CASE STUDY

International Journal of Sport Communication, 2010, 3, 113-128

Fan–Athlete Interaction and Twitter Tweeting Through the Giro: A Case Study

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This case study examines how fans can experience a major sporting event (cycling's Tour of Italy) through a particular new communication technology platform—Twitter. To explore this possibility the authors tracked the "tweets" sent out by a selection of American and English-speaking riders during the 3-wk race. Their analysis of these texts revealed that Twitter served to increase immediacy between athletes and fans. This occurred as athletes provided commentary and opinions, fostered interactivity, and cultivated insider perspectives for fans. These activities position Twitter as a powerful communication technology that affords a more social vs. parasocial relationship between athletes and fans.

Keywords: cycling, parasocial interaction, new media, social networking

In the past fans' access to their sporting heroes was limited to what they could observe and consume from television, sports talk radio, and print media. This is no longer the case with the advent of new communication technologies. Internet technologies now provide fans with unprecedented access to professional athletes (Kassing & Sanderson, 2009; Sanderson, 2008b). For fans these technologies present new and novel ways to interact with sports celebrities. Fans can offer advice, display gratitude, and provide consolation to athletes. For sports celebrities these technologies function as a platform for self-presentation (Sanderson, 2008a) and expression of dissent (Sanderson, 2009). Athletes can use them to counter unfavorable media representations, to espouse their particular values, and to contest regulations. We contend that new communication technologies are reshaping fan–athlete interaction. Twitter is one communication technology that has spread quickly and prominently throughout the sports community (Kassing et al., 2004).

This case study considers professional athletes' use of Twitter as a means of communicating directly with their fans. Parasocial interaction (PSI) serves as the theoretical backdrop for the case and provides a framework for conceptualizing the nature of interaction occurring on Twitter between athletes and fans. To better understand this phenomenon we examined the messages sent via Twitter from professional cyclists during the 2009 Tour of Italy. The case begins with an examination of PSI and then moves to a discussion of cycling's grand tours. Then

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we describe how we conducted the analysis and present our findings regarding athletes' use of Twitter. We close by examining the questions that emerged from this case study.

PSI

PSI refers to relationships that a media user establishes with a media figure (Auter & Palmgreen, 2000; Horton & Wohl, 1956). According to Horton and Wohl, continued viewing over time leads viewers to develop bonds of intimacy with media personalities. These bonds resemble interpersonal social interaction yet remain one-sided and mediated. Subsequent scholars have emphasized that PSI involves more than simply identifying strongly with a media personality (Auter & Palmgreen, 2000). It also involves taking an interest in the character (i.e., predicting how the character will behave and caring about the character), developing group identification with the character (i.e., assessing similarities between the character and one's social group), and building respect for the character's problem-solving ability (i.e., appreciating how the character deals with adversity). In addition, Gleich (1997) recognized that PSI involved emphatic interaction or the materialization of behavioral or affective responses from viewers. This could involve verbally addressing a media figure or feeling embarrassed when a media figure makes a mistake. Therefore, PSI may remain one-sided, but this does not necessarily equate to passivity. Rather, it can lead people to actively behave in ways that resemble actual social relationships.

Traditional scholarship in this area examined PSI between audience members and newscasters (Palmgreen, Wenner, & Rayburn, 1980; Rubin, Perse, & Powell, 1985; Rubin & McHugh, 1987), soap opera characters (Perse & Rubin, 1989), and television and radio talk-show hosts (Rubin, 2000; Rubin, Haridakis, & Eyal, 2003). Subsequent studies have examined PSI in television shopping (Gudelunas, 2006), reality-based programming (Nabi, Stitt, Halford, & Finnerty, 2006), and romance novels (Burnett & Beto, 2000). Typically PSI has been assessed with survey instruments, but there have been instances in which scholars have examined the construct in communication texts such as fan letters and postings to electronic bulletin boards (Bae & Lee, 2004; Sood & Rogers, 2000). PSI occurs, then, in reaction to an array of media personalities and via different media.

Sports celebrities appear to be subjects of PSI, as well. In fact, several studies have documented PSI effects between fans and sports celebrities (Brown & Basil, 1995; Brown, Basil, & Bocarnea, 2003; Kassing & Sanderson 2009). For example, Brown and Basil found that fans who identified highly with Magic Johnson were more likely to be concerned about the risk of contracting AIDS and about reducing high-risk behavior. Similarly, highly identified fans of Mark McGwire developed an interest in the muscle-enhancement products he was using (Brown et al., 2003), and those identified with O.J. Simpson were more likely to believe that he was innocent of murder charges (Brown, Duane, and Fraser, 1997).

Sport communication scholars have extended this line of work to consider how PSI manifests in new media formats (Kassing & Sanderson, 2009; Sanderson, 2008b). For instance, Kassing and Sanderson examined fan postings that appeared on American cyclist Floyd Landis's Web site and observed that PSI manifested along traditional lines (e.g., identification). They also discovered, however, that fans behaved in ways that were more social than parasocial, including disclosure

of the behavioral effects that fans were experiencing from witnessing Landis's performance (e.g., taking time off work to recover from the exhilarating race), as well as the efforts fans actively made to provide guidance to Landis in the hope that their advice would assist his athletic performance. Similarly, Sanderson (2008b) investigated PSI manifesting on Boston Red Sox pitcher Curt Schilling's blog and found that fans offered advice but also criticized Schilling for his religious beliefs and his open support for the Republican Party. These efforts examined fans' and athletes' use of blogs. In this work we are interested in examining how PSI extends to other forms of new media. As such, we now examine a comparatively new and robust form of new media.

Twitter

Twitter is perhaps one of the most popular social-networking and communication technologies at the present time (Weingarten, 2008). It allows individuals to create "microblogs" wherein they can construct and distribute communicative messages to others (Goodyear, 2009). User accounts are linked to a user name preceded by the @ symbol, and messages, or "tweets," are limited to 140 characters per message. People become connected to others by choosing to "follow" other users. Each tweet that a person sends is transmitted to each of his or her followers, who can respond by sending a tweet of their own. With the 140-character limit, tweets rely largely on abbreviations. The brevity of messages has led to the criticism that Twitter is normalizing poor communication ("So Little Space," 2009). Despite such criticism, Twitter has become increasingly popular with celebrities, journalists, and sports personalities (Daley, 2009).

A host of sports figures who have substantial numbers of followers consistently tweet about various aspects of both their professional and their personal lives. For example, as of this writing, National Basketball Association (NBA) star Shaquille O'Neal has 2,123,222 followers, and Major League Baseball (MLB) player Nick Swisher has 753,943 followers. The use of Twitter in sports is not limited to athletes, though. Now coaches at the professional and college level are using Twitter. Indeed, Twitter is emerging as a powerful recruiting tool for college athletic programs. Twitter use is apparent among administrative personnel, too, including National Football League (NFL) commissioner Roger Goodell. League representatives, sports agents, and sports journalists employ Twitter to provide updates to fans.

Twitter's unanticipated emergence onto the sports scene has brought with it a set of benefits and limitations. One noteworthy change it has produced in the athlete–fan relationship is enhanced access. For instance, on August 26, 2009, a few days after completing the Tour of Ireland, Lance Armstrong invited his Twitter followers to join him for a ride that evening around a local park via a seemingly innocuous tweet (i.e., "Good morning Dublin. Who wants to ride this afternoon? I do. 5:30pm at the roundabout of Fountain Road and Chesterfield Avenue. See you there"). Amazingly, over 1,000 people showed up to join him for the ride (Cromwell, 2009). Twitter also serves as a mechanism for breaking sports news. When Armstrong's one-of-a-kind time-trial bike was stolen from outside the team bus at the Tour of California in February 2009, it was Armstrong who broke the story. Shortly after learning of the theft from team personnel, Armstrong shared the news with his followers on Twitter. The news media subsequently picked up the story.

The ways in which athletes have experimented with Twitter have raised questions of privacy, appropriate disclosure, and governance of Twitter by sports organizations. For example, on August 25, 2009, sports fans learned that NBA player Michael Beasley had checked into a Houston rehabilitation facility (Reynolds, 2009). Several days earlier Beasley had posted a photograph on his Twitter page displaying a new tattoo that was accompanied with phrases such as "Feelin like it's not worth livin!!!!!!! I'm done," and "I feel like the whole world is against me I can't win for losin" (Kriegel, 2009). These revelations raised concerns about the appropriateness of athletes' disclosures on Twitter (Kriegel, 2009). However, scholars have argued that online communication facilitates self-disclosure (Stefanone & Lackaff, 2009). Nonetheless, finding the balance of what should and should not be shared can be difficult. Disclosures such as Beasley's provide a glimpse into an athlete's life—providing information about an athlete that may have been difficult to access or obtain before the existence of Twitter.

With the proliferation of Twitter among professional athletes, sports organizations are quickly realizing that they may need regulations in place to govern its use. For instance, NFL player Chad Johnson announced that he intended to post tweets during his games. Front-office personnel in professional sports franchises need to be alert, then, about how athletes' use of Twitter can enhance or detract from their performance or the stature of the team. In another NFL case, the San Diego Chargers organization fined cornerback Antonio Cromartie $2,500 for posting a tweet that complained about the team's training-camp food ("NFL Works on a Policy," 2009). Twitter apparently can be used not only to entertain fans but also to communicate athletes' displeasure with their respective organizations. This potential appropriation of Twitter resembles how other forms of new media like blogs have been used to express dissent (Sanderson, 2009). How organizations respond to employees' use of Twitter will be interesting to observe, because a clash of privacy boundaries will likely occur.

So there are many concerns associated with Twitter and the impact it may be having on sport generally and fan–athlete interaction in particular. In this work we focused specifically on the role Twitter appears to be playing in fan–athlete interaction. To better understand this we chose to examine athletes' use of Twitter during cycling's Tour of Italy. This proved to be an ideal place to conduct an initial investigation of Twitter use for a number of reasons. First, there were several cyclists using the technology at the time of the event. Second, the event is an intense 3-week sporting contest, which allowed us to examine a large body of texts (i.e., tweets) related to an entire sporting event. We thought this would be valuable compared with examining only a portion of a much longer sport season. Third, the role of Twitter as a source of sporting information seemed to be somewhat pronounced because there were limited media choices for following the event in the United States. Fourth, cycling fans are highly identified with and informed about their sport (Wieting, 2000), and therefore tweets directed to them promised to be a valuable source for exploring fan–athlete interaction where PSI would be occurring.

Cycling's Grand Tours

There are three grand tours annually in professional cycling that showcase their respective countries—the Tours of France, Italy, and Spain. The Tour de France (TdF) is clearly the biggest of these (Palmer, 1998), but the Tours of Italy and

Spain—the Giro d'Italia (Giro) and the Vuelta a España (Vuelta), respectively—have equally compelling histories, engaging competitions, and race legends. On the race calendar the Giro and the Vuelta bookend the TdF. The Giro is run in May, and the Vuelta happens in September.

Cycling's grand tours are the domain of true endurance athletes—competitors must ride multiple and consecutive stages that regularly exceed 100 miles over terrain that varies daily. They have a particular appeal because they "can be glimpsed, literally, from one's own door step" (Palmer, 1998, p. 267). These are sporting events of the highest magnitude that unfold not in professional sporting venues but on our common roads. This leaves cyclists exposed and vulnerable to any number of potential dangers including poor road surfaces, obstacles on the course, inclement weather, and unruly fans. In fact, the normalization of risk as routine and inevitable is a fundamental tenet of cycling (Albert, 1999). To be successful a competitive cyclist needs to come to terms with the notion that crashes occur and that they can lead to serious bodily injury or death.

As the first grand tour of the season, second only to the TdF in prestige, the Giro is an important race in professional cycling. The *maglia rosa,* or pink jersey, that goes to the race leader and overall winner is a coveted prize in cycling. It is superseded in stature only by the TdF's yellow jersey. The race marks the first challenge of the season for general classification, or "GC," contenders in the grand tours. Only a few legendary riders have captured the historic double by winning both the Giro and the TDF in the same year, including Fausto Coppi (1949 and 1952), Jacques Anquetil (1964), Eddy Merckx (1970, 1972, and 1974), Bernard Hinault (1982 and 1985), Stephen Roche (1987), Miguel Indurain (1992 and 1993), and Marco Pantani (1998).

The 2009 Giro garnered added attention because American cycling legend Lance Armstrong announced that he would ride the race as part of his comeback in the sport. This announcement was particularly compelling because Armstrong, who had won an unprecedented seven consecutive TdF titles and placed fourth in the Vuelta the year before embarking on his remarkable run at the TdF, had never ridden the Giro in his professional career. The 2009 race was Armstrong's first Giro and his first grand tour after leaving the professional level of the sport 4 years earlier.

As the 2009 Giro approached it looked as if there would be no live coverage of the race for U.S. fans. In previous seasons the Versus Network had broadcast the entire race or weekly highlight shows, but it appeared this would not be the case in 2009. Just days before the Giro was to begin, Universal Sports, an NBC affiliate, announced that it would provide daily televised and online coverage. However, the television coverage was not available in all cable and satellite packages. Fans could follow the race live via updates or after the fact via highlight clips on leading online cycling outlets such as cyclingnews.com and velonews.com. These limitations on accessing the event thrust Twitter into an interesting position. It, too, could be a source of sporting information for cycling fans.

Selecting and Analyzing Tweets

To identify the texts for analysis we took the race's start list (i.e., a list of all riders and teams) and compared that with cyclists using Twitter. Although there were a few additional professional cyclists using Twitter, we decided to focus on two

groups: American cyclists and first-language speakers of English who were riding on one of the two American-based teams (i.e., Columbia-High Road or Garmin-Slipstream). In total there were 10 American cyclists in the race and an additional three English-speaking riders on the two American-based teams. Two of the American cyclists did not appear to have Twitter accounts, and a third only adopted the technology after completing the Giro. Similarly, two of the English-speaking riders on American-based teams began using Twitter after the Giro. Thus, we were able to follow eight riders: seven American cyclists and an Australian cyclist riding for Team Columbia-High Road. For a detailed list of the riders considered and followed, see Table 1.

We cataloged tweets from the eight riders from May 6, 2009 (3 days before the official start of the race), until June 1, 2009 (1 day after the race finished). The Giro ran for 3 weeks. It began in Venice on May 9 and finished in Rome on May 31. We accessed each of the respective athletes' Twitter pages and downloaded the tweets sent during this time period. An immediate observation that we were able to make when we examined the frequency of Twitter use was simple and patently obvious. When it comes to Twitter use, Lance Armstrong is clearly an outlier. Armstrong alone sent 394 tweets and accounted for over half (53%) of all tweets sent during the 27-day period examined.

The remaining seven riders combined only sent 350 tweets, each sending between 16 and 112. When Armstrong is counted the daily average of tweets per rider per day was 3.44. Excluding Armstrong, the other riders averaged 1.85 per day. Closer examination of the frequency counts indicates that there were three groups: (a) modest users like Zabriskie, Vande Velde, Danielson, and Horner, who sent 16–23 tweets, or just over 10% of the total; (b) moderate users like King,

Table 1 American or American-Based-Team Riders in the Giro Followed on Twitter

Cyclist	Nationality	Team	Team location
Michael Rogers	Australia	Columbia-High Road	USA
Mark Renshaw[a]	Australia	Columbia-High Road	USA
Bradley Wiggins[a]	Great Britain	Garmin-Slipstream	USA
Christian Vande Velde	USA	Garmin-Slipstream	USA
Tom Danielson	USA	Garmin-Slipstream	USA
Dave Zabriskie	USA	Garmin-Slipstream	USA
Danny Pate[a]	USA	Garmin-Slipstream	USA
Tyler Farrar[b]	USA	Garmin-Slipstream	USA
Chris Horner	USA	Astana	Kazakhstan
Levi Leipheimer	USA	Astana	Kazakhstan
Lance Armstrong	USA	Astana	Kazakhstan
Ted King	USA	Cervelo Test Team	Switzerland
Jason McCartney[b]	USA	Saxo-Bank	Denmark

[a]Professional cyclists who currently do not use Twitter. [b]Professional cyclists who currently use Twitter but began using it after the Giro.

Rogers, and Leipheimer, who sent 55–112 tweets, or just under 40% of the total; and (c) prolific or heavy users (i.e., Armstrong). To understand the pattern of use without the outlying data we computed summary statistics that excluded the tallies for Armstrong (see Table 2). These numbers provide a more balanced account of the typical use of Twitter by professional cyclists involved in the Giro.

Armstrong's celebrity status and number of followers on Twitter (see Table 3) far exceed those of any of the other cyclists, so it is not surprising that his numbers would be out of phase with all other cyclists. Given these factors we did see some similarities between his use of Twitter and that of the other cyclists but also some stark contrasts. Armstrong used Twitter to promote his cancer initiative, to comment on public affairs, to share results and opinions about other racers and races, and to interact with friends and fans. Examining Armstrong's tweets alone would in fact warrant a separate analysis and case study. Thus, we chose to focus primarily on the tweets provided by the other riders we followed during the Giro, but we do reference content from Armstrong's tweets when appropriate.

We examined all tweets for emergent themes using grounded theory (Glaser & Strauss, 1967) with two overarching questions in mind: How do athletes use Twitter?

Table 2 Frequency of Tweets Sent From May 6 to June 1, 2009

Cyclist	Total tweets	Daily average	Overall proportion	Proportion without Armstrong
Zabriskie	16	0.59	2.2%	4.6%
Vande Velde	17	0.63	2.3%	4.9%
Danielson	19	0.70	2.5%	5.4%
Horner	23	0.85	3.1%	6.6%
King	55	2.04	7.4%	15.7%
Rogers	108	4.00	14.5%	30.8%
Leipheimer	112	4.15	15.0%	32.0%
Armstrong	394	14.59	53.0%	

Note. Daily averages were computed by dividing by 27 (the total number of days examined).

Table 3 Cyclists' Twitter Followers

Cyclist	Number of Twitter followers[a]
Ted King	3,676
Tom Danielson	4,526
Chris Horner	15,858
Michael Rogers	20,245
Christian Vande Velde	25,345
Dave Zabriskie	27,067
Levi Leipheimer	71,853
Lance Armstrong	1,207,445

[a]As of August 12, 2009.

and What purposes do these uses serve? Our analysis involved reading and rereading all tweets several times and noting similar content themes. As part of this process we developed, clarified, and refined emergent categories as we continued to examine and reexamine the data. We examined texts until new observations did not add substantively to the emergent themes. Because the analysis was exploratory in nature there is some expected overlap between categories. Emergent categories are not meant to be discrete but rather to represent an integrated structure of the functions of tweets.

Emergent Themes

Overall we found that Twitter functioned to augment fans' experience of the Giro. The content of cyclists' tweets afforded fans greater insight into the race in particular and the sport in general. We illustrate how this occurred via the sharing of commentary and opinion, the fostering of interactivity, and the cultivating of insider perspectives.

Sharing Commentary and Opinions

Twitter served to provide a platform for cyclists to comment on and share their opinions about a whole host of issues. Much of this commentary concerned the race (e.g., the weather, the course, the speed, etc.). For example, riders posted the following tweets after consecutive days when the finishes were particularly challenging. Here they questioned the finish of Stage 6: "Crazy finish today! Peloton [term used to refer to the group of riders] was going over 70 mph through twisty, small roads. Its safe to say the giro keeps you on [y]our toes" (Tom Danielson, May 14). "Wow, the last 30km was crazy! The peloton was not happy" (Levi Leipheimer, May 14). "Done with stage 6. Uh...wow. That was the craziest last 30k I've ever seen. Long, fast de[s]cent at 80k (50mph) plus then a tight circuit" (Lance Armstrong, May 14). "Not sure that's necessary really. Tomorrow is the same kind of finish. It's bike racing, not moto gp" (Lance Armstrong, May 14).

The following day riders questioned the finish on Stage 7, as well: "Didn't enjoy the last de[s]cent into the finish. Dangerous stuff :-/" (Michael Rogers, May 15). "In truth it only rained the final 90mins. But the 25 mile gnarly descent in the pissing rain, I could have happily done without" (Ted King, May 15). "Holy sh*tballs that was a ridiculous finish. Someone was not thinking when they came up with that" (Tom Danielson, May 15). "Done with st 7 [stage 7]. I've seen it all now. 25 mile fast de[s]cent to the finish. In the pissing rain. Makes no sense. The boys in the bunch are...Livid" (Lance Armstrong, May 15).

The riders apparently grew tired of the race organizers' apparent lack of concern for their safety as the race continued. Twitter served as a platform to let fans know about their growing discontent. The tension came to a head on May 17 during the 165-km Stage 9 that finished on a circuit in Milan. In an unusual move, riders determined that the final circuit around Milan was too dangerous to race and most decided not to compete for the day's stage. Normally a stage like this would culminate in a dramatic, high-speed sprint finish. Instead, they controlled their speed and rode in safely as a group. They had determined that the circuit was too dangerous because of parked cars, multiple tramline crossings, and 25 tight turns, many of which funneled the riders into narrower streets. The race organizers and some

journalists found the protest disrespectful and offensive. A fan following riders on Twitter, though, would already have been privy to the growing frustration among riders about the organizing body's decisions regarding the course route. A protest of this magnitude would not necessarily seem so shocking, then, to fans who had been alerted to what riders felt were unnecessarily dangerous routes and finishes.

After the protest riders commented on yet another dangerous finishing circuit. For example, "That truly was a very dangerous course today. Parked cars on the course, coned off head on moving traffic, road construction, people in road" (Tom Danielson, May 17). They also took time to defend their actions in light of criticism leveled against them. Australian Michael Rodgers commented, "Funny that everyone is blaming the riders for our protest today. No one mentions the parked cars on the circuit, the on coming traffic...tram tracks in the middle of corners, people walking onto the circuit" (May 17). Lance Armstrong added,

> St 9 done. Unfortunately not the best day for the fans OR the riders. We [the peloton] collectively took the decision to neutralize most...of the race due to circuit. Ram tacks [sic] running same direction as the course, parked cars on the roads, etc. Anyhow, it lit up at the end. (May 17)

Such commentary provided fans directly with insight that may have been unavailable, overlooked, or underreported by other media sources. Fans who were following Giro riders on Twitter were made aware of the riders' concerns and were aware of the consistency with which riders had voiced those concerns in the preceding days.

Not all of the commentary provided by riders struck such a serious note. In fact, much of it was simply unadulterated promotion of one form or another. For example, Michael Rogers stated, "Got U2's Magnificent on repeat on the iPod. What can I say? It's magnificent. Going to miss the U2 Europe concerts this summer. Damn TdF ;-)" (May 25). On other occasions riders provided commentary on things they found amusing or irritating. Ted King let fans know what he thought about the Italianization of a popular television show, while Dave Zabriskie commented on the price of cappuccinos. "Cops is a terrible show. But dubbed in Italian it's kind of entertaining" (Ted King, May 19). "Sat down for two quick cappuccinos in Venice. I handed the waiter five euros. He showed me the bill. It read 10.00 euro...that's a bit much" (Dave Zabriskie, May 7). Still other riders, such as Christian Vande Velde, commented on the dramatic European destinations that they encountered along the way, saying things like "I could live in Venice, boats and more boats. I'm in heaven" (May 8). In these instances commentary served to show that riders could be playful, particularly given the grueling and competitive nature of the Giro. It also worked to shape their respective personas for fans.

Zabriskie's cappuccino tweet was one of many comical things he posted during the Giro—all of which confirmed his place as the court jester or funny man of the peloton. Others included simply "Sweating..." (May 24), "Holding the gas in while on the massage table..." (May 26), and "Today was the kind of day that made me wish I could piss over my head while riding" (May 20). Other riders used Twitter to bolster the public's perception of one another, as well. For example, Levi Leipheimer sent a tweet that linked to a picture of a half-dressed Zabriskie preparing for the formal team presentation that occurs before the start of the event. Tom Danielson, in turn, reported about Zabriskie's antics at the beginning of a stage toward the end of the race:

> Ouch! That was a hard, hard day out there today. Best moment was when DZ [Dave Zabriskie] stole the microphone from the announcers at the start and sang...he sang sweet child o mine by gnr [Guns and Roses] to the whole race, fans, and chaos that was at the startline! Start searching youtube for it! It was legend. (Tom Danielson, May 25)

Commentary of this nature put particular personalities on display for fans. In another instance, when the course veered to a coastal region of Italy, Australian Michael Rogers played up his country's swimming prowess by challenging American cyclists Lance Armstrong and Levi Leipheimer to a swimming race. The exchange between the riders played out in several tweets, across multiple days, in front of thousands of fans. The swim meet never occurred, but the back-and-forth banter exchanged between these world-class athletes proved to be quite entertaining. Thus, Twitter served as a means for athletes to display their playfulness, senses of humor, and competitive personas.

Fostering Interactivity

Interactivity surfaced in several ways. Often riders directed followers to pictures they had posted online or to blogs they or other riders were writing and posting elsewhere. They also provided links that promoted the equipment they used, their sponsors, their teams, or the causes they endorsed. Directing fans to other places (e.g., blogs, Web sites, photos, etc.) created a way in which followers could actively participate in the athletes' construction of the event. This form of interactivity required fans to move through and link to other technologies to discover a fuller sense of the rider's experience of a grand tour.

Not all interactions, however, were scripted by the athletes directing fans to other media. Rather, interactivity seemed to occur in some instances rather spontaneously in response to information provided by riders. For example, on May 7 Levi Leipheimer mentioned his new personal sponsor Road ID and called it "a great company committed to keeping athletes safe." The company provides identification information in the form of bracelets that can be worn during sporting activity. The following day Leipheimer added, "I received a ton of mentions from people telling their stories about Road ID, pretty cool to read. Great product that saves lives" (Levi Leipheimer, May 8). Apparently without solicitation followers of Leipheimer felt the need to share their endorsement of the product with him. Interactivity in this case provided followers with an opportunity to share in Leipheimer's endorsement of a product they valued. It also worked to cement fans' respect and admiration for Leipheimer and to enhance the fan–athlete bond. Bonding with Leipheimer over a valued product sponsorship did not require Twitter. It could have occurred simply through seeing a television, Web, or magazine or newspaper advertisement. Twitter, though, enabled fans to communicate directly and immediately with Leipheimer about their experiences with the product. In response, Leipheimer appeared genuinely moved and pleased with fan reaction to his new sponsor. In this and similar instances riders did not directly solicit but readily received feedback from fans.

Thus, interactivity could be fostered by directing fans elsewhere to see, read, view, and hear other media content about the Giro, or it simply could occur through fans' questioning tweet content. It also occurred when athletes directly sought the

input of their Twitter followers. Michael Rogers, for example, stated, "Searching for some tt [time trial] warm up tunes!" and then asked "Anyone have some suggestions?" in a tweet sent on the final day of the race (May 31). Twenty-seven minutes later he sent another saying "Liking the suggestions for Rage Against the Machine." Similarly, Levi Leipheimer invited fans to participate in a rest-day contest on May 26 for a "cool tee" on his Facebook page. He provided a link for followers but replied just 23 minutes later saying "That link was bad, sorry about that...Try this." Clearly, followers alerted him to the bad link. We cannot be certain of how many people responded because we were not following all the people following the riders. The quickness with which riders replied in these cases does seem to indicate that they received ample responses from followers in short amounts of time.

Cultivating Insider Perspectives

Riders also cultivated immediacy with fans by providing an insider perspective. At times they provided insight into how the day's ride treated them. For example, Levi Leipheimer tweeted on May 23, "Giro has no exit strategy for the riders here and we had to ride back down the climb, felt like descending on a mtb [mountain bike], very steep!" Here, Leipheimer provides followers with a sense of what the riders have to contend with after a stage that finishes on a steep hilltop—in this case riding back down after exhausting oneself with a full day of riding. Michael Rogers recounted a particular mishap during an early stage of the race that occurred on May 15, saying, "Thanks to teammate Marco Pinotti who gave his front wheel after I had a front wheel blow out on the final de[s]cent." A "mechanical" in cycling parlance (i.e., any problem with the bicycle) is not an unusual occurrence. It can be quite distressing, though, when it occurs during a pivotal point in the race. Followers can sense the relief in Rogers's remarks as he expresses his gratitude to a teammate who performed admirably to protect the rider and team's overall position in the race. At other times riders shared some of the absurd aspects of the sport. Levi Leipheimer reported on May 14 "We had a fast downhill in the middle of the stage and we were comparing top speeds, heard JJ Haedo hit 117kph!! That's 72.7mph to be exact." This tweet places the speeds professional cyclists reach in perspective for fans, which is something that would likely not translate well or accurately to televised viewing. It also shows how cyclists compare notes with one another while they are riding and reveals that professional cyclists can surprise and amuse themselves even in the midst of competition.

The perspective provided by riders was not limited exclusively to actual racing but also encompassed the activity that surrounded the entire event. Riders often talked about their warm-up or cool-down routines, the postrace massages, injury treatments, team dinners, team meetings, and visits from doping control. Dave Zabriskie, for example, let followers know that "Maniac from flashdance just came on bus radio...does it get any better?" (May 24). During the last week of the Giro Ted King wrote "The unglamorous side of cycling rears its nasty face as I watch my roommate get his wounds tended to. Cycling is often a cruel sport" (May 26). Michael Rogers let followers know about Team Columbia's hotel accommodations for the night, stating, "Nice hotel tonight! There is even a tricked out 'café illy' bar/shop. What more does a bunch of tied biker [sic] riders need?" (May 28). By sharing their experience with their teams, teammates, and accommodations, riders

become tour guides of sorts—providing a level of detail and sense of immediacy absent in other media.

And finally, immediacy could also be felt in the remarks riders made as they returned home. Knowing that he was nearing his northern California home and minutes from a well-deserved homecoming, one could truly empathize with Levi Leipheimer as he posted "Crossing the Golden Gate Bridge right now" (June 1). It is interesting that he had the wherewithal to share this interpretable moment with his Twitter followers. Ted King, a young American cyclist, completed his first grand tour and welcomed his return home with a simple "merica!" (June 1). These tweets allowed fans to share in the riders' homecomings and to join in their sense of accomplishment derived from having completed one of cycling's grand tours.

Making Sense of Twitter and PSI

Overall, we can see that Twitter works well as a complementary medium for athletes and fans—one that can enhance the experience of sport. Our findings suggest that this is the result of Twitter's capacity to function as a vehicle for athletes to offer commentary and opinion and as a mechanism for fostering immediacy with fans through interactivity and insider perspectives. Twitter provides athletes and fans with an opportunity to interact in a more social rather than parasocial way (Kassing & Sanderson, 2009), to interact more interpersonally even in a medium that essentially broadcasts from one to many. As such, Twitter appears to have the capacity to transform the way athletes communicate with fans and how fans in turn respond to their athletic heroes.

The themes unearthed in this case study demonstrate that Twitter will continue to shape and reshape our conceptions of fan–athlete interaction. This will be particularly evident with regard to PSI. Our current case-study analysis aligns with previous examinations of PSI occurring via new media between athletes and fans (Kassing & Sanderson, 2009; Sanderson, 2008b) and also illustrates how Twitter can further augment PSI in these instances. Although blogs appear to be a powerful mechanism for athletes to communicate directly with fans (Sanderson, 2008a), Twitter takes interaction to an even more immediate level. With Twitter, fans no longer need to log onto an athlete's Web site. Instead, they receive messages directly and immediately from athletes delivered straight to a host of mobile-communication devices. No longer is the fan limited to parasocially interacting with the athlete via a stationary computer interface. Fans can hear from their athletic heroes at any time and in any number of places. They can receive text messages from their athletic heroes just as they do from their circle of friends and family.

Another interesting capability of Twitter is that an athlete can easily respond to a tweet from a fan. It was not our intention in this work to track fan responses to athletes' tweets, but this would be an important consideration in future work. Such an investigation could reveal much about how parasocial relationships move toward actual social relationships and the role that computer-mediated communication plays in this transformation. Future research could examine the types of fan tweets to which athletes respond or the types of tweets athletes send seeking responses from fans. We saw some indications of this practice in the current analysis when athletes sought recommendations directly from fans. A specific exploration of this trend could reveal much more.

It would be interesting to consider how communication functions that have emerged in new media formats between fans and athletes translate or survive in the truncated form that Twitter demands. Consider that computer-mediated forums function as supportive environments wherein fans act to defend and bolster their sporting heroes (Kassing & Sanderson, in press). To what degree can this occur via a limited platform like Twitter? Sanderson (2009) examined NBA owner Mark Cuban's use of his blog to express dissent about league rulings and officiating decisions. Expressing dissent in these cases was facilitated by the limitless space a blog affords one for making such arguments. Would doing the same be viable when limited to 140 characters? Kassing and Sanderson (2009) found that fans provided direct advice to Floyd Landis on his blog. They spent considerable time and energy providing advice about how to ride or prepare for specific stages of the TdF and where to seek medical assistance with his impending hip-replacement surgery. Here, too, we wonder about the capacity to provide such advice given the limitations imposed by Twitter.

Thus, further investigation of the use of Twitter might demonstrate how athletes and fans are achieving these comparatively complex communicative acts in abbreviated forms. Future work also could reveal that more complex communication functions get jettisoned with increased use of Twitter. This did not appear to be the case in the current analysis, though, as riders achieved interesting communicative outcomes through their truncated texts. However, this occurred not through a single tweet but rather as the result of a continuous, albeit staccato, narrative spread over an entire sporting event. More research is necessary, then, to discover the particular ways in which communication functions when abbreviated within the parameters of particular new media formats.

Although this case answers some important questions about the nature of how athletes and fans are using Twitter, it also raises some new and challenging questions about the future of this medium and its place in fan–athlete interaction. Providing a constant running commentary of one's activities during an already demanding physical effort like a 3-week grand tour can be taxing. As more and more athletes continue to adopt Twitter to connect with fans it will be interesting to see if there is a burnout or fatigue factor that comes into play. Seeking and receiving fan support can be quite rewarding but also demanding. Michael Rogers, among the moderate users, hinted at this paradox when he stated on the final day of the Giro,Thanks for all the support over the last 3 weeks guys. Means a lot to me!!!

> On my way to the airport, have flight to catch [and added 2 minutes later]... I'm signing off twitter for a few days. Need to dedicate all my time to my two little twin girls :-) (May 31)

Another pertinent question concerns saturation. At what point will Twitter saturate users' tolerance for receiving communication? We had much to examine here, and we only followed eight riders in a single sport for an intensive but comparatively brief time span. What becomes of fans who follow countless athletes across multiple sports and during much longer seasons? How many tweets will be too many tweets, particularly given the capacity for tweets to simply report or share the mundane? We saw evidence of that trend here (e.g., riders simply telling us they were on the team bus or eating breakfast), but it was not too pronounced. Keep in mind that the athletes here, with the exception of Lance Armstrong, are not

sport celebrities beyond the world of cycling. Thus, they are speaking to a specific audience. A sport celebrity like Lance Armstrong speaks to a much broader audience evidenced by the sheer number of followers he has on Twitter. He, in turn, tweets about a much broader array of subject matters and sometimes as a celebrity about subject matter that simply is mundane (e.g., what he's listening to on his iPod).

So as sports figures gain popularity and celebrity status we may also see an increase in non-sport-related tweets that merely tell us about aspects of their ordinary lives. Now this may or may not be intriguing to sports fans, but we do know it will be voluminous. Which begs the question: How much of this can one tolerate? Fans subscribed to follow numerous celebrity athletes could quickly get pulled into a swampy litany of mundane celebrity fodder. So here, too, we wonder if too much will prove problematic. Thus, there could be a burnout factor for fans, as well. These are trends to observe as more athletes and fans adopt this technology.

In conclusion, Twitter clearly enhances fans' access to athletes. Given the large number of athletes now using this medium Twitter seems destined to have an impact on sports communication. Sports organizations will continue to struggle with governing this alluring new medium, athletes will continue to expand their use of the technology, and fans will continue to follow those athletes with unprecedented access. How this all unfolds will give rise to many exciting opportunities to explore the ever-expanding domain of communication and sport.

Case Questions

- Think of other sporting events that may not receive prominent media coverage in the United States. How might athletes participating in these events use Twitter to stimulate interest and involvement with fans?
- In this case study cyclists used Twitter to voice their disgust with safety issues and racing conditions. Is Twitter an appropriate platform for athletes to express dissent about decisions made by sports organizations?
- The NFL recently adopted a Twitter policy forbidding athletes and coaching personnel from sending tweets 90 minutes before game time. Should sports leagues be able to regulate Twitter use? How so, and to what degree? What are the implications of doing so?
- Athletes have used Twitter to break news, disclose personal information, and share opinions about fans, coaches, and league personnel. Besides limiting when athletes use Twitter, as the NFL policy does, are there other considerations that should be taken into account when determining what is appropriate or inappropriate use of Twitter?
- This case study reveals that athletes connect with fans through opinion sharing, fostering interactivity, and cultivating insider perspectives. How else can the fan–athlete relationship be strengthened through the use of Twitter? What about Twitter makes it feel particularly interpersonal? What about it seems personal?
- It appears that fan–athlete interaction will benefit from Twitter use. Will this always be the case? Is it possible that fan–athlete interaction will suffer from Twitter use? How might this happen?

- Twitter is a very popular communication technology at this point in time. Is it a fad or will it remain popular? Will the sporting public grow tired of Twitter and athletes' accelerating use of it?
- What other communication technologies have had or will have an impact on fan–athlete interaction? How might athletes and fans use these technologies to bond with one another?

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