Pushing perfection: Exploring activity systems through international elite gymnastics scoring

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Pushing perfection: Exploring activity systems through elite gymnastics scoring

by

Elizabeth Stranahan

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

MASTER OF ARTS

Major: Rhetoric, Composition, and Professional Communication

Program of Study Committee:
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Iowa State University
Ames, Iowa
2014

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ACKNOWLEDGEMENTS

It is true that writing does not happen in a vacuum. I would like to extend my sincerest thanks to my committee, Dr. Abby Dubisar, Dr. Amy Bix, and especially to my chair Dr. Gregory Wilson, for breathing life into this document. Thank you for your considerate questions, instructional comments, and reminding me I could produce interesting ideas when I questioned it myself. I am also indebted to my peers Kaylee Browning and Rachel Alsup, who selflessly allowed me to bounce ideas and drafts off their brilliant minds, and to my friends Jamie Hurst and Ashley Kent whose daily encouragement kept me both productive and sane throughout the process. Finally to my parents, Chip and Vivian Stranahan who never stop supporting and allowing me to chase down my dreams even if it meant becoming an English major.

Also, if you decide to take on reading this document, I highly suggest you do so while listening to Sara Bareilles or the Catching Fire soundtrack. Makes for a more dynamic read if nothing else.
ABSTRACT

In 2006 the international elite gymnastics community switched their scoring system from the iconic 10.0 to a limitless system. Because of the overlapping interests of NBC as media broadcasting the event, the change in scoring resulted in NBC creating a key to assist audiences in understanding the scoring change for the 2012 London Olympic broadcast. The theoretical concepts of multiple activity systems sharing an object and collaborative ecologies work well together to explain the motives and context surrounding the 2012 NBC scoring key. Thinking of international elite gymnastics and NBC as participating in an activity system sharing the score mediated through the international elite gymnastics code of points offers a framework from which to understand the interrelatedness of international elite gymnastics and NBC. Additionally, considering international elite gymnastics as a collaborative ecology clarifies why the code of points acted as a tool for the international elite gymnastics collaborative ecology and incurred so many changes over time. The paper explores the interdependency of activity systems that share an object and also how changes in the tools that mediate a shared object can result in altering how activity systems function as a whole.
CHAPTER I: INTRODUCTION

On July 31, 2012, I huddled up to the TV with the rest of my family with heavy anticipation for the London Olympics Women’s Artistic Gymnastics Team Final. Because of the time change, I already tracked the live scoring results earlier that day, but I was eager for my family to catch up on the action and learn what I already knew: USA was golden. Settled in our living room, we watched as gymnast Jordyn Wieber kicked off the competition for team USA on the vault. Based on the 15.933 score I saw on the live score cast, it came as no surprise to me when Wieber nailed her 2 ½ twisting yurchenko vault.

Delighted to put video with the scores, I watched as NBC panned over to Wieber to flash her score on the broadcast. While NBC posted the same score I had seen online, I also noted a green triangle in the bottom corner, a notation I had not previously seen in the webcast or anywhere else (Figure 1).

![NBC flashing Jordyn Wieber's score at the 2012 London Olympics Women's Artistic Gymnastics Team Final](image1.jpg)
NBC sports anchor Tim Daggett soon jumped in to explain the notation that first intrigued me. “We have our own little scoring reference,” Daggett explained several times throughout the Olympic competition, “1.2 deductions or less, [the score is] green; it’s a go score. It’s great. Then there’s cautionary…And then there’s red, and that is obviously bad.” (“Women’s Artistic Gymnastics London Bars Final”). NBC, it seemed, created their own scoring key to help clarify the marks the gymnasts received from the judges (Figure 2). Reaffirming my suspicions, Daggett chimed in stating that the

![Figure 2: The NBC scoring key flashed at the 2012 London Olympics Women’s Artistic Gymnastics All Around Final (“Women’s Artistic Gymnastics London Team Final”).](image)

competition arena in London would not use the scoring key, but rather the NBC broadcast alone developed the system to help explain the complex scoring code that governs the sport of gymnastics.

As a competitive gymnast for 19 years, the NBC scoring key irked me almost immediately. In trying to simplify the scoring system, NBC created a key that does not accurately represent the entire competition field under the new scoring system. Under the new scoring system, execution and difficulty get weighted separately, but the NBC
scoring system only accounts for points lost in execution (not points gained in difficulty). Therefore, the scoring system misleadingly foretells that two gymnasts scoring the same in the execution category should both place relative to one another in the rankings when in reality small changes in the difficulty score will result in drastically different competitive rankings.

I started this project with the intent of fixing what I saw as a large problem: inaccuracies in the NBC scoring key. However, when I started researching the context and potential motivations surrounding NBC’s scoring key, a larger pattern surfaced. The NBC gymnastics broadcast does not work independently when trying to air their content to the public. Instead, NBC relies on the international elite gymnastics community to create scores that allows audiences both in the arena and at home to make sense of the actions in the competition arena. In 2006, the International Gymnastics Federation (FIG) changed the scoring system for elite gymnastics from the iconic 10.0 to a limitless system in hopes of more fairly awarding athletes for their performances in the competition arena. In changing the scoring tool the international elite gymnastics community used, the FIG also changed the way NBC performed their job of delivering and explaining that score to their televised audience as witnessed through the 2012 scoring key NBC developed.

To explore the interaction between NBC and the international elite gymnastics community, this paper will start by defining the theoretical concepts of activity systems and collaborative ecologies as they prove essential at providing a framework for this discussion. Next, I will provide a brief history of the code of points as a mediating tool to explain how the code has changed over time in response to evolving needs of the international elite gymnastics activity system. Pulling these concepts together, the
following chapter will illustrate how NBC and the international elite gymnastics community functioned as activity systems sharing the score mediated through the code of points to provide both their individual activity systems with meaning and structure prior to the 2006 scoring change. Before finally reaching the activity system demonstrated in 2012 when NBC introduced their scoring key as a secondary tool used to mediate the shared tool (the score) to their broadcast audience. Taking a look at the relationship between NBC and the international elite gymnastics community illuminates how changes in the gymnastics scoring system from 2004-2006 resulted in NBC changing their role as a mediator of information to their TV viewing audience, and also changed their participation in the activity network as a whole.
CHAPTER TWO: THEORETICAL FOUNDATION

Two theoretical concepts prove instrumental in considering the role of NBC’s scoring key and NBC as an organization interacting with international elite gymnastics competition: activity theory and collaborative ecologies. Activity theory, in particular, provides a strong foundation when looking at how the international elite gymnastics code of points, the document that outlines the scoring and requirements of the sport, acts as a tool that helps provide meaning to the sport and its audience, the international elite gymnastics community and NBC included. Activity theory also explicates how multiple communities can share the same object for vastly different reasons. The ability to share and use an object for different reasons and in a multiplicity of contexts also provides the tool with unique affordances depending on who uses the object. The international elite gymnastics community uses the scoring system to rank athlete performances, while NBC uses the same object to mediate a narrative for their broadcast. The international elite gymnastics community and NBC alike both developed new tools over time. David Niedergeses’s term of a crisis in a collaborative ecology helps explain why both organizations felt the need to change their tools. The terminology also explicates why the tools developed in the manners they did.

This chapter breaks down each term or concept individually to demonstrate how they work together to explain the international elite gymnastics-NBC case. It turn, they open up the current research on activity theory and how activities sharing a tool pairs nicely with collaborative ecologies and affordances to explain cases where tools and their corresponding object develop over time to change how participants interact with activity networks as a whole.
Elite Gymnastics as an Activity System

Activity theory provides a foundation for understanding the intersecting actions of the international elite gymnastics community and the broadcasting media during a competition. In the article, “Working Alone Together: Coworking a Emergent Collaborative Activity,” Clay Spinuzzi defines an activity network as occurring when, “one or more subjects labor to cyclically transform an object in order to achieve an outcome (403). Early research concerning activity theory focused on subjects converting physical objects to achieve an outcome such as farmers converting crops into grain (Engestrom 360). What interested early activity theorists lay not in the results of the activity system, but rather on the physical objects or tools necessary for certain activities to take place. “The insertion of cultural artifacts into human actions was revolutionary” in early activity theory because individuals were suddenly inextricable from the tools they used to achieve work (“Expansive Learning at Work: toward an activity theoretical reconceptualization” 134). Early activity theory research, or first generation research as it is sometimes referred, explored scenarios such as a farmer that requires a number of physical tools to mediate his environment and transform crops into grain. Kaptelinin contributed that, “The object is the linchpin of analysis, the ‘sense-maker’ around which the rest of the unit of analysis, the activity system, forms” (qtd. in “Losing by Expanding: Corralling the Runaway Object” 450). In essence, the objects define or “bound” the activity (Engestrom qtd. in “Losing by Expanding: Corralling the Runaway Object” 450). First generation activity theory looks at how the object comes to define the space in which it operates, and how that changes the relationship or thought process of the individual using the object.
While first generation activity theory was concerned with individuals using objects to serve individual needs, shortcomings of the theory were quickly noted. Second generation activity theory came to denote how the mediation of an object came to define communities as a whole (“Expansive Learning at Work: toward an activity theoretical reconceptualization” 135). Second generation activity theory, “suggests that activity theory researchers and practitioners need to examine interactions shared among multiple activities and the boundaries of those activities to identify the potential development and changes in both human activity and societal systems” (Engestrom qtd. in Yamagata-Lynch 24). Second generation activity theory suggests that mediating a tool produces changes not only in a single individual, but in the society itself.

While first and second generation activity theory research focuses on physical objects that, “we can touch and examine,” third generation activity theory emerged to develop the type of tool performing mediation (“Losing by Expanding: Corralling the Runaway Object” 453). Spinuzzi marks a distinction between the two types of “work” or systems activity theory and thus the activity objects work to describe: agricultural work and knowledge work. Agricultural work covers the work of using those tangible objects to physically labor to transform a substance, while “[k]nowledge work primarily involves creating, manipulating, analyzing, and transforming symbols. The objects of knowledge work tend to be texts and other representations” (“Losing by Expanding: Corralling the Runaway Object” 464). Third generation activity theory deals with knowledge work, which is the type of work the international elite gymnastics community undertakes when trying to develop a tool to provide their sport with structure and meaning.
For international elite gymnastics the code of points acts as a tool that gives meaning to international elite gymnastics as an activity system. The code of points performs knowledge work through changing the actions of the athletes into an object or product audiences can understand, and it provides the activity system with as objective a score as possible by creating “experts” in the form of judges that must be trained to code the activity as fairly as possible.

As a linchpin object, the code of points helps the participants of the activity—the athletes, judges, and audience—make sense of the physical maneuvers the gymnasts perform. The code of points provides meaning and awards symbolic merit to the physical skills the gymnasts execute. In essence, it is the tool that transforms the crops (gymnastics routines) into wheat (an understandable score). These scores go on to allow the routines to be ranked and hold meaning as comparative figures. For the athletes such rankings can build to gold medals, establish careers, and sponsorship packages. For viewers, these scores create sports legends and inspire masses, and finally, for broadcast media and marketing rankings sell tickets and increase revenue. The code of points mediates the routines to provide athletes and audiences alike with an object they can latch onto to use to serve the needs of their individual activity system.

The code of points also performs knowledge work in that it tries to create “experts” and establish objectivity to observational scoring which is inherently a subjective activity. The judges that score gymnastics competition at the elite level are called Brevet judges, and they passed a series of tests and met numerous qualifications in order to score at the elite level (“Judging Women’s Artistic Gymnastics”; Eligibility for 2013 Judges’ Courses”). Brevet judges typically have decades of experience with
gymnastics judging, or they previously competed at the international elite level
themselves making them familiar with the system. Brevet judges rely on the code of points to instruct them on how to perform their jobs, essentially, as the code instructs Brevet judges on how much athletes can earn for performing elements both alone and in combination, what possible deductions exist, and how much each deduction counts off of a score (“2013 – 2016 FIG Code of Points”). By boiling down each skill and their corresponding deductions, the code of points hopes to eliminate any potential bias from the judging panel. The code even goes so far as to require Brevet judges to recite the Judge’s Oath preceding major international events:

“At the World Championships, and other important international events, juries and judges pledge to respect the terms of the Judges' Oath. ‘In the name of all the judges and officials, I promise that we shall officiate in these World Championships (or any other official FIG Event) with complete impartiality, respecting and abiding by the rules which govern them, in the true spirit of sportsmanship.’” (“2013 – 2016 FIG Code of Points”).

The code of points therefore not only provides meaning to international elite gymnastics competition as an activity, but it also performs the knowledge work of trying to create as objective a scoring atmosphere as possible in a sport scored purely out of observations.

Beyond doing knowledge work, the code of points also bounds competitive elite gymnastics as an activity separate from other forms of competition and the, “infinitely extensible set of associations” or forms of potential participation in the sport (“Losing by Expanding: Corralling the Runaway Object” 454). The code of points creates a set of rules and regulations only used by international elite gymnastics competition. While the NCAA, Junior Olympics, and many recreation leagues participate in competitive
gymnastics, the code of points separates these activities and provides a clear definition of what defines international elite competition as separate from these other forms.¹

Considering international elite gymnastics competition as a third generation activity system helps explain the role of the code of points as a document that both restricts and dictates the work achieved in the activity system. The code of points provides the international elite gymnastics competition with meaning while also removing potential bias and ensuring it stands alone as an activity separate from other associations.

**Elite Gymnastics, Media, and Shared Objects**

Thinking of international elite gymnastics competition as an activity system helps demonstrate how this community uses the code of points to direct its work. However, the members of the competitive elite gymnastics activity system are not the only ones interacting with the scoring system as an object to provide meaning and substance. Media and athletics hold a long history of occupying the same space to perform their own objectives. In 1936, the Berlin Games became the first televised Olympics in history with the broadcast reaching Berlin and Potsdam. The first international Olympic broadcast came in 1964 at the Tokyo Games (Guinness World Records). And decades before that, print media along with movie theater newsreels relayed the events of the competition to eager audiences miles away from the competition venues (“Women’s Gymnastics European Cup 1961 newsreel”). The two entities developed a mutually beneficial relationship over time establishing these communities or activity systems as familiars

¹ NCAA, Junior Olympics, AAU, and International Elite gymnastics all contain their own unique code of points that outline the rules, regulations, and requirements of competing at that level of competition.
both working to serve the other. The broadcast community helps increase the presence of
the sport and its athletes to the general public, while exciting gymnastics competitions
and feats bring the media revenue in the form of ratings or subscriptions.

Both the international elite gymnastics activity system and NBC share the
physical space of the competition arena during major meets, but space is not the only
thing these two communities share. International elite gymnastics, as previously
established, uses the code of points to mediate their activity system and make sense of
their work. When NBC enters the competition arena, they too use the code of points to
provide their broadcast audience with information that allows them to make sense of the
activity they are watching. The code of points and the score the code of points mediates
provides NBC with the affordance of creating a narrative. Psychologist J.J. Gibson
coined term referring to the, “properties between the world and an actor,” describing the
natural relationships actors (humans and non-humans) make with objects they interact
with either with frequency or on a temporary basis (Norman 39). Affordances dictate the
default setting or how users typically interact with an object: “a string affords pulling.
String cannot be pushed” (Nidergeses 24). NBC uses the code of points and the score the
code of points mediates to provide substance for their TV broadcast. In their TV
commentary, the score mediated through the code of points affords the creation of a
narrative for audiences to follow events of competition. For experts in the gymnastics
activity system—judges, coaches, athletes, experienced fans—this affordance is natural
as these individuals readily witness the story the score unfold just as I did when watching
the live scoring on my laptop during the 2012 London team final. However, for a novice
audience this affordance may not be as apparent thus the need for NBC. NBC uses their
knowledge of the international elite scoring to afford a narrative dictates which athletes and routines get shown on the NBC broadcast as NBC has a limited time space and therefore will select only the routines thought to garner the most interest: the best or most dramatic routines of the competition. While audiences in the competition arena itself are expected to work out this narrative on their own, NBC capitalizes on the affordances of the scoring system to make that narrative abundantly clear to their televised audience.

Because NBC needs the scoring system to create the narrative and framework for their broadcast, the code of points becomes as much of a meaning-making tool to NBC as it does to the international elite gymnastics community. In essence, the international elite gymnastics activity system and the NBC activity system share the code of points as a linchpin object that gives structure and meaning to both activities. Spinuzzi represents two activity systems sharing an object in Figure 3. Spinuzzi demonstrates that activity systems rarely operate in a vacuum, but rather are multi-voiced entities an idea Figure 3:

Spinuzzi’s representation of two activity systems sharing an object (“Losing by Expanding: Corralling the Runaway Object” 459).

Engestrom first introduced (14-15). In a single activity system, communities “labor cyclically to transform an object” with mediating tools as previously established (“Losing
by Expanding: Corralling the Runaway Object” 454). In a two or multiple activity system each system shares the object to transform to suit its own needs. However the two activity systems may not necessarily share the same mediating tools to achieve the work of their activity systems. Each interaction with the shared object comes with the unique contextual needs of that activity system to perform their individual work.

For the international elite gymnastics and NBC, the score flashed in the competition arena serves as the shared object between these two activity systems. The international elite gymnastics activity system uses the code of points as the mediating tool that produces the score that gives their activity system meaning. NBC also shares the score to provide their activity system with meaning in the form of allowing them to use that scoring to produce commentary and a narrative understandable to their TV viewing audience. The most important aspect to note is that the international elite gymnastics activity system and NBC both depend on the score the code of points mediates to perform the work necessary for their respective activity systems. The score provides meaning to both activity systems, and the score depends on the code of points for mediation. Sharing an object, however, does not necessarily make these two activity systems collaborative entities. Engestrom argues that despite, “different activity systems have critically important shared objects...[there is] little evidence of productive collaboration across organization boundaries” (6). The FIG does not invite NBC into meetings concerning the development and changes to the code of points. The act of sharing an object without sharing collaboration goes on to demonstrate NBC’s dependability on the international elite gymnastics community to produce a score that allows NBC to perform their own work.
Another characteristic of a shared tool is that they fit into their respective activity systems in different manners making the objects, “polymotivated with stakeholders acting on the object to satisfy multiple, sometimes conflicting motives” (“Losing by Expanding: Corralling the Runaway Object” 457). For the international elite gymnastics activity system, the code of points needs to fairly award merit and symbolic meaning to the feats of the gymnasts. NBC also needs the code of points to provide meaning making for their audience, but they also need the tool to aid in the creation of a narrative for their broadcast.

Prior to the 2006 scoring change, the code of points operated with a fluidity that served the needs of NBC and the international elite gymnastics community without conflict. The two activity systems operated with the code of points as a shared object that allowed each system to carry out their own unique needs and motivations without impinging on the activity of the other.

**Collaborative Ecologies**

The second portion of theory that offers substantial guidance in understanding the interplay between the international elite gymnastics community and NBC is the idea of a collaborative ecology, a term coined by David Niedergeses. Niedergeses defines collaborative ecologies as, “sociocultural systems that consist of persons, activities, tools, and ideas that are mutually constructive” (viii). Niedergeses proposes that professionals collaborate continuously to decide not only what tools should be used in an activity, but also how the tools themselves should perform the work needed (1). He views collaborative ecologies as a terminology that indicates, “the social use of shared tools is a contingent, dynamic, mutually-constitutive endeavor where the people and their
activities, tools and ideas are all interdependent” (Niedergeses 2). In his research, Niedergeses observes a user experience team to further his understanding of how collaborative ecologies operate, share, and develop tools. The user development team Niedergeses uses in his study creates software applications to serve a range of purposes from, a “rigid project management tool” to a more flexible and open-ended wiki program (6). Throughout development of these tools, Niedergeses noted that the team developed several different strategies of developing tools to fit the needs of their assignments, and he comes up with three mechanisms that he believes shapes collaborative ecologies: selection, practice, and mediation. Selection considers how the tools are, “integrated or emerge in the collaborative ecology” while mediation for Niedergeses indicates, “the way tools and behaviors spread in the collaborative ecology—a departure from how mediation is described in activity theory and used in this paper (45-49). The third method, practice, holds the largest contribution when thinking about the international elite gymnastics and NBC relationship. Practice takes a look at how the tools become integrated into the collaborative ecology and how users in that ecology employ those tools. It also considers that how users may use a tool does not always match up with the tool’s original intended use (47). So while activity systems help describe how NBC and international elite gymnastics share tools, collaborative ecologies elaborate on how these are actually used in practice. Additionally, Niedergeses provides some guidelines for understanding how the tools themselves get changed over time. Niedergeses suggests that when the tools available no longer match the needs of the collaborative ecology it creates a crisis of ecology that users or participants in the collaborative ecology must decide how to fix. The idea of a crisis in a collaborative ecology proves essential in comprehending the
history of the international elite code of points and the multiple revisions the document received.

For the international elite gymnastics code of points, a multitude of individuals meet and collaborate when creating and revising the governing document. Therefore, it becomes helpful to think of the committees that collaborate on this document as a collaborative ecology to better understand their role in this international elite gymnastics-NBC case study. The FIG committee serves as the main professionals that guide the conversation about what tools best serve the gymnastics community, in this case, which scoring system would most judiciously reward the athletes for their feats in the competition arena. Both formally at the FIG Congress Executive Committee meetings and informally throughout the elite season, the FIG gathers input from coaches, judges, and athletes alike to ensure their tools serve the best interests of the athletes (International Gymnastics Federation).

Throughout its history as a governing document, the international elite gymnastics code of points has endured many revisions across nearly all its jurisdictions from what values certain skills get awarded and what requirements gymnasts must perform to the type of equipment used and, as demonstrated in the NBC case, the scoring system used. A crises within the collaborative ecology serves to answer those moments of revision calling them a crisis in the collaborative ecology. Niedergeses argues that, “[a] mismatched between the activities and tools creates a crisis within a collaborative ecology...That crisis can only be resolved by changing the tools available in the collaborative ecology, changing how the tools are used, or compromising the activity” (49). As the next chapter will note, the FIG as the collaborative ecology that holds the
final say on the international elite gymnastics code of points, witnessed several moments where the activity in the international elite gymnastics activity system was compromised by a mismatch between the available tools and the activities enacted. Over time, the FIG resolved their crises through changing how the code was used or changing the code altogether. The solution to the 2004 crisis of ecology the FIG unveiled becomes especially important as it helps explore how FIG’s solution to their own crisis ended up creating a resulting crisis of ecology for NBC as an activity system sharing the very tool the FIG changed.

Considering NBC and the international elite gymnastics community as an activity system that shares the scoring code of points as an object to help both bodies perform work helps demonstrate the relationship between of NBC on the international elite gymnastics community. It also demonstrates NBC’s reliance on the international elite gymnastics community to construct a tool that will produce a score or object that NBC can use to perform their work. It is also important to recognize that while these two activity systems share the code of points and scoring, they do not share this object for the same reasons as each activity system possesses its own goals. International elite gymnastics uses the code of points to give their activity symbolic meaning and to construct a score that is both meaningful to audiences and contrived with as much objectivity and fairness as possible. Similar to the international elite gymnastics activity system, NBC does use the code of points to establish symbolic meaning, but NBC also goes a step further to use select scores and portions of the meet to create a narrative for their broadcast that will hopefully be of interest to viewers at home. Lastly, considering the code of points governing body the FIG as a collaborative ecology helps explain why
the FIG revised the code of points several times throughout the document’s history. Together, these rhetorical devices provide the framework necessary to understand the crisis that occurred in NBC’s collaborative ecology that ultimately resulted in the decision to create a scoring key for the 2012 Olympic artistic gymnastics broadcasts.
CHAPTER THREE: CRISES IN THE COLLABORATIVE ECOLOGY AND SCORING

For the 2012 London Olympic broadcast in the US, NBC created a key to help audiences without an extensive knowledge of gymnastics understand the new limitless scoring system the FIG implemented in 2005. The change to the Code of Points from 2004-2005 seemed radical at the time, and for many audiences it was the most apparent change they had ever witnessed to the codes governing gymnastics as a sport. However, when looking at the history of the code of points, it is clear that the document is a living text that is constantly revisited and reworked.

This chapter will walk through a brief history of the international elite gymnastics code of points to demonstrate that the FIG acts as a collaborative ecology that at multiple moments in time revised the code of points to resolve crises in the collaborative ecology, or moments when the code failed to serve the international elite gymnastics community as originally intended. Establishing that the code of points becomes outstripped of its power and that the FIG routinely works at fixing these shortcomings helps explain the context of the 2004-2005 scoring change when the international elite gymnastics community swapped the 10.0 scoring system in preference for a limitless system to solve the crisis in their collaborative ecology. Additionally, as the 2004-2005 revision constituted not just building upon previous tools in existence, but rather the creation of a radically new tool explains why the first time the public became vastly aware of changes to the code of points occurred in 2006. Lastly, because the 2004-2005 scoring change demanded a nearly entirely new tool, this theoretical concept provides guidance in
understanding why NBC felt the need to explain the scoring swap when in years past, the broadcast did little to acknowledge changes to the code.

**Origins of the International Elite Scoring System**

While gymnastics traces its roots back to Greek ancestry and first saw participation in the 1896 Olympic games, gymnastics as modern audiences would recognize it only surfaced in 1954 with the standardization of the apparatuses and the scoring system. For nearly two decades, the sport operated under the ten to one system with judges valuing men’s excellence based on their strength, and women received demarcation for their grace and execution (“History of Gymnastics”). All gymnasts at the Olympic level started their routines out at a perfect 10.0 as long as their routine contained the required elements, and judges subtracted points according to deemed infractions such as flexed feet, bent knees, wobbles, or failure to complete skills (Fink).

However, in 1972, Soviet gymnast Olga Korbut redefined the nature of the sport for women as she combined both elegance and high athleticism (“History of Gymnastics”). Ripples of change already surfaced as gymnasts began pushing against the original parameters that defined the sport. In 1976 at the Montreal Olympic games, Romanian Nadia Comaneci became the first gymnast to ever score a perfect 10.0, and she did it not once, but six times at the games (“Nadia Comaneci”). Comaneci’s performances exemplified the breadth of the scoring system proving the upper limit to which gymnasts would be held. She demonstrated that a perfect 10.0 was not an abstraction, but rather an attainable meter that she and others could achieve.
The First Revisions to the 10.0

What was a novelty in 1976 became a commonplace by the 1980s. Comaneci was the first gymnast to score a 10.0, but she was far from the last. At the 1984 Los Angeles Olympics alone, 44 gymnasts received a perfect 10.0 (“History of Gymnastics”). The merit of perfection soon lost its significance, and the FIG started to take a second look as the scoring system no longer matched the needs of its athletes.

In 1990, the FIG made modifications to the Code of Points to account for the level of difficulty present in the routine and award the routine a start value dependent on the number of risky elements or skills in succession the athlete performed thus pushing a perfect 10.0 further out of reach than under the previous system (“History of Gymnastics”). The original code stood on the premise that:

“For each routine, the gymnast begins with a base score of 9.500. Judges make deductions for flaws in execution and for any missing requirements in the composition of the exercise. The judge may award bonus points, up to .5. Thus, the perfect routine, including bonus points added, is awarded a score of 10.00. “ (University of Michigan)

However, even the 1990s revisions to the code did not satisfactorily solve the scoring issues in the long run.

As is the nature of the sport, gymnasts continued to revolutionize the elements performed and amp up the potential difficulty in their routines. In response, the Code of Points continued to increase the amount of difficulty or bonus points the athletes required in order to start their routine at that 10.0 mark. “Before 2006, every routine was assigned a Start Value (SV). A routine with maximum SV performed perfectly was worth a 10.0. A routine with all required elements was automatically given a base SV (9.4 in 1996; 9.0
The Code of Points continued to incur revisions as athletes continued pushing on the boundaries of the system.

In 2004 at the Athens games, Russian competitor Alexei Nemov followed the trend Korbut started and ramped up the difficulty of his high bar routine. During the event final, Nemov performed one of, if not the, most difficult routines of the competition. Despite successfully completing a routine composed with six release moves, the judges awarded Nemov a score of 9.725 placing him in third with seven athletes still to go. The arena audience went irate following the flash of Nemov’s score halting the competition for nearly ten minutes as the arena loudly voiced their protest. Eventually, the judges would raise Nemov’s score to a 9.762, but he would still land out of medal contention in fifth place (Clarke).

Nemov’s scoring controversy again made coaches, gymnasts, and fans alike question the validity of the 2000-2004 Code of Points (Clarke). The immense difficulty of Nemov’s routine pushed him well beyond the required 8.8 SV to begin his routine at a 10.0. However, as gymnasts cannot receive credit for skills amassing over a 10.0 SV, Nemov received no advantage to doing the extra skills. In fact, Nemov’s risk cost him to lose points as while he was not receiving additional credit for the maneuvers, he was incurring the additional deductions in execution value. This act demonstrates that under the 2000-2004 Code of Points, gymnasts were actually dissuaded from trying to incorporate their full potential of difficulty. Many point to the event as the last straw for those requesting a dramatic overhaul to the international elite scoring system.
The Limitless System

In 2005, the FIG made the most dramatic revision to the Code of Points to date. The FIG revealed that starting in 2006, international elite competition would no longer be judged on the 10.0 scale. To try and avoid the disputes such as the one Alexi Nemov stirred at the 2004 games, the Code would now operate with a two part scoring system that valued degree of difficulty and execution as two separate entities:

“Under the current system, a gymnast's total score includes values for both the routine's content and his/her execution. Basically, the scoring procedure adds the Difficulty Score, which includes difficulty value for skills, connection value and element/compositional requirements, to the Execution Score, which encompasses execution - and for women, artistry on the balance beam and floor exercise – to determine a gymnast's total score. Scores no longer have a maximum value of 10.” (“Judging Women’s Artistic Gymnastics.”)

The new system now rewards gymnasts for taking risks and combining difficult skills instead of punishing them as it did with Nemov in 2004 by allowing athletes to rack up the highest difficulty score that they can. However, to dissuade gymnasts from simply throwing the most difficult skills possible, the code increased the deduction for failing to complete a skill from 0.5 to 1.0 and those deductions come from the execution score that remains on the 10.0 scale (“Judging Women’s Artistic Gymnastics”).

The latest revisions to the Code of Points hoped to better match the ever-changing needs of the athletes. As the sport continues to evolve, so must the tools to that mediate the activity.

Crises in the Collaborative Ecology

The history of the FIG code of points demonstrates that the laws governing the sport are not rigid, but rather reconfigure regularly to match the needs of the athletes. Each time gymnasts developed new skills, they pushed against the code of points as the
linchpin object. The code of points did not foresee far enough into the future to anticipate how much the sport would evolve causing repeated compromises in the activity system as it no longer fairly award the participants of the activity system with meaningful scores. Niedergeses calls these moments crises in the collaborative ecology. The FIG as the body that develops and reviews the code of points had to collaborate each time the activity system got compromised to a point that the old tools would no longer work. As Niedergeses suggests, the possible solutions for fixing a crisis are leaving the collaborative ecologies compromised, changing the way the tools are used, or changing the tools altogether. In the history of the code of points, the FIG tries each of these solutions to combat their unique crises.

In the 1970s, Korbut pushed against the code of points when she demonstrated that women’s artistic gymnastics could contain both grace and high difficulty. Korbut represents one of the first examples where the original code could not account for the activity occurring within the collaborative ecology. The maneuvers Korbut did pushed again where the limits of the original code thought the sport would end. For a short period, Korbut challenged the code with her high difficulty and compromised the collaborative ecology. However, one gymnast who compromises the system was not enough to revise the code of points.

Following in Korbut’s footsteps, Comaneci too pushed against the code of points as a mediating tool when she proved that perfection was attainable. If a judge were to rescore Comaneci’s 1976 bar routine where she achieved her first 10.0 under the present day code of points, they would no doubt find a slew of mistakes the 1972-1976 code did not account for. For instance, Comaneci takes a small hop forward on her dismount,
which under the present code could result in a 0.05-0.1 deduction (“2013-2016 FIG Code of Points”). However, the code during Comaneci’s time could not account for the difficulty of scores she performed. Because Comaneci’s difficulty level soared so far above her other competition, the activity system was compromised. The only way to fairly award Comaneci was to give her a perfect score, despite what in today’s standards was not a perfect routine. Much like Korbut, Comaneci compromised the activity as she displayed that perfection was not actually perfect. Still, however, the FIG felt the code of points held together enough so as not to change it. The activity system remained compromised.

However, following Comaneci, the weaknesses that she and Korbut began to point out came to a head. In the 1980s a slew of “perfect” 10.0s were recorded as more and more athletes rose to the level Comaneci and Korbut set. The code of points tried to reward these efforts, but it unfortunately came at the cost of undermining what constituted a 10.0 and rendered the value meaningless. Changing the way the tools were used no longer presented itself as a viable solution to the compromised collaborative ecology. Instead, the FIG needed to change the tools entirely: the second solution Niedergeses proposes.

With the original 10.0 scoring compromising the activity system and no longer fairly awarding the athletes scores, the FIG finally stepped in and changed the code in 1990. Under the 1990 code of points, athletes no longer automatically start competitors at a 10.0 simply based on whether or not the routines contained the required elements. Instead, the 1990 code introduced the concept of start values, meaning:

“For each routine, the gymnast begins with a base score of 9.500. Judges make deductions for flaws in execution and for any missing requirements in the
composition of the exercise. The judge may award bonus points, up to .5. Thus, the perfect routine, including bonus points added, is awarded a score of 10.00. “

(University of Michigan)

In building off of the preexisting 10.0 scale, the FIG merely changed how the tools were used with the 1990 revision to the code of points. The FIG hoped that changing the way the tools were used would help resolve the conflict in their collaborative ecology that resulted from gymnasts continuing to increase in the difficulty of skills performed.

The 1990 fix, however, proved not to solve the problem forever. A repetitive pattern emerges of athletes increasing the possible difficulty of the sport and the code of points as a scoring system getting compromised as a tool for the collaborative ecology. The start value of the updated 10.0 system continued to decrease from a 9.6 (1996) to a 9.0 (1997) to an 8.8 (2001) as the FIG continued to try and push gymnasts away from hitting the ceiling mark of a 10.0 (“Women’s Artistic Gymnastics”). Each time athletes inched closer to achieving perfection and devaluing the 10.0 again, the international elite gymnastics collaborative ecology experienced a crisis that persisted in a compromised activity until the FIG updated and changed the code of points. The 1990s to early 2000s fixes, however, all remained rooted in the idea that simply building upon changing the way the existing tool operated and was viewed would help fix the crisis in the collaborative ecology and therefore better serve the international elite activity system.

In 2004, Alexei Nemov proved that no amount of adjusting or re-envisioning of the existing code would allow the international elite gymnastics activity system to both grow as a sport with increasingly expanding difficulty and operate uncompromised as an activity system. The frustration fans, coaches, and athletes alike expressed following Nemov’s performance at the 2004 games pushed the FIG to once again visit the code of
points this time proceeding to the third solution in Niedergeses’s trifecta: changing the tools themselves. The FIG switched from the 10.0 to the limitless scoring system in hopes of creating a tool that would serve the needs of the international elite gymnastics activity system for a longer period of time than the 10.0 tool. The transition to the limitless system indicates the first time in the history of the code that the tool did not obviously build off the tools that came before it. In actuality, the limitless system does continue to use the 10.0 scoring system to evaluate execution errors. Likewise, from the 1990s onward, each code created a way to account for degree of difficulty in a separate manner. The limitless system just makes the distinction between these two functions more apparent.

Throughout its history, the international elite gymnastics code of points encountered challenges, compromises, and in the end changes either to the way in which the tools (the scoring system) was used in the elite gymnastics activity system, or changes to the tool itself. Observing the history of the code of points through the lens of a collaborative ecology framework demonstrates that the scoring change from 2004-2005 was the first time in the code’s history that the tools used to make sense of the international elite gymnastics activity system were exchanged almost entirely. This idea helps explain why the scoring change from 2004-2005 seemed more radical to television audiences than modifications in the past, and provides a clue as to why NBC felt it necessary to mediate this scoring change thus changing their participation in the international elite gymnastics activity system in 2012 in a manner not previously witnessed up to this point. The next two chapters will specifically outline NBC’s
participation in the pre-2004 international elite activity system and its changed participation as a mediator of the code of points in the post-2005 activity system.
CHAPTER FOUR: THE PRE-2006 ACTIVITY SYSTEM

To understand how NBC’s role changed when working with the 2012 international elite gymnastics activity system, first it is important to understand NBC’s participation in the international elite gymnastics activity system prior to the 2006 scoring change. This chapter details the NBC and the international elite gymnastics activity system in the decades preceding the 2006 scoring change. It details how NBC and the international elite gymnastics activity systems share the score as an object created by the code of points as a mediating device. Additionally, it looks at how these activity systems share the physical space of the competition arena as well and how that dictates the work these two specific activity systems perform.

10.0 International Elite Gymnastics and NBC Activity System

For large portions of the year, the international elite gymnastics community and NBC operate independent of one another. The aims and goals of these two organizations overlap only at the largest competitions during the elite season when NBC possesses the best chance of turning a profit off the broadcast. For a few competitions throughout the year, NBC and the gymnastics community cross the boundaries of their typical activities to share both the physical space of the competition arena and the code of points as a mediating tool to provide structure to both of their activity systems.

Figure 3 introduces the international elite gymnastics and NBC interactions prior to 2006, however, Spinuzzi created another model that analyzes how multiple activity systems coexist and even collaborate when sharing an object. Spinuzzi spent two years researching how business professionals shared office space to complete projects. As most of the business professionals that rented office space performed freelance work or work
from home, Spinuzzi expected the majority of coworkers would use the office space to provide themselves with a stricter work environment than they could create in their homes. In essence, Spinuzzi believed the coworkers chose to commune in the office space to “work alone together” (“Working Alone, Together: Coworking as Emergent Collaborative Activity” 428). However, he was surprised to find that the coworking office provided much more than space. In several instances Spinuzzi discovered certain coworking environments fostered collaborative efforts between the participants. These offices allowed unconnected professionals and entrepreneurs to link up temporarily to tackle a shared problem (“Working Alone, Together: Coworking as Emergent Collaborative Activity” 429). Spinuzzi creates activity models to describe the work habits in both coworking environments. The Good Partners configuration outlined the behaviors of coworking sites where participants of the activity system collaborated on problems for temporary time periods. The second model Spinuzzi created describes the work patterns of the coworkers that worked in parallel. Spinuzzi entitled this model the Good Neighbors configuration (Figure 4). What Spinuzzi contributes to third generation activity theory when he demonstrated through the Good Neighbors and Good Partners configurations that different objects used to mediate the same type of work can produce differing results. In the Good Neighbors configuration outward facing desks created an environment where employees worked in parallel. Contrastingly, the Good Partners configuration included inward or clustered collaborating spaces that resulted in employees working with one another on shared projects without that being the space’s original intent.
Returning to the NBC – international elite gymnastics case, the Good Partners configuration does contribute to informing the international elite gymnastics and NBC activity system in describing interactions and collaborations that occur on a temporary basis, it is the Good Neighbors configuration that transfers particularly well in helping to illustrate what took place in the London competition arena in 2012 (Figure 4).

In the Good Partners configuration Spinuzzi illustrates the diverse groups he witnesses that, “bring their work into the coworking space (the [dashed] circle) and work on it in parallel” (“Working Alone, Together: Coworking as Emergent Collaborative Activity” 428). In Spinuzzi’s model, each of the separate workers completes their own projects to serve their own individual clients. The only collaboration that takes place comes in the form of sharing a work environment and ensuring the space is conducive.

![Figure 4: Spinuzzi’s Good Neighbor configuration illustrating multiple activity systems sharing the coworking space as an object (“Working Alone, Together: Coworking as Emergent Collaborative Activity” 429).](image)

Likewise, NBC and the international elite gymnastics activity system do not collaborate on the shared object that is the score nor the tool that mediates the object, the code of points as previously discussed. Additionally, the Good Partners configuration
demonstrates that more than two activity systems can share an object to make sense of their activity systems, a idea that carries over to the international elite gymnastics and NBC case. The Good Partners configuration illustrates six different activity systems or coworking individuals that shared the coworking space to perform the work of their activity systems. For Spinuzzi, the shared object of these activity systems is the coworking office space itself. The office layout dictates the type of behavior expected of the participants, and consequently provides structure and meaning for the activity systems that share the space or the object. In the case of the Good Partners workers, the outward facing desks of their coworking space (their shared object) indicated that the space afforded the activity system the tools to meet with clients in a professional environment “Working Alone, Together: Coworking as Emergent Collaborative Activity” 423). For the international elite gymnastics and NBC activity system, space is not the shared object, but rather the scoring system. The gymnastics community, NBC as a broadcast media, NBC’s televised audience, and the arena audience all depend on the scoring system to mediate the activities taking place in the competition arena. As the actions in the 2012 competition arena pull on portions of multiple networks sharing an object and the Good Partners configuration I created a hybrid of these two activity models to characterize the interactions of the international elite gymnastics and NBC activity system prior to the 2006 scoring change (Figure 5).
Figure 5 demonstrates that NBC, NBC’s broadcast audience, the international elite gymnastics community, and the arena all share the score mediated through the 10.0 scoring system to make sense of the actions in the international elite competition arena. However, as previously discussed, each activity system also brings with it their own additional motivations and contexts through which they process that information. Most notably of these motivations is NBC’s need to use the score to create a broadcast. The post-2006 activity system replicates the format of the Good Neighbors configuration using arrows to denote that each activity system relies on the score as a core piece to the work performed in their activity system.

I incorporated a dashed circle in the post-2006 activity system to represent the space the activity systems share. While Spinuzzi originally used the circle to represent the shared office space that he envisioned as the shared tool, instead I use the circle to demonstrate that the television audience is separated from the action of the competition.
arena. This distinction proves important because it limits the scope of the activity that the TV audience is privy to. NBC restricts which routines to show based on what best serves their need to create a broadcast and a narrative of the events.

Figure 5 illustrates that NBC under the 10.0 scoring system, NBC needed to do little to help further the affordances the code of points mediated to make the score understandable to the TV viewing audience; the narrative was already apparent. When the first Olympics were internationally broadcast in 1964, the elite scoring system had already been in place for nearly ten years. So as Nadia Comaneci became the first female to achieve a perfect 10.0 in 1976, NBC and other announcers did not need to explain to audiences the novelty and importance of the event. The viewing public already understood the ramifications of such a score and what it meant to the activity system because of the built into affordances the score provided that created a narrative of the events.

Audio commentary stood as the only mediating device NBC and other broadcast systems used to explain the activity because when audiences saw a 9.8 or a 10.0 they knew what those marks symbolically meant to the sport. NBC operated as a good neighbor as Spinuzzi defines the activity system in that they did not impede or step on the work the international elite community produced, but rather simply relayed the scores to an audience for their own purposes.

The pre-2006 activity network represents a blending of two aspects of activity theory: two systems sharing an object and the good neighbor configuration. Prior to 2006, the gymnastics and NBC activity network worked well alongside one another while sharing an object to serve all of their needs. Prior to 2006, and during the early stages of
the crisis of ecology, Spinuzzi’s characterization of two activity systems sharing an object and the Good Partners configuration do a good job of explaining the international elite gymnastics and NBC relationship, however, just as the different office configurations changed the offices Spinuzzi observes, so too did the scoring change in international elite gymnastics change how both the NBC and international elite gymnastics activity systems operated. Explaining the post-2006 scoring system requires a new way of thinking about how activity systems relate to each other. In the next chapter, I propose that changes in the international elite collaborative ecology resulted in creating a secondary crisis in the NBC collaborative ecology because of its role as an activity system using the score generated from the code of points as a shared tool.
CHAPTER FIVE: POST 2006/LIMITLESS ACTIVITY NETWORK

In 2006, the international elite gymnastics activity network introduced a new tool to help mediate their work and create a score to judge the athletes’ routines. The FIG who developed the new scoring system hoped the limitless scoring would more fairly represent the performances of the gymnasts in the competition arena and allow for the sport to continue growing in its difficulty and composition. The FIG changed to the limitless system as a way to resolve the most recent crisis in their collaborative ecology. As demonstrated in the previous chapter, however, the international elite gymnastics is not the only activity system that shares the score mediated through the code of points to make sense of their activity system. NBC also uses the score to provide their televised audience with meaning of the competition’s events. The score also allows NBC to mediate a narrative to deliver to their audience. The FIG resolved the crisis in their collaborative ecology, but because of NBC’s dependency on the score as a shared object, the FIG’s change resulted in NBC also experiencing a crisis in their collaborative ecology.

This chapter outlines NBC’s participation in the international elite gymnastics-NBC activity network following the 2006 scoring change. It also cites a crisis in NBC’s collaborative ecology that occurred as a result of sharing the international elite gymnastics score as a linchpin object to make sense of their activity system. The chapter additionally explores the motivations surrounded NBC’s decision to create a scoring key as an additional mediating tool to help their broadcast audience understand the 2006 limitless scoring system.
**NBC’s Crisis of Ecology & the New Activity Network**

As international elite gymnastics encountered challenges to their scoring system, they experienced crises in their collaborative ecology. In 2004, the international elite gymnastics community decided the code of points compromised the activity system to a point that the code demanded a near total revision. The FIG as the governing body of the international elite gymnastics activity system followed the pattern Niedergeses foretold when crises occur in a collaborative ecology, and the FIG created a new tool altogether. While the change to the code of points as a mediating device resolved the crisis in the international elite gymnastics activity system, the change of tools from a 10.0 to a limitless scoring system resulted in creating a different crisis of ecology for NBC. Before 2006, NBC merely shared scores from the international elite gymnastics competition arena with their at-home audience with minimum addendums to that information. NBC added commentary and constructed a narrative to help their audiences make sense of the events transpiring in the competition arena, but they did not alter the actual product (the score) that resulted from the pre-2006 code of points as a mediating tool because the affordances of the 10.0 scoring already made the narrative of the events clear to novice and expert audiences alike. Moreover, although the code of points underwent several changes over its history, all of the adapted tools prior to 2006 stemmed out of the 10.0 system. NBC did not need to alter their broadcasting methods because the change was not readily apparent to the non-expert audience. The activity system, therefore, did not change during this time period.

In 2006, however, it was impossible for audiences to miss the change in tools that occurred. Instead of scores of 9.5 or 9.8, audiences witnessed 12.75s and 15.2s flash
across their screens (StickIt Media). I suspect NBC\(^2\) feared that the new code of points as a mediating device would create a score that the televised audience would no longer understand. Therefore, the score no longer worked as a linchpin object because it no longer made sense to the broadcast audience. The score mediated through the limitless scoring system did not afford novice audiences with a narration that was clear and easy to interpret as the 10.0 system did. These concerns do not seem unfounded either, as many leaders in the international elite gymnastics activity system also expressed their own confusion at the new scoring system. American gymnast Mary Lou Retton stated, “It’s hard to understand,” in an interview with the *New York Times* adding, “I don’t even understand it” (Macur). Former US National Team Coordinator Bela Karolyi also voiced his frustration with the new scoring system, “It’s crazy, terrible, the stupidest thing that ever happened to the sport of gymnastics. How could they take away this beautiful, this most perfect thing from us, the one thing that separated our sport from the others?” (Macur). Suddenly, the emblem that had come to define the sport and thus the activity system changed to a point that many feared would make it unrecognizable and impede understanding.

If NBC’s televised audience could no longer use the score mediated through the limitless scoring system outlined in the updated code of points, NBC’s activity system would be compromised thus NBC experience their own crisis of ecology. Once again, we return to Niedergeses’s solutions for a compromised collaborative ecology: compromise the activity, change how the tools are used, or change the tools completely. As previously

\(^2\) At this time, it is difficult to discern whether NBC or the international elite gymnastics community originated the idea for the scoring key. As NBC broadcast the event, in this paper they assume credit.
established, NBC holds no role in collaborating on the code of points, therefore, exchanging the code of points for a mediating tool that was more accessible to the TV audience was not an option. Additionally, continuing with a compromised activity system set NBC up to potentially incur huge losses in their profit margins because of a reduced viewership. So to solve the crisis in their collaborative ecology, NBC created their own scoring key as a tool that would mediate the new score that was already once mediated through the limitless scoring system. In creating a second mediating tool, NBC also changed their role in the international elite gymnastics activity system (Figure 6).

![Figure 6: Limitless activity system illustrating both the limitless scoring system and the NBC scoring key as shared objects](image)

In the 2012 activity system that uses the code of points as the mediating tool to create a score as the shared object between these activity systems, NBC’s second mediating tool of a scoring key (Figure 2) is shown. The limitless activity system also demonstrates that while each of the respective activity systems—NBC, NBC’s TV
audience, the international elite gymnastics community, and the arena audience—continue to share the score as a shared object to make meaning of their activity systems, NBC’s TV audience shares in the score only as mediated through NBC’s scoring key. Because the TV audience is physically separated from the work occurring in the international elite competition arena as denoted by the dashed circle, they cannot view the score or their shared tool via the NBC broadcast without also seeing NBC’s scoring key, an affordance not available to the arena audience or the athletes on the floor. NBC hoped their scoring key would resolve the crisis in their collaborative ecology and result in audiences better understanding the new scoring system, and lastly, keep NBC from losing audiences from their broadcast.

However, as my anecdote in the introduction told, the tool NBC developed is far from perfect. The NBC scoring key works well for the NBC TV broadcast where only the top routines are shown. As the narrative NBC constructs for their broadcast will likely only include the routines with the highest scoring potential, this shortcoming does not present a problem. Nevertheless, if audiences mistake the scoring key as functioning to explain the new scoring system in its entirety and try to apply the key to the webcasts where the competition as a whole was shown, or if they used it on smaller elite competitions, they will find themselves misled in predicting which gymnast held the best chance of winning the competition. Because the FIG score muddies execution and difficulty scores, novice audiences will likely find themselves unable to differentiate which routines hold a higher scoring power. Unless the gymnast makes detrimental mistakes such as large wobbles or falls, again, a novice audience will not be able to spot
the execution mistakes that the judges and more experienced audience members will

The solution to the crisis in the collaborative ecology of the international elite
gymnastics community resulted in creating a crisis for NBC’s collaborative ecology.

NBC solved this crisis through developing a secondary mediating tool to perform the
knowledge work of giving meaning to a score mediated through the limitless system for
novice audience. NBC hoped this second mediating device would help less experienced
audiences continue to be able to use the scores mediated under the limitless system as a
linchpin device that provided their activity system with meaning similar to how the score
operated as a shared object in the 10.0 activity system. NBC’s solution to their crisis also
caused them to change how the international elite gymnastics activity network appeared
following the 2006 code of points change demonstrating that modifications in shared
objects and the mediating tools that construct them can result in changes in entire activity
networks.
CHAPTER SIX: CONCLUSION

In July of 2008, StickIt Media, an online men’s gymnastics sports magazine took its own stab at explaining the new limitless scoring system to audiences in preparation for the 2008 Beijing Olympic games. The website foretells that, “[f]ans will soon see good scores such as 15.75 instead of 9.5. A very good score will range in the 15s and 16s” (‘Explaining the New Olympic Gymnastics Scoring System’). As it stands, the NBC scoring legend contains some fatal flaws that prevent it from accurately representing the actions of the entire competition to audiences at home. This shortcoming does not hinder the NBC broadcast, but it does misconstrue how the limitless scoring system is intended to operate for the entire competition field. Improving the NBC scoring model may lend to increasing audience understanding of the current gymnastics scoring structure in its entirety, but the fix provides only temporary alleviation for the greater predicament. The StickIt Media quote illustrates this fallacy because while a score in the 15s and 16s will be great for now, also demonstrated in the history of the code of points, gymnasts will continue expanding the difficulty of the sport and the code of points will change in response.

Already, minor changes to the code are taking place such as the devaluing of the Amanar vault for women’s international elite artistic gymnastics from a 6.5 difficulty start value used from 2005 – 2012 to a 6.3 in 2013. Because the number of women performing the vault increased significantly in that period, the vault lost its reign as the most difficult vault in the world, and gymnastics aficionados are already making bets on which gymnast will become the first woman to perform a triple twisting yurchenko (Cuesta). These changes, while minor, mirror the trends seen before in the history of the
code of points, and foretells that the cyclical pattern of the international elite gymnastics activity system and the activity systems that share in the score as a linchpin object will continue to see fluctuations in both the tools required to mediate the work of constructing a score and the formation of the activity network as a whole as a result. Bruno Grandi, President of the International Gymnastics Federation stated in 2011 that, “[o]riginally created to serve the development of our sport, the [2006] Code has mutated into a time bomb that we are wholly unable to contain (International Gymnastics Federation).

Already, the FIG is questioning the limitless system as a mediating tool that performs the work as intended.

So the area of interest is not whether or not the NBC scoring key serves its audience or even whether or not the current code of points performs its intended purpose of providing meaning to the international elite gymnastics activity system. Instead, the case opens up research into how changes in mediating tools ripple to affect activity systems and activity networks as a whole. Research forecasts that the international elite gymnastics community will continue to experience crises in their collaborative ecology at the hands of the code of points, but through a better understanding of the activity systems involved and invested in international elite gymnastics scoring as a shared object can better prepare each activity system to accommodate their methods and mediating tools when these crises occur. In addition, if the international elite gymnastics activity system learns how changes in their collaborative ecology led to NBC developing an imperfect secondary mediation tool, perhaps the FIG will take audience into consideration when navigating rule revisions in the future.
Lastly, this international elite gymnastics-NBC activity network opens the door for research that views activity theory as a rhetorical device that not only provides insight into how communities collaborate and share at single moments in time, but rather as a theory that can track changes in activities over time. The first collaborations of the international elite gymnastics community and NBC as a broadcasting media appear very differently than they do presently. I contend that applying activity theory to communities and tracking them over time will provide greater insight into how those organizations achieve work in a world where technology, contexts, constraints, and motivations are in constant flux. Moreover, it may increase understanding of how shared objects are formed and reformed. Perhaps the code of points actually participates in the larger context of genre, where several sports that rely on observational scoring such as ice-skating or freestyle skiing all partake in similar patterns of revision that stem from relying on past versions of their respective code of points to research past scoring operations, revise current techniques, and innovate new strategies to provide the most equitable scoring possible.

Based on the international elite gymnastics and NBC relations, the importance of seeing how multiple activity systems share an object becomes apparent. Changes in mediating tools for one activity system often spill over to create unforeseen ramifications in neighboring activity systems and the network as a whole. Continued exploration of these intricacies is needed to understand that activity systems are not static events, but rather shifting entities that develop over time.
Works Cited


Fink, Hardy. Personal Interview. 21 March 2014.


“Women’s Gymnastics European Cup 1961 newsreel”
