Afterword

Sport's digital future: biodigital design, e-sport, mixed reality, fan engagement and gamification

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Over the last 20 years, studies of digital culture have gone by various names. First, there was the work of the *science-fiction* writers, including such authors as William Gibson (1984), who described our virtual futures as a 'consensual hallucination', characterized by a world where the complexity of data and its visualization becomes an embodied part of our daily lives. Subsequently, the first wave of *cyberculture* theorists spoke of the emancipatory potential of digital space, as operable outside of society's conventional hierarchies, making possible the disruption of the status quo (Rheingold, 1991). Next, *Web studies* scholars marshalled crucial empirical data to inform our understanding of what it was possible to achieve through living online (Gauntlett, 2000).

Each of these versions of our imagined future lacks one crucial element that has become a defining part of our digital world today. None of them foresaw the manner in which mobile digitality has become a central element in how our lives are played out in 'cyberspace', and this is crucial when considering what is achieved in the context of this book on the implications of digital technology for qualitative research into sport and exercise. Even the era of social media follows from these early interventions, and works by Turkle (2012) and Shirky (2009) have thrown into focus the impact of such change in terms of our social lives online.

In each iteration of this research subject, one can identify persistent aspirations, the most prominent of which operate around themes of power and identity. Whether it is through the Internet's capacity to empower citizens or social movements, or the way in which it gives voice to disenfranchised movements, research scientists have tracked our digital world's successes and failures by shedding light on the promise and perils of living within a virtual world.

Similar aspirations are evident within this volume, as many researchers inquire into the emancipatory potential of digital experiences around sport and exercise. In some cases, there is anxiety over the proliferation of the quantified self as a taken-for-granted way of being in the world. Indeed, as more and more mobile devices have an opt-out approach to data capture or a disincentivizing

approach to communicating the choice – if you do not opt in, certain functionality will be lost – there is both a curtailment of meaningful consent to how our data is used and a gradual erosion of the capacity or inclination to step outside of these data traps. In most, if not all, cases, the quantified self is thus also a self that is increasingly owned by stakeholders of the mobile world. Understanding the journey of users through this blurry world of mixed consents, vehement resistance and ambivalent tolerance of a world that requires us to relinquish ever more of our private worlds to a monetized, shared economic infrastructure is crucial to ensure we realize what is at stake when ushering in such realities.

For researchers in this field, the human experience remains central to the aim of the inquiry, as does a certain understanding of the conventional sports or exercise setting. For instance, McGillivray (Chapter 1) writes of the possibility for new media to disrupt conventional narratives that operate around sport by providing the apparatus through which new voices can express their own perspectives about it, using new digital environments. As one of the central pillars of the modern media sport complex, the disruption of these conventions through participatory media practice is radical, potentially destabilizing and even democratizing. McGannon and McMahon (Chapter 7) also take on the capacity of social media to be a route towards emancipation for certain groups, in their case athlete mothers and their use of blogging.

Yet, for the organizers of sport, there is now an understanding that this expansion is also in the service of their principal economic objectives. More people seeking to report their events has been shown to lead to more people engaging with their brands, and mostly in a positive manner. In this sense, participatory media production entails feeding the machine of the data-driven world, a theme explored by Millington and Millington in Chapter 2. The creation and acquisition of data has become an increasingly central component of the economic foundation of sports for the established providers – traditional sports media – as well as the newer social media giants. In this sense, disruption to the status quo may be short-lived as a new form of hybrid media infrastructure develops in which the traditional media utilize social media to amplify their principal content, as Delia and Armstrong demonstrate (Chapter 9). A good example of this in print media is the *Washington Post*'s creation of a Snapchat Discover Team, a 20-strong group of reporters who produce content specifically for that platform (Patel, 2017). In this respect, it is pertinent that Antunovic (Chapter 3) speaks of the need to step back from the 'transformative' expectations we have of social media, noting that, while it can be used as a vehicle for feminist critiques of sport, it is hard to substantiate claims of change resulting from such interventions. This perspective is shared by Bundon and Hurd Clarke (Chapter 8), who describe social media's use as patchy at best when examining it from the perspective of seeking positive social change

There can be no doubt that digital technology has changed how all actors around sports behave. It affects how fans engage with their sports, how

sponsors connect with their customers, how broadcasters communicate their stories, and how athletes and officials produce the field of play. Carlén and Maivorsdotter (Chapter 4) document how athletes have mobilized around these opportunities, and we can expect to see much more of this. Indeed, the sports industry is hoping that athletes will become much more instrumental in the production of media content. From Usain Bolt taking a photo for a spectator at the London 2012 Games, to one USOC athlete staging his own mini-opening ceremony on his home street when he was unable to attend the actual event and then posting the footage on Instagram, the exciting aspect of social media today is that everyone *can* do it, and everyone *is* doing it.

All of this provides vast new opportunities for data accumulation by social scientists, so we may speak of entirely new bodies of research that will emerge out of these actions. Many questions are already being asked about how we should approach such work, both ethically and methodologically, as Sanderson (Chapter 5) highlights. This is especially true when dealing with sensitive content, such as health data, the focus of Hall and Grogan in Chapter 6. Moreover, qualitative researchers need to determine the optimal ways to collect data and Washiya's (Chapter 10) reflective inquiry into video diaries is indicative of this new opportunity to discover new, technological routes towards data collection that are not simply about efficiency, but finding a different mode of interacting with the world under investigation. The merits of such investigative work are also due to the fact that they reflect a shift in how we habitualize certain modes of capturing our world. Arguably, video-making, image-making and text-based chat are becoming more naturalized forms of existing in the world, rather than handwritten notes on a page; and, while this might not apply to everyone in all circumstances, these new sensibilities should inform our understanding of the optimal form of data capture in qualitative research.

So, where do all these insights leave us when thinking about the future of such research? There are perhaps five crucial considerations to take on board, each of which is informed by the insights within this book. But they also go further in expanding the realm of such research.

First, it is critical to note that the landscape of what counts as sport and exercise is expanding through digital technology. One of the best examples of this is the mobile fitness application Zombies Run! Within this gamified running experience, the user downloads a mobile application to their smartphone, which allows them to access stories that are then played out through headphones. When beginning a run, the user receives narration, instruction, which aims to create an incentivizing drama for the physical activity. This is essentially predicated on the idea that zombies are chasing you and you need to escape from them. It is perhaps the first example of how a creative narrative – written with contributions from such storytellers as Margaret Atwood – is finding its way into sports experiences, perhaps taking the idea that sport has always essentially been about creating compelling narratives to a completely new level. In this respect, the crucial consideration for researchers is that fitness is becoming a creative and cultural practice, rather than simply a matter of physical activity or health promotion.

The importance of this example is reinforced when considering the second of the five future features of such work – the rise of e-sport. Over the last five years, e-sport has steadily attracted attention from researchers and commentators who are excited by the prospective disruption to how we make sense of both sport and gaming. Within this example, competitive computer game playing, often within fantasy worlds, is becoming a completely new branch of organized sport for which the organizers are pursuing legitimation in the form of legal recognition of e-sport's status as true sport. While there is much resistance to this idea – including some from gamers who do not want their pastimes to be categorized as sports – e-sport has already found a place in the sports industry. For instance, various football clubs have placed gamers under contract in recognition of their world-leading status in the electronic version of the game. Furthermore, some e-sport players now have athlete status for the purpose of international travel, mirroring the concessions granted to conventional athletes.

Intimately connected to the rise of e-sport is the expansion of such activities into the realm of virtual and augmented reality – the third of our categories of digital change. The most prominent example of this has been Pokémon Go. In the summer of 2016, when the game was released worldwide, it generated conversations about how augmented reality would be the future of computer game playing, but also about how physical activity would be an underpinning logic to such experiences, thus transforming presumptions that gaming invariably leads to a more sedentary society. Suddenly, young people were walking and running through streets and parks to find new Pokémon figures, and the game's logic provided level-up achievements based partly on how far the players travelled. Additionally, the game integrates the mobile digital device with the physical world in graphical form, mapping the actual physical space with a layer of augmented computer-generated content. In so doing, it shifted the long-standing conversation about virtual reality removing us from the physical world, perhaps to the detriment of our lived, social reality. Instead, Pokémon Go brought augmented reality into the mainstream and provided a way for thinking further about their synergy.

These processes are occurring at a time when virtual reality is expanding the ways in which fans are able to engage with their sporting interests – the fourth component of the emerging technological infrastructure around sports. Through virtual reality, sports are renegotiating and complicating the relationship between sports and society. Where once we might have spoken of sports as operating outside of society in terms of their norms and ethos, they are becoming even more examples of life within a fantasy or narrativized space, where our categorization of their social function and the concerns we attach to what takes place within them require reconsideration. A good example here is the company Virtually Live, which has taken a real-time sport – Formula E racing – and rapidly transformed it into a computer-generated virtual experience. The city where the race occurs and the cars that are racing are all rendered into CGI and mapped in near real time to provide a new kind of live experience, albeit one that is no longer authenticated by the eye witness of a broadcast camera but entirely computer generated. While this development is in its

early stages, one can imagine how the playing field might be transformed as a result of the elimination of the video camera, the role of which is to serve as an eye witness for spectators. Computer-generated images could lead to the radical redesign of physical spaces, making the future of sports content consumption much more like the present-day world of computer game playing than broadcasting. Viewers could modify their cars to their liking, or change the city where the race took place in some way. Alternatively, sponsors could monetize the images to optimize impact and advertising revenue. In so doing, a new layer of unreality will be created around sports, which may change how researchers engage with their informants when inquiring into their experience and perception of sports.

In each of these examples, there is a fifth feature that is shaping the future direction of digital research – namely, gamification. At the end of the Rio 2016 Olympic Games, the International Olympic Committee launched its new Olympic Channel, which aspires to create a new, mobile-first, digital environment for Olympic fans to connect with their interests between Games. Many aspects of this are relevant to considerations of sport's future, but of particular interest to qualitative researchers is the integration of social gaming within the sport experience. In this respect, while social media research makes a set of ontological assumptions about the types of interactions that are taking place within such worlds, gaming interactions may require a new paradigm. Indeed, there are already good examples of this within established digital gaming settings, many of which include a social element. Increasingly, these features provide a new layer of identity formation for the player/spectator/fan which calls for new ways of thinking about such participants within the productive ecosystem of sports.

Gamified spectators may be less separated from the athlete actors who compete on the playing field itself. A good example of this is Formula E racing, which has experimented with fan-based participation (O'Kane, 2015). The cars of the three drivers who accumulate the most votes receive a power boost as the race is taking place. The boost is activated by the driver and lasts for five seconds. Such examples represent a new form of participatory specatorship that reconfigures the fans' role in the production of sports competitions, and we can expect to see a great deal more of them in the future. Indeed, if one examines the trajectory of digital media, one can appreciate that the pursuit of creator engagement through interactivity is a crucial aspect of enabling further involvement. The desire to ensure that sports are able to occupy the time that fans spend within second screen experiences – even when they are live in front of a sport – is driving this initiative in the interest of maximizing brand exposure. For the sports researcher, this further transforms the dynamic experience of sport, calling for new ways of making sense of that encounter.

In conclusion, one challenging facet of digital research is the dynamic nature of the environments and the difficulty of pursuing similar research from one year to the next. Even relatively stable platforms, such as Facebook and Twitter, change every few months. For instance, Twitter, a platform that is

renowned for restricting the length of tweets to just 140 characters, has started to stream entire sports events, meaning it has become more of a television channel. For this reason, replicability is one of the most challenging dimensions of digital research, followed by the difficulties associated with the short-termism of our mode of experiencing life online. Yet, there may be even more profound transformations that have implications for how social researchers operate. For instance, artificial intelligence is already used within a range of health contexts. In 2015, Proteus Technologies received the first patent for an ingestible sensor that is built into medication. The device is consumed like a regular pill and a smartphone then monitors its progress as it passes through the body. Meanwhile, the NHS in England has begun experimenting with an AI app to provide diagnoses for patients. Thus far, there has been little or no research into how people feel about the use of artificial intelligence within their digital encounters, but this is likely to be a significant issue in the future.

Qualitative researchers have a role to play in documenting the push back against the age of automation and algorithms. They need to delve deeper into the experience of living among bots and robots to discover what life is really like within such worlds. Perhaps the most important reason for this has to do with the corruptibility of data. Already, numerous claims have been made about users based on algorithmic insights, but there has been almost no interrogation of these assertions. Ensuring access to data will be a bigger challenge in the future, as more of it is locked into proprietary networks that seek to share data only with relevant markets. Academic research is typically not considered one of those markets, so more creative approaches to studying people's experiences will be needed.

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