# THE ACCELERATION OF MEDIA SPORT CULTURE

Brett Hutchins [a]

[a] Faculty of Arts, Monash University, PO Box 197,
Caulfield East, Melbourne, Victoria, 3145, Australia

PLEASE SCROLL DOWN FOR ARTICLE

# Brett Hutchins

## THE ACCELERATION OF MEDIA SPORT CULTURE
Twitter, telepresence and online messaging

*There has been a rapid and widespread increase in the use of the micro-blogging and social networking platform Twitter (http://twitter.com) by professional athletes, sports clubs, leagues and fans. For instance, 'tweets' or messages of up to 140 characters offer high-profile athletes like Lance Armstrong (cycling), Serena Williams (tennis), Usain Bolt (track and field), Lote Tuqiri (rugby) and Shaquille O'Neal (basketball) the ability to communicate instantaneously with fans, friends and observers, bypassing the gate-keeping functions of journalists, publicists and sports officials. 'Tweeting' has added an unpredictable and occasionally controversial dimension to the types of public expression, promotion and representation associated with media sport. This paper argues that Twitter fits within a range of internet-based and mobile communications practices, including text messaging and instant messaging, that are evidence of an accelerated information order in which telepresence — 'keeping in touch' without literally being in touch — is a pervasive feature. The existence of this order highlights important changes in both the production and consumption of media content, and necessitates a shift away from broadcast-centric understandings of media sport towards those that properly acknowledge the increasing significance of networked digital communications.*

'Bent Apologises for Online Rant'. Appearing on the BBC Sport website in July 2009 (BBC 2009a), this headline referred to English Premier League football player, Darren Bent, and a series of messages posted on his now defunct Twitter account. Bent's frustration at delays over a pending transfer deal that

would see him move clubs from Tottenham Hotspur to Sunderland saw him post a series of spontaneous tweets appearing to blame Tottenham club chairman, Daniel Levy, for his predicament. Bent's tweets included, 'Why can't anything be simple. Sunderland are not the problem in the slightest', and 'Do I wanna go to Hull? No. Do I wanna got to Stoke? No. Do I wanna go to Sunderland? Yes.' Accessed by sports journalists and fans, these tweets caused a minor media scandal that initially saw Bent issue a public apology for his actions, and then later speculate that his outburst may have been beneficial, helping to clear the way for his eventual move to Sunderland (BBC 2009b). Bent's intervention into the transfer process through the use of an online communications platform focused direct news media attention on the inner-workings and power dynamics of the football transfer market. Indirectly, and more significantly for my analysis, this incident revealed the increasing use of online digital media and social networking services by athletes for self-promotion, self-representation and personal expression. It is one example among many presented in this paper showing how an increasing number of elite athletes (see, e.g. http://twitter-athletes.com) are communicating with fans, followers, journalists and friends through short, direct messages of 140 characters or less on Twitter, and, in the process, producing unpredictable outcomes and problems for sports leagues, clubs, officials and sometimes themselves.

While the subject of arguably excessive media hype and fashion, the popularity of Twitter as a form of social media is indicated by the fact that the noun 'tweet' and verb 'tweeting', which usually refer to noises emitted by a small bird, are now commonly associated with this online service. Twitter represents a compelling development in the context of emergent digital media forms, content and technologies. According to the Director of Online Communications for the 2010 Winter Olympics, Graeme Menzies, Twitter recalls Marshall McLuhan's observations about the telegraph:

> Twitter has retrieved the telegram. It is a good telegram: Short little sentences and things that are important for the next five minutes, but not so important after that.

> (quoted in Silverman 2010)

His point about disposable short sentences is accurate, but requires the addition of three critical dimensions – network speed, scale and accessibility – to understand its significance in the operation of communication power in a multimodal, multichannel and multiplatform media environment (Castells 2009, p. 134). Twitter has, for example, between 15 and 18 million active users (Ostrow 2009; Gaudin 2010) who contributed to a 1,400 per cent increase in the number tweets sent in 2009 compared with 2008 (AFP 2010; Twitter Blog 2010). This explosion in popularity and the intensity of messaging activities is the result of a number of factors, including rapidly increasing use of 'Web 2.0'[1] social

software, effective website design, canny online promotion, and widespread news coverage garnered through Twitter's adoption by celebrities like actor Ashton Kutcher, pop star Britney Spears and basketball player Shaquille O'Neal (Beck 2008; Carlson 2009; Sutter 2009). These factors coincided with an explosion in consumer uptake of personal communications devices ideally suited to tweeting, internet-enabled 3G smart phones such as the Apple iPhone, Blackberry and Google's Nexus One, although it is necessary to note that tweets are easily and commonly sent by sms text messages on 2G mobile phones and via the web. This suite of developments helps to show how the ubiquity of mobile devices and web-based communication in many developed economies underpins the growing importance of the telecommunications industry in the constitution of media cultures (Goggin 2006; Castells *et al.* 2007; Hutchins & Rowe 2009a).

Twitter is approached here as a relatively new online service that is attracting extensive media coverage, and a media practice undertaken by millions of users.[2] This platform's operation is helping to produce stories about sports, intensifying and proliferating media sports content and information available in the public sphere, and forcing new ways of thinking about the interaction between sport and digital media by sports organizations, athletes, journalists, publicists and fans. Twitter's importance stems from the fact that it is both a constitutive part of contemporary media experience, and a frame through which this experience is filtered and understood (cf. McQuire 1999, p. 153). As a form of media, it adds another layer to an already complicated 'media sport cultural complex' (Rowe 2004) that is seeing analogue, broadcast and print media bypassed, challenged, and complemented by digital networked media sport (Boyle & Haynes 2004; Hutchins & Rowe 2009b).

Despite their novelty, Twitter's 140-character messages also relate to an existing set of digital messaging practices, including email, sms text messaging, internet relay chat, instant messaging, status updates and bulletin board posts. Impromptu, fast, interactive and multimedia messages have long been a routine feature of online communications via numerous platforms and interfaces, satisfying and creating demand among internet and wireless communication users for established and novel forms of interaction. Like other types of messaging services, the modality of Twitter also extends beyond text-based communication to visual representation, with uploaded 'twitpics' (photographs) a popular feature that allows athletes and fans to both show and tell via their profile.[3] Other messaging innovations attracting attention at present include '12 seconds' (http://12seconds.tv/), a micro-blogging service for video 'status updates' of no longer than 12 seconds (Burgess & Green 2009, p. 65). Twitter is among the most publicized of these messaging practices at present, which suggests that much can be learnt from its use by individuals and organizations.

This paper is part of a three-year media studies research project, funded by the Australian Research Council (2008–2010), examining the transformation of

the media-sport cultural complex in an age of digital media.[4] The evidence presented here is drawn from observation and use of Twitter over a 12-month period, and news reports collected from sources in Australia, the UK and the United States over the same period.[5] News reports were checked against other media sources for consistency and facts, enabling patterns to emerge in the types of issues arising in relation to Twitter. This time period coincided with the phenomenal growth in popularity of Twitter that occurred from early 2009. While data on usage, audience and active accounts varies, all show Twitter experiencing a remarkable upsurge in activity. The site attracted around 44.5 million unique visitors worldwide in June 2009, which compares to 2.9 million in June the previous year (Schonfeld 2009). Over half of Twitter's audience is thought to be located outside of the United States. Further to this, background information about the role and function of social networking platforms in the overall context of online and digital communication was collected as part of 42 semi-structured in-depth interviews with media managers and directors of sports organizations, journalists, industry regulators and information technology specialists. Following a thematic analysis, relevant interview data collected from four sports journalists is presented in later sections.[6] The theoretical framework guiding my analysis is now outlined.

## Telepresence and acceleration

Tweeting sits within a range of media activities and technologies that can be housed under the heading of 'telemediated' practices and experiences. According to cultural sociologist, Tomlinson (2007), *telemediatization* describes the proliferation of communications technologies and media systems within the quotidian rhythms of social life, a phenomenon that has altered the 'everyday flow of experience' (pp. 94, 121 n. 5). Communication via networked personal computers, the internet and mobile phones is now a taken-for-granted ability for many citizens. Sending and receiving text messages, clicking and scrolling on screen-keypad interfaces, and watching and interacting with screens are, in Tomlinson's mind, historically 'unique cultural practices' that, unlike previous eras, increasingly integrate both face-to-face and technologically mediated communication-at-a-distance (see also Thompson 1995, 2005). Speaking to this reality is an estimate that live spectator sports is the second most popular location for the use of mobile text messaging, behind only 'crowded public transport' and ahead of 'busy meetings', 'campus classrooms' and hospitals (Castells et al. 2007, p. 177).

Adding to his conceptual schema, Tomlinson (2007, pp. 111–121) employs a term usually associated with information technology research and computing studies to specify what is unique experientially in a social world of high-speed interconnectivity, where portable and accessible communications technologies

enable constant contact between individuals and groups. *Telepresence* – 'the possibility, and increasingly for many, the preference, of "keeping in touch" without actually, literally, being in touch' (Tomlinson 2007, p. 111) – speaks to a range of techniques in which relations of presence are felt between different social actors in both embodied and disembodied forms (see also Sconce 2000, pp. 6–17). Tele-, meaning 'at a distance', is the pivotal prefix here, opening the possibility of real-time 'presence at a distance' as a readily available method of interaction for social actors who form and maintain meaningful relationships in and through media systems, including websites, bulletin boards, social networking services, chat rooms, and online games and spaces (Der Derian 1999, p. 224; Castronova 2005; Crawford 2006). These types of interaction weave relations between people known to each other through online interaction, off-line contact, and more traditional forms of media representation and celebrity. It is necessary to note that telepresence is not treated ontologically as a deficient condition, regarded as inferior to physical, face-to-face presence (Tomlinson 2007). Rather, telepresence sits alongside direct, embodied experience as a pervasive and normalized feature of contemporary social relations. Sport is a useful case study in this respect, being a simultaneously embodied and mediated experience, a dominant form of media content and representation globally, and a site where social media technologies are used for varying purposes (Hutchins & Mikosza 2010, in press).

The constantly connected, always available communications environment described so far is transforming relations of time, space, transmission and reception, giving rise to an accelerated information order in which immediacy, instantaneity and immanence are constitutive of social experience (Redhead 2007). Recent figures indicate that 50 million tweets are sent per day (a figure that largely excludes spam) (AFP 2010; Twitter Blog 2010). Included in this number are messages posted and received by a host of athletes throughout world sport, including many Olympians (http://twitter.com/verified/Olympians). It quickly becomes obvious after following dozens of athletes for a short period that, despite the timeliness and number of tweets posted, their content is often banal, disposable and of questionable insight. Yet, it is precisely these characteristics that make these messages stand out as a form of media sport, with the 'ambient intimacy' (Song 2010, p. 269) and 'ordinariness' (Turner 2009) displayed by a constant stream of tweets sent by a famous sportsperson underwriting their appeal. The spectacular representation of athletic feats and contests, and the unremitting adulation and scrutiny of sport celebrities (Whannel 2002) render mundane messages from elite footballers and world top-ten tennis players special. An example here is the Twitter profile of tennis' Andy Roddick, which includes random observations about visiting a shopping mall ('walking around the mall with a friend and she looked at a Betsey Johnson store and said . . . "that place looks like a carnival threw up"'; 13 February 2010) and the state of the weather ('its absolutely pouring here

in austin….cant stand it…cold + rain= im bored'; 5 February 2010). These messages hint at the 'real person' behind the celebrity persona, promising intimate and immediate insight into the backstage dimensions of a sports star's social life (cf. Goffman 1990[1959]). These types of tweets also build a sense of 'common experience' between athletes and their followers, be they fans, observers or dedicated tweeters. In other words, the cultural distance between the elite athlete and fan is erased momentarily through a repetitive communicative act. The fact that Twitter is so popular at present – Roddick, for example, has over 270,000 followers at the time of writing – shows the social performance of tweeting is proving successful.

Digital messages about sport circulating globally in real-time are part of a generalized acceleration in the circulation and mobility of commodities, people, symbols and information in modernity (Gane 2004, 2006; Urry 2007). Acceleration of communication to the point of instantaneity has, for instance, been a precondition for the emergence of 'fast' or 'turbo-charged' capitalism via global financial markets and trans-national corporations (Hutton & Giddens 2000; Beck 2005; Giulianotti & Robertson 2009), which connects with Paul Virilio's insistence that contemporary social and cultural analysis needs a 'political economy of speed' (Virilio in Armitage 2001, p. 26). Taking inspiration from Virilio (1986), and in the context of sport, Redhead (2004, 2007), speed and acceleration are used in this paper as an analytic sensitizing instruments to understand changes in the 'media sport content economy' (Hutchins & Rowe 2009b). Twitter is evidence of an accelerated information order, which is seeing an ever-proliferating digital content produced by a widening array of providers including athletes, clubs, leagues, news companies and fans. This intensification of digital content production and transmission has altered the operation and supply chains of media sport, which are distinct from the analogue broadcast era where a limited set of producers possessed the infrastructure and spectrum needed to reach mass audiences at scheduled times. These conditions now see the long-standing sports broadcast schedule, measured in 30-minute and hour-long units, interacting with real-time digital and broadband media that operate according to a logic of instantaneity and simultaneity. Moreover, audiences can now mix live, broadcast, online and mobile media in the experience of major sports events. For example, multimodal audience engagement is observable in Major League Baseball (Tussey 2009), while 14 per cent of television viewers watching the 2010 Super Bowl live they were also using the internet at the same time (Nielsen 2010). Reasons for doing this include following unfolding match statistics, online commentary and comments by other fans as contests progress. Twitter further complicates this scenario by enabling athletes to tweet before, during and/or after sports events, as well as allowing other athletes involved in the same sport to comment on fixtures they not participating in. This ability was observed during the 2010 Vancouver Olympiad when the American alpine ski racer, Julia Mancuso (http://

twitter.com/JuliaMancuso), tweeted about her performance *during* the progress of the giant slalom event (McClusky 2010). The NBC Olympics website (http://www.nbcolympics.com/olympicpulse/index.html) also provided a live Twitter feed of athlete messages for the duration of the Games.

Twitter is currently the most publicized online media platform where digital instantaneity is manifest. The fact that about 600 tweets are sent *per second* (AFP 2010; Twitter Blog 2010) is clear evidence of the increasing speed of information transmission, especially when sent and received by 'telepresent' athletes and officials on mobile handheld devices. As the case of Darren Bent has already shown, however, media sport transmitted and consumed 'at the speed of light' (McQuire 1999; Virilio 2001, p. 113) has unpredictable consequences, affecting the media stories and experiences that have long accompanied sport. The question of whether a by-product of this development is an overloaded media sport information order, thereby creating a fragmented and unmanageable 'attention economy' (Lanham 2006) is discussed in the conclusion. The next section examines the use of Twitter as a tool of athlete self-promotion and expression.

## Self-promotion, public revelations and journalism

> I guess you would say it is the purest way to communicate with your fans and I think they like that as well . . . Most of the time their information is coming second-hand – through a middle man. The journalists and reporters give their take on what we had to say and definitely, I think, sometimes things get presented differently to how you were thinking them. It's not always malicious, it is just people sometimes hear things differently . . . Tweeting – it is coming straight from the horse's mouth.
>
> (Karmichael Hunt quoted in from Read & Koch 2009)

This statement from the professional football player and compulsive tweeter, Karmichael Hunt, highlights an obvious but notable deployment of Twitter for self-promotion and representation, thereby evading the mediating influence of journalists and sports officials. The capacity to bypass these layers of mediation and communicate directly with fans and the sporting public positions Twitter as a tool in the task of personal branding. Elite-level men's professional sport is a prominent area where the creation and exercise of 'image' or 'personality rights', defined as 'the commercial appropriation of someone's personality, including indexes of their image, voice, name and signature' (Haynes 2004, p. 101), has been occurring. This is a growing issue due to the increased capacity for sporting images to be communicated independently via online media, including personal blogs, websites and social networking profiles. Individual sports such as cycling, athletics and tennis are examples in this regard, with Lance Armstrong (http://www.lancearmstrong.com), Usain Bolt (http://www.usainbolt.com) and

Serena Williams (http://www.serenawilliams.com) possessing notable online multimedia presences that function to disseminate information to fans, provide personal announcements, and build their brand in the celebrity and media sport marketplace. Twitter has fast become a key element in marking this online presence, as it provides a peculiarly personalized form of communication. Armstrong in particular has deployed Twitter strategically in the tight control of his public image, limiting media interviews and posting several tweets a day in order to communicate his opinions and activities. Journalists then use his tweets as the basis of stories (McClusky 2010). Another example of this type is American footballer, Terrell Owens, who has attempted to use his tweets in order to counter negative news reports about his on-field performances (Brauer 2009). Both Armstrong and Owen reveal the possibility of using Twitter to both pre-empt news stories and respond after they appear, ensuring that their undiluted perspective on events is heard immediately.

Twitter also affords athletes who do not attract extensive news coverage the ability to connect with followers and, at least potentially, wider audiences. This practice is particularly evident during multi-sport mega-events such as the Summer and Winter Olympics, which feature specialist events that do not always attract public and media attention outside of these times. For example, American aerial skier, Jeret Peterson (http://twitter.com/speedypeterson), appreciated the ability to announce himself without having to attract the attention of a journalist or employ team media officers at the Vancouver Olympiad: 'It's free, it's instantaneous and it's real … It's my message and it's not filtered' (quoted in Pells 2010). Twitter is, in effect, being used for manifold purposes, including building and promoting the image of athletes, enabling direct and instantaneous communication with fans, and attempting to control or at least influence the sports news agenda.

Not surprisingly, many sports journalists are keenly aware of Twitter and the practices and dynamics outlined thus far. Journalists comb through voluminous messages searching for content that may provide evidence, no matter how slim, for a story that would otherwise go unreported. Tweets by athletes can announce unguarded opinions and reactions that offer a 'shock of vitality' (Williams 1974, p. 54) compared with the scripted responses usually offered in staged press conferences and media interviews. This is a digital search for scandals, disagreements and disclosures that elicit a response from the public and the subjects of stories (Thompson 2000). It is also a fascinating example of an almost ineradicable schism that exists between the individual right and ability of athletes to express themselves publicly, and the determination of sports leagues and clubs to exercise tight control over media comment and self-expression in order to keep scandals out of the news. Yet, and this is the key point, both trends emanate from exactly the same source – a world of intensifying and accelerating media sports information flows.

'Scandal hunting' by journalists produces a range of reports of uneven news value, including alleged personal animosity between team mates (Finn 2010), athlete outrage at official decisions, and serious matters such as the adequacy of security arrangements at tournaments. For instance, Australian rugby league's Matt Rogers expressed spontaneous anger at the suspension of a fellow player. A news report emerged that Rogers had posted the following message shortly after a player judiciary announced a two-week suspension of a team mate on the repellent charge of biting an opponent:

> No no no no no no no. That is a #%^*+#* joke!!! If he wanted to bite him he wouldve bitten him. How about 2 weeks for a grapple!!

The message was removed but not before journalists had seen and recorded it. While managing to avoid a financial penalty, Rogers' outburst and the resulting story produced a warning from his sport's governing body and a telling announcement that tweets are considered to 'fall into the category of "public comment" and can have the same consequences as comments in any other form of media' (quoted in Jackson *et al.* 2009). Again, this determination sets up an interesting tension. As can be seen through even a cursory examination of athlete profiles, the routine use of Twitter and social networking media for personal expression clashes with the explicitly public status awarded to *any* comment appearing on a profile.

Another more geo-politically serious story occurred in relation to tweets about the planned security arrangements for the 2010 Indian Premier League (IPL) cricket tournament. Signalling another shift in the globalization of sports revolving around increased concentrations of power and capital in Asian sports markets (Rowe & Gilmour 2008; Mehta *et al.* 2009), the highly lucrative and popular IPL has had to deal with terrorist threats. The 2009 event was staged in South Africa following the Mumbai bombings of November 2008, while the 2010 tournament received threats from a right-wing regional political party and the operational arm of Al Qaeda in Pakistan (Cricinfo Staff 2010; Gollapudi 2010). If designed to cause consternation among competitors and administrators, the threats achieved their aim, especially during meetings where cricket's governing bodies discussed whether proposed security arrangements were satisfactory. In response, a flurry of ten tweets by former Australian and now Rajasthan Royal player, Damien Martyn, in the space of 42 minutes took direct aim at a perceived double standard. Martyn had been a member of the Australian men's side that was touring England when the 2005 London bombings occurred. His messages included:

> Ashes a bomb went off in London we were in Leeds that day but drove to London that night . Interesting . Then in a secret meeting CA said

> If 1 more bomb goes off we would go home and not complete ashes as history shows another bomb went off and CA said we couldn't leave . Why?
>
> The reason was the ashes was to big and to much money any other country we would of left . . . Food for thought (25 February 2010)

Martyn followed up just four hours later, disparaging the fact that journalists had been using his ungrammatical comments to publish reports:

> Thank you for the mainstream coverage if all sportsman got on Twitter and gave the news where does it leave the journos might be jobs for us twitters.

That it took only four hours for news of his comments to start circulating widely indicates that journalists are turning to social networking sites such as Twitter and Facebook to trace discussion and find comments to use as the basis for reports. This fact was confirmed during research interviews with sports journalists.

Twitter is a janus-faced communications mechanism from the perspective of journalists. On the one hand, it allows a degree of instantaneous and potentially scandalous insight into the thoughts of athletes that may be otherwise unavailable. Twitter is also a useful tool that enables media personnel to gauge what readers and audience members are thinking and how they are responding to stories, as indicated by a radio programme producer:

> I start my day by looking at what people are saying on Twitter and then I follow up on that depending on what they're saying. We've done four or five stories arising from things I've seen on Twitter. We've asked people for questions on Twitter. To an extent I've tried to incorporate that into my day.

On the other hand, the speed and sheer amount of tweets and profiles makes it difficult to follow their content without sacrificing time that can be spent completing other journalistic tasks. Another very experienced electronic journalist strongly rejects the use-value of Twitter as a reporting source on the grounds that its popularity is a fad, and, more fundamentally, because it allows athletes and officials to escape the sustained scrutiny required to produce news of genuine public interest and value:

> I think the fun of discovering Twitter has led people toward reporting from Twitter, which I think is an absurdity. I think radio was reporting Karmichael Hunt's Twitter while he was doing media interviews and I would question the value of that. I'm opposed to those sorts of things on the grounds that it helps players escape scrutiny. . .It's not enough to provide quotes.

> They have to actually answer questions and that's the fundamental differ-
> ence. I think athletes and sporting codes think, "Well as long as you've
> got quotes you'll be happy", and that betrays a fundamental dimension of
> journalism, which is asking the question. So it would be crazy for sports
> people not to have their own websites and so on and you can value-add
> and do a diary and all that sort of stuff, but not if you think that excuses
> you from fronting up to journalists at appropriate times.

This is a noteworthy problem, as the trend towards online self-representation by
athletes and the exercise of tight proprietorial control over their image has
coincided with difficulties faced by journalists in gaining access to them for inter-
views and reports. This issue was raised in several research interviews, with the
following comments by two print journalists encapsulating a broadly felt opinion:

> They [athletes] never used to be this hard to get a hold of probably up until
> the early 21st century. They were difficult to get a hold of but you could
> generally track them down. Now I just think they can't be assed. And
> they also have their own franchises to take care of.

> First, it [lack of access] was exacerbated by PR [public relations] people
> trying to keep us at arms length, trying to control everything. Because
> that was your source of stories, you drink with them [sportspeople] or
> socialise with them or whatever. You heard that Fred Bloggs is boiling
> over his contract, you know. And then PR and now the Internet is
> another step removed. Because not only are they controlling the information
> you get, they're actually sending it out themselves. So that's the next step
> again, the Internet.

The struggle to secure reliable and worthwhile access to prominent sportspeople
also helps to explain a profusion of tabloid and celebrity style sports reporting
in which rumour, gossip and sensationalism supplant fact and source-based
journalism. Despite its questionable news value, this type of reporting provides
a staple of cheap and popular content for media outlets (Turner 2009) and does
little to dispel the notion that sport is the 'toy department' of the news media
(Rowe 2007). However, journalists are not the only group contending with
the conditions discussed here. The challenges faced by sports organizations
and officialdom attempting to control the use of Twitter are now examined.

## Twitter and its discontents

There is, as has already been outlined, a fundamental tension in the use of Twitter
between the right of athletes to express and promote themselves as individuals,

and the requirement of sports-governing bodies, leagues and clubs that they conform to common and shared protocols of public comment. Fears of possible litigation and/or damage to an organization's reputation caused by inappropriate statements are the justification for the development and implementation of these protocols. However, reasons for officials wishing to either ban, curb or control tweets extend beyond public relations and the maintenance of a carefully constructed club or competition brand. Other factors include the tactical character of competitive sports, fears around gambling and match fixing activities, infringement of broadcast coverage and reporting contracts, and the advent of fake athlete profiles.

Elite professional sport is intensely competitive. This very obvious point means that considerable energy is devoted to maintaining secrecy around detailed game plans, tactics, player injuries and team selections by coaches and their support staff. Disseminating this type of information can surrender the ability to surprise an opponent, allow opposition coaches to counter planned plays, and provide a source of motivation for an opponent identified as having a weakness in their technique or psychology. For example, sports officials have been caught unaware recently by tweets containing information about team selections prior to the official public release of line-ups. The controversial dropping of Australian opening batsman, Phillip Hughes, from the national side for a Test match against England was tweeted on Hughes' profile (http://twitter.com/ph408) the morning before the official team announcement, allowing the English opening bowlers to prepare for an alternative batsman (Pandaram 2009). Coaching staff were also embarrassed when found to be unaware of his tweet, as they were still claiming publicly that no decision had been reached on Hughes' place in the team. Similarly, New Zealand All-Black rugby players, Cory Jane (http://twitter.com/soup15) and Neemia Tialata (http://twitter.com/neyza3), posted messages prior to an official team announcement saying they were being rested from a match against England during a tour of Great Britain in 2009 (AFP 2009). The striking feature of both sets of circumstances was that team officials appeared to have little or no knowledge about what Twitter was or the fact players were using it regularly. Indeed, coaches in both cases were bewildered, responding earnestly in the case of Hughes ('I now know what Twitter is') and light-heartedly in respect to the All-Blacks ('I had to find out what bloody Twitter was. I thought he was the new five-eighth playing for England'). These circumstances and responses reveal that the rapid growth in Twitter's popularity has confounded officials, with team media policies now having to pre-emptively account for the existence and uses of new technologies and platforms. Unsurprisingly, this scenario is 'causing anxiety among sports administrators' (Jerga 2009), and has prompted leading competitions like the Australian Football League to form specialist working groups to assess the impact of social networking media upon their football code (Cullen 2010). More significantly from a communications perspective, these selection

controversies show how the ubiquitous connectivity offered by 3G mobile devices and laptop computers can create highly unpredictable outcomes in and around sports.

In the United States, the National Football League (NFL) acknowledges the opportunities and challenges posed by Twitter as a communications service. Possessing a national and global fan base, the NFL utilizes a profile (http://twitter.com/nfl) as a promotional vehicle to provide updates, news, scores and links. They also recognize the right of players, coaches and team officials to maintain profiles. However, the instantaneity of mobile communications presents a problem for the NFL because of players tweeting *during* games from the sidelines or dressing rooms. Tweeting during a game emphasizes the degree to which telepresence has become possible for elite athletes, allowing them to 'keep in touch' with fans and audiences at the precise time where they are, at least theoretically, meant to eliminate outside distractions in the pursuit of victory. The portability of mobile devices, and the considerable time spent by large numbers of offensive and defensive team members off the field over the course of a three-hour game does, however, increase the likelihood of players posting tweets during games. An example here is the Cincinnati Bengal wide receiver, Chad Ochocinco (http://twitter.com/OGOchoCinco), who has said he would attempt to circumvent any attempts at banning this practice (Reisinger 2009).

From a regulatory perspective, Twitter presents a four-fold set of concerns for NFL officials, as well for a range of other professional sports both inside and outside North America such as the National Basketball Association (NBA) and International Tennis Federation (two of these concerns have already been mentioned): (i) players will deliberately or inadvertently give away sensitive information about injuries or tactics; (ii) embarrassing or offensive messages will be posted by players; (iii) regular messages will be provided over the course of a match that encroach upon the activities of existing media rights holders who supply the official score and match progress updates; (iv) most seriously, information contained in tweets will be used intentionally or unintentionally in the operation of legal and illegal sports betting markets (Battista 2009; Reisinger 2009; Slater 2009). The speed with which 'inside information' about a team or fixture can be transmitted on mobile devices makes this a legitimate concern, particularly given the range of match-fixing controversies that have engulfed various sports intermittently over several decades (cf. Marqusee 2000; Hill 2009). The NFL has since banned players and team personnel from updating their profiles from 90-minutes before a match until post-match interviews are completed, with the NBA adopting a similar stance. Given that Twitter was originally conceived by its creators as a way of keeping in touch with friends and family (Farrer 2010), these practices and policies represent another example of a communications technology presenting a range of potential uses that are far beyond the intentions of its inventors (Winston 1998).

In addition to the issues already discussed, a serious problem has emerged with the rise of counterfeit Twitter (and Facebook) profiles. For instance, English cricketer Ian Bell was forced to declare that he was not tweeting after a hoax profile appeared featuring messages about his preparation for a forthcoming match (BBC 2009c). Australian rugby league player, Terry Campese, has been the victim of the same ruse, which prompted his sport's governing body to provide education sessions on social networking media for its athletes (Read & Koch 2009). Training and education of this type are increasingly used by other sports in Australia and elsewhere (Hutchins & Mikosza 2010, in press). Fake profiles which are easy to find and often funny when they cleverly parody a sportsperson, undercut the control of athletes over their public image, take considerable time to remove and impact upon clubs and sports organizations more broadly. Perpetrators are also hard to locate. Fraudulent messages are an acute concern when the hoaxer attempts to portray a degree of authenticity in posts, making it difficult to distinguish the actual athlete from the fake portrayal, as has occurred in the case of Ian Bell (BBC 2009c) and Shaquille O'Neal (Beck 2008). Such deception confuses fans because of the speed and volume of information circulation online, meaning that deliberately mischievous or inaccurate speculation about an injury, team mate, opponent or personal opinion can be distributed swiftly among large numbers of fans and journalists, taking on the status of assumed but erroneous fact. Deception of this kind also reveals a prevailing anxiety of the so-called 'information age': the incredible volume of information available online makes it difficult to ascertain what segments and sources are significant, trustworthy and reliable (cf. Castells 2009). Seeking to counter this uncertainty, Twitter has introduced a 'verified account' process in order to reduce identity confusion (http://twitter.com/help/verified). Cumulatively, these actions and responses suggest that an explosion of telemediated practices has produced an overloaded information order that is difficult to monitor and govern, and which is altering the experience of sports consumption and engagement.

## Information overload?

Digital media sport has achieved the status of real-time transmission and reception through Twitter. As the evidence presented in this paper has shown, this evolving media sport information order is producing unpredictable results founded upon a hitherto unavailable degree of telepresence. Outcomes include changes in athlete self-expression and representation, journalist behaviour and reporting, and sports organization communications practices and policies. Unpredictability in the relationship between intention and consequence is a defining feature of these developments, which is explainable by the newness, speed and quantity of messages, the ubiquity of 3G mobile and wireless

communications, and the desire to experiment with and use Twitter. This is a situation of social complexity flowing from the hyper-production and hyper-accumulation of digital information (Gane 2006, p. 29), which makes it difficult for athletes to anticipate the potential effects of their tweets, for sports organizations to follow, manage or control publicly available messages, and for journalists to separate fact from falsehood. An easy conclusion is to assert that the media sport content economy has accelerated to a point where it is no longer manageable or comprehensible even as it continues to produce even more information. A more profitable argument, however, is to observe that Twitter is part of a large-scale transformation in the organization and formalization of media sport, which is seeing the analogue-broadcast order of the twentieth century colliding with the digital-online order of the new millennium.[7]

The growth in digital media communications systems is transforming sports production and consumption from a broadcast and print-centred activity to one where online platforms augment communication, viewing and interaction. Twitter is, therefore, a signpost highlighting the institutional and cultural reorganization of media sport for the digital age, with confusion and occasional disarray flowing from the disruptive impact of digital technologies (Latzer 2009). Lowered economic barriers of access have enabled an increasing range of media sport content providers, including clubs, athletes and fans, to produce and disseminate sports-related content (Hutchins & Rowe 2009b), while a parallel shift has occurred in relation to sports fans and followers who are no longer conceivable as a mass audience, but are multiply constituted and segmented across a range of media and platforms, even during a live sports event (Hutchins & Rowe 2010). Both sets of developments signal a shift away from broadcast-centric modes of media sport towards networked digital communications. As the case of Twitter attests, this transformation is producing both popular fascination for novel ways of communicating, and confusion and anxiety about how new communications platforms should be used, regulated and understood.

Lash's (2002) theory of 'informationcritique' is helpful in concluding the case that has been presented. Drawing upon Virilio and a host of other theorists, he offers a dense and challenging set of ideas that account for both the acceleration and speed of the contemporary information order, and emergent mechanisms and behaviours built upon digital media systems and logics. Global digital communication flows are contributing towards the continuing 'detraditionalization' (Heelas et al. 1996) of modern sport by destabilizing fixed social bonds organized around community, class, geography, historically durable identities, and relatively slow analogue and print media forms. The principle of society is now increasingly indivisible from the principle of information in which simultaneously immanent, distanciated and accelerated 'communicational bonds' are increasingly prominent (Lash 2002; Gane 2004, 2006). These bonds constitute a range of connections that, depending on how far the argument is stretched, supplement, stand in for, or replace 'the social'. Sport is not immune to these

developments despite the fact that it represents a uniquely corporeal and place-based activity. Even in its most rooted and nostalgic of forms, contemporary elite sport is an unavoidably mediated affair (Ruddock *et al.* 2010, in press) and the types of bonds or relationships formed with it are heavily reliant upon media frames, technologies, corporations and institutions. Connections and relationships with sports are formed and perpetuated in and through media on multiple platforms. Twitter is but the latest, albeit heavily hyped manifestation of this phenomenon, exposing an ongoing *intensification* of digital media sport content production, *acceleration* of information flows, and *expansion* of networked communications capacity.

## Notes

1   Web 2.0 is a contentious term. Despite disagreement over its precise meaning, Cormode and Krishnamurthy (2008) demonstrate how it serves to categorize a range of technical, content, user and internet traffic developments that distinguish it from earlier iterations of the web, especially in relation to the proliferation of user-created content. Song (2010) also makes the case that Web 2.0 can be distinguished by a 'participatory habitus', which separates it from earlier versions of web-based culture.

2   Twitter was founded in 2006 by Jack Dorsey, Evan Williams and Isaac Stone (Farrer 2010). Based in San Francisco, California, the market value and profitability of Twitter are subject to much speculation.

3   An intriguing interplay between Twitter and the visual representation of sport was offered by NBC during the 2010 Winter Olympics. A 'tracker' visually traced the intensity of Twitter activity by showing images of the specific events and athletes competing at the time tweets were sent. See http://www.youtube.com/watch?v=DQazwDC7wBI

4   DP0877777 ARC Discovery Grant, 'Struggling for Possession: The Control and Use of Online Media Sport'. Chief Investigators – Brett Hutchins and David Rowe.

5   The issue of inequality of access to information and communication technologies is of indirect relevance to the discussion presented here. For example, the use of Twitter in the global South demands stand-alone consideration, particularly given the popularity of mobile phone use and pre-paid plans in many countries (Castells *et al.* 2007). Usage patterns suggest that more nuanced and critical approaches to notions such as the digital divide and the digital age are required to capture media practices and experiences that speak to 'alternative modernities' (Ginsburg 2008).

6    Project participants are fully de-identified in accordance with the requirements of a University Human Research Ethics Committee.

7    There is no suggestion here that the broadcast sport is set to disappear. But even this traditional mode of sports consumption is now delivered to audiences via digital transmission, recording, time-shifting and 'special event' 3D telecasts.

## References

AFP (2009) 'No penalty for twittering all Blacks', *The Age*, 19 November, [Online] Available at: http://news.theage.com.au/breaking-news-sport/no-penalty-for-twittering-all-blacks-20091119-imv4.html (November 2009).

AFP (2010) 'Twitter users write 50 million "tweets" a day', *Sydney Morning Herald*, 23 February, [Online] Available at: http://www.smh.com.au/technology/technology-news/twitter-users-write-50-million-tweets-a-day-20100223-ovwk.html (February 2010).

Armitage, J. (ed.) (2001) *Virilio Live: Selected Interviews*, Sage, London.

Battista, J. (2009) 'The N.F.L. has identified the enemy and it is twitter', *The New York Times*, 3 August, [Online] Available at: http://www.nytimes.com/2009/08/04/sports/football/04twitter.html?_r=2&ref=sports (March 2010).

BBC (2009a) 'Bent apologises for online rant', *Sport: Football*, 31 July, [Online] Available at: http://news.bbc.co.uk/sport2/hi/football/teams/t/tottenham_hotspur/8177678.stm (August 2009).

BBC (2009b) 'Bent move "aided" by twitter rant', *Sport: Football*, 6 August, [Online] Available at: http://news.bbc.co.uk/sport2/hi/football/teams/s/sunderland/8186921.stm (August 2009).

BBC (2009c) 'Bell a victim of twitter hoaxer', *Sport: Cricket*, 12 August, [Online] Available at: http://news.bbc.co.uk/sport2/hi/cricket/8196649.stm (August 2009).

Beck, H. (2008) 'The real O'Neal puts his cyber foot down', *The New York Times*, 20 November, [Online] Available at: http://www.nytimes.com/2008/11/20/sports/basketball/20shaq.html (February 2009).

Beck, U. (2005) *Power in the Global Age: A New Global Political Economy*, Polity Press, Cambridge.

Boyle, R. & Haynes, R. (2004) *Football in the New Media Age*, Routledge, London.

Brauer, S. (2009) 'The dual/duelling sides of T.O./Terrell Owens', *FlowTV*, vol. 10, no. 10, [Online] Available at: http://flowtv.org/?p=4420 (October 2009).

Burgess, J. & Green, J. (2009) *YouTube: Online Video and Participatory Culture*, Polity Press, Cambridge.

Carlson, N. (2009) 'Ashton Kutcher passes Britney Spears in race to 1 million followers', *Business Insider*, 15 April, [Online] Available at: http://www.businessinsider.com/ashton-passes-britney-in-race-to-1-million-twitter-followers-2009-4 (February 2010).

Castells, M. (2009) *Communication Power*, Oxford University Press, Oxford.

Castells, M., Fernandez-Ardevol, M., Qiu, J. L. & Sey, A. (2007) *Mobile Communication and Society: A Global Perspective*, The MIT Press, Cambridge, MA.

Castronova, E. (2005) *Synthetic Worlds: The Business and Culture of Online Games*, University of Chicago Press, Chicago.

Cormode, G. & Krishnamurthy, B. (2008) 'Key differences between web 1.0 and web 2.0', *First Monday*, vol. 13, no. 6, [Online] Available at: http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2125/1972 (July 2008).

Crawford, G. (2006) 'The cult of champ man: the culture and pleasures of championship manager/football manager games', *Information, Communication & Society*, vol. 9, no. 4, pp. 496–514.

Cricinfo Staff (2010) 'Players' lobby warns of withdrawal from IPL', *ESPN Cricinfo*, 18 February, [Online] Available at: http://www.cricinfo.com/ipl2010/content/story/448982.html (March 2010).

Cullen, M. (2010) 'You have 16 friend requests', *afl.com.au*, 6 January, [Online] Available at: http://www.afl.com.au/news/newsarticle/tabid/208/newsid/88512/default.aspx (January 2010).

Der Derian, J. (1999) 'The conceptual cosmology of Paul Virilio', *Theory, Culture & Society*, vol. 16, nos 5–6, pp. 215–227.

Farrer, G. (2010) 'Twitter search for a golden thread', *The Age*, Business Day, 25 February, p. 7.

Finn, G. (2010) 'Scoring social media use in the 2010 Winter Olympics', *Search Engine Land*, 2 March, [Online] Available at: http://searchengineland.com/scoring-social-media-use-in-the-2010-winter-olympics-37032 (March 2010).

Gane, N. (2004) *The Future of Social Theory*, Continuum, London and New York.

Gane, N. (2006) 'Speed up or slow down? Social theory in the information age', *Information, Communication & Society*, vol. 9, no. 1, pp. 20–38.

Gaudin, S. (2010) 'Twitter now has 75M users; most asleep at the mouse', *Computerworld*, 26 January, [Online] Available at: http://www.computerworld.com/s/article/9148878/Twitter_now_has_75M_users_most_asleep_at_the_mouse (February 2010).

Ginsburg, F. (2008) 'Rethinking the digital age', in *The Media and Social Theory*, eds D. Hesmondhalgh & J. Toynbee, Routledge, London, pp. 127–144.

Giulianotti, R. & Robertson, R. (2009) *Globalization and Football*, Sage, London.

Goffman, E. (1990[1959]) *The Presentation of Self in Everyday Life*, Penguin, Harmondsworth.

Goggin, G. (2006) *Cell Phone Culture: Mobile Technologies in Everyday Life*, Routledge, London.

Gollapudi, N. (2010) 'Dickason gets update from IPL's security experts', *ESPN Cricinfo*, 2 March, [Online] Available at: http://www.cricinfo.com/ipl2010/content/story/450561.html?CMP=OTC-RSS (March 2010).

Haynes, R. (2004) 'The fame game: the peculiarities of sports image rights in the United Kingdom', *Trends in Communication*, vol. 12, no. 2, pp. 101–116.

Heelas, P., Lash, S. & Morris, P. (eds) (1996) *Detraditionalization: Critical Reflections on Authority and Identity*, Blackwell, Cambridge, MA.

Hill, D. (2009) 'How gambling corruptors fix matches', *European Sport Management Quarterly*, vol. 9, no. 4, pp. 411–432.

Hutchins, B. & Mikosza, J. (2010, in press) 'The Web 2.0 Olympics: athlete blogging, social networking and policy contradictions at the 2008 Beijing games', *Convergence*.

Hutchins, B. & Rowe, R. (2009a) 'Broadcasters under pressure: the growing power of telecommunications and digital media companies in the sports market', *FlowTV*, vol. 10, no. 10, [Online] Available at: http://flowtv.org/?p=4418 (October 2009).

Hutchins, B. & Rowe, D. (2009b) 'From broadcast rationing to digital plenitude: the changing dynamics of the media sport content economy', *Television & New Media*, vol. 10, no. 4, pp. 354–370.

Hutchins, B. & Rowe, D. (2010) 'Reconfiguring media sport for the online world: an inquiry into "sports news and digital media"', *International Journal of Communication*, vol. 4, pp. 696–718, [Online] Available at: http://ijoc.org/ojs/index.php/ijoc/article/view/758 (July 2010).

Hutton, W. & Giddens, A. (eds) (2000) *On the Edge: Living with Global Capitalism*, The Free Press, New York.

Jackson, G., Walter, B. & Prichard, G. (2009) 'Mat bites off more than he can chew', *Sydney Morning Herald*, 21 August, [Online] Available at: http://www.smh.com.au/rugby-league/league-news/mat-bites-off-more-than-he-can-chew-20091123-j1tm.html (August 2009).

Jerga, J. (2009) 'Twittering sports stars making their bosses anxious', *The Age*, 22 October, [Online] Available at: http://www.theage.com.au/technology/twittering-sport-stars-making-their-bosses-anxious-20091022-ha9s.html (October 2009).

Lanham, R. A. (2006) *The Economics of Attention: Style and Substance in the Age of Information*, University of Chicago Press, Chicago and London.

Lash, S. (2002) *Critique of Information*, Sage, London.

Latzer, M. (2009) 'Information and communication technology innovations: radical and disruptive?', *New Media & Society*, vol. 11, no. 4, pp. 599–619.

McClusky, M. (2010) 'Golden games for social media', *Playbook: The Wired World of Sports*, 25 February, [Online] Available at: http://www.wired.com/playbook/2010/02/golden-games-for-social-media/ (February 2010).

McQuire, S. (1999) 'Blinded by the (speed of) light', *Theory, Culture & Society*, vol. 16, nos 5–6, pp. 143–159.

Marqusee, M. (2000) 'This sporting lie', *Index on Censorship*, vol. 29, no. 4, pp. 36–47.

Mehta, N., Gemmell, J. & Malcolm, D. (2009) '"Bombay sport exchange": cricket, globalization and the future', *Sport in Society*, vol. 12, no. 4, pp. 694–707.

Nielsen (2010) '14% multi-tasked and got social on the web during super bowl', *Nielsen Wire*, 12 February, [Online] Available at: http://blog.nielsen.com/

nielsenwire/online_mobile/14-multi-tasked-and-got-social-on-the-web-during-super-bowl/ (February 2010).

Ostrow, A. (2009) '18 million twitter users by the end of 2009', *Mashable: The Social Media Guide*, 14 September, [Online] Available at: http://mashable.com/2009/09/14/twitter-2009-stats/#comment-16580522 (February 2010).

Pandaram, J. (2009) 'Sometimes, it's a little more twit than twitter', *Sydney Morning Herald*, 1 August, [Online] Available at: http://www.smh.com.au/sport/cricket/sometimes-it146s-a-little-more-twit-than-twitter-20091124-jitb.html (August 2009).

Pells, E. (2010) 'The social Olympics: twitter, facebook get the message out', *The Bismarck Tribune*, 14 February, [Online] Available at: http://www.bismarcktribune.com/news/national/article_dc4c6f10-16ce-11df-8c16-001cc4c03286.html (February 2010).

Read, B. & Koch, D. (2009) 'Twitter revolution strikes sporting establishment', *The Australian*, 22 August, [Online] Available at: http://www.theaustralian.com.au/news/twitter-revolution-strikes-sporting-establishment/story-e6frg7mo-1225765000965 (August 2009).

Redhead, S. (2004) *Paul Virilio: Theorist for an Accelerated Culture*, University of Toronto Press, Toronto and Buffalo.

Redhead, S. (2007) 'Those absent from the stadium are always right: accelerated culture, sport media, and theory at the speed of light', *Journal of Sport and Social Issues*, vol. 31, no. 3, pp. 226–241.

Reisinger, D. (2009) 'NFL bans tweeting before, during, after games', *cnet news*, 1 September, [Online] Available at: http://news.cnet.com/8301-17939_109-10322904-2.html (January 2010).

Rowe, D. (2004) *Sport, Culture and the Media: The Unruly Trinity*, 2nd edn, Open University Press, Berkshire.

Rowe, D. (2007) 'Sports journalism: still the "toy department" of the news media?', *Journalism*, vol. 8, no. 4, pp. 385–405.

Rowe, D. & Gilmour, C. (2008) 'Contemporary media sport: de- or re-westernization?,' *International Journal of Sport Communication*, vol. 1, no. 2, pp. 177–194.

Ruddock, A., Hutchins, B. & Rowe, D. (2010, in press) 'Contradictions in media sport culture: the reinscription of football supporter traditions through online media', *European Journal of Cultural Studies*.

Schonfeld, E. (2009) 'Twitter reaches 44.5 million people worldwide in June', *TechCrunch*, 3 August, [Online] Available at: http://techcrunch.com/2009/08/03/twitter-reaches-445-million-people-worldwide-in-june-comscore/ (February 2010).

Sconce, J. (2000) *Haunted Media: Electronic Presence from Telegraphy to Television*, Duke University Press, Durham and London.

Silverman, C. (2010) 'Inside the social media strategy of the Winter Olympics Games', *Mediashift*, 12 February, [Online] Available at: http://www.pbs.org/mediashift/2010/02/inside-the-social-media-strategy-of-the-winter-olympic-games043.html (February 2010).

Slater, J. (2009) 'Twitter suspicion makes Roddick Titter', *Sydney Morning Herald*, 31 August, [Online] Available at: http://www.smh.com.au/articles/2009/08/30/1251570622753.html (August 2009).

Song, F. W. (2010) 'Theorizing web 2.0: a cultural perspective', *Information, Communication & Society*, vol. 13, no. 2, pp. 249–275.

Sutter, J. D. (2009) 'Ashton Kutcher challenges CNN to twitter popularity contest', *CNN.com*, 15 April, [Online] Available at: http://www.cnn.com/2009/TECH/04/15/ashton.cnn.twitter.battle/ (February 2010).

Thompson, J. B. (1995) *The Media and Modernity*, Polity Press, Cambridge.

Thompson, J. B. (2000) *Political Scandal: Power and Visibility in the Media Age*, Polity Press, Cambridge.

Thompson, J. B. (2005) 'The new visibility', *Theory, Culture & Society*, vol. 22, no. 6, pp. 31–51.

Tomlinson, J. (2007) *The Culture of Speed: The Coming of Immediacy*, Sage, London.

Turner, G. (2009) *Ordinary People and the Media: The Demotic Turn*, Sage, Los Angeles.

Tussey, E. (2009) 'Foam finger cubicle: selling ESPN360 as workspace media', *FlowTV*, vol. 10, no. 10, [Online] Available at: http://flowtv.org/?p=4424 (October 2009).

Twitter Blog (2010) 'Measuring tweets', 22 February, [Online] Available at: http://blog.twitter.com/2010/02/measuring-tweets.html (February 2010).

Urry, J. (2007) *Mobilities*, Polity Press, Cambridge.

Virilio, P. (1986) *Speed and Politics*, Semiotext(e), New York.

Virilio, P. (2001) 'Interview with Jerome Sans', in *Virilio Live: Selected Interviews*, ed. J. Armitage, Sage, London, pp. 113–120.

Whannel, G. (2002) *Media Sport Stars: Masculinities and Moralities*, Routledge, London.

Williams, R. (1974) *Television: Technology and Cultural Form*, Fontana, London.

Winston, B. (1998) *Media Technology and Society. A History: From the Telegraph to the Internet*, Routledge, London.

**Brett Hutchins** is a Senior Lecturer in Communications and Media Studies at Monash University, Melbourne, Australia. His research investigates the effects of the large-scale shift from analogue-print to digital-convergent media systems. He is presently working on research projects investigating the internet and media sport, and environmental protest and politics. His latest publications appear in *International Journal of Communication*, *Convergence, Media Culture & Society*, *European Journal of Cultural Studies*, and *Television & New Media*. *Address*: Faculty of Arts, Monash University, PO Box 197, Caulfield East, Melbourne, Victoria 3145, Australia. [email: Brett.Hutchins@monash.edu.au]