

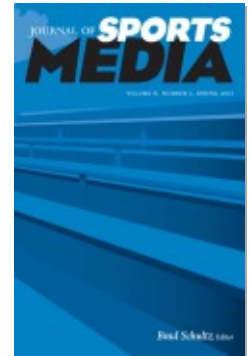


PROJECT MUSE®

The First Online Olympics: The Interactions between Internet
Use and Sports Viewing

Tang Tang, Roger Cooper

Journal of Sports Media, Volume 6, Number 1, Spring 2011, pp. 1-22 (Article)



Published by University of Nebraska Press

DOI: <https://doi.org/10.1353/jsm.2011.0002>

➔ *For additional information about this article*

<https://muse.jhu.edu/article/414725>

The First Online Olympics

The Interactions between Internet Use and Sports Viewing

TANG TANG AND ROGER COOPER

.....

The 2008 Beijing Olympics represented a broad expansion and emphasis on online sports content. This study integrated variables associated with uses and gratifications, technology adoption theories, and sports fanship literature to examine the influence of the Internet on “big-event” sports viewing. The study found that four statistically significant factors—the amount of time that individuals spent watching television online, perceived benefits of watching the Olympics online, time spent following sports news online, and preferences for various Olympic sports—combined to explain 34.6% of the variance in Web use for the Olympics. Those who used the Internet for Olympic content watched the Olympics more and indicated stronger motivations to watch sports than non-users. The findings suggest that networks should continue to increase emphasis on Web content, especially for event sports programming.

The Olympics is firmly established as one of the world’s largest sporting events. For decades, it has also been perceived as an important television event among viewers (Billings & Angelini, 2007; Gantz, Wang, Paul, & Potter, 2006). The 2008 Beijing Games represented the first wide-scale expansion to online and digital environments. NBCOlympics.com offered more than 3,500 hours of online coverage from Beijing (Steinberg, 2008). In addition, other major Web sites, mobile video channels, and user-generated media (e.g., YouTube, Facebook, and blogs) also covered the Games. The result was that audiences started to seek sports content on multiple media platforms to a degree never before seen. According to Nielsen Media Research, 51.8 million unique users visited NBCOlympics

.com, viewed 1.3 billion pages, and watched more than 75 million video streams. Eighteen percent of viewers consumed content on both television and the Internet (Cooper, 2008). Thus, Olympic viewing behavior shifted for the first time during the 2008 Beijing Games, and digital technologies played a significant role in shaping sports viewing during this big event.

Within scholarship, sports fandom has attracted considerable attention (e.g., Dietz-Uhler, et al., 2000; Eastman & Land, 1997; Gantz, et al., 2006; Lines, 2000) and a wealth of uses and gratifications studies have examined the factors that influence sports viewing and new media use (e.g., Ferguson & Perse, 2000; Gantz, 1985; Ko, Cho, & Roberts, 2005; Papacharissi & Rubin, 2000; Ruggiero, 2000). In addition, technology adoption studies have also suggested that audience adoption of new technologies, such as Webcasting, are due to a number of cognitive, affective and behavioral factors (e.g., Ajzen, 1991; Atkin, Jeffres, & Neuendorf, 1998; Davis, 1989; Lin, 2004; 2006). However, inadequate attention has been paid to sports viewing in new media environments and few studies have empirically sought to determine the interactions between Internet use and “big-event” sports viewing. This study sought to address this theoretical and empirical gap by integrating variables associated with the uses and gratifications approach, technology adoption theories, and sports fandom literature to predict Web Olympics use. In this study, “Web Olympics” was used to reference viewers who watched Olympic content online. This study assessed the similarities and differences between Web Olympics viewers and non-viewers, and examined the predictors of Web use for the 2008 Beijing Olympic Games.

Theoretical Conceptualizations and Related Studies

Uses and Gratifications Approach

In the field of mass communication, the uses and gratifications approach has provided important insights in understanding au-

dience behavior. A number of social psychologists believe that audiences are active and goal-directed when consuming media. They suggest that media use is best understood via individual characteristics, such as motivations, content preferences, and audience characteristics (e.g., Ferguson & Perse, 2000; Katz, Blumler, & Gurevitch, 1974; Ko, et al., 2005). In terms of motivations, two orientations have been recognized toward media use: instrumental use and ritualistic use. As Rubin (1984) states, "Instrumental media use reflects more active patterns of using media content to select information from realistically perceived messages. Ritualized media use reflects less active patterns of using the media to fill time and relieve boredom (p. 67)."

Several scholars suggest that instrumental use is generally linked to watching sports (e.g., Cooper & Tang, 2009; Gantz, 1981). Sloan (1989) identified six cognitive needs for sports fans: belonging needs, routine, stimulation, relief of tension and aggression, entertainment, and achievement. Wann (1995) also proposed that positive arousal, self-esteem, escape, entertainment, economic, aesthetic, group affiliation, and family needs are reasons individuals watch sports. Social interaction, surveillance, enjoyment, escape, arousal, and entertainment are the most frequent sports viewing motives in uses and gratification research (e.g., Farquhar & Meeds, 2007; Gantz, et al., 2006; James & Ridinger, 2002; Nabi & Krcmar, 2004; Nabi, Stitt, Halford, & Finnerty, 2006; Trail & James, 2001).

A number of uses and gratifications studies have also examined the motivations for Internet use. For instance, Papacharissi and Rubin (2000) summarized five motivations—interpersonal utility, pastime, information seeking, convenience, and entertainment—that predict Internet use. Korgaonkar and Wolin (1999) also suggest that seven factors—social escapism, transactional security and privacy, information, interactive control, socialization, non-transnational privacy and economic motivations—influence Internet exposure. Recently, Lin (2006) found that motives such as infotainment, escape and interpersonal

communication are related to overall Webcast viewing interest. Hong and Raney (2007) further suggested that entertainment, information, and perceived interactivity explained why people visit sports sites.

Another common assumption of the uses and gratifications theory is that few media can fulfill all the goals audiences seek. Media users are selecting from functional alternatives (e.g., Dutta-Bergman, 2004; Ferguson & Perse, 2000). Many researchers suggest that there is a relationship between an old technology and a new medium (e.g., Coffey & Stipp, 1997; Cooper & Tang, 2009; Ferguson & Perse, 2000; Lin, 2004). Early studies found that traditional media use such as television viewing declined because of the increase of Internet use (e.g., Coffey & Stipp, 1997; Kayany & Yelsma, 2000). Later, researchers found that Internet use may not reduce time people spent on other media (see Cooper & Tang, 2009). When facing an expanded media menu, media users increasingly use two or more media simultaneously. A number of published studies also suggest that earlier adopters of a new technology may use mass media more frequently than late adopters (e.g., Dupagne, 1999; Rogers, 1995). For instance, Dupagne (1999) found a positive association between sports viewing and high-definition TV adoption. Lin (2006) demonstrates that the amount of time people spent online significantly predicted Webcast viewing interest. Thus, it is logical to expect that Web Olympics use is related to an individual's other media activities, such as overall Internet use, Webcasting adoption, and sports viewing in general.

In addition to individual motivations and other media activities, audience characteristics such as age, gender, social economic status and access to technologies should influence Web Olympics use. Studies indicate that men watched sports newscasts more frequently than women, and spent more time watching sports in general (e.g., Dietz-Uhler, et al., 2000; Gantz & Wenner, 1991). In addition, younger people were more likely to be adopters of Webcasting. Home broadband access can also in-

fluence video stream downloading and use of Webcasting (Lin, 2004; 2006).

Technology Adoption Theories

In addition to the uses and gratifications approach, a number of technology adoption theories, such as the technology acceptance model (TAM) and the theory of planned behavior (TPB), have been used to explain new technology adoption and use. Scholars in this theoretical school found that perceived usefulness, perceived ease of use, attitude, social norms, and perceived behavior control influenced the use of new technologies (e.g., Ajzen, 1991; Davis, 1989; Klobas & Clyder, 2000). They suggest that perceived usefulness refers to the degree to which an individual believes that using the technology will improve productivity, effectiveness, job performance or satisfaction. Perceived ease of use is the degree to which an individual believes that using the technology would be free of mental effort. Attitude indicates an individual's assessment of the desirability of using the technology (e.g., Davis, 1989; 1993; Lederer, et al., 2000; Porter & Donthu, 2006).

Although there is no available work on perceived benefits of Web Olympics viewing, it would be useful to review previous new technology adoption studies. Porter and Donthu (2006) found that perceptions regarding usefulness and ease of use had a strong impact on online-media use. Venkatesh (2000) suggests that perceived ease of use is an important determinant of use for any information technology or information system. Kaye (1998) demonstrates that perceived informational learning and interaction utilities can predict use of the popular Web sites. Lin (2006) also found that perceived utilities acted as a significant predictor of Webcasting adoption.

Moreover, technology adoption scholars suggest that an individual could form a positive or negative attitude towards a technology. Such evaluation leads to certain behavioral inten-

tions and can influence the actual use of the technology (Ajzen, 1991; Liaw, 2004; Rogers, 1995). Nysveen and his colleagues (2005) found that attitude influenced the use of mobile services. Liaw (2004) demonstrates that perceived satisfaction with search engines impacts the actual use. Thus, use of the Web to watch the Olympics may be influenced by an individual's general attitude towards watching content online.

Sports Fanship and Olympics Viewing

A huge body of research has examined sports fanship (e.g., Eastman & Land, 1997; Farquhar & Meeds, 2007; Gantz, 1981; 1985; Gantz & Wenner, 1995). According to the dictionary definition, fan is "a keen and regular spectator of a (professional) sport, originally of baseball" (Oxford English Dictionary, 1996). In addition, several scholars operationally defined sports fans by measuring individual enjoyment of sports programming, the amount of time that they spend watching sports news on TV, and the amount of time spent following sports news on the Web (Gantz & Wenner, 1991).

Studies suggest that certain concomitant and post-viewing behaviors are associated with sports viewing (e.g., Eastman & Land, 1997; Gantz & Wenner, 1995). Researchers found that sports fans were more likely to feel nervous, excited, angry, happy, or sad during viewing (Peterson & Raney, 2008). They generally cared about the outcomes, and at times might yell out at players or teams (e.g., Gantz & Wenner, 1991). In addition, after watching sports, fans were more willing to watch news about it, and check more information on the Web or in print. When their favorite player or team did well, fans tended to stay in a good mood for a while after watching sports (e.g., Eastman & Land, 1997; Gantz & Wenner, 1991). Thus, although few studies have examined online sports event viewing, we speculate that Web use for Olympic content may be related to audience concomitant and post-viewing behaviors, as well as their over-

all preference of sports programming, and the amount of time they spend watching sports through different media.

For the 2008 Olympics, 90% of Olympics consumption was still via television. TV remained dominant for people who watched big sports events. However, NBC provided 2,200 hours of live video coverage online, as well as other online Olympic content such as full-event replays, highlights, features, interviews, and encore packages (Steinberg, 2008; NBCOlympics.com, 2009). The 2008 Games offered the most comprehensive digital media content in history. More than 50 million unique users watched 75 million video streams (Cooper, 2008). The Beijing Games could logically be considered the first “online Olympics” and, thus, it is valuable to examine the influences on those who used (and did not use) online technology to watch the 2008 Beijing Games.

Overall, this study represents one of the first attempts to empirically integrate factors associated with the uses and gratifications approach, technology adoption theories, and sports fan-ship literature to explain their collective and relative impacts on Web use for the Olympics. Therefore, this initial attempt led to the two research questions for this study:

RQ₁: What are the similarities and differences between Web Olympics users and non-users?

RQ₂: What are the predictors of Web use for the Olympics?

Methodology

Sampling and Procedure

This study examined the factors that influence Web use for the Olympics by conducting a Web survey at a large Midwestern university. The university’s computer network service sent e-mail messages to the university’s students, faculty, and staff. The e-mail message included a link to the Web survey, and invited

recipients to take part in “a study of sports viewing.” In all, 458 respondents completed the survey. Among the respondents, 363 watched the Beijing Olympics, while 95 did not watch the Games. Respondents who did not watch the 2008 Olympics were not included in the analyses (independent t-tests suggest no statistically significant differences between Olympics viewers and non-viewers in terms of gender, age, and ethnicity). Among the 363 respondents who watched the 2008 Olympics, 52.9% (192) were female and 47.1% (171) were male. Overall, 55.9% were students and 44.1% were non-student adults. Respondent ages ranged from 18 to 71 with a mean age of 28 ($SD = 13.36$). In terms of ethnicity, 93.1% of the sample were Caucasian, 2.2% were African or African American, and 1.9% were Asian or Pacific Islander.

Measures

Measures used in this study could be clustered into three categories: (1) uses and gratifications, (2) technology adoption, and (3) sports viewing. These measures are detailed below.

Uses and gratifications

A seven-point Likert scale was employed to measure individual motivations. Respondents were asked to rate each of the 10 statements¹ according to their level of agreement. All the statements were drawn from previous sports viewing studies (e.g., Wann, 1995). Participant responses to each motivation statement were averaged to create a measure of motivation. The Cronbach's alpha coefficient was .909 ($M = 4.03$; $SD = 1.39$).

In addition, respondents were asked to report the estimated number of hours/minutes that they spend on the following media activities on a typical day: Internet use; watching live TV at home; watching TV outside home; watching TV through a DVR; and watching TV online. Two steps were used in this study to measure Internet access. First, respondents were asked whether they have access to the Internet at their current resi-

dence. Then, respondents who have access were asked to rate the speed of the Internet connection at their current residence on a five-point scale (1 indicating “very slow” to 5 indicating “very fast”). Furthermore, the respondents provided demographic variables, including age, gender, ethnicity, and monthly income.

Technology adoption

A seven-point Likert scale was employed to measure perceived benefits of watching Olympics online. Respondents were asked to rate each of the eight statements² according to their level of agreement. All the statements were drawn from previous technology adoption studies (e.g., Lederer, et al., 2000; Lin, 2006). Participant responses to each perceived benefit statement were averaged to create a measure of perceived benefits. The Cronbach’s alpha coefficient was .895 ($M = 2.52$; $SD = 1.36$). In addition, on a five-point scale (i.e., 1 indicating “very negative”; 5 indicating “very positive”), respondents were also asked to indicate their general attitude towards watching Olympics online.

Sports viewing

A seven-point Likert scale was employed to measure concomitant behaviors and post-viewing behaviors. Participant responses to each of the five concomitant behavior statements³ were averaged to create a measure of concomitant behaviors. The Cronbach’s alpha coefficient was .808 ($M = 4.85$; $SD = 1.57$). Also, participant responses to each of the five post-viewing behavior statements⁴ were averaged to create a measure of post-viewing behaviors. The Cronbach’s alpha coefficient was .907 ($M = 4.10$; $SD = 1.69$). All these statements were drawn from previous sports viewing literature (e.g., Gantz & Wesson, 1991; Gantz, et al., 2006).

On a seven-point scale (i.e., 1 indicating “do not enjoy watching it at all;” 7 indicating “enjoy watching it a great deal.”), respondents indicated how much they enjoy watching each of the 28 sports⁵ on television. These sports were the 28 summer

sports currently on the Olympic program (en.beijing2008.cn, 2008). Participant responses to each sport were summed to create a measure of preferences for various Olympic sports. In addition, on the same seven-point scale, respondents were asked to indicate how much they enjoy watching sports programming in general.

Respondents also reported the estimated time they spend on the following activities on a typical day: watching sports news on television; watching sports events/games on television; following sports news on the Web; and watching/listening to sports events/games on the Web.

Finally, respondents were asked whether they watched the Beijing Olympic Games. Respondents who watched the Games were subsequently asked to report the estimated number of hours/minutes that they spent on the following activities on a typical day during the Games: watching the Olympics through NBC (i.e., broadcast TV); watching the Olympics through cable channels (e.g., MSNBC, USA, etc.); watching the Olympics through a DVR; and watching the Olympics online. Participant responses to each activity were summed to create a measure of total time spent watching the Olympics.

Data Screening and Analysis

Researchers used Frequency, Explore and Q-Q graphic in SPSS for data screening. Independent t-tests were used to examine the differences between Web Olympics users and non-users. Multiple regression analyses were conducted to test the explanatory power of predictor variables on Web use for the 2008 Olympic Games.

Results

The 363 respondents reported an average overall Internet use of three hours and 51 minutes a day. On average, they spent three

hours and five minutes a day watching live TV, about 24 minutes watching TV through a DVR, and only nine minutes watching TV online. Among these respondents, 340 (93.7%) had access to the Internet at their current residence. During the 2008 Beijing Olympics, respondents reported spending an average of two hours and 32 minutes a day watching the Olympics through NBC (i.e., broadcast network); about 57 minutes watching the Olympics on cable channels (e.g., MSNBC, USA, etc.); 23 minutes watching the Games through a DVR; and 15 minutes (range: 0 to three hours and 15 minutes per day) watching the Games online. Overall, 92 of the 363 respondents (25.3%) watched the Olympics online and spent an average of one hour and two minutes watching Olympics online during the Beijing Games.

Results indicate significant differences between online Olympics users and non-users in total viewing (see Table 1). Overall, online users spent significantly more total time watching the Olympics (334.61 minutes or 5 hours, 35 minutes) than non-users (218.64 minutes or 3:39). This difference between users and non-users in overall Olympics viewing was statistically significant ($t = 4.86; p < .001$). Web Olympics users spent 2:47 (167.17 minutes) watching the Olympics on NBC, while non-users spent 2:27 (146.25 minutes). Web Olympics users spent one hour and 14 minutes watching the Game through cable channels, while non-users only watched 52 minutes. Web Olympics users spent 31 minutes watching Olympics through a DVR, with non-users at 21 minutes. Independent t-tests suggest a significant difference in watching Olympics through cable channels between Web Olympics users and non-users ($t = 2.35; p = .020$).

Individuals who watched the Olympics online were significantly different from non-users on 15 of the 19 variables listed in Table 2. Web Olympics users spent more time using the Internet ($t = 2.69; p = .008$), watching television outside home ($t = 2.83; p = .005$), and watching television online ($t = 3.13; p = .002$). Males were more likely to be Web Olympics users than females. Younger people watched the Olympics online more than

TABLE I. Differences between web Olympics users and non-users in Olympics viewing

VARIABLES	USERS		NON-USERS		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Total time spent watching Olympics	334.61	204.78	218.64	175.42	4.86***
Time spent watching Olympics on cable	74.04	70.44	51.62	44.33	2.35*
Time spent watching Olympics on NBC	167.17	117.81	146.25	103.47	1.52
Time spent watching Olympics on a DVR	30.92	21.04	20.76	16.66	1.24

*** $p < .001$; * $p < .05$

older viewers. Also, Web Olympics users reported having a significantly faster Internet connection at their current residence than non-users.

Independent t-tests also found statistically significant differences between Web Olympics users and non-users in perceived benefits for watching the Olympics online ($t = 8.78$; $p < .001$), attitude towards Web Olympics ($t = 8.17$; $p < .001$), preferences for various sports ($t = 5.05$; $p < .001$), post-viewing behaviors ($t = 3.71$; $p < .001$), overall preference for sports programming ($t = 3.67$; $p < .001$), concomitant behaviors ($t = 2.71$; $p = .007$), and motivations for sports viewing ($t = 2.62$; $p = .009$). Web Olympics users also spent significantly more time watching sports news on TV ($t = 2.90$; $p = .004$), as well as following sports news online ($t = 2.79$; $p = .006$). However, there was no significant difference in the amount of time respondents spent watching sports events on TV or on the Web (Table 2).

Multiple regression analyses were conducted to examine the factors that predicted use of online Olympics (Table 3). Four fac-

TABLE 2. Profile of web Olympics users and non-users

VARIABLES	USERS		NON-USERS		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Perceived benefits of watching Olympics online	3.62	1.49	2.14	1.08	8.78***
Attitude toward watching Olympics online	3.49	.82	2.66	.84	8.17***
Preference for various Olympic sports	81.77	29.54	64.92	21.17	5.05***
Post-viewing behaviors	4.61	1.47	3.92	1.72	3.71***
Preference for sports programming	5.47	1.61	4.70	2.10	3.67***
Watch TV online	17.38	12.03	6.05	11.52	3.13**
Watch sports news on TV	55.00	47.60	35.26	32.58	2.90**
Watch TV outside home	25.94	19.81	12.98	9.95	2.83**
Read sports news on the Web	46.16	44.69	23.29	21.75	2.79**
Concomitant behaviors	5.19	1.34	4.73	1.63	2.71**
Overall use of the Internet	276.99	196.80	215.78	160.21	2.69**
Motivations to watch sports	4.36	1.25	3.92	1.42	2.62**
Internet speed	3.67	1.05	3.35	1.30	2.40*
Gender	1.42	.50	1.57	.50	-2.35*
Age	30.13	12.07	33.56	13.71	-2.24*
Watch sports events on the Web	16.69	14.01	9.02	7.88	1.90
Watch sports events on TV	107.54	100.68	99.66	90.91	.65
Watch TV at home	163.93	116.94	170.52	124.14	-.44
Watch TV through a DVR	24.21	14.77	23.49	19.16	.12

****p* < .001; ***p* < .01; **p* < .05

tors—time spent watching TV online, perceived benefits of watching the Olympics online, time spent reading sports news online, and preferences for various Olympic sports—significantly predicted watching the Olympics online. Together, these four variables explained 34.6% of the variance in Web use for the Olympics ($p < .001$). Table 3 indicates the partial correlations for each variable, plus the explanatory value for a variable when all other variables were controlled. Time spent watching TV online provided a unique explanation of 8.1% when all other variables were controlled. Perceived benefits added 7.2% of unique explanation, time spent reading sports online provided 4.9%, and preferences for various sports added 4.1% when all variables were controlled.

Discussion

This study represents one of the first attempts to empirically integrate variables associated with the uses and gratifications approach, technology adoption theories, and sports fandom literature to examine online sports viewing. Overall, significant differences were found between those who watched the 2008 Beijing Games online and those who watched through more traditional sources. Users of Web Olympics appear more intensely engaged and involved in sports and the Olympics overall. Compared to non-users, Web Olympics users watched significantly more Olympic programming on any given day, and enjoyed a broader range of Olympic sports. Individuals with a stronger motivation to watch sports were more likely to watch the Olympics online. Web Olympics users were also predisposed to using online sources to view media content and were more accustomed to watching television content online. The study found that the amount of time spent watching television online was the strongest predictor of Web use for the Olympics. These findings suggest that with more instant and smooth use of streaming and Webcasting, sports fans who value diversity and on-demand

TABLE 3. Significant predictors of watching the Olympics online

PREDICTORS	PARTIAL CORRELATION	BETA	ALL VARIABLES CONTROLLED R^2	SIG. F CHANGE
Time spent watching TV online	.333***	.293***	.081***	.000
Perceived benefits of watching Olympics online	.314***	.277***	.072***	.000
Time spent reading sports news online	.263***	.223***	.049***	.000
Preferences for various Olympic sports	.242***	.206***	.041***	.000

$R^2 = .346$; Adjusted $R^2 = .338$, $p < .001$

*** $p < .001$

experience will increasingly seek online source and an expanded media menu for their sports diet.

Interestingly, but perhaps not surprisingly, television was still the dominant medium for the Olympics among online users. Almost all Web users for the Olympics seek content through both the Internet and television. In fact, Web Olympics users spent slightly more time watching the Games through NBC (i.e., broadcast TV) than non-users. These results indicate that the Internet did not merely displace television viewing for sports programming (especially for event programming). As Cooper and Tang (2009) suggest, the Internet and television can serve a variety of functions beyond being an “alternative,” and Web Olympics adopters may use the Internet and television for different purposes. Due to the twelve-hour time difference between Beijing and the East Coast in the States, as well as the variety of sports carried by the Olympics, users may have accessed the Internet for the live events that were not covered by television, or watched the coverage that they had missed or favored (i.e., repeat viewing). Literally, the Internet removed barriers

caused by international time zones and provided fans 24/7 anywhere on-demand access to Olympic sports events. It is unclear whether the time difference between Beijing and the United States influenced use. Future studies should seek to determine if the proximity of the user to the event location has an impact on use of the web for Olympic content.

For many Web Olympics users, the Internet may also serve as a functional enhancement to the televised Games by providing value-added content, such as expanded coverage, fan sites and live post-event discussion. This study found that Web Olympics users tended to perceive greater benefits for using the Web to watch Olympic events than non-users. This tendency suggests that the network's Web effectively built relationships with sports fans and (perhaps, to some degree) facilitated the creation of a fan community (Ha & Chan-Olmsted, 2001). Sports fans likely enjoy the infotainment and interactive features of the online community. Thus, instead of reducing the amount of time users spent on television, the use of Web Olympics may encourage and enhance users' television experience by offering additional avenues for information, entertainment, and interaction. The television industry will likely continue to integrate the Internet into its sports programming strategies, especially for sports fans who are motivated for content (broadly defined) that enhances the experience.

It is also important to note that even though Web Olympics use may be explained as a functional differentiation or enhancement to the televised event, users may have, at times, also used television or the Internet simply because one medium is available over another (Cooper & Tang, 2009). For example, traditional television may not be readily accessible at work, while many individuals work at a computer. This will continue to influence what, when, and how content is watched.

While this study provides important insights about the interactions between Internet use and "big-event" sports viewing, these initial results should be viewed in context. The study was

based on a university sample using a Web survey, which is biased towards individuals with higher levels of education and access to the Internet. In addition, we speculate that the sample was biased to some degree toward people who like watching sports. Sports fans might be more willing to complete a survey about sports viewing. Future research should institute methods and measures that help paint a representative picture of the on-line sports viewer.

Despite the limitations, this study yielded insights that should inform future inquiry. The study suggests that networks should continue to increase emphasis on Web content, especially for event sports programming. Users will increasingly look to the Web to access content, especially if they perceive a strong benefit for doing so. Today's and tomorrow's sports viewers have a plethora of choices and converging platforms to access content to satisfy their needs. In a convergent media environment, it is more fruitful to consider sports fans/viewers across media rather than to isolate their uses within a medium. By empirically examining Web use for the 2008 Beijing Olympic Games, this study expands our theoretical understanding of the interactions between Internet use and sports viewing, and encourages future studies.

Tang Tang (Ph.D., Ohio University) is an Assistant Professor in the School of Communication at The University of Akron. Her research interests include audience research and the impact of new communication technologies.

Roger Cooper (Ph.D., Indiana University) is Director of the School of Media Arts and Studies at Ohio University. His research interests include new media uses and the personality attributes for career success in media professions.

Notes

1. The 10 statements used to measure motivations for sports viewing included: "I watch sports to see who does well/who wins; because

I care about the players or teams; to follow a specific player or team; because I like the unpredictability of the shows/games; to put aside responsibilities, including studying, for a while; because I don't want to miss a thing on the show or game; to relieve stress and escape from pressures of the day; to feel connected with the players or teams; to be in the know; and to add some excitement of my life."

2. The eight statements used to measure perceived benefits included: "I watched the Olympics online because it was more convenient; because it provided a wide variety of programming; because it was a quicker way to get information; because it fitted my schedule better; because it enhanced the quality of the Olympics coverage; and because it brought me more entertainment; It was easy for me to figure out how to watch the Olympics online; and It was too much trouble when watching the Olympics online (reversed)."

3. The five statements used to measure concomitant behaviors included: "When watching sports, I feel happy if my favorite player or team does well; I feel sad or depressed if my favorite player or team does poorly; I yell out at the players, teams or action; I hope (or pray) for an outcome I want; and I talk with others about the show/game."

4. The five statements used to measure post-viewing behaviors included: "After watching sports, I will watch more about it on TV; I will stay in a good mood for a while if my favorite player or team did well; I will read about the players, teams, or games in the newspaper; I will talk with my friends about it; and I will check the Web to read more about it."

5. The 28 sports types used in this study included: "Archery, badminton, baseball, basketball, beach volleyball, boxing, cycling, diving, equestrian, fencing, field hockey, gymnastics, judo, mountain biking, rowing, sailing, shooting, soccer, softball, swimming, synchronized swimming, table tennis, tennis, track and field, volleyball, water polo, weightlifting and wrestling."

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human-Decision Processes*, 50, 179–211.
- Atkin, D., Jeffres, L., & Neuendorf, K. (1998). Understanding Internet

- adoption as telecommunications behavior. *Journal of Broadcasting & Electronic Media*, 42, 475–490.
- Billings, A. C., & Angelini, J. R. (2007). Packing the games for viewer consumption: Gender, ethnicity, and nationality in NBC's coverage of the 2004 summer Olympics. *Communication Quarterly*, 55(1), 95–111.
- Coffey, S., & Stipp, H. (1997). The interactions between computer and television usage. *Journal of Advertising Research*, 37(2), 61–67.
- Cooper, J. (2008). Let the Web Games begin. *MediaWeek*, 18(28), 12.
- Cooper, R., & Tang, T. (2009). Predicting audience exposure to television in today's media environment: An empirical integration of active-audience and structural theories. *Journal of Broadcasting & Electronic Media*, 53(3), 400–418.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13, 319–340.
- Dietz-Uhler, B., Harrick, E. A., End, C., & Jacquemotte, L. (2000). Sex difference in sport fan behavior and reasons for being a sport fan. *Journal of Sport Behavior*, 23, 219–231.
- Dupagne, M. (1999). Exploring the characteristics of potential high-definition television adopters. *Journal of Media Economics*, 12(1), 35–50.
- Dutta-Bergman, M. J. (2004). Complementarity in consumption of news types across traditional and news media. *Journal of Broadcasting & Electronic Media*, 48(1), 41–60.
- Eastman, S., & Land, A. (1997). The best of both worlds: Sport fans find good seats at the bar. *Journal of Sport and Social Issues*, 21, 156–178.
- En.beijing2008.cn (2008). Retrieved November 17, 2009, from <http://en.beijing2008.cn>
- Farquhar, L. K., & Meeds, R. (2007). Types of fantasy sports users and their motivations. *Journal of Computer-Mediated Communication*, 12, 1208–1228.
- Ferguson, D. A., & Perse, E. M. (2000). The World Wide Web as a functional alternative to television. *Journal of Broadcasting & Electronic Media*, 44(2), 155–174.
- Gantz, W. (1985). Exploring the role of television in married life. *Journal of Broadcasting & Electronic Media*, 29, 65–78.
- Gantz, W. (1981). An exploration of viewing motives and behaviors associated with television sports. *Journal of Broadcasting*, 12, 263–275.

- Gantz, W., Wang, Z., Paul, B., & Potter, R. F. (2006). Sports versus all comers: Comparing TV sports fans with fans of other programming genres. *Journal of Broadcasting & Electronic Media*, 50(1), 95–118.
- Gantz, W., & Wenner, L. A. (1995). Fanship and the television sports viewing experience. *Sociology of Sports Journal*, 12, 56–74.
- Gantz, W., & Wenner, L. A. (1991). Men, women, and sports: Audience experiences and effects. *Journal of Broadcasting & Electronic Media*, 35, 233–243.
- Ha, L., & Chan-Olmsted, S. M. (2001). Enhanced TV as brand extension: TV viewers' perception of enhanced TV features and TV commerce on broadcast networks' Web sites. *International Journal on Media Management*, 3(4), 202–212.
- Hong, M., & Raney, A. (2007). Online sports fans' motive research: Does interactivity lead motives or follow them. The 2007 National Communication Association Annual Convention, Chicago, IL.
- James, J. D., & Ridinger, L. L. (2002). Female and male sport fans: A comparison of sport consumption motives. *Journal of Sport Behavior*, 25, 260–278.
- Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Utilization of mass communication by the individual. In J. G. Blumler & E. Katz (Eds.), *The uses of mass communications: Current perspectives on gratifications research* (pp. 19–32). Beverly Hills, CA: Sage.
- Kayany, J. M., & Yelsma, P. (2000). Displacement effects of online media in the socio-technical contexts of households. *Journal of Broadcasting & Electronic Media*, 44(2), 215–230.
- Kaye, B. K. (1998). Uses and gratifications of the World Wide Web: From couch potato to Web potato. *New Jersey Journal of Communication*, 6(1), 21–40.
- Klobas, J. E., & Clyder, L. A. (2000). Adults learning to use the Internet: A longitudinal study of attitudes and other factors associated with intended Internet use. *Library*, 22, 5–34.
- Ko, H., Cho, C., & Roberts, M. S. (2005). Internet uses and gratifications. *Journal of Advertising*, 34(2), 57–70.
- Korgaonkar, P., & Wolin, L. (1999). A multivariate analysis of Web usage. *Journal of Advertising Research*, 39(1), 53–68.
- Lederer, A. L., Maupin, D. J., Sena, M. P., & Zhuang, Y. (2000). The technology acceptance model and the World Wide Web. *Decision Support Systems*, 29, 269–282.

- Liaw, S. (2004). The theory of planned behaviour applied to search engines as a learning tool. *Journal of computer Assisted Learning*, 20, 283–291.
- Lin, C. A. (2006). Technology fluidity and on-demand webcasting adoption. *Telematics & Informatics*, 25, 84–98.
- Lin, C. A. (2004). Webcasting adoption: Technology fluidity, user innovativeness, and media substitution. *Journal of Broadcasting & Electronic Media*, 48(3), 446–465.
- Lines, G. (2000). Media sport audiences—Young people and the Summer of Sport'96: Revisiting frameworks for analysis. *Media, Culture & Society*, 22, 669–680.
- Nabi, R., & Krcmar, K. (2004). Conceptualizing media enjoyment as attitude: Implications for mass media effects research. *Communication Theory*, 14, 288–310.
- Nabi, R., Stitt, C. R., Halford, J., & Finnerty, K. L. (2006). Emotional and cognitive predictors of the enjoyment of reality-based and fictional television programming: An elaboration of the uses and gratifications perspective. *Media Psychology*, 8, 421–447.
- NBCOlympics.com (2008). Retrieved November 17, 2009, from http://www.nbcolympics.com/tv_and_online_listings/index.html
- Nysveen, H., Pedersen, P. E., & Thorbjornsen, H. (2005). Intention to use mobile services: Antecedents and cross-service comparisons. *Journal of the Academy of Marketing Science*, 33(3), 330–346.
- Oxford English Dictionary*. (1996). Retrieved November 17, 2009, from <http://www.oshlib.wisconsin.edu/oed/>
- Papacharissi, Z., & Rubin, A. M. (2000). Predictors of Internet use. *Journal of Broadcasting & Electronic Media*, 44(2), 175–196.
- Peterson, E. P., & Raney A. A. (2008). Reconceptualizing and reexamining suspense as a predictor of mediated sports enjoyment. *Journal of Broadcasting & Electronic Media*, 52, 544–562.
- Porter, C. E., & Donthu, N. (2006). Using the technology acceptance model to explain how attitudes determine Internet usage: The role of perceived access barriers and demographics. *Journal of Business Research*, 59, 999–1007.
- Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: Free Press.
- Rubin, A. M. (1984). Ritualized and instrumental television viewing. *Journal of Communication*, 34(3), 67–77.

- Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society*, 3(1), 3–37.
- Sloan, L. R. (1989). The motives of sports fans. In J. H. Goldstein (Ed.), *Sports, games, and play: Social and psychological viewpoints* (2nd ed., pp. 175–240). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Steinberg, B. (2008). NBC tracks Olympic viewers wherever they're watching. *Advertising Age*, 79(32), 3–21.
- Trail, G. T., & James, J. D. (2001). The motivation scale for sport consumption: Assessment of the scale's psychometric properties. *Journal of Sport Behavior*, 24(1), 9–19.
- Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research*, 11(4), 342–365.
- Wann, D. L. (1995). Preliminary validation of the sport fan motivation scale. *Journal of Sport and Social Issues*, 19, 377–396.