

For Love or Money: Developing and Validating a Motivational Scale for Fantasy Football Participation

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The contemporary sport fan has the ability to consume spectator sport through several means including event attendance, television and radio broadcasts, print publications, and Internet applications. Recently, an ancillary sport service, termed fantasy sports, has become one of the most popular activities among sport fans. As a result, the business of fantasy sports is booming. This study examined motivational dimensions underlying fantasy football participation from a Uses and Gratifications perspective. Utilizing Churchill's (1979) five-step method for developing quality marketing measures, this study identified and validated three motivational dimensions: *entertainment/escape*, *competition*, and *social interaction*. The results suggest a pattern of fantasy football participation that is more purposeful and active than traditional media use. Discussed are the gambling associations, future research opportunities, and suggestions for developing fantasy football participation into a more creative and interactive marketing communication tool.

The psychological, sociological, and behavioral study of sport spectators and consumers has been a prosperous area of study for sport management researchers over the past two decades. Specifically, the demand for sport has been the primary focus of the majority of this research, for understanding consumer motivation provides vital information for sport marketers (Sloan, 1989). Within this process, the development of measurement instruments is an important step in explaining why people attend, engage in, or watch sport events (Trail, Anderson, & Fink, 2000; Trail & James, 2001; Wann, 1995). For sport managers, this information is pertinent to provide products and services that continually meet the needs and wants of sport consumers.

Currently, sport fans have the ability to consume sports through several means including event attendance, television and radio broadcasts, print publications, and the Internet. Therefore, to fully understand fan consumption, it is necessary to investigate the numerous ways and frequency in which they consume sport. Interestingly, as the study of sport consumer behavior has evolved, the examination of certain segments of sport consumers has been overlooked, specifically, the population of media-dominant fans. While this segment of the sport population represents professional sports' most substantial fan base, a comprehensive psychographic assessment of this group of consumers is lacking (Pritchard & Funk, 2006). Within this large segment of sport fans reside fantasy sport participants.

Also known as Rotisserie and Fanalytics, fantasy sports are games in which participants act as general managers or owners of their own sport team. Completely customizable, interactive, and involving nearly every major professional sport from professional football to bass fishing, fantasy sports are primarily online services that allow fans to simultaneously follow their favorite sports and actively compete and interact with family, friends, acquaintances, or even strangers based upon real-world professional player statistics. The current study investigated fantasy football participation due to its immense popularity (> 20 million participants) and its status as the gateway activity for other fantasy sport games (Fantasy Sports Trade Association [FSTA], 2008).

With respect to the process of the activity, fantasy football leagues are formed throughout the summer and teams are traditionally drafted as the National Football League (NFL) season begins. Individual NFL players are drafted based on their potential to perform on the field as fantasy team performance is determined by their statistical output in the form of touchdowns, yards from scrimmage, receptions, field goals, etc. Competition between fantasy participants typically mirrors the NFL's weekly head-to-head matchup, and as a result, participants engage in weekly sometimes even daily activities involving their team and league including adding and dropping players, trading players, and altering their starting line-ups. To perform these actions, however, access to

player and team information is required, and as a function of this requirement, the Internet plays a significant role in the process. Specifically, fantasy sport websites, such as Yahoo.com, ESPN.com, and CBSsports.com, have become the primary vehicle through which fantasy owners draft players, check scores, conduct research, and perform daily and weekly functions associated with the activity. Simultaneously, as the Internet has grown into a primary means of communication and entertainment for consumers, fantasy football have become one of the most popular activities among NFL fans.

The popularity of fantasy sports, in general, is evidenced by the fact that nearly 30 million Americans and Canadians currently participate in some kind of fantasy sport league (FSTA, 2008). Many fantasy owners participate in several leagues during a single season and throughout the year. Recently, this habitual commitment has transformed fantasy sports into a highly-lucrative enterprise. The FSTA currently estimates the total market impact of fantasy sports to be \$4.48 billion, annually, with \$800 million spent directly on fantasy sport products and services. Fantasy sport participants also represent corporate America's most highly-coveted group of consumers (Caucasian, Male, 18–45, Bachelor's Degree, and \$78,000 annual income). As a result, fantasy sport has emerged as an easy, cost-effective means of reaching an engaged and lucrative group of consumers (Leporini, 2006).

Despite the ever-increasing popularity of the activity and the highly-sought after marketability of its participants, there is a significant lack of empirical research studying the motivational factors behind participation. Given this limited amount of investigation, the current study was exploratory in nature. The purpose of this study was twofold: (1) examine what motivational dimensions lead to fantasy football participation, and (2) develop and validate a comprehensive fantasy football motivation scale. Specifically, this study examined fantasy football from a Uses and Gratifications (U&G) perspective to understand how fantasy football participants use this media to fulfill their unique needs and wants.

Review of Literature

Fantasy Sports and the Media-Dominant Sport Fan

The advent of fantasy sports as an ancillary sport media service has seemingly created a new role for the traditional sport consumer (Drayer, Shapiro, Dwyer, Morse, & White, 2010). For most sport fans, it is the closest way to participate in professional sports without actually putting on a uniform and competing. A typical fantasy team is comprised of a self-selected group of heterogeneous players. The corresponding attachment attributed to these players often distributes a participant's interest throughout an entire professional league. Ergo, instead of passively following one's favorite team, a fantasy participant is given the opportunity to actively engage in

operations similar to those that occur in a professional sport team's front office.

Furthermore, the premise of fantasy sports allows individual participants to compete weekly against other fantasy team owners in a league-style format. This competition usually lasts the duration of a professional sport league regular season, and is dependent upon the statistical output of real-world athletic performance. Given this unique competitive nature, fantasy sport participation has created a new, highly-engaged sport consumer who craves interactivity and real-time information combined with the traditional, old-fashioned spectatorship associated with professional sports (Shipman, 2001).

In general, the scholarly literature in the area of fantasy sports is limited (Lomax, 2006). Previous studies have spanned from gambling concerns associated with fantasy sports, masculinity issues, and communication (Bernhard & Eade, 2005; Davis & Duncan, 2006; Shipman, 2001). Recently, however, researchers Drayer et al. (2010) explored the consumption habits of a group of fantasy football participants with regard to NFL products and services. The authors observed unique behaviors including an increase in media consumption and a newly found gameday experience. According to the authors, these behaviors resulted from fantasy football participation which changed the participants' perception of the league.

Research by Comeau (2007) and Woodward (2005) determined that the unique nature of fantasy sport participation has the potential to alter traditional sport fandom through an amplified reliance upon mass mediated sport. Consequently, fantasy sport participants are classified as an important faction of the media-dominant sport consumer population. By definition, media-dominant sport fans primarily consume spectator sports through the mediated broadcast (television, radio, or Internet) or publication (print or electronic) of the event. According to Pritchard and Funk (2006), in comparison with heavy and event-dominant sport consumers, media-dominant fans are "more likely to purchase team-related merchandise, view media advertising and promotions, and are equally involved with the sport" (p. 316). Therefore, a further understanding of this group of spectators will offer strategic insight for sport organizations, specifically when it comes to advertising and sponsorship opportunities. Given the amount of media use associated with fantasy football participation, this study used the U&G perspective as a theoretical framework to investigate fantasy sport participants use of this interactive media.

A Uses and Gratifications Perspective

In the U&G paradigm, it has been assumed that people are actively involved in media selection and usage to fulfill their needs and wants (Blumler & Katz, 1974). The psychological communication perspective was established in an attempt to understand what individuals do with mass media, rather than what the media does to an individual (Katz, Blumler, & Gurevitch, 1973; Rubin,

1994). The primary objectives of the audience-centered approach are to explain the social and psychological needs that motivate individuals to use media, and to uncover the origins of the needs leading to different patterns of media consumption for gratification (Katz et al., 1973; Rubin, 1994). With the emphasis on the role of audience initiative and activity, the U&G paradigm provides a theoretical approach to examine audiences' psychological processes while using media in particular contexts (Eighmey & McCord, 1998; Papacharissi & Rubin, 2000; Ruggiero, 2000).

Given the recent developments of the electronic information age, the notion of audience activity has become an important construct for conducting audience analysis (McQuail, 1994; Ruggiero, 2000). If audiences are aware of not only their desires but also how to gratify their psychological needs by selecting appropriate media (Katz et al., 1973; Rubin, 1994), then perhaps they will take the initiative in selecting and using media content from a number of alternatives (e.g., television) to best satisfy their needs and desires (Ferguson & Perse, 2000; Katz et al., 1973; Rubin, 1994). This activity is directed by prior motivation, interests and preferences, and involvement of users with media (Blumler, 1979; Levy & Windahl, 1984). In addition, this audience activity is especially crucial when examining what leads to an individual's choice for the type of media and the continuing use of a medium and its content to satisfy specific needs (Swanson, 1987). In addition, audience activity research provides insight into a consumer's choice with regard to a given source within a specific medium (Lin, 1993). For instance, the psychological need for social interaction may drive an individual toward a social networking website (e.g., Facebook or YouTube) as opposed to a content provider such as CNN.com or ESPN.com (Haridakis & Hanson, 2009).

From the U&G perspective, sport fans are often motivated to participate in activities and select content that will satisfy a specific need. With the advancement of interactive and realistic media technology, sport fans, for example, make use of sport video games to satisfy their needs and wants which cannot be fulfilled in a real life sport context (Kim & Ross, 2006; Kim, Walsh, & Ross, 2008). A study by Kim and Ross demonstrated that sport fans play an active role in media selection and usage. Furthermore, with the explosive growth of the Internet, online technology makes it easier to access information related to sports, and communicate with their peer groups and like-minded sport fans. Sport fans are going online to access information and statistics about their team and players, read expert opinions on fantasy matchups, watch game highlights, and follow their teams and players (Consumer Electronics Association, 2008; Seo & Green, 2008). In an online community, sport fans communicate with their peer groups and like-minded sport fans, representing themselves as a member of their favorite sport teams on team message boards. Likewise, fantasy football participants log-on to fantasy-specific websites as owners of their fantasy teams. From there,

they communicate and connect with other league members/competitors via chat rooms and league message boards. As such, sport fans' media consumption patterns in an electronic environment are more purposeful and active than traditional media uses.

For sport fans, fantasy football participation is perhaps an additional way to enjoy their favorite sports, teams, or players. In a virtual environment, the possibility to create, manage, and run a fantasy team through a virtual draft enables participants to feel their initial emotional experience, much like real sport owners can in professional sports rather than in front of their televisions or on the Internet. In particular, these highly interactive features of fantasy sport websites enable fantasy owners to mentally and emotionally engage with the chosen players for their own fantasy team (Grigorovici & Constantin, 2004; Levy & Windahl, 1984; Rubin & Perse, 1987; Sundar & Kim, 2005; Swanson, 1987). Furthermore, participating in fantasy sport leagues perhaps enables users to build new social relations with like-minded users and their peer group. Like real-life sport participation, the social context of fantasy sport leagues provides individuals with opportunities to participate in dynamic social interaction among sport fans.

In all, a focus on participation in fantasy football leagues from a U&G point of view may aid researchers and practitioners in understanding the motivations and characteristics of these users. From the U&G perspective, a number of studies have investigated audiences' motivation and decision to use a certain type of media as a new technology moves into the stage of mass communication (Elliott & Rossenberg, 1987). However, there have only been a few empirical endeavors to examine psychological and behavioral aspects of fantasy sport participants.

Sport Motivations

Previous sport spectator research has suggested that different motives may drive different consumer segments and different sport activities (Funk, Mahony, & Ridinger, 2002). In 1995, Wann developed the first comprehensive and psychometrically-sound sport fan motivation instrument termed the Sport Fan Motivation Scale (SFMS). The SFMS focused on eight categories of sport fandom: eustress (i.e., arousal and stress relief), self-esteem or personal enhancement, escape or diversion, entertainment, economic factors (i.e., gambling), aesthetic value (i.e., artistic characteristics), group affiliation, and family affiliation. More recently, Trail, Anderson, and Fink (2000) specified additional factors that contribute to sport consumption: motives, identification, event expectations, disconfirmation or confirmation of those expectations, self-esteem behaviors, and the individual's affective reactions. Trail and James (2001) then extended this work and developed the Motivational Scale for Sport Consumption. This scale identified the following nine motives for following sports: vicarious achievement, acquisition of knowledge, aesthetics, social interaction, excitement, escape, family, physical attractiveness of the players, and

the skill exhibited by the players. Despite being developed for sport spectator consumption, many of the characteristics that make up these well-researched motivations can be found in fantasy football participation. Specifically, the motives dealing with vicarious achievement, acquisition of knowledge, social interaction, excitement, and escape may help explain why individuals choose to participate.

With respect to sport participation, several studies have investigated the psychological needs satisfied through sport activities. According to a study by Pelletier et al. (1995) in which the Sport Motivation Scale (SMS) was developed, sport behaviors can be directed and prompted by extrinsic motivation as well as intrinsic motivation. Extrinsic motivation refers to engaging in an activity to gain material rewards or avoid external constraints, while intrinsic motivation refers to engaging in an activity purely for the pleasure and satisfaction derived from doing the activity (Deci, 1975). Extrinsic motivation is typified by participation in an activity prompted by such external forces as rewards or imposed pressure on the individual. While the majority of previous motivation research has focused on intrinsic qualities, the SMS offers a unique framework for understanding both intrinsic and extrinsic motives. With regard to the current study, extrinsic motivation may be evident when people engage in fantasy football for external reward in the form of compensation. Once again, despite this confluence of well-researched sport consumer motives, there is a significant knowledge gap with respect to the unique motivations of fantasy sport participants.

Motivational Dimensions of Fantasy Sport Participation. A study by the Sports and Entertainment Academy at Indiana University (2000) was the first to explore motivations for fantasy sport league participation and demographic characteristics of fantasy sport owners. In this study, 90% of respondents indicated friendship as the primary reason for playing fantasy sports, and almost 60% of respondents cited fun as the second most important reason, followed by the thrill of competition and passing time. With regard to gender differences in fantasy sport participation, the findings supported the assertion of previous research that fantasy sport owners are predominantly male (FSTA, 2008). However, the results of this study should not be generalized to a larger population due to the small sample size and the lack of a rigorous statistical analysis.

More recently, in an attempt to determine a typology of fantasy sport participants, Farquhar and Meeds (2007) identified a set of common underlying motivational dimensions for fantasy sport league participation. Employing a Q-Methodology, the study found the following five primary motives for fantasy sport participation: surveillance, arousal, entertainment, escape, and social interaction. Further, the study indicated that the perceived gratifications of arousal and surveillance led to differences among types of fantasy sport users. The primary difference between the two groups was the way in which they valued the element of chance in fantasy

sports. For instance, individuals driven by surveillance, or the need for statistical information, believed fantasy sports were games of skill, while those driven by arousal, or the need to compete, saw them as games of chance. Interestingly, according to Farquhar and Meeds, highly-involved participants believed they “get more out of fantasy sports when they put in more time and money” (p. 1217). The findings provided valuable insight into the use of fantasy sports and the behavior of sport consumers in the virtual environment. It also suggested that participation in fantasy sports is driven by intrinsic motives for learning and understanding something new, experiencing fun and excitement, and obtaining achievement through competition against other players in the fantasy league. However, this study did not verify the underlying factor structure of the motivational dimensions, and further, was limited to intrinsic motivations identified to explain the patterns of media use and sport consumption in the absence of external rewards or constraints.

A potentially interesting extrinsic motivation associated with fantasy sport participation is gambling. Since its inception in the mid-1950s, fantasy sport leagues have been associated with sport wagering. Given that sport performance is ultimately unpredictable and league winners are traditionally compensated via league entry fees, it is understandable how these gambling associations were derived. In 2005, Bernhard and Eade explored the similarities between traditional sport gambling and fantasy sport participation. Specifically, the authors concentrated on the observation of fantasy baseball participants. From an economic point of view, the authors concluded that the two activities have several similarities including an initial investment to participate and the potential to win money. In addition, comparisons were drawn between the amount of research performed by participants and the value of luck versus skill in both ventures. In all, Bernhard and Eade provided a preliminary investigation into the positive and negative aspects of fantasy baseball in comparison with other forms of gambling. While they suggested that the two cultures are similar, they concluded fantasy sport participants do not exhibit the serious forms of pathological gamblers, and therefore, the activity is more like “gambling’s cousin, the stock market” (p. 35).

With the continued growth of the Internet and the associated growth of fantasy sport leagues, a more complete understanding of this distinct group of consumers is needed among researchers and marketers. Although previous research has some limitations, the findings of previous studies provide insight into the understanding of possible motivations for fantasy football participation and point to a “gratification” approach that can serve as a starting point in understanding audience experiences with fantasy football leagues. In an attempt to add to the knowledge base of sport consumer behavior, this study sought to develop and validate a Motivational Scale for Fantasy Football Participation (MSFFP). The following section presents the methods employed to satisfy this purpose.

Methods

Using Churchill's (1979) suggested procedure for developing effective marketing constructs, the current study implemented the following five-step procedure for developing and validating an instrument for measuring motives of fantasy sport participation: 1) specification of the construct domain, 2) generation of sample items, 3) data collection, 4) purification of the measure, and 5) assessment of instrument reliability and validity. The following sections provide a detailed discussion of the instrument development procedure.

Construct Specification and Item Generation

Following a review of fantasy sport motivations, spectator sport motivations, and media behavior literature, the unique attributes and behaviors associated with fantasy sport participation, such as diversion, vicarious achievement, escape, competition, entertainment, and statistical gratification, were included to properly specify the following domain: motives for fantasy football participation. Specifically, the construct of gambling was heavily incorporated due to the aforementioned association with the activity. In all, a semistructured interview guide was composed to lead focus group discussions.

The generation of sample items was the second step in the scale development process. Focus group interviews were conducted to identify the most common reasons for participating in fantasy football. For this purpose, focus group sessions were conducted to elicit an open discussion of the construct defined above (Churchill, 1995). Based on focus group results, the authors developed a series of statements provided by the participants as reasoning for fantasy football participation. Two independent content evaluators were then responsible for the cross-reference of the interview transcripts and item generation. That is, the individual statements developed by the authors were validated and parsed down into survey items with a seven-point Likert-type scale ranging from 1 = Strongly Disagree to 7 = Strongly Agree and randomly placed within a questionnaire. A pilot study was then performed on a convenient sample to provide additional content validation of the proposed instrument before being applied to the next procedure.

Data Collection, Measurement Purification, and Instrument Validation

To determine the number of dimensions and obtain a more complete understanding of the underlying structure of the data, a principal component analysis (PCA) with promax rotation was conducted. The results of the PCA were then analyzed by experts to refine and edit the items to provide parsimony. The experts also theoretically critiqued the PCA-generated dimensions to ensure the factors accurately measured the specified domain.

Next, to verify the underlying factor structure, the refined survey was administered to a second sample of fantasy football participants on two Internet sites: ESPN.com and Yahoo.com. These sites were chosen because of their large audiences and high levels of interaction between members. Once potential respondents had accessed the hyperlink address to the online survey questionnaire, they simply entered their date of birth and clicked the submit button at the end of the page. Individuals under the age of 18 were thanked for their interest but prohibited from taking the survey. The information from the completed surveys was entered into a secure database for further analysis. A confirmatory factor analysis (CFA) was then performed to verify the underlying factor structure of the fantasy football motivation scale developed in this study.

Cronbach's Alpha coefficient and interitem correlations were analyzed to assess the reliability of the scale scores. The Average Variance Extracted (AVE) score for each dimension was interpreted to ensure convergent validity. Discriminant validity was evaluated through the application of Fornell and Larcker's (1981) AVE test. To assess criterion-related (predictive) validity, the scores for each of the MSFFP dimensions were regressed simultaneously on to three measures of fantasy football participation selected due to both theoretical and practical relevance (DeVellis, 1991). The three participation measures were: (1) total number of fantasy football teams managed per year, (2) approximate number of hours spent following their fantasy football team per week, and (3) a self-reported level of fantasy football competitiveness.

Results

Three focus groups were conducted with a total of 23 individuals. Participants were Caucasian males between the ages of 24–35. The individuals were selected by their willingness to participate and their level of involvement ranged from avid to recreational. Analysis of the focus group sessions resulted in 81 initial statements provided by the participants. After interpreting and reviewing the focus group transcripts and each statement, two content evaluators retained 27 statements viewed as potential discriminators. The 27 statements were then developed into items for the initial questionnaire. To adequately test the instrument before the next stage of implementation, a pilot study was administered to 57 graduate students (male = 49, female = 8) enrolled in a midsized public institution in the Western United States. The questionnaire was scrutinized for content validity, and correspondingly, simple reordering occurred. Overall, it was deemed an adequate and usable questionnaire.

A PCA with promax rotation was conducted using a convenient sample of 345 undergraduate students at a midsized Western university and a large Midwestern university of which 235 web-based surveys were completed and deemed usable. The 235 respondents were mostly male (88.5%), Caucasian (73.6%), and between the age of 18 and 36 (mean = 23; median = 22). A variety of criteria was then used to decide on an appropriate number

of factors to retain (Tabachnick & Fidell, 2007). Scree-Plot test and the Kaiser criterion, which considers all eigenvalues greater than one as common factors (Kaiser, 1970), suggested four dimensions. In conjunction with these results, a model was chosen that produced the most readily interpretable and theoretically sensible pattern of results. Accordingly, a four factor solution containing 20 variables was accepted as the most appropriate. The resulting model explained 63.2% of the variance, and the primary factor loadings from the pattern matrix for the 20 items ranged from .627 to .869. The factors identified were *competition* (4 items; eigenvalue = 1.521), *social interaction* (5 items; eigenvalue = 3.476), *entertainment/escape* (5 items; eigenvalue = 2.337), and *gambling* (6 items; eigenvalue = 5.301). The operational definitions of each factor are presented in Table 1.

Three independent experts then scrutinized the PCA results to purify the measure. The experts suggested the rewording of one item to eliminate possible confusion, and the removal of two others due to high interitem correlations. In addition, one expert, a measurement specialist, recommended combining two of the items due to similar wording and a high correlation. Based on the feedback from experts, a four factor scale with 17 items was developed for the next stage of the study.

A CFA using LISREL 8.8 was performed on an additional 201 fantasy football participants drawn from two Internet sites. The aim of this procedure was to validate the subscales measuring the four factors of motives for fantasy football participation. The demographic profile of the sample is presented in Table 2, and the primary factor loadings and item wording are offered in Table 3.

Table 1 Operational Definitions of the 4 Motivational Factors for Fantasy Sport Participation

Factor	Definition
Gambling	The gambling motive represents participation driven by, or focused upon, the chance of winning money.
Social Interaction	The social interaction motive involves establishing, preserving, or renewing relationships with family, friends, and/or coworkers.
Competition	The competition motive embodies participation not only to win each week, but driven by the need to be the best in the eyes of one's competitors.
Entertainment/Escape	The entertainment/escape motive represents participation for pure enjoyment of the activity as well as the diversion it provides from one's day-to-day activities.

Table 2 Demographic of Fantasy Football Participants—Robust Maximum Likelihood CFA Sample

N	201 (100%)	Age	
		Average	28.70
SEX		Median	25
Male	187 (93.1%)	Standard Deviation	9.50
Female	14 (6.9%)	Range	18–68
ETHNICITY		NUMBER OF YEARS PLAYED	
Asian/Pacific Islander	14 (6.9%)	Average	3.62
Black	4 (2.0%)	Median	2
Caucasian/White	163 (80.7%)	Standard Deviation	3.70
Hispanic/Latino	9 (4.6%)	Range	1–25
Multiracial	4 (2.1%)		
Other	3 (1.6%)	NUMBER OF TEAMS MANAGED	
Would rather not say	4 (2.1%)	Average	3.49
		Median	2
CURRENTLY PLAYING		Standard Deviation	4.07
Yes	201 (100%)	Range	1–30
No	0 (0%)		
		WILL YOU PLAY NEXT YEAR?	
LEVEL OF COMPETITIVENESS		Yes	192 (95.5%)
Very Competitive	122 (60.7%)	No	0 (0%)
Competitive	66 (32.8%)	Maybe	9 (4.5)
Recreational	13 (6.5%)		

Table 3 Factors, Adjusted Items, and Primary Factor Loadings for the MSFFP—Robust Maximum Likelihood CFA

Factors and Items	Factor Loading*
Social Interaction (4 items) <i>Sample mean = 4.54; Std. deviation = 1.31</i>	
Playing fantasy football provides an excellent opportunity to get together with, or stay in contact with, my family and friends. (SOC1)	.741
One of the main reasons I play fantasy football is that doing so allows me to belong to a group of my peers. (SOC2)	.778
An important reason for playing fantasy football is the ability it gives me to interact my coworkers, friends, family, and/or significant other. (SOC3)	.730
Interacting with other fantasy football participants is important to me. (SOC4)	.686
Gambling (5 items) <i>Sample mean = 3.08; Std. deviation = 1.83</i>	
The amount of money wagered determines how much I follow fantasy football team. (GAM1)	.901
To me, fantasy football is just another way to bet on professional football. (GAM2)	.968
I play fantasy football to win money. (GAM3)	.693
Given the opportunity, I would prefer to wager money on fantasy football than play at no cost. (GAM4)	.591
Playing fantasy football is only enjoyable if you can bet on the outcome. (GAM5)	.625
Competition (4 items) <i>Sample mean = 5.51; Std. deviation = 1.09</i>	
I like to play fantasy football to prove to my fellow competitors that I am the best. (COM1)	.851
When playing fantasy football, it is important to me to compare my skills with my competitors. (COM3)	.762
It is important to me to win my fantasy football league(s). (COM3)	.709
An important reason for playing fantasy football is the opportunity it provides to compare my unique knowledge about NFL players and teams with my competitors. (COM4)	.650
Entertainment/Escape (4 items) <i>Sample mean = 6.06; Std. deviation = 0.89</i>	
I play fantasy football because it makes watching NFL football more enjoyable. (ENT1)	.602
Playing fantasy football has provided an excellent opportunity to enjoy the performance of NFL players who are not on my favorite NFL team(s). (ENT2)	.637
I play fantasy football because it is a fun way to spend my time. (ENT3)	.773
I play fantasy football because it provides an entertaining escape from my day-to-day activities. (ENT4)	.804

* Primary factor loading from Pattern Matrix

Of the 1,314 individuals who viewed the initial postings, 384 began the survey. Of these, 42 were excluded from analyses because they indicated that they were less than 18 years old, and 141 were excluded because they failed to complete the questionnaire. The 201 respondents remaining represented a 15.3% completion rate. To ensure soundness of the data, Mardia's Statistic was interpreted. As a result, the data showed adequate to good multivariate normality with a Mardia's PK score of 1.991 (Tabachnick & Fidell, 2007). Most factors were significantly correlated with each other (see Table 4), with the exception of entertainment/escape and gambling. In addition, the correlation matrix of individual items (Table 5) portrays the strong relationships within factors and the occasional significant correlation outside of a factor.

As Hu and Bentler (1999) suggested, the following fit indices and their cutoff criteria were used to assess the overall fit of the model: the Satorra-Bentler scaled chi-square statistic (X^2), the Non-Normed Fit Index (NNFI), the Comparative Fit Index (CFI), the Standardized Root Mean Square Residual (SRMR), and the Root Mean

Table 4 Correlations Among Factors

Factor	Social Interaction
Social Interaction	1.00
Competition	.378**
Entertainment/Escape	.433**
Gambling	.190**

* Coefficients are statistically significant at $p < .05$

** Coefficients are statistically significant at $p < .01$

Square Error of Approximation (RMSEA). First, to verify the global fit of the data to the model, a chi-square statistic was analyzed. The X^2 value (151.30) was statistically significant at $p < .05$ ($df = 111$), and the X^2 /degrees of freedom ratio (1.36) was greater than one.

While the global fit was significant, several factors including sample size and nonnormality may substantially affect the X^2 statistic score (Curran, West, & Finch, 1996). Therefore, a variety of other comparative indices

Table 5 Correlations Among Items

GAM5	GAM4	GAM3	GAM2	GAM1	ENT4	ENT3	ENT2	ENT1	COM4	COM3	COM2	COM1	SOC4	SOC3	SOC2	SOC1	Item
.071	.114	.104	.033	.024	-.061	-.033	-.041	-.009	.105	.119	.121	.149*	.484**	.518**	.590**	1.00	SOC1
.098	.136	.108	.018	-.018	-.013	.029	.002	-.003	.089	.179*	.180*	.106	.500**	.535**	1.00	-	SOC2
.027	.089	.071	-.016	.010	-.079	-.038	-.070	-.085	.112	.074	.147*	.098	.516**	1.00	-	-	SOC3
-.069	.093	.086	.035	.034	-.095	.054	.029	.006	.053	.083	.090	.062	1.00	-	-	-	SOC4
.060	.129	.148*	.114	.088	.048	.020	-.067	-.091	.522**	.525**	.586**	1.00	-	-	-	-	COM1
.157*	.082	.062	.056	.066	-.031	.030	-.115	.023	.475**	.462**	1.00	-	-	-	-	-	COM2
.243**	.026	.016	.119	.093	.066	.072	-.043	-.051	.423**	1.00	-	-	-	-	-	-	COM3
.099	.106	.016	.041	.015	.059	.089	-.073	-.034	1.00	-	-	-	-	-	-	-	COM4
.009	-.027	.002	-.027	-.055	.447**	.527**	.587**	1.00	-	-	-	-	-	-	-	-	ENT1
.020	-.020	-.002	-.008	-.063	.479**	.550**	1.00	-	-	-	-	-	-	-	-	-	ENT2
.093	.058	.034	.038	-.017	.562**	1.00	-	-	-	-	-	-	-	-	-	-	ENT3
.025	.046	-.023	-.013	-.035	1.00	-	-	-	-	-	-	-	-	-	-	-	ENT4
.538**	.460**	.555**	.841**	1.00	-	-	-	-	-	-	-	-	-	-	-	-	GAM1
.545**	.549**	.624**	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	GAM2
.511**	.514**	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GAM3
.635**	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GAM4
1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GAM5

* Coefficients are statistically significant at $p < .05$

** Coefficients are statistically significant at $p < .01$

were analyzed to further assess the component fit of the data. The values of NNFI (.95) and RMSEA (.006) reflect a good fit to the data (Bentler, 1990). The CFI (.96) and SRMR (.06) provide evidence of an adequate fit. In addition, the residuals were extensively examined to identify any factorial complexities, and the results suggested that the fit could not be improved by allowing any item's error variances to correlate with other error variances. Given that the values of the overall fit indices for the model fell within the acceptable range of values suggested by Hu and Bentler (1999), the four-factor, 17-item model was deemed to have an adequate fit to the data.

Cronbach's alpha scores and interitem correlation scores were examined as part of the scales reliability analysis. While not the only means for assessing internal consistency, Cronbach's alpha is a unique test that takes the average value of the reliability coefficients for all possible combinations of items when split into two half-tests (Carmines & Zeller, 1979). According to Bearden and Netemeyer (1999), it is the "most widely used" reliability coefficient within the scale development process. The Cronbach's alpha scores for each factor in the current study ranged from .794 to .872 (Table 6). Nunnally (1978) and Carmines and Zeller recommended a reliability value of at least .80 for widely used scales. However, these authors did not specify for which assessment this threshold should be applied. In addition, it is important to note that a single reliability standard, as suggested above, should not be universally applied to all scales (Lance, Butt, & Michels, 2006; Nunnally, 1978). Thus, an additional reliability assessment

and good judgment on behalf of the researchers were used. The mean interitem correlations ranged from .499 to .577 which meets Clark and Watson's (1995) suggestion of interitem scores above .40. Based on the above criteria, the 17-item 4-factor scale was deemed an internally consistent measure of fantasy football participation motives.

An AVE score greater than .50 indicates adequate convergent validity (Fornell & Larcker, 1981). The AVE scores for this scale ranged from .503 to .594, indicating that the amount of variance explained by the constructs was greater than the variance explained by measurement error. As a result, the scores for this instrument possess sound convergent validity. Discriminant validity is shown if the AVE is greater than the square of the construct's correlations between factors. The results of the AVE test (Table 7) clearly indicate that the four independent factors are, in fact, distinct from one another.

Lastly, to assess the predictive validity, correlations between the individual factor scores and three criterion participation variables were examined. The three variables were measured at the same time as the motivational items and included the number of hours spent following fantasy football per week, the number of teams owned per year, and one's perceived level of fantasy football competitiveness. These variables were selected based on their inherent value of predicting a participant's level of engagement. The correlation coefficients for the individual measures are shown in Table 8. The competitive, social interactive, and entertainment/escape dimensions showed strong evidence of predictive validity, with each

Table 6 Reliability and Convergent Validity Testing for Robust Maximum Likelihood CFA

Factor	Item	Item-to-total correlation	Mean interitem correlation	Cronbach's alpha	Average Variance Extracted (AVE)
Social Interaction	SOC1	.806**	0.524	0.872	0.541
	SOC2	.820**			
	SOC3	.797**			
	SOC4	.780**			
Gambling	GAM1	.846**	0.577	0.871	0.594
	GAM2	.887**			
	GAM3	.785**			
	GAM4	.762**			
	GAM5	.782**			
Competition	COM1	.839**	0.499	0.860	0.557
	COM2	.799**			
	COM3	.744**			
	COM4	.768**			
Entertainment/Escape	ENT1	.796**	0.525	0.794	0.501
	ENT2	.817**			
	ENT3	.827**			
	ENT4	.767**			

** $p < .01$

factor significantly correlating with at least two of the three participation variables. However, the gambling factor resulted in a significant negative relationship with the criterion variables. In total, the scores for this scale provided evidence of adequate internal consistency,

convergent validity, and discriminant validity. However, the results of correlation analysis with respect to the motive of gambling call into question the criterion-related validity of the scale. As a result, the gambling factor was dropped from the final MSFFP (Table 9).

Table 7 Average Variance Extracted (AVE) Test (Fornell & Larcker, 1981)

Factor (AVE score)	Social Interaction	Competition	Entertainment/Escape	Gambling
Social Interaction (.727)	1.00	-		
Competition (.691)	.143**	1.00	-	
Entertainment/Escape (.554)	.188**	.228**	1.00	-
Gambling (.611)	.036**	.035*	.031	1.00

* Coefficients are statistically significant at $p < .05$

** Coefficients are statistically significant at $p < .01$

Note. No correlations failed the AVE test

Table 8 Correlations Among Motivational Scale for Fantasy Football Participation and Three Fantasy Football Participation Measures to Assess Predictive Validity

Fantasy Football Participation Measures	Gambling	Social Interaction	Competition	Entertainment
Approximate number of hours spent following fantasy football team per week	-.215**	.425**	.492**	.433**
Total number of fantasy football teams managed per year	-.401**	.166*	-.012	.292*
Self-reported level of fantasy football competitiveness	-.518**	.058	.315*	.087

Note. Sample Size = 436 for all analyses.

** $p < .01$; * $p < .05$

Table 9 Final Motivation Scale for Fantasy Football Participation (MSFFP) With Factors, Factor Descriptions, and Items

Social Interaction – Driven by the social connection and group affiliation with other league members in the form of friends, family, coworkers, or acquaintances.	
1	Playing fantasy football provides an excellent opportunity to get together with or stay in contact with my family and friends.
2	One of the main reasons I play fantasy football is that doing so allows me to belong to a group of my peers.
3	An important reason for playing fantasy football is the ability it gives me to interact with my coworkers, friends, family, and/or significant other.
4	Interacting with other fantasy football participants is important to me.
Competition – Driven by the opportunity to measure one's unique skills and abilities with others, prove worthiness as an opponent, and strive to be the best.	
5	I like to play fantasy football to prove to my fellow competitors that I am the best.
6	When playing fantasy football, it is important to me to compare my skills with my competitors.
7	It is important to me to win my fantasy football league(s).
8	An important reason for playing fantasy football is the opportunity it provides to compare my unique knowledge about NFL players and teams with my competitors.
Entertainment/Escape – Driven by the additional opportunity to enjoy NFL football and the performance of NFL players while simultaneously benefiting from the diversion and pleasurable qualities of the activity.	
9	I play fantasy football because it makes watching NFL football more enjoyable.
10	Playing fantasy football has provided an excellent opportunity to enjoy the performance of NFL players who are not on my favorite NFL team(s).
11	I play fantasy football because it is a fun way to spend my time.
12	I play fantasy football because it provides an entertaining escape from my day-to-day activities.

Discussion

In a U&G paradigm, this study examined what psychological needs are satisfied through fantasy football participation, and as a result, the MSFFP was developed as a valid and reliable measure of the unique motives of fantasy football participants. Initially, a four-dimensional motivational scale was produced. However, a lack of criterion-related validity with regard to the gambling factor resulted in a three-dimensional measure consisting of social interaction, entertainment/escape, and competition motives. These three dimensions are consistent with previous research on fantasy sport participation (Drayer et al., 2010; Farquhar & Meeds, 2007), participatory sport motives (Pelletier et al., 1995), spectator sport motives (Milne & McDonald, 1999; Trail & James, 2001; Wann, 1995), audience activity (McQuail, 1994; Ruggiero, 2000), and online media consumption (Grigorovici & Constantin, 2004; Seo & Green, 2008).

The most intriguing implication of this study centers on the relationship between gambling and fantasy football participation. Gambling is a proven vehicle for fan connection and is an extremely popular activity in the United States with a reported 82% of Americans partaking in some form of wagering (Rein, Kotler, & Shields, 2006; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2004). Recently, legal commentators have stated their belief that fantasy sport participation is a gambling-related activity (Bernhard & Eade, 2005; Davidson, 2002). According to the current study's two independent samples, gambling was an important motivation for some participants within fantasy football leagues. However, the motivational factor of gambling did not predict sport-related media consumption for fantasy football participants as compared with the other three motivational dimensions. In fact, the results of the predictive validity assessment (Table 8) indicated that the gambling factor may even be a restraint to mediated sport consumption. In other words, the respondents who indicated high levels of gambling-related motivation managed fewer fantasy football teams per year and spent fewer hours per week following their fantasy football teams. These outcomes result in less time spent online, less time doing fantasy football research, and less time watching the televised broadcast of the NFL games. With respect to promotional strategy, this is a noteworthy finding for web-based sport media providers, such as ESPN.com, CBSsports.com, and Yahoo.com, which use fantasy sport applications to drive their primary media offerings.

In addition to the sport gambling ramifications, the results of the entertainment/escape dimension were not expected. Previous definitions of entertainment have primarily focused on enjoyment and fun, while escape has been most often conceptualized as a form of diversion. Thus, one would expect a distinct dimension for each of these related, yet separate motives. However, the results of the current inquiry extracted a single measure for entertainment and escape. Three items, "I play fantasy football because it makes watching NFL football more enjoyable," "playing fantasy football has provided an

excellent opportunity to enjoy the performance of NFL players who are not on my favorite NFL team," and "I play fantasy football because it is a fun way to spend my time," of the four-item subscale centered on the enjoyment sought through fantasy football participation. The remaining item, "I play fantasy football because it provides an entertaining escape from my day-to-day activities," focused on the diversion-related aspect of fantasy football participation. While the combination of these two well-researched dimensions was not expected, this result is consistent with previous Internet-use research that determined people primarily use the Internet to satisfy information and communication needs, followed by the *combination* of entertainment and escape needs (Kraut et al., 2002). In addition, the results may speak to the difference between traditional sport consumption and fantasy sport consumption as previous sport fan motivation scales have uncovered distinct factors for diversion/escape and entertainment (Trail et al., 2000; Trail & James, 2001; Wann, 1995).

Similarly, given that the Internet has become the preeminent route to being involved in groups and pursuing interests with like-minded individuals (Ferguson & Perse, 2000; Quan-Haase & Wellman, 2004), the motivational dimension of social interaction substantiated the concept that participants use fantasy football as means to stay in contact and/or connect with family, friends, and coworkers (Farquhar & Meeds, 2007). The competition motive identified in the current study is very similar to that found in the actual sport participation context. That is, because this unique sport experience occurs in the virtual environment, the motivational dimensions of fantasy football participation reflect similar motives to the competitive needs of traditional athletes. Thus, fantasy football competition occurs in front of televisions and computer screens as opposed to playing fields.

The competition factor discovered in the current study also aligns nicely with Farquhar and Meeds' (2007) arousal typology of fantasy football participants. However, in comparison with previous sport consumption motives (Trail et al., 2000; Trail & James, 2001; Wann, 1995), this competitive dimension is new to traditional sport fandom. With that said, this motivation has the potential to add to consumption behavior. That is, it is necessary that the fantasy football participants first understand sport teams, athletes, and the sport itself to beat other users. As such, elements of competition associated with fantasy football may lead to enhanced engagement with sport statistics, player information, and team strategy potentially leading to higher demand for NFL products and services (Drayer et al., 2010).

Interestingly, despite its expected significance within the domain, the intrinsic motivation of attaining sport knowledge and/or interest in statistics (statistical gratification) was not a unique dimension uncovered through this process. Previous research has documented the importance of this motivational factor within sport, spectator sport, and fantasy sport motives (Farquhar & Meeds, 2007; Milne & McDonald, 1999; Pelletier

et al., 1995; Trail & James 2001). It is important to note, however, that two statistical gratification-related items did load under another dimension. The items "An important reason for playing fantasy football is the opportunity it provides to compare my unique knowledge about NFL players and teams with my competitors" and "When playing fantasy football, it is important to me to compare my skills with my competitors" loaded under the competition dimension. On one hand, these results may suggest that owners seek gratification through the opportunity to compete against others by using their unique knowledge of individual players, team strategy, and matchups. On the other hand, this may suggest that statistical gratification is an important support mechanism for the competitive motivation of fantasy football participation, or perhaps as an outcome of fantasy football participation. For instance, within focus group interviews, the participants mentioned an increased attention to player numbers, the scrolling scores and statistics during games, and halftime show highlights due to their participation in fantasy football.

Future Use and Limitations

The development of the MSFFP provides academic researchers and marketing practitioners with a psychometrically-sound instrument for measuring the psychological motives (social interaction, entertainment/escape, and competition) of fantasy football participants. In the sport marketing literature, there have been numerous investigations into understanding the demand for sport (Sloan, 1989; Trail & James, 2001; Wann, 1995). However, despite the significant growth of the fantasy sport industry, the psychological needs of sport fans in a virtual sport context and the consumer-based examination investigating the drivers of fantasy football participants have received little attention. This study represents one of the first attempts to provide empirical evidence to this area of research and provides new insights into the social-psychology of sport fans who participate in fantasy football.

Future use of this measure is encouraged as additional research surrounding fantasy football participants' motives and decision making will help sport managers better understand this key market segment. The three dimensions could be used together to assess a participant's overarching motivation of owning a fantasy football team, or each item could be used separately to provide greater detail of the participant's motivation to engage in the activity. Furthermore, the scale scores with regard to the gambling factor were significant, internally consistent, and valid with exception of predictive validity scores that were associated with enhanced media sport consumption. Thus, researchers could use this dimension individually to further segment the fantasy football market and target individuals stimulated by the potential for economic return. In all, participant responses on the MSFFP will help sport marketers develop effective segmentation and promotional strategies.

Due to the exploratory nature of this study, however, limitations to the current results certainly exist. For instance, both of our samples were limited, and the data reported here may reflect motivations among a relatively young and highly-educated group of participants. In addition, the participants surveyed for the CFA represented a rather homogenous sample of fantasy football participants which could underestimate the correlations. Therefore, generalizability may be weakened, and as a result, different exposure settings should be included in future research to develop a more refined and strengthened motivation scale. Furthermore, to provide additional validity to this study, future research should compare and contrast the MSFFP with other motivation scales related to sport consumption, spectatorship, and media use. Likewise, fantasy football is only one of several fantasy sports, and the outcomes reached here are unique to the football experience. Therefore, this scale should be tested on a variety of different fantasy sports. In addition, only positive motives were included in this study, and an investigation into constraints or barriers to participation would certainly be a fruitful line of research. Lastly, more investigation is needed to further bridge the gap between fantasy football participation and traditional forms of sport consumption (i.e., event attendance and merchandise purchasing).

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