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Gender, health and physical activity in the digital age: between postfeminism and pedagogical possibilities

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ABSTRACT

In this paper, I reflect on the numerous contributions of feminist research in helping to frame critical analyses of contemporary health imperatives and their impact on girls' experiences of their bodies and subjectivities. I then consider recent trends towards the digitisation of girl's bodies across both formal and informal sites of learning. Digital technologies are increasingly being used in physical and health education to track and monitor young people's 'health behaviours'. Evidence is also emerging that digital health technologies, mobile apps, social media and wearable lifestyle technologies are growing in popularity amongst young people but can have potentially far-reaching effects on their health practices, identities and well-being. I argue that new digitised cultures of health and fitness are sites within which gendered pedagogies circulate and reflect a postfeminist sensibility of consumption, surveillance and self-actualisation. I then consider how the proliferation of these technologies and new forms of engagement with the body, inform or challenge gender inequalities. As the title suggests, in terms of gendered norms, digital health technologies can be used to govern bodies and subjectivities but also provide opportunities for resistance; reflecting a postfeminist sensibility but also providing pedagogical possibilities for resistance.

Introduction

In this paper, my intention is to foreground the digitisation of health and fitness and centre the significance of pedagogies of gender in their development. The article is based on a keynote address given at a one day conference on Gender, Physical Education (PE) and Active Lifestyles: Researching young people's experiences on 11 September 2017, Leeds Beckett University. The conference was an opportunity to celebrate the 25th anniversary of Sheila Scraton's book (Scraton, 1992) *Shaping Up to Womanhood: Gender and Girls' Physical Education.* Sheila's keynote in this event, which is also available in this special issue examined how our understanding of gender and PE has developed since the 1980s as differing feminist approaches engage with a changing social and cultural world. Around the time of the publication of Shaping up to Womanhood, much was also being written about healthism. The development of the term 'healthism' brought into question the 'preoccupation with personal health as a primary – often the primary – focus for the definition and achievement of, well-being; a goal which is to be attained through the modification of life styles, with or without therapeutic help' (Crawford, 1980, p. 386). This, of course, has been the focus of much feminist work over the last two decades, collectively revealing the potentially far-reaching effects on girls' and young women's bodies and subjectivities. Since the publication of *Shaping Up To Womanhood,*

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and within what some are describing as a postfeminist, neoliberal context (Dobson, 2015) it is perhaps fair to say that girls and young women now grow up in new digitised cultures which are steeped in imperatives of healthism, and having a profound impact on what they are learning about health and their bodies. Indeed, technology has developed in such a way that there is now a rapidly growing field of digital health and fitness technologies which are being used on and by young people to directly monitor, regulate and shape their bodies (Goodyear, Armour, & Wood, 2018; Rich & Miah, 2014). Moreover, as I will argue, these technologies, which provide a new means to learn about health and the body (Goodyear et al., 2018) are often subsumed by postfeminist and neoliberal orientations.

I begin to develop my arguments by unpacking healthism and its discursive effects, with reference to some of the work on body pedagogies of health and PE. Building on this work, the paper maps a relationship between healthism, body pedagogies and new technologies of health. In doing so, I also signpost the implications of this for future research. I argue the gendered implications of immersion in these mediatised and digitised cultures of health and physical activity are contradictory; girls and young women may be subject to neoliberal and postfeminist imperatives of constant reinvention and optimisation, whilst at the same time, utilise the same technologies to open up spaces for resistance to body norms. As such, and as the title suggest, we need to avoid seeing technology as either inherently oppressive or empowering but as having the potential to refract a postfeminist sensibility and also providing pedagogical possibilities for resistance. I conclude by discussing new frontiers for feminist work in gender, technology and physical activity, including how feminist critiques of (bio)technology might be productively refracted in contemporary theorisations of gender, physical activity and body pedagogy.

Healthism and body pedagogies

Over three decades later, Crawford's (1980) analysis of public health concerns are still as relevant today. Healthism continues to operate as the dominant framework of understanding health (Lee & Macdonald, 2010) in contemporary western society and has been subject to critical interrogation, particularly in terms of how it has shaped dominant notions of gender in relation to physical activity and health. Providing a much needed and compelling critique of girls' PE, Scraton's (1992) work has clearly influenced the development of different theoretical approaches across the world contributing to our understanding of gender and PE. Moreover, the work on embodiment as fundamental to young people's identities and positioning in PE has been influential in understanding the relationship between gender, healthism and PE. Work within critical health education (HE) and pedagogy has examined how normalising practices are emerging across many different social sites through what is variously referred to as *body pedagogics* (Shilling, 2018), *bio pedagogies* (Wright, 2009; Wright & Harwood, 2009) or *body pedagogies* (Evans & Davies, 2004; Evans, Rich, Davies, & Allwood, 2008) and their specific variants. This work has contributed to our understanding of why girls often report negative and alienating experiences of PE (Flintoff & Scraton, 2001; Williams, Bedward, & Woodhouse, 2000).

More recently, informed by this earlier work and that of post-structuralism, a body of work has revealed how schools have been increasingly charged with the responsibility of 'educating' young people about risky lifestyles and being healthy (Gard & Wright, 2005) as a mechanism to prevent the rise in childhood obesity (Evans et al., 2008; Wright & Harwood, 2009). As such healthism continues to find expression within the policies and practices of schools, particularly within PE (Walseth, Aartun, & Engelsrud, 2017) and HE (often combined as HPE). Informed by a range of feminist perspectives, research is revealing how the 'regulative' component of what has been described as 'body pedagogies' (Evans et al., 2008) and its accompanying weight centred discourse, can propel some girls towards harmful practices of the body.

However, despite a considerable volume of literature critiquing healthism, as Wright (2014, p. 235) argues it seems hard to imagine 'a health education somehow distanced from its

neoliberal context, when that context seeps, in so many ways, into our everyday lives'. Whilst healthism discourses can be resisted and (re)interpreted (MacIsaac, Gray, & Horrell, 2013), despite the two decades of work since *Shaping up to Womanhood*, there is compelling evidence of increasing pressures affecting young women's body confidence. As others point out, despite advances in theory, there remain ongoing concerns about the positive change in practice (Flintoff & Scraton, 2005).

This is perhaps not surprising, given the mediatised and digitised cultures within which young women are growing up. Indeed, the means through which girls and young women are expected to shape their bodies in response to health imperatives have been influenced by rapid advances in technology which forms part of their everyday lives. As the above work on girls' embodiment and body pedagogies has developed, it has become clear that there is a need to better experience the relationship between young people's experiences in formal education and their immersion in broader physical cultures. As such, this has brought me to the kinds of questions which consider the relationship between gender and physical activity in the digital age within what is increasingly being described as postfeminist, advanced liberal societies (Gill, 2007).

Body pedagogies, digital health and postfeminism

In thinking about gender, physical activity and health in the digital era, there is a vast range of technologies and digital practices which might form the basis of our analysis. For example, digital campaigns for women in sport e.g. 'this girl can' (Depper, Fullagar, & Francombe-Webb, 2017) the rise of the 'healthy selfie' culture, celebrity culture (MacIsaac, Kelly, & Gray, 2017) wearable technology (e.g. fitbits) (Goodyear, Kerner, & Quennerstedt, 2017), the integration of technology in PE (Casey, Goodyear, & Armour, 2017) health and fitness hashtags and images on social media (e.g. 'fitspiration) and exergaming (Gibbs, Quennerstedt, & Larsson, 2017). In brief, the emergence of 'digital health and fitness' includes a vast range of technologies focused on promoting healthy lifestyles as a mechanism of preventative medicine/healthcare. These include a broad range of devices and software, including social media platforms, telemedicine and telehealth (remote access health care), big data health tracking, gaming technologies and wearable technologies. Digital health systems continue to grow and are framed by a prevailing techno-solutionist (Lupton, 2014a, p. 706) approach; positioned as having the potential to generate greater efficiencies within health care systems that are in crisis or overburdened.

But what of the consequences of this exponential growth in health and fitness technology for girls and young women? Whilst there is not space to examine each of these technologies, it is pertinent to consider the kids of questions and inquiries that might be relevant in terms of a feminist study of digital technologies for health and fitness. Certainly, among the range of questions, we might reasonably ask, is what it is that young people are learning about themselves and others. My overarching thesis is that digital health provides new ways to learn about the physically active body/body ideals which have gendered implications. Refracting the focus on learning, in 2014 with colleague Andy Miah we outlined a theory of digital health technologies as a form of public pedagogy (Rich & Miah, 2014, p. 301):

> In advancing a public pedagogy approach to theorising digital health, it is necessary to recognise how technology is inextricable from the manner in which people learn about health. Furthermore, these apparatus dictate conditions of self-tracking, collection of data, and monitoring, which have a bearing on what and how people learn about their bodies and health.

Although in need of theoretical refinement and subject to contention as to its conceptual parameters, public pedagogy broadens the focus of pedagogy beyond traditional sites such as schools and universities. Various scholars have begun to acknowledge how teaching and learning take place across multiple sites/social contexts through public pedagogies, including the influence of digitised social spaces (Freishtat & Sandlin, 2010; Kellner & Kim, 2009). Building on this approach (Rich & Miah,

2014), I argue that many of the digital practices associated with these technologies reflects a postfeminist expectation placed on girls and young women to reinvent themselves and adapt to constant change (Toffoletti, 2016) – judged not only in terms of the presentation of their bodies but by their consumption choices.

Elsewhere, a number of key thinkers on postfeminism (Gill, 2007; McRobbie, 2004; Ringrose, 2013) have usefully identified some of the common elements of postfeminism which act 'as a "sensibility" or set of dominant discourses that infuse and shape the zeitgeist of contemporary culture' (Ringrose, 2013, p. 5). Gill (2007) argues that postfeminism is a sensibility which is deeply enmeshed with neoliberalism, not least because of the way it promulgates a highly individualised subjectivity (Harris, 2004) and circulates tropes of freedom and choice. As such, McRobbie (2004) contends that the term 'refer(s) to an active process by which feminist gains of the 1970s and 80s come to be undermined'. Similarly, Ringrose (2013) observes that 'feminist commentators writing about postfeminism tend to position this phenomenon as a set of politics and discourse grounded in assumptions that gender equity has now been achieved for girls and women in education, the workplace and home' (p. 1). Within the fields of cultural and media studies, there has been a growing interest in postfeminist inquiry. More recently, scholars have explored the influence of postfeminist thinking on education (see Ringrose, 2013). Similarly, there had been a growth in the scholarship which explores femininity and athleticism within a postfeminist era (see Toffoletti, Thorpe, & Francombe-Webb, 2018). Here, I extend the ideas of this inquiry to pedagogies of health and fitness. Rather than exploring all of these common elements, I foreground some of the themes relevant to digital technologies of health and fitness. In Gill's (2007) terms, these include imperative towards self-monitoring and surveillance; the role of makeover and the significance of self-transformation; a focus on consumption and commodities.

Digital health and pedagogies of consumption, commodification and competition

Implicit in the postfeminist project are a number of 'imaginaries'. The first is the neoliberal logic of individuals who are empowered and self-actualising. It assumes, perhaps implores, girls and young women to develop the knowledge, desire and resources to constantly work on and modify their bodies in line with contemporary imperatives. Harris (2004) in her influential book *Future Girl,* draws on Beck's (1992) ideas about individualisation and risk in advanced capitalist society, suggesting that young women are often 'doubly constructed as ideal flexible subjects; they are imagined as benefiting from feminist achievements and ideology, as well as from new conditions that favor their success' (Harris, 2004, p. 8). The marketing of digital health technologies is based on a neoliberal logic of empowerment and 'free-choice' offering solutions to enable *monitoring of* and *work on* the body. In this next section, my inquiry focuses on the growing marketplace of what is categorised as 'wellness and lifestyle' technologies. At the time of writing this paper, there are over 165,000 health-related mobile phone health apps (mHealth) available, many of which will not be subject to the same form of regulation (Powell, Landman, & Bates, 2014) in the same way as medical devices.

The rapid growth in digital health and fitness market reflects a trajectory across the globe in recent years of reshaping health provision as a market enterprise. The marketplace of digital health offers solutions and invites girls and women to use these devices to monitor and work on their bodies. It assimilates girls and young women into particular ways of consuming, reflecting the turn towards the market as both a cost-effective health strategy, but also as means through which to constitute a healthy, neoliberal self. To this end, rather than focusing on consumption as simply the selection and purchase of products shaped by the market, following Paterson (2006, p. 7) consumption can be understood as part of everyday life practices as consumers place 'their conscious experiences of acts of consumption into larger processes of globalization'. Sandlin and McLaren (2010, p. 11) encourage 'educators to explore consumption as it is situated in particular everyday contexts'. To do so, it is important to question the rationalist and individualistic language through which consumption is often understood. In their handbook of public pedagogy, Sandlin, Schultz, and Burdick (2010, p. 32) observe that many authors now 'focus on forms of learning existing beyond the dominant

focus of language with most formal educational sites. These learnings elevate body, position, and affect to serve as direct modes of address, rather than tangential *learning styles* to be deployed as an accompaniment to the *real* education inherent in illocution'.

Specifically, the pedagogies circulating within assemblages of digital health, enable individuals to develop a subjectivity through consumption. This growing market of technologies has afforded individuals new opportunities to measure, monitor and regulate their bodies and aspects of their daily lives and behaviours including calorie intake, exercise/physical activity, mood, heart rate and sleep patterns and quality. These practices are increasingly recognised as part of a phenomenon described as self-tracking and involve the measuring and charting of these everyday behaviours. Their popularity reflects the trend towards self-tracking as a way of managing one's lifestyle (Lupton, 2013) in line with the logic of a growing movement known as 'the quantified self' (Swan, 2012) involving the collection, charting and sharing of data to monitor and modify health and related behaviours.

In part, pedagogies of digital health consumption involves learning the appropriate and subsequent data practices as subjects who utilise data to 'generate stories for and about the body/self' (Smith & Vonthethoff, 2017, p. 15) in line with gendered norms of postfeminism. This might, for example, take the form of posting confessional practices via social media about how far one has run or sharing charts which visualise progress and self-improvement (e.g. tracking weight loss). This form of learning involves developing knowledge of appropriate health technologies, of the literacies to make sense of the data that is produced by these goods and knowledge of the appropriate consumption practices so as to flexibly perform the self-improvement expected of 'DIY girl' (Harris, 2004). It is part of constituting successful femininity which is therefore assembled through the material-discursive practices of digital health.

Even a cursory search of the popular health and fitness apps and their marketing imagery reveals how postfeminist discourses circulate, involving 'a heightened female visibility in conjunction with notions of assumed freedom, agency, choice, pleasure, personal empowerment and autonomy' (Lazar, 2009, p. 339). The development of digital technologies to manage health reflects a broader shift of responsibility from the medical expert to the individual, which is typically framed through neoliberal discourses of the individual (patient) empowerment and democratisation (Fotopoulou & O'Riordan, 2016). The digitally engaged self-learns the various techniques to manage and reduce the 'risks' related to the body in the pursuit of particular notions of personhood derived from the concept of the digitally engaged patient (Lupton, 2013). Digital technologies provide the capacities for self-surveillance which are not only a requisite of preventative medicine but so too neoliberalism and postfeminism, which demands subjects who are able to constantly adapt to change. This postfeminist sentiment aligns with the emphasis on accumulating and sharing data as part of a broader shift of responsibility, so as to monitor, regulate and adjust ones' health behaviours. Arguably, as young women and girls grow up in this digital health era, these market values and commodification become central to the constitution of the healthy subject. As Tasker and Negra (2007, p. 2) argue 'post-feminist culture works in part to incorporate, assume or naturalise aspects of feminism; crucially it also works to commodify feminism via the figure of the woman as empowered consumer'. Such sentiments can be found in the advertising of many of these products, for example,

> On the walk to work, at the weight room or in the last mile.
> Somewhere between first tries and finish lines. Pillow fights and pushing limits. That's where you find fitness.
> Every moment matters and every bit makes a big impact. Because fitness is the sum of your life.
> That's the idea Fitbit was built on – that fitness is not just about gym time. It's all the time.
> How you spend your day determines when you reach your goals. And seeing your progress helps you see what's possible.
> Seek it, crave it, live it.
> (Fitbit, website: https://www.fitbit.com/sg/whyfitbit)

The idea of 'living it' could suggest ongoing and even relentless project of the self, reflecting a gendered subjectivity which, in a postfeminist era, is to be continually worked on and is always becoming. The imperative to relentless work on one's body has raised a number of concerns about the sort of imagery which is being populated in digital spaces which reinforce these messages. For example, concerns have been raised about 'thinspiration' and 'fitspiration' images, promoting thin-ideal media content. Tiggemann and Zaccardo (2015) found that exposure to fitspiration images led to greater negative mood, body dissatisfaction and lower appearance self-esteem. Furthermore, Lewallen and Behm-Morawitz (2016) suggest that many images which might not be allowed as *thinspiration* posts are being shared as 'fitspiration'.

Many of these technologies provide feedback such as visualisations of 'performance' which are often accompanied by suggestions about training plans or dietary advice; effectively shaping the conduct of the user. As Fotopoulou and O'Riordan (2016, p. 54) observe 'users are offered training in self-care through wearable technologies through a series of micropractices that involve processes of mediation and sharing their own data via social networking'. This form of competition with oneself and others reflects a neoliberal discourse which promulgates the idea that one is to constantly change, transform and 'perfect oneself' (Ringrose & Walkerine, 2008), in part through the logic of consumption. The design and functioning of these digital technologies and their associated data practices draw on a 'foundational understanding of educational activity' which 'targets the self, or more specifically the western notion of the self as developmental, autonomous, and rational isolate, as the object of pedagogical and curricular energies' (Burdick & Sandlin, 2013,p. 145). These can be considered pedagogical enactments of what (Rice, 2015, p. 387) describes as 'conventional biopedagogical interventions that conflate moral with medical values in teaching what bodies should be'. As such, many of these technologies offer an instructional pedagogy, messages about how to monitor and regulate the body in ways that are deeply infused with a 'coporeal ethic, a socially regulative moral code' (Evans & Rich, 2011, p. 365).

Technological optimisation and makeover within a postfeminist era

Concerns are being raised about how girls and women are being digitally constituted through processes of quantification, surveillance and the sharing of personalised data. Particularly given that this is a project that has no end, as the body is seen to be constantly 'at risk' so there is an expectation to continually accrue data about our bodies. These orientations reflect worrying tendencies for young women to approach work on the body as a 'boundaryless project' (Evans et al., 2008; Petherick, 2015, p. 363).

There is a growing body of work revealing the influence of social media on body image (Cohen, Newton-John, & Slater, 2017; Perloff, 2014). Research reveals how for many young people using social media, they feel pressure to lose weight, look more attractive or muscular and to change their appearance (Pepin and Endresz, 2015). Lewallen and Behm-Morawitz (2016) suggest that individuals who follow more fitness boards on the social networking site Pinterest are more likely to report intentions to engage in extreme weight loss behaviours.

In many ways, this reflects the postfeminist expectation places on women to reinvent themselves to adapt to constant change (Toffoletti, 2016). Weight loss apps, for example, are framed through a vocabulary of freedom, choice and feeling good about oneself. A search on the app stores for 'workouts' and 'women' or 'fitness' and 'women' reveal an overwhelmingly gendered imagery and marketing based on sexualised culture. The description of one app reads:

> Sweat with the personal trainer to achieve health and fitness goal with only Simple workout every day! It helps train your body and burn your calories, day by day you will get a perfect S shape. Do each move in quick succession, then jump at the chance to show off your sexy body. (Female fitness women workout app)

Apps like these promote a postfeminist sensibility which encourages constant surveillance and work on one's body, in order to meet these narrow expectations of (hetero)sexualised feminine

appearance. Furthermore, as Kissling (2013) and Gill (2007) assert, a makeover paradigm is central to postfeminism, where 'women must seek and follow the advice of experts to reform their inadequate lives, usually through an increase or change in consumer behaviours' (Kissling, 2013). As Raisborough (2011, p. 48) argues, lifestyle media is now part of a broader makeover culture, 'a cultural ethos and logic that privileges becoming over being'. In many ways, it is therefore not surprising that young women are engaging with photo editing tools to enhance images of their bodies. Elsewhere, I examine girls' micropractices of producing, editing and sharing images of themselves whilst also seeking out, commenting, liking and circulating images of others (Rich, in press). Examples of the way in which young women engage with health and fitness images via social media reveal both their pleasures, empowerment and engagement as well as surveillance, anxiety and disaffection. Examples are a plenty in social media environments of the polished and perfected images of fit, toned and slim bodies coalescing around hashtags such as 'fitspiration'; reflecting the perhaps now normalised disciplinary practices through which online images are judged. As Carah and Dobson (2016, p. 3) suggest 'it is precisely the social and cultural imperative to produce and to 'control' images that functions as a key form of surveillance and discipline operationalised in neoliberal and postfeminist digital cultures'.

There is also emerging evidence of the extent to which the circulation of celebrity and peer images through mobile and other social media platforms affects other bodies (Brown & Tiggemann, 2016). Based on a study located within a Scottish secondary school, (MacIsaac et al., 2018) reveal how online presentation and the development of a celebrity-esque culture within social media, had a significant effect on the way pupils behaved and viewed themselves within PE classes.

A number of these digital health technologies operate through the commodification of particular affects oriented towards the desire to become fit, thin and healthy. These pedagogies of consumption promise empowerment and self-betterment, positioning self-tracking and digital health practices by providing solutions to that which needs fixing. This logic reifies the idea that 'structural inequalities are increasingly viewed as personal problems that can be resolved through individual achievement' (Baer, 2016, p. 20). Within these cultures of digital health, there is little recognition of gendered inequities in leisure and physical activity – those which accounts of intersectionality describe as 'multi-layered and multiplicitous' (Watson & Scraton, 2012, p. 45). Furthermore, there is a lack of engagement within digital health policy of the potential inequalities which might be brought about by this switch towards more personalised, digitised forms of health care. Inequalities which might be experienced by those without the requisite knowledge, desire, health literacy or financial or other resources to actually consume these digital apps.

The use of digital technologies to monitor girls' bodies and health

Feminist scholarship will be crucial in examining how formal institutions and organisations (e.g. schools, health organisations) are involved in crafting subjects engaged with commercially based digital technologies and their associated data practices (Gard, 2014; Lupton, 2015). As Scraton (this issue) emphasises, the institution of schooling and the individuals within it remain influenced by powerful gendered discourses and there will be good cause to continue to investigate the digitisation of these sites.

Despite growing concerns, outlined above, about the harmful effects of surveillance and new health imperatives, recent research points towards the digitisation of HE and PE (Casey et al., 2017; Gard, 2014). Williamson (2016) notes that digital data technologies play an increasingly prominent role in the collection, calculation and circulation of information about children. This is perhaps unsurprising given the rise of commercialism within schools (Spring, 2003) which might serve to consolidate rather than eradicate some of the existing hierarchies and inequalities with education (see also Evans & Davies, 2015).

In these postfeminist discourses, health imperatives act as a key rhetorical device for mobilising the use of digital technologies to monitor the 'health' of children and young people.

There are now numerous examples of schools using 'digital devices and software that allow students to collect, track, manipulate and share health-related data' (Gard, 2014, p. 838). Many of these technologies are produced by fitness and weight loss companies, and provide the functions through which teachers can collect various body data such as physical activity levels, steps take, heart rate or even body mass index/weight measurements. Arguably, their use is 'affording the type of close monitoring and surveillance of students' bodies that was previously not possible' (Lupton, 2015, p. 127). Whilst the surveillance of girls' bodies is not a new phenomena, the use of digital technologies to monitor and track young people's bodies perhaps goes further by producing digital pedagogies that celebrate a *new* type of imperative focused on self-optimisation. Mobile health technologies foreground practices of 'self-betterment' or 'self-optimization' (Ruckenstein, 2014, p. 69) whereby, it is not enough to 'have a more transparent view of oneself, one needs to respond to that knowledge and raise one's goals'. This raises a number of questions about the affect of the digital era on gender and embodied subjectivities. How are issues of inequality further intensified by this biomedical and neoliberal orientation towards the commercial market within education? What kinds of gendered norms will be re(constituted) through these practices?

Feminism, technology and pedagogical possibilities?

As technology has become increasingly part of our everyday lives, questions have been raised about the impact this has on gender inequalities and the possibilities for challenging injustice; of its *pedagogical possibilities*. My aspirations in this paper have been to raise some critical feminist questions about the trajectories of digital health technologies in relation to their impact on young people's bodies and subjectivities. At the time of writing this article, the global media is abuzz with news of the '#MeToo' (a slogan associated with a campaign originally developed by activist Tarana Burke) movement, centred around the use of a hashtag on social media, used by women around the world to speak out about their experiences of sexual harassment and assault. Its viral spread, was, in part, a response to the allegations made at the time against Hollywood producer Harvey Weinstein. Whilst not directly concerning physical activity, this example speaks to the power and the potential of digital platforms for disseminating feminist ideas (Baer, 2016) and challenging inequalities (for example #everydaysexism). It is a stark reminder of the need to avoid falling into polarised articulations of the relationship between digitality and gender – in terms of seeing this as either a techno-utopia or techno-dystopia.

The relationship between gender and technology has long been the attention of feminist scholars and activists, both in terms of technologies role in constituting gender (Wajcman, 2004, 2007), and more recently, challenging it. As such, future research on physical activity and gender must challenge the reductionist division of technology and the body, a perspective captured in the work of Shiva (1995, p. 276) who argues that 'a post-reductionist perspective of biotechnology needs to evolve on the basis of the connections between technology and nature, between micro-organisms and humans, including women … '. In an attempt to unpack how postfeminism 'circulates' (Ringrose, 2013) in digital health cultures, thus far I have focused on its potentially harmful effects. In problematising this relationship with technology, this means neither accepting technology as inherently empowering or oppressive. In this regard, whilst I point towards some of the harmful effects, this pedagogical process is not one of simple governance (see Rich & Miah, 2014). There are many different ways in which people engage with digital health and future work might examine how girls/women develop alternative and positive ways of using digital health to manage their health without falling into the neoliberal and postfeminist framing of individual responsibility and self-care. The relationality of girls' embodied experiences of digital health thus is not a simple product of broader social process, nor a simple enactment of 'choice' or 'agency' as postfeminist and neoliberal discourse suggest. This is perhaps not a novel observation and speaks to the 'middle ground' theorising by Scraton (this issue).

As such, future work might consider how embodied subjects are connected with and through technology to material objects themselves (e.g. wearable tech), and to other bodies through

pedagogy. Theoretical advancements which sharpen our conceptual focus on human-technological relations have emerged in recent years. These new conceptual apparatus understand digital health practices as occurring in relation to other lived bodies, materialities, practices and discourses, within 'assembled relations' (Fox et al., 2018, p. 5). Theories of 'becoming' help us to understand the learning processes and their relationship with the body's open endedness, 'becoming' or 'emerging' in these digital assemblages. In this sense 'bodies do not come to be before their interactions, but *emerge* through their interacting' (Emphasis in the original) (Rice, 2015, p. 389). As Coleman (2008) writes about becoming of female bodies through media images, subjectivities are not merely affected but rather produced through media images.

As Stride (2016, p. 677) emphasises, it is important to 'acknowledge girls' heterogeneity and agency in the ways they strategically navigate spaces in their quest to be physically active on their terms'. Future feminist work will need to understand the complex affective relationalities between data, user and the body. Work within digital anthropology has begun to demonstrate the ways in which different digital technologies take on different meanings amongst particular groups/users in ways that might not align with the intended use of the technology. Whilst there are many speculative futures produced through the discourses accompanying emerging technologies, it is hard to know what these might look in the future, or how they will be used.

Informed by these relational approaches we can understand these practices as entangled and as such integral to the process of emerging meanings and practices. As such, this focus on body pedagogies (Evans et al., 2008) draws attention to the relationalities and materialities of learning through and with everyday practices. Future research might examine if the sensing feeling body leads some to resist and distrust quantification of their bodies. Tensions could emerge for example between an exercise app and gendered experiences of moving and running in particular spaces or of experiencing fatigue, stigma, danger, the male gaze. Engaging with these relationalities reflects the feminist poststructuralist bioethics advanced by Shildrick (2005) who focuses on a situated embodied ethics and gives recognition to people's experiential knowledge. How, for example, do girls and young women experience their increasingly digitised bodies in different spaces; including those in formal spaces such as Physical Education? In these moments, there may be opportunities for what (Rice, 2015, p. 392) calls 'learning about the in-between and otherwise'.

My point here is that data practices have potential to be reimagined and resisted. We need a better understanding of how young people are creatively appropriating these technologies. As Ruckenstein (2014, p. 69) observes, 'the ways in which people confront and engage with visualized personal data are as significant as the technology itself'.

This reading of digitality frustrates conceptions of pedagogies of digital technologies as ultimately surveillant and disempowering in an absolute sense (see Fullagar et al., 2017). Further research is needed to examine the complex relationalities of these digital tools, moving beyond a critical analysis of 'content' and towards the relationalities that produce them as pedagogies. This means a focus on the sentient experiences of engaging with wearable and mobile health technology, and 'the intersection of the subject and object of pedagogy – the relational meanings that are generated via active, sensate, embodied interactions' (Burdick & Sandlin, 2013, p. 147).

Conclusion

As the title of this paper suggests, I have suggested in this paper that we might recognise gender, physical activity and health in digital era as between postfeminism and pedagogical possibilities. As I alluded to at the outset, the reason for this is that whilst technologies are leading to increased forms of surveillance, we need to be mindful of positioning them as inherently oppressive. In terms of gendered norms, they have the potential to liberate and govern simultaneously. For those those involved with the health and physical activity of young people, researchers and practitioners alike, the challenge and opportunities technologies bring are are many and varied.

Digital technologies are developing at a rapid pace and as such this requires us to be much more creative about how we theorise gender and physical activity within the digital age. This means considering how as researchers we think about the complexity and nuanced practices and relationalities between bodies and technology. Finally, Scraton (this issue) raises the important issue of the need for these advances, in theory, to actually influence practice. Similarly, how do we do work that is more future-facing so that we might begin to influence digital health technology in a way that challenges gender and other inequalities? Emerging work within the field of design sociology might provide some useful insights and opportunities to encourage stakeholder involvement and (re)imagine technologies. As Lupton (2014b, p. 54) argues, 'to stimulate both participants and designers to think in unexpected and inventive ways'. There is a pressing need for a greater engagement with digital sociology and critical digital health studies in the future design and development of digital health-related policies and interventions, so as to help 'counter the individualised notion of health behaviour' (Cohn, 2014, p. 160). Enabling exchange between teachers, health educators, social scientists, young people, designers, the arts, health practitioners, computer scientists, software developers could provide opportunities for new forms of co-creation.

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