also help in reducing the frequency and severity of traffic-related aggression. Therefore, in addition to providing alternative transportation, alternative routes should be clearly defined and visible to both inside and outside. Steps for both in and out can help in minimizing aggression.
ABBREVIATIONS


Hull, J.G. "A self-awareness model of the causes and effects of alcohol consumption."


Hutton, F.C. "Up for it, mad for it? Women, drug use and participation in club scenes."


Pallone, N.J., and J.J. Hennessy. "Blacks and Whites as victims and offenders in aggressive crime in the U.S.: Myths and realities." *Race, ethnicity, sexual orientation, violent


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BIOGRAPHICAL SKETCH

Jessica Lynn James was born July 7, 1985 in Hinsdale, Illinois. She received the Bachelor of Fine Arts in Interior Design from Iowa State University in 2007 and the Master of Fine Arts in Interior Design from Iowa State University in 2009. Her years of experience working in various drinking establishments led her to this research topic. She was selected to first present it at the 2008 Interior Design Educators Council National Conference in Montreal, Canada.