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Types of Fantasy Sports Users and Their Motivations

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Over 15 million people participate in online fantasy sports. Applying a uses and gratifications framework, we use Q-methodology, a quantitative means for developing typologies of people, to examine types of online fantasy sports users and their motivations. Five types of players emerged, with casual players, skilled players, and isolationist thrill-seekers being the three most common types. Differences among types of users were primarily associated with two motivations—arousal and surveillance—while entertainment, escape, and social interaction motivations were judged to be less important. The minimal importance of social interaction to fantasy sports users in this study was unexpected, based on previous research, and implies that not all online communities build or maintain relationships.

Introduction

The immense popularity of professional sports, especially the NFL and MLB, has brought fans to the Internet in search of other ways to enjoy their favorite sports, teams, and players (Fantasy Sports Trade Association, 2003). Fantasy sports leagues are one way fans can enjoy their favorite sports away from the stadium or arena. A fantasy sports league is made up of a dozen or so participants who compete against each other based on statistics from real-world competitions. Fantasy leagues normally begin with a draft of some sort, where owners either select their players or are randomly assigned players. During a sport's season, points are generated for each of the participants' "teams" based on real-world performances of the owners' players. In fantasy football, for example, teams usually compete based on categories such as touchdowns, yards gained, and turnovers (Hu, 2003).

Statistician Glen Waggoner is commonly cited as the originator of the first fantasy sports league. Waggoner's original league, in the early 1980s, required hours of work with statistics by the participants and was not nearly ready for the masses. The rise of computer technologies and the Internet changed the structure of fantasy sports in the 1990s. For the first time, participants could enjoy fantasy sports without having to labor for hours compiling statistics (Hu, 2003). Today's online fantasy sports offer statistical analysis and recordkeeping with the click of a mouse. Average fans are now able to participate in fantasy leagues at relatively low cost and with a relatively low time commitment.

As of several years ago, there were around 15 million fantasy sports users (FSUs) in America (Fantasy Sports Trade Association, 2003). A majority of FSUs are 18 to 34-year-old males (Fantasy Sports Trade Association, 2002, 2003). FSUs each spent about $175 annually on fantasy sports league fees, fantasy sports information sources, and add-ons such as live stat-tracking programs (Fantasy Sports Trade Association, 2003). CBS Sportsline reported a 40% increase in their billings for fantasy football and baseball in 2003, an increase that brought their total fantasy football and baseball billings to $14.4 million (Sportsline.com, Inc., 2003).

The increasing time and dollars spent annually on fantasy sports warrant research on the users, the providers, and the general role of fantasy sports in the community. Research in the area of sports fan motivation is considerably developed and includes several scales for motivation measurement (see especially James & Ridinger, 2002; Trail & James, 2001; Wann, 1995). However, knowledge of motivations for participating in a fantasy sport that is based on the real sport is lacking and may provide further insight into sports fan motivations in general. Additionally, there may be gratifications sought through online gaming that are not fulfilled by mere sports consumption alone or perhaps not fulfilled completely.

The following study examines types of FSUs based on motivations using Q-methodology, in an attempt to better understand online gaming in general and fantasy sports users specifically. Through analysis of 42 Q-sorts, five clear FSU types were identified based on two primary differentiating motivations—surveillance and arousal—and a handful of secondary motivations.

Literature Review

Past research has shown motivations for Internet use (Chan-Olmsted & Park, 2000; Green, 1996, 2001; Leung, 2001; Perse & Ferguson, 2000; Taylor, 2003), although studies focusing on fantasy sports in the online environment are lacking. Past uses and gratifications (U&G) research regarding sports fan motivations, however, suggests potential motivations for online fantasy sports use. Trail and James (2001) provide a detailed analysis of three motivation scales and offer a list of nine sports fan motivations. Three of these motivations include physical attributes of athletes and the games themselves, which are not applicable to a strategy game based in a virtual environment. A handful of motivations from sports fan research, however,

seem quite applicable. The motivations most frequently found in uses and gratifications research on sports fanship (although lacking uniform labels across the field) are social interaction, surveillance, escape, arousal, and entertainment (James & Ridinger, 2002; Milne & McDonald, 1999; Sloan, 1989; Trail & James, 2001; Wann, 1995). Our aim is to examine how these motivations may operate among FSUs participating in a virtual environment.

Chan-Olmsted and Park (2000) suggest that the Internet's characteristics are "inherently very different from the traditional broadcast media" because they include higher levels of interactivity and personalization (p. 321). Thus, some uses and gratifications may not transfer from older media studies cleanly into Internet-based U&G studies. However, a variety of studies (Althaus & Tewksbury, 2000; Conway & Rubin, 1991; Green, 1996, 2001; Leung, 2001; Lin & Jeffres, 2001; Milne & McDonald, 1999; Papacharissi & Rubin, 2000; Perse & Ferguson, 2000; Rabby & Walter, 2003; Rubin, 1981; Rubin & Perse, 1987; Taylor, 2003; Trail & James, 2001; Vincent & Basil, 1997; Wann, 1995; Wann, Friedman, McHale, & Jaffe, 2003) have applied the uses and gratifications perspective to Internet use and virtual interactions, and in these studies a set of common motivations—including personal utility, passing time, information seeking, convenience, and entertainment—emerge as the primary motives associated with Internet usage.

Ruggiero (2000) suggested that uses and gratifications research regarding the Internet has seen and will continue to see resurgence, due to the Internet's characteristics of interactivity, demassification, and asynchroneity (originally developed by Rogers in 1986). The interactive nature of many fantasy sports websites lends itself to highly involved participants and particularly attracts those who enjoy working with statistics and details in the management of their teams. Demassification refers to the individualistic nature of participation in fantasy sports (Ruggiero, 2000). Each FSU is able to develop highly personalized displays of information and strategies for competition. Asynchroneity on the Internet enables FSUs to participate at their leisure, checking teams, players, and statistics around the clock.

Due to the lack of research specifically focusing on fantasy sports, hypotheses are not justifiable for our study. Uses and gratifications research on both sports fanship and Internet usage, however, suggests that the five motivations used in this study are potentially applicable to the study of fantasy sports users. Because of this potential, the following research questions are asked:

RQ1: Which motivations are considered important to fantasy sports users?
RQ2: What possible types of fantasy sports users emerge based on these motivation combinations?

Methods

To examine uses and gratifications associated with FSU participation in fantasy sports, we chose Q-methodology for its ability to group individuals based on their

responses. Q-methodology is "a rigorous quantitative means for examining human subjectivity" (McKeown & Thomas, 1988, p. 7). Stephenson (1953) laid the groundwork for Q-methodology. Unlike R methods, Q-methodology aims to develop typologies of people. That is, instead of focusing on variables, Q-methodology focuses on people. Typically a Q-study involves having a small, purposive sample of people sort carefully selected statements about a self-referent topic. In Q-methodology, judgments are interdependent, meaning that each decision is affected by other decisions. Each statement ranking by a participant is, by design, affected by the ranking of other statements (Stephenson, 1953).

After more than 50 years in which Q-methodology has been used to study human behavior and subjectivity across a wide variety of disciplines, it still remains an obscure methodology in most disciplines, seldom taught in graduate methods courses. Consequently, its differences with R methods are not generally known. The fundamental difference in this study, as in most Q-studies, lies in the object of its generalizations. Within Cattell's data box, Q represents the second way of analyzing person-by-variable relationships while holding occasions constant (Cattell, 1978). R methods in the social sciences (e.g., surveys and experiments) analyze how variables correlate across people or populations. The aim is to make generalizations about these variables (e.g., their distributions, relationships with other variables). Q-methodology, on the other hand, views the cases-by-variables matrix differently, seeking to analyze how people correlate across variables. Since making generalizations about variables in a population is not the objective of Q-methodology, the sampling emphasis in this methodology is more concerned with how the sample of statements (the Q-sample) is constructed than with the representativeness or randomness of the sample of people doing the sorting (McKeown & Thomas, 1988).

Operational Definitions

Fantasy Sports—Based on the Fantasy Sport Trade Association's survey of most popular fantasy sports, the games considered in this study included fantasy football, baseball, basketball, hockey, golf, and NASCAR. We further limited our focus to online versions of these sports.

Fantasy Sport User (FSU)—For the purposes of this study, an FSU was operationalized as an individual who had participated online in a fantasy sport within one year prior to participation in the study. For an extensive description of fantasy sports users, their involvement levels, and their financial commitments, see the Fantasy Sports Trade Association (2002, 2003) surveys.

Regard for Fantasy Sports—This measure of attitude in FSUs was formed in two ways: 1) based on a questionnaire completed prior to the participants' Q-sorts and 2) through the Q-sorts.

Involvement—Involvement concerns time and money spent on fantasy sports. It was determined for participants by a questionnaire accompanying the Q-sort, as well as through the Q-sort itself.

Entertainment—Entertainment involves participating for pure enjoyment of the game. Fantasy sports, in this light, are seen as a fun way to pass the time.

Escape—Escape involves mentally getting away from daily rituals such as work, school, or any other environment.

Arousal—Arousal involves participating for the thrill of victory. This motivation is fulfilled through victory and pursued with the thought that the next victory is just around the corner.

Social Interaction—Social interaction involves creating and maintaining relationships and includes both family and friends.

Surveillance—Surveillance includes information gathering, working with statistics, and staying in touch with real-world sports.

Gathering and Measuring Data

A Q-methodology study generally involves a smaller sample of participants (P-sample) than other methodologies. In this case, 42 participants (38 males, 4 females, which is similar to the male-female participation rates reported by the Fantasy Sports Trade Association, 2003) were selected. The convenience P-sample was comprised of FSU college students at a large, midwestern U.S. university recruited in various lecture courses.

A Q-sample is a list of stimulus statements that are given to the P-sample for sorting. These statements were based on the 2 (high/low regard) $\times$ 2 (high/low involvement) $\times$ 5 (entertainment/escape/arousal/social interaction/surveillance motivations) factorial design first used by Carlson and Hyde (1984) and later adapted by McKeown and Thomas (1988). The number of replications (three) was also based on McKeown and Thomas. The statements in this study comprise a ready-made sample from various editorials regarding fantasy sports. The editorials were gathered using the Lexis-Nexis search engine and the keywords "Fantasy Sports." The statement population (247 editorial statements) represented a great number of views and opinions. To ensure a manageable list for assessing the motivations reflected in the literature, the statement sample for this study was selected using a structured design (see Appendix 1). Each statement was tagged with an implied set of components.

The participants ranked the 60 statements that resulted from the above process using a forced-normal distribution frequently employed in Q-studies. The participants were instructed first to sort the 60 statements into three piles. These piles were labeled "Most characteristic of my viewpoint," "Most uncharacteristic of my viewpoint," and "Neutral/Ambivalent" (McKeown & Thomas, 1988). After sorting into the initial piles, the participants placed the three most "agreed" with statements in the far right column. Then, they did the same for the most "disagreed" with statements in the far-left column. They continued to operate in this pattern until they were left with 10 statements in the middle (neutral) column. There were 11 columns in the distribution, ranging from −5 ("most uncharacteristic of my viewpoint" to +5 ("most characteristic of my viewpoint.")

Although they were forced to place a prescribed number of items in each rank, the participants were completely free in the actual placement of any specific item. The participants controlled the specific rank and significance of each item. Thus, the participants individually determined the meaning of the continuum (McKeown & Thomas, 1988). After the Q-sort was completed, each participant was asked to answer an open-ended question regarding his or her personal thoughts on fantasy sports and his or her elaborations on the most agreed with and most disagreed with items.

Data Analysis

Data analysis occurs in Q-studies with intercorrelations of the N Q-sorts (e.g., participants) as variables and factor analysis of the $N(sort) \times N(statement)$ correlation matrix (McKeown & Thomas, 1988). In other words, the data matrix is rotated so that persons become the columns of data and variables become the rows. Thus, persons are correlated, or factor analyzed, instead of traits or variables. The factor analysis produces factors—various points of view—of the people grouped together. Factor loadings, then, show the association between individual respondents and a particular factor. These factor loadings and other analyses were computed with PQMETHOD, a specific Q-method software program. Each participant had a factor loading for every factor, and the design is such that as many participants as possible will load heavily on one and only one factor. Each participant was then assigned to the factor on which he or she had the highest factor loading. Of the original P-sample (n = 42), 32 participants loaded heavily on one and only one factor. Once participants were included in a group through factor loadings, other data including demographics could be computed for each factor.

The final step (McKeown & Thomas, 1988) is the calculation of factor scores. Here, each statement in the Q-sample is given a z-score for each factor, indicating the relative importance of the statements to the participants who loaded significantly on specific factors. This scoring helps the researcher interpret the factors. The scoring is shown in a factor array, which facilitates analysis among factors that have given statements ranked much differently (for a comprehensive review of Q-methodology, see McKeown & Thomas, 1988).

Results

Overall Analysis

Five distinct factors emerged among FSUs (Appendix 2), with level of involvement and two motivations, arousal and surveillance, serving as the primary differentiating characteristics.

The PQMETHOD software generated factors through centroid analysis and orthogonal factor rotation. The participants' loadings on the factors are given in Table 1. The criteria for deciding on the number of factors were eigenvalues (greater than 1.0), scree plot examination, simple structure, and interpretability.

Table 1 Mean z-scores for primary components on all factors

Components	Factors				
	1	2	3	4	5
High Regard	.97[b]	1.40[a]	.63[b]	.77[b]	.67[b]
Low Regard	−.60[b]	−1.14[a]	−.77[b]	−.76[b]	−.69[b]
High Involvement	−1.23[a]	.39	−.48	−.21	−.10
Low Involvement	.97[a]	−.80[b]	.47	.14	.28
Entertainment	.27	−.48	.17	−.19	−.34
Escape	−.79[b]	−.52	.04	−.25	−.50
Arousal	−.75[b]	.15	1.04[a]	.87[b]	.78[b]
Social Interaction	−.06	−.11	−.97[b]	.34	−.55
Surveillance	1.20[a]	.49[b]	.01	−.73[b]	1.12[a]
% Expl Variance	20	16	9	9	7

Notes: [a]Component values that met or exceeded +/− 1.00. [b]Those components that were determined significant through frequency of occurrence and factor differentiation.

Surveillance was the dominant motivation that characterized the first two factors (F1) and (F2). Arousal was not prominent in these two factors. Factor 3 (F3) and Factor 4 (F4) made up the second group, which, on average, favored arousal over surveillance. Factor 5 had highly positive rankings for both surveillance and arousal items.

Z-Scores
Every statement in the Q-sample was given a z-score (showing its degree and direction of ranking) on each factor. Commonly in Q-studies, a z-score exceeding +/−1.00 is deemed significant. This was the critical level we adopted as well. For example, a z-score of −1.35 would indicate that the members of a factor had a significant negative view toward a statement, while a score of 1.75 would indicate a significant positive view toward a statement. Z-scores were used in two ways. First, they were used to describe a factor. Second, they were used to differentiate among factors.

System of Analysis
McKeown and Thomas (1988) offer a detailed description of analyses in Q-method as well as examples of techniques. Their discussion provided much of the direction for this analysis. The statement rankings that met or exceeded the z-score critical value (+/−1.00) were given primacy in the analysis of each factor. However, since each statement included three main effects (1. High or low regard for fantasy sports, 2. High or low involvement, and 3. One of the five motivations), we formulated a system for dissecting the importance of any single component.

The first measurement used to determine the importance of a component was its frequency of occurrence within the significantly ranked statements. For the second

measure, we compared component frequency in each factor with the baseline frequencies from the Q-sample. Since high and low regard for fantasy sports and heavy and light involvement occurred 50% of the time, and since entertainment, escape, arousal, social interaction, and surveillance occurred in 20% of the statements, components that occurred in statements with significant z-scores more frequently than these rates were considered important components of a factor. The frequency of occurrence assessment was necessary because it was possible for participants to focus on one of the three components included in each statement and give the entire statement significant placement in the distribution. In such cases, frequency of occurrence allowed us to determine which components were actually at work.

In addition to frequency of occurrence, mean values associated with each component were used to assess the importance of components to a factor. The mean scores for all components allowed for an equal playing field among components. Although the regard and involvement components occurred, by design, more frequently than the five uses and gratifications components, the mean z-score for all components was comparable.

Descriptions of Factors

Factor 1: Casual Players

Thirteen (31%) of the participants (11 male, 2 female) from this study sorted into F1, making it the largest and most powerful factor (20% of explained variance). We labeled this factor "casual players." Members of this group averaged 3.31 years of participation, usually spending between $0-$20 annually on fantasy sports. These FSUs devote one to two hours per week to the activity and display a high regard for fantasy sports, with a score of 3.77 (with 4 being most positive). Relatively speaking, however, their ranking for high regard was third highest among the five factors. Fantasy football (11) and baseball (8) were the two most popular fantasy sports for this group.

The components most frequently receiving positive rankings for F1 were low involvement (11/12 of the statements), high regard (8/12 of the statements), entertainment (4/12), and surveillance (4/12). Conversely, the most frequently occurring components that received negative rankings for F1 were low regard (10/11 of the statements), high involvement (9/11), entertainment (3/12), escape (3/12), and arousal (3/12). The components with the highest mean scores for F1 were surveillance (1.20), high regard (.97), and low involvement (.97). The components with the lowest mean scores were high involvement (−1.2), escape (−.76), arousal (−.75), and low regard (−.60).

Distinguishing Statements. Each factor has its own distribution of statements according to the distribution grid used originally by the participants in sorting the statements (with the most significant statements positioned at the extremities, −5 and 5). Among these factor grids, we can find useful points of distinction in statement

positioning that distinguishes a single factor from all others. The most representative distinguishing statements for F1 are listed below, with the average column placement (-5 to $+5$) for the statement on each of the factors given in parentheses, and the average placement for the factor of interest highlighted in bold font (**F1**, F2, F3, F4, F5). All statements are significant at the $p < .01$ level.

> 53. Fantasy sports are simple games that players don't need to work at for hours to have fun. (**5**, 0, 2, 2, 1)
> 30. You can have just as much fun and even WIN just by drawing your players out of a hat. (**1**, -4, -4, -3, -2).

Factor 1 Summary
F1 was labeled "casual players." The members of this factor did not spend lots of time, energy, or money in participating in fantasy sports. The statement that best represents their overall opinions is statement 53 (Fantasy sports are simple games that players don't need to work at for hours to have fun.) They also did not think that success in fantasy sports comes from skill. Rather, the casual players believed that any success stemmed predominantly from luck. This was best shown in their strong opposition to statement 15 (Fantasy sports are games of skill, not chance.) In addition, they favored statement 30 (You can have just as much fun and even WIN just by drawing your players out of a hat). Their most dominant motivation component was surveillance. The statements that best showed the importance of surveillance were:

> 51. I keep up with my favorite sport by occasionally checking fantasy sites.
> 9. Joining a fantasy league lets you stay interested in all of the other games that [you] normally wouldn't watch.

Although the casual players' ranking on the entertainment component was not significant, it was a point of differentiation between F1 and other factors. After surveillance, entertainment was the strongest motivation component for F1. Statements that best represented their opinion regarding entertainment were:

> 53. Fantasy sports are simple games that players don't need to work at for hours to have fun.
> 45. Having fun is the goal. People shouldn't have to spend all kinds of time and money.

The participants were asked an open-ended question regarding the three statements with which they agreed most, as well as a question regarding the three statements with which they disagreed most. The personal statements that most exemplify the casual players were:

User Reflections Regarding Statements of Agreement
1. Fantasy sports keep me interested and updated with sports that I can't find on TV or don't watch, and it's simple and not a big commitment.

2. Fantasy sports have made my interest in real-world sports grow, even though I don't spend any money or excessive time doing it.

3. I'm not really into it as much as some of the other people in the league. I think they take it way too serious. (sic)

User Reflections Regarding Statements of Disagreement

1. It's not hard. It doesn't take up much time and, for certain, it's not geeks doing this. I know a lot of people that get into leagues with the businesses they work at. It's a lot of fun.

2. Fantasy sports aren't fun because of money. They're fun because they require very little work and they fill you in on who's who in the sport.

3. Money wouldn't help me like fantasy sports more. I think it would make me dislike it. I just like to have fun with friends.

Factor 2: Skilled Players

Nine (21%) of the participants comprised F2, the second largest factor (16% of explained variance). These FSUs, whom we labeled "skilled players," averaged nearly 4.5 years of participation, and spent $12 to $50 annually on fantasy sports. This group devoted four to five hours per week on fantasy sports, and all nine participants (8 male, 1 female) ranked their regard for fantasy sports as 4 (out of 4).

Factor 2 had significant I ($+/-$ 1.00) on 26 statements. The positive rankings most commonly occurred on the components of high regard (11/12), high involvement (10/12), and motivations of social interaction (3/12) and surveillance (4/12). Factor 2 averaged heavily negative rankings on components of low regard (14/14), low involvement (8/14), and motivations of escape (4/14) and social interaction (4/14). The components with the highest mean z-scores were high regard (1.4) and surveillance (.49). The components with the lowest mean z-scores were low regard (-1.14), low involvement ($-.795$), and escape ($-.52$).

Distinguishing Statements. The most representative distinguishing statements for F2 are listed below:

49. Crafting a good team takes legitimate skill, no matter whether it's football or tennis, and a good team is very rewarding. (0, **5**, 3, 4, 3)

52. Fantasy football is a great distraction from the daily routine, and the cost is well worth it. (0, **2**, 0, 0, 0)

42. Paying money for services enriches the fantasy experience. (-4, **1**, -2, -1, -2)

Factor 2 Summary

Participants who loaded on F2 were highly involved in fantasy sports, and they appeared to get more out of fantasy sports when they put in more time and money. This opinion is best represented by F2's heavily positive rankings on statements 42 and 52 listed above.

High regard and high involvement were the most dominant components for F2. However, surveillance statements also defined F2. These FSUs enjoyed working with the numbers involved in fantasy sports and clearly saw fantasy sports as a game of skill. An increased chance for success, in their opinion, came from increased involvement. Often, this led these FSUs to pay for extra services, which they felt gave them an advantage. In their opinion, the games were based on numbers, perhaps even forming an equation for success.

The most representative personal statements from members of this factor included:

User Reflections Regarding Statements of Agreement
1. [Regarding statement 21] Sometimes I get busy. This ensures that I keep track of the sports, which I love. [Regarding statement 49] To know that you have picked the right team and worked hard is rewarding. [Regarding 28] By being so involved, you get a deeper understanding and love for the sport.
2. The top 2 [statements] that I most agree with deal with skill. You have to do some research sometimes and know who's hot and who's not. The third statement [17] is true for me because now I do pay more attention to sports when it involves my leagues.

User Reflections Regarding Statements of Disagreement
1. [Regarding statement 24] We just love sports and have fun following them. [Regarding statement 1] Sports can never be meaningless. [Regarding statement 40] Fantasy sports provide a lot of good meaningful things. You can keep in touch, follow the sports better, get satisfaction, and gain knowledge.
2. Though there might be some luck in it, fantasy sports is about preparation and fielding the best possible team. "Chance favors the prepared mind."

From these statements, "skilled players" appeared to be an accurate label for this group. This group appeared to be the most serious about, devote the most time to, and spend the most money on fantasy sports. Overall, the group also thought it took skill to be successful in fantasy sports.

Factor 3: Isolationist Thrill-Seekers
Four (9.5%, 3 males, 1 female) participants sorted on F3 (9% of explained variance). They averaged more than five years of participation, which is the longest of any group and a surprisingly long time, given that their average age was only 22. Members of this factor spent one to two hours per week on fantasy sports, and spent, on average, between $0 and $20 per year on fantasy sports. These members rated their regard for fantasy sports 3.75 out of 4. This rating was the second-lowest average among the five groups, with only F5's members rating their regard for fantasy sports lower. Fantasy baseball and football were the most popular sports among this group.

The components most frequently receiving positive rankings were high regard (10/12), low involvement (8/12), and arousal (5/12). The components most

frequently receiving negative rankings were low regard (9/13), high involvement (8/13), and social interaction (6/13). The component with the highest mean z-scores was arousal (1.0). High regard (.63) also received a heavily positive ranking. The components with the lowest mean z-scores were social interaction ($-$.97) and low regard ($-$.77).

It seems that F3 members had high regard for their participation in fantasy sports but were motivated primarily by arousal. This factor had somewhat of an isolationist view with its apparent dislike for social interaction. Six (46%) of the statements that had heavily negative rankings for this group included the social interaction component, which would have randomly occurred only 20% of the time.

Distinguishing Statements. The most representative distinguishing statements for F3 are listed below, with the average column placement for each statement across the five factors given in parentheses (F1, F2, **F3**, F4, F5).

48. I'm not too serious in my fantasy leagues, but everyone loves to win. (2, 0, **5**, 0, 0)
25. Fantasy sports are addictive for the same reason gambling is: Both create the hope that victory is just around the corner. ($-$3, $-$2, **0**, 2, 5)

Factor 3 Summary
Statement 48 (I'm not too serious in my fantasy leagues, but everyone loves to win) was most indicative of the mood of members of this factor. They sought arousal—the thrill of victory—most of all. They did not enjoy pouring in lots of time and money but still got enjoyment out of victory. Factor 3 had the highest rankings of any factor on arousal statements.

Factor 3's rankings on escape statements were higher than any other factor's. In fact, F3 was the only factor to average a positive ranking on the escape component. The statement that best represents this uncommon opinion is statement 5 (It's just a good way to lose yourself in something you love), which received a heavily positive ranking by F3.

Other than arousal and an uncommonly high level of escape, the other noteworthy component was social interaction. This is important because F3 ranked these statements heavily negative, unlike most other participants. Most participants in this study favored playing in leagues with family and friends. F3 seemed not only to find motivation elsewhere, but also seemed averse to participation for social reasons. This opinion is supported by the fact that 46% of the statements which F3 ranked significantly negative included the social interaction component. Two of the statements that F3 heavily opposed are listed below.

41. I love playing because it helps me to stay in touch with home.
60. Keeping up with buddies is about all I really get out of fantasy sports.

The personal statements in response to the open-ended questions that best reflect this group's view are presented below.

User Reflections Regarding Statements of Agreement

1. [Regarding statement 20] Winning is fun no matter how easy it was. [Regarding statement 43] I just do it for fun. If I am busy, it is low on my list of priorities. Just a hobby. [Regarding statement 14] I know several people who participate, including local business owners.

2. I love talking trash. I definitely have a hobby in fantasy sports. Many different types of people play fantasy sports.

User Reflections Regarding Statements of Disagreement

1. [Regarding statement 41] I don't play with people from home so definitely not. [Regarding statement 17] If you're not interested in the real sport, then why the fantasy sport? [Regarding statement 44] Illusion of people without don't participate.

2. It does not take a lot of time to do. Fantasy sports have about nothing in common with gambling. People follow teams they want to, not teams that they never heard of.

The overall analysis of this factor showed a strong arousal motivation and minimal involvement. In addition, there appeared to be a certain level of escapism at play. It was interesting that a handful of the personal statements from members of this group sought to legitimize fantasy sports as a benign endeavor or perhaps minimize their level of participation. Statements that indicated the low involvement level included, "Fantasy sports aren't too big of a deal for me," "It does not take a lot of time to do," and "Fantasy sports is not something that controls your life." Of the personal statements, "Winning is fun no matter how easy it was" and fantasy sports "just being a hobby" were very representative of these FSUs' opinions. Thus, the label "isolationist thrill-seekers" appeared to be appropriate for this group.

Factor 4: Trash-Talkers

Four (9.5%, all males) of the 42 participants fit into F4 (9% of explained variance). This group's members averaged nearly 3.5 years of participation, the third longest among the five groups. The average age was just under 20.5, making it the youngest group. Members of this factor spent one to two hours per week on fantasy sports, and all were in the lowest annual fantasy sports expenditure bracket ($0 to $20). These members rated their regard for fantasy sports 3.75 out of 4.

The components most frequently receiving positive rankings for F4 were high regard (9/12), low involvement (8/12), social interaction (4/12), and arousal (3/12). The components most frequently receiving negative rankings were low regard (9/12), low involvement (7/12), entertainment (3/12), social interaction (3/12), and surveillance (3/12). The components with the highest mean z-scores were arousal (.87), high regard (.77), low regard (−.76), and surveillance (−.73), none of which had a mean score above the +/−1.00 level.

Distinguishing Statements. As with the previous factors, the most representative distinguishing statements for F4 are listed below:

37*. Your luck determines the all-important bragging rights over your friends. (1, −2, −2, **5**, −1)

23. Fantasy sports are an easy way to just get away from the world for a little bit. (1, 0, −1, **3**, 1)

36. Fantasy sports is a healthy distraction that only takes up a few minutes per day. (4, 0, 3, **−1**, 1)

20*. There's nothing like the feeling of winning, especially when you don't have to work hard to get it. (1, 0, 4, **−4**, 1)

Factor 4 Summary

Factor 4 fell into the general category of FSUs motivated by arousal. Members of this group were thrill-seekers, thus separate from groups that had other primary motivations, such as surveillance. Two items separated F4 from the other arousal-based group, F3. First was the degree to which arousal served as motivation; F3 had much higher ties to arousal. The second differentiating component was social interaction. Though F4's rankings on social interaction statements were not, on average, extremely high, they were still much higher than F3's ranking (which was negative). Two distinguishing statements best represent the overall view of F4's members, in that they include elements of high regard, social interaction, and arousal. These statements, both of which received positive rankings from F4's members, are listed below:

53. Your luck determines the all-important bragging rights over your friends.
20. There's nothing like the feeling of winning, especially when you don't have to work hard to get it.

The personal statements listed below were the answers to open-ended questions regarding the participants' ranking of statements that are most representative of this group.

User Reflections Regarding Statements of Agreement
1. I have a lot of fun sitting around talking trash after a good week and I only play the free games. It really helps me pay attention to real-world sports so I can succeed in the fantasy games.
2. I believe that most people play fantasy sports because if they win, then it shows that they knew more about sports than everyone else. Even though to me, it is a game of luck.
3. I don't take it serious. I just do it as a friendly competition against family. I'm not even the one to check scores. My grandfather does.

User Reflections Regarding Statements of Disagreement
1. If it wasn't hard, everyone would do it. And my friends and I aren't dorks, but we love our fantasy football.
2. Fantasy sports can take up a lot of your day because you need to know who gets hot around certain parts of the season. Because all you want to do is win.

3. Fantasy leagues are supposed to be fun, in my opinion. The amount you pay, joining sports you don't follow, or saying there is only one good thing about fantasy sports is wrong. Granted, everyone has his or her own opinion. Mine is a more laid-back-not-really-caring approach.

Though there are elements of other components in the personal statements, the strongest motivations for F4 were arousal and social interaction. These FSUs liked to win. Moreover, they liked to beat their friends and family in "friendly" competition. Thus, the label "trash-talkers" is appropriate.

Factor 5: Formatives

Two (5%, both males) of the 42 participants fit into F5 (7% of explained variance). This group's members averaged two years of participation, by far the shortest period of participation among the groups. The average age of this group's members was 20.5, making them the second youngest group. Members of this factor spent 2 to 3 hours per week on fantasy sports and spent $20 to $30 annually, making them the second highest spenders among the five groups. These members rated their regard for fantasy sports 2.5 out of 4, which was by far the lowest rating for regard among the groups.

Components most frequently occurring in positively ranked statements (14) were high regard (11/14), high involvement (8/14), arousal (4/14), surveillance (4/14), and entertainment (3/14). Components most frequently occurring in negatively ranked statements (12) were low regard (9/12), high involvement (8/12), entertainment (4/12), escape (3/12), and social interaction (3/12). The mean score of only one component—surveillance (1.12)—eclipsed the $+/-1.00$ level. Interestingly, arousal (.77) was the next most important component. However, two other components, escape and social interaction, were still important to defining F5 through comparisons.

Distinguishing Statements. The most representative distinguishing statements for this factor are listed below:

8*. Fantasy players who faithfully pick only their favorite athletes are generally seen as pigeons and suckers. ($-2, -1, -2, 0, \mathbf{4}$)

35*. It's all in harmless good fun, nothing that could possibly intrude on your real life. ($2, 0, 2, 1, \mathbf{-5}$)

Factor 5 Summary

Factor 5's members were motivated by the strongest two motivations in this study, surveillance and arousal. This group enjoyed the information and statistics that drive the scoring in fantasy sports as well as the thrill of victory (whether through skill or pure luck). This was the most complex group to understand. If a member of this group pursued the information and statistics more than the simple thrill of victory, he leaned toward high involvement. Conversely, if a member pursued the thrill of victory more, with only a touch of surveillance on the side, he leaned toward low involvement. It was also interesting to see that one of this factor's members seemed to have some guilt about his level of involvement, which might have been due to his

inexperience. That is, he might not have expected to commit so much time and money to fantasy sports, and subsequently developed feelings of guilt.

Even the distinguishing statements for this group appeared contradictory. For example, members of F5 heavily favored statement 8 (Fantasy players who faithfully pick only their favorite athletes are generally seen as pigeons and suckers). This statement's positive ranking shows that they see fantasy sports as a game determined by skill and unbiased player selection. However, the same individuals strongly opposed statement 15 (Fantasy sports are games of skill, not chance), suggesting that in the end, they believe fantasy sports are determined by luck.

Factor 5's members were the least experienced regarding fantasy sports and the second youngest factor. They average just two years (seasons, actually) of participation. Thus, the attitudes of these FSUs may still be forming.

The attitudes of these participants might be best explained in the words of the participants themselves. All of this group's personal statements are listed below.

User Reflections Regarding Statements of Agreement
1. I think playing fantasy sports can be very addictive. [Statement] #21 was a perfect example. It talks about how people like to take control. In other words, being a manager of a team. [Statement] #25 also backs it up, saying that it's like gambling; hoping for victory. ESPN may have had a big role on fantasy sports having through its "getting the league back" commercials. I thought they were hilarious. I think only die hard fans or people who give it everything they got on everything are addicted to fantasy sports. [Statement] #12 is a perfect example of a laid-back person like me.
2. I would consider myself a casual player. I don't pay for it, and I don't check my team too often. My buddies and I do talk some smack though.

User Reflections Regarding Statements of Disagreement
1. [Statement] #35 explains that they are harmless. Anything that you pay for to have a chance to win something bigger is always going to have a chance to be addictive. [Statement] #30—You can't just do that. You have to take a little time to pick the players you need to win. [Statement] #50— Little entertainment. That's all it is. Entertainment. Except it shows a little bit of the gambling side.
2. I don't think paying would help anything. I also don't think I could spend a lot of time on it each week, other than watching games on Sundays.

Although the factor analysis identified F5 as significant and its two members loaded heavily on F5 and only F5 (showing some consistency in the Q-sorts), F5's members seem to contradict themselves in many ways, writing about the harmlessness of fantasy sports but also touching on its potentially addictive nature. They also talked about the idea of "total control" but also talked about being "laid-back" and "not spending a lot of time on it each week." It was because of consistent contradiction that followers of F5 were labeled "formatives." These FSUs are young, inexperienced, and still forming their opinions about the nature of fantasy sports.

Summary

Generally, FSUs in this study fell into two categories, based on surveillance and arousal motivations. The FSUs were either highly involved and enjoyed the statistics, knowing that they outsmarted those who did not win, or they were less involved and sought the thrill of victory and subsequent bragging rights.

The FSUs primarily motivated by surveillance saw fantasy sports as games of skill. These FSUs enjoyed working with the statistics and often formed strategies about creating the most efficient and productive teams. It should be noted that some low involvement members of F1 enjoyed the statistics, but still saw fantasy sports as a game of chance. In contrast, the FSUs primarily motivated by arousal saw fantasy sports as games of chance. These FSUs enjoyed the thrill of victory most of all, generally had low involvement levels, and did not devote too much time or money to fantasy sports.

Some less experienced FSUs (particularly F5) might have still been forming their opinions regarding fantasy sports. This group showed affinity for both arousal and surveillance components. As time passes and these FSUs gain experience, it is likely that they will join one of the other factors and fully develop either arousal-based or surveillance-based motivations.

The primary motivations produced by this study support past research on online groups (Conway & Rubin, 1991; Leung, 2001; Lin & Jeffres, 2001; Perse & Ferguson, 2000; Rubin, 1981; Vincent & Basil, 1997). The most surprising of this study's motivations was social interaction, which was ranked quite low by most of the participants. On the surface, this appears contrary to previous work (Green, 1996; Rabby & Walther, 2003; Utz, 2003) which showed that virtual communities are an effective way to fulfill the social interaction motivation. Although some of the participants' personal statements mentioned playing with family and friends, the relatively low ranking of social interaction compared to most factors points to an interesting direction for future study: online interactions and competition that may be *non-* or even *anti*-social.

Uses and gratifications proved useful as a theoretical framework, providing a starting point from which primary motivations could be developed and applied to the Internet. FSUs in this study certainly supported Rogers' (1986) and Ruggiero's (2000) concepts of asynchroneity, demassification, and interactivity and their application to the Internet. In addition, much of the other past work on this theory (Chan-Olmsted & Park, 2000; Green, 1996, 2001; Leung, 2001; Perse & Ferguson, 2000; Taylor, 2003) was supported by this study, specifically findings regarding motivations of arousal and surveillance, which were found in both sports fanship and Internet use research.

Asynchroneity seemed to be most important to those FSUs who showed low involvement levels. Members of all factors except F2 favored low involvement over high involvement statements. These FSUs liked the idea of being able to control their team when it was most convenient for them, as opposed to having a rigid schedule for participation.

Demassification was important to all FSUs in this study. All online fantasy sports leagues allow for a high level of control and personalization, either through a league commissioner or through a small governing body. The skilled players, more than any other group, may benefit from increased personalization of leagues and teams.

Interactivity was most important to members of F2, the skilled players. This group sought the most control and feedback from fantasy leagues. These FSUs often paid extra money for increased statistical feedback and more control.

Strengths and Limitations

Q-methodology, by design, is intended to describe only the sampled group. Q-method is not used to make inferences about the distribution of factors within a general population; rather, it provides a systematic way of understanding some, but not all, of the factors that do exist. The list of FSU categories found in this study is in no way exhaustive; Q-method allows for a potentially infinite number of possible factors. In an effort to create the best possible understanding of the participants in our study, we focused on the five clearest factors. Different criteria for evaluating factor solutions could yield different results.

A limitation of note in this study regards the Q-sample of statements. These statements represent a ready-made sample; the case for the three implied components comprising each statement could be strengthened through the inclusion of participants in the development of the Q-sample through interviewing and pre-testing (McKeown & Thomas, 1988).

Future Research

Research on communication in virtual settings will undoubtedly increase in the near future with the increasing popularity of virtual gaming communities. Future research could focus on the types of relationships formed and maintained in such settings. Frequently, participants in these types of virtual groups consider each other friends but actually know relatively little about each other. Additionally, the differences between anonymous participation with strangers and competition among friends need to be examined more closely. It may be that playing with strangers is connected to motivations (thrill of victory without risk of shame, creating relationships, escape) that differ from the motivations associated with playing with family and friends (thrill of victory, maintaining relationships).

Future research could also analyze the factors from this study in terms of individual roles and levels of activity in online gaming. Some FSUs, particularly those who view fantasy sports as a game of chance, are relatively inactive, while others (those who view fantasy sports as a game of skill) step forward to act as league commissioners, enforcing league rules, collecting dues, paying winners, and so on. Such activities could have significant effects on online community formation and maintenance.

Last, future research might benefit from applying Q-methodology to other populations of FSUs (such as younger groups, older groups, or populations of the same

age outside of college), participants in other types of online gaming (such as MMORPGs or Yahoo! games), or members of other types of online communities (such as chatrooms or social networking sites), in order to further contribute to an understanding of the motivations and types of users who frequent these increasingly popular online environments. Although research on motivations of other groups may provide some support for the findings of this study, it is very likely that it would also generate entirely new motivation-based categories of users, since other online gamers and community members would not necessarily be driven by the same motivations as the population of the present study. This study provides an early step from which such possibilities can be explored in the future.

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Appendix 1

Factorial Design for FSU Q-Study

Main Effects	Components
Regard for Fantasy Sports (X)	High (a) Low (b)
Involvement (Y)	Heavy (c) Light (d)
Primary Motivations (Z)	Entertainment (e) Escape (f) arousal (g) Social Interaction (h) Surveillance (i)

Q-Sample = (Main Effects) (Replications) = (X)(Y)(Z)(m)
(X)(Y)(Z) = (2)(2)(5) = 20 Combinations
Replications = (m) = 3
N = (2)(2)(5)(3) = 60 Q-Sample Statements

Appendix 2

Factor Breakdown

Component	Factors				
	1	2	3	4	5
Regard	High	High	High	High	High
Involvement	Low	High	Low	Low	Low
#1 Motivation	Surv	Surv	Aro	Aro	Surv
#2 Motivation	Ent	Aro	Ent	SI	Aro
Lowest Motivation	Esc/Aro	Esc	SI	Surv	SI
# of Members	13	9	4	4	2
Years of Participation	3.31	4.5	5.2	3.5	2
Participation hrs/wk	1–2	4–5	1–2	1–2	2–3

Notes: Regard = regard for fantasy sports. Involve = Involvemnt level in fantasy sports. Motivations = Surveillance (Surv), Entertainment (Ent), Escape (Esc), Arousal (Aro), and Social Interaction (SI).

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