

Rhythms of Moving in and Between Digital Media: A Study on Video Diaries of Young People with Physical Disabilities.

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Abstract

This article develops a new framework for analysing digital media use and access by drawing on the concepts of ‘rhythm’ and ‘wayfaring.’ It unravels how young people with physical disabilities *move in and between* digital media devices, online sites and activities in an embodied and rhythmic way that happens at a fast or slow pace. The framework is used to analyse the video diaries of three male secondary school students with physical disabilities on their use of digital media at home. We propose methodological advances in studying digital media use as dynamic movement and provide alternative insights on digital inequalities.

Keywords: access, digital media, disability, rhythm, video diaries, wayfaring, youth

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Introduction

Young people are often observed to be speeding online from one activity to another (Livingstone, 2009) through the immediacy of applications (Gardner and Davis, 2013). However, their digital media use is frequently studied in terms of time spent gaming or information seeking (Eynon and Malmberg, 2011), which does not capture the dynamics of *how they move within and between* digital media. Research on inequalities and digital media typically focuses on access to the Internet. Young people's access has been examined in relation to parents being able to afford digital technologies and internet connection as well how technology and connection are available across different social settings (Elccessor, 2016; OECD, 2016). A privileged young internet user is frequently online and able to access online content using multiple devices for numerous activities (OECD, 2016; Bovill & Livingstone, 2001).

The accessibility of digital media for people with disabilities has been evaluated by looking at the ease with which they can connect and engage with digital technologies and web content (Goggin et al., 2017). Elccessor (2016) argues for defining access more broadly, taking into consideration regulation, hardware, software and online content, which can be more or less meaningful for people with disabilities. Goggin (2016) argues that mobility studies can

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make sense of how digital technologies create possibilities and obstacles for people with disabilities to move about using location-based technologies or smart home technologies.

This article draws on mobility studies to contribute to these conversations by analysing how young people with disabilities *move in and between digital media*. We explore how young people with disabilities move in and out of the internet, between digital devices, online sites and activities, and how these movement happen at slow or fast paces. Studying movement *within* digital media highlights an alternative dimension of use and access and reveals how embodied practices of habitual digital media use harbour inequalities. We will draw on the concepts of ‘rhythm’ (Lefebvre, 2004 [1992]) and ‘wayfaring’ (Ingold, 2007) to unravel the moving about online from one site and activity to another in a repetitive and habitual manner.

The article begins by reviewing literature on mobility studies, digital media and disability. The discussion broadens the concepts of use and access to include embodied practices of moving *within* the internet. We then discuss the concepts of rhythm and wayfaring, which form the framework for analysing video diaries of three young males with physical disabilities chosen for our illustrative cases. Our analytical framework proposes methodological

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strategies for studying digital media use as a dynamic, mobile activity and offers insight into how inequalities are embedded in these habitual rhythms.

Mobility, Digital Media and Disability

Mobility studies offers a fruitful approach for understanding the routine and mundane digital media practices of young people. The ‘mobility turn’ in the social sciences (Urry, 2004) has inspired an interdisciplinary conceptual paradigm exploring mobilities and *immobilities*, including the study of various forms of travel and transport, such as automobility (Lumsden, 2015). Sheller and Urry (2006: 2) argue that the emergent practices of physical, informational and communicational mobility are continually ‘reconfiguring patterns of movement, co-presences, social exclusion and security.’ This is coupled with an increased focus on ‘hyper-mobility’ and forms of ‘instantaneous’ communication (Hannam et al., 2006). Others, such as Bissell (2007: 280), highlight the need to study those moments during which individuals are *immobile*, ‘stuck’, ‘suspended’ or ‘waiting’.

Goggin (2016) explores the intersection of disability and mobile media within mobility studies. The development of mobile phones opens up different kinds of mobilities for people with disabilities. Mobile phones enhance the mobility of people in wheelchairs, as they can contact with others regarding their safety

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while travelling. Smartphones with sensor technologies enable people with disabilities to engage in practices of independent ‘wayfinding’ and navigation. In the current phase, new digital technologies (such as smart homes and driverless cars) hold potential to make new kinds of mobilities possible for people with disabilities (Goggin, 2016).

However, research has observed that mobile phones do not necessarily enhance all kinds of mobilities. Wallis (2013) argues that a key feature of young migrant women’s use of mobile phones in China entailed ‘immobile mobility,’ that is, the phones enabled them to be virtually mobile and engage in communicative activities while being in fixed locations, however, their mobile phone use did little to improve their offline social and economic immobility and they remained stuck working long hours in low paid jobs. Thornham and Cruz (2016) found that unemployed young people can also be virtually immobile as they are unable to connect to wireless on the move. Young people also struggle to enhance their economic mobility as they search for job opportunities using mobile phones which do not grant them full access to features on webpages available through alternative mediums such as a personal computer.

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From a disability perspective Ellcessor (2016) discusses how the design and content of the internet culturally favours an active and able-bodied user and argues that we should reconceptualise access to digital media in terms of design, structure, content and regulation in ways that cater to the needs of disabled people. To demonstrate how inequalities are currently structured, Goggin (2011) discusses how mobile phone miniaturisation has made it difficult for users who are blind, deaf and physically disabled to press, hold and manipulate them. Raghavendra et al. (2012) found that physical disability can slow down typing speed, which can limit or frustrate young people with physical disabilities engaging in games and instant conversations that require immediate responses.

The research on how digital media may not necessarily enhance access and mobility, or may enhance them in different ways for different groups, highlights issues of inequality. We take this as our starting point but seek to move the conversation forward by analysing mobilities embedded in everyday embodied media practices (Moores, 2014; 2015; Pink and Mackley, 2013). For instance, Moores (2014: 204) notes that virtual travel takes place alongside manual bodily movements. He calls this being 'doubly digital', as fingers tapping and mouse clicking translates to a person traversing through, in and out of online and offline environments. To make sense of these movements,

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Moore (2014) uses Ingold's (2007) concept of 'wayfaring' - a particular form of improvisational movement through which beings inhabit the world by journeying along lines of travel without a destination in mind. In this article we draw on the concept of 'wayfaring' and the concept of 'rhythm' (Lefebvre 2004 [1992]) to develop and employ a novel conceptual and methodological framework for analysing how users – in our case young people with physical disabilities – habitually *move or journey within and between* digital devices, online sites and activities at differing paces in repetitive or rhythmic fashion.

Digital Rhythms and Wayfaring

The concept of 'rhythm' was introduced by Lefebvre (2004 [1992]) alongside 'rhythmanalysis' - an analytical lens or a tool to analyse practices and performances of rhythms in everyday life. Lefebvre (2004 [1992]: 15) defines rhythm in many ways. Broadly it is considered as the 'repeated instances of movements, gestures, actions, situations that are open to a measure of difference' (Lefebvre, 2004 [1992]: 15). Rhythms are comprised of reprises and returns with a variation, where each move is not identical to the one that preceded it. Everyday life is organised according to various rhythms, and the coming together of many rhythms ('polyrhythmia') at the same time produces a state of motion.

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Lefebvre (2004 [1992]) describes how different rhythms can overlap, coexist and relate to one another. Firstly, he identifies different modes of repetition such as biological (sleep or hunger), cyclic (seasonal, cosmic and cycles that produce new beginnings) and linear rhythms (produced from human social action i.e. walking to a destination at a certain pace with little difference in intervals). Secondly, he identifies intertwined rhythms in the study of everyday city life, where different rhythms coalesce and interact. For example, a pedestrian walking down the street (fast or slow) is shaped by interactions with other rhythms such as the time of day; while the rhythm of an automobile is shaped by the rhythm and flow of traffic. Although all these rhythms are repetitive, they vary according to pace: some are slow and take a long time, while others are quick and short lived. When different rhythms taking place at different paces come together at the same time Lefebvre calls this 'polyrhythmia' (2004 [1992]: 89).

Rhythms also have a political or evaluative dimension. Being slow or immobile has been likened to the inability to match a fast-paced life (Tomlinson, 2007). Cresswell (2010) notes that different social groups and individuals are positioned differently with regard to their movements. The politics of mobility places people with disabilities in a slower lane of life that relies on the use of assistive technologies to enable them to move about online

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and offline, and which marks them as different from mainstream internet users (Söderström, 2013).

However, movements for slow eating and slow living provide a different meaning to the term slow. Rather than considering being slow as a disadvantage, being slow is a response for 'time for meaningful things' (Parkins, 2004: 364). Being slow is considered as involving mindful attention to practices, savouring its pleasure or becoming involved in the task to which we give our time (Parkins, 2004). For instance, we may slow down or pause to give our mindful attention to something we view online, just as people pause on different sections of a newspaper to read an article (Moore, 2015). Internet users may also intentionally 'pause' online to rest or make observations (Ingold, 2007). Slowing down or 'pausing' can therefore be a choice.

Lefebvre (2004 [1992]) further notes how a disruption in heterogeneous or harmonious rhythms ('eurhythmia') can produce 'arrhythmia'. A rhythm can also be disrupted by 'friction', which slows down the motion or brings it to a halt (Cresswell, 2014). Friction is understood by Cresswell (2014) in terms of physics or the articulation of power relations. Bissell (2007) notes that rhythms of waiting take place in transport (i.e. airports). When the mobility of

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people travelling is brought to a slower pace (i.e. delayed flight timings), rather than waiting being empty time, people experience 'waiting' by engaging in activities such as eating, reading or browsing the internet. In this article we use these insights to understand how young disabled people encounter friction, become immobile, or end up waiting while using digital media - for instance when being aided or distracted by parents or a slow internet connection.

One becomes conscious of their own rhythms when they are met with disruptions or irregularities (Lefebvre, 2004 [1992]). As rhythms are performed in environments that are ever-changing (Ingold, 2011) those people that successfully attune their rhythms to changing environments become skilled practitioners. For example, rhythms, such as walking, do not take place automatically; when walking down a street in a city the body adapts to the eventualities, flows and interruptions that shape the experience of the walker (Edensor, 2010).

Ingold (2007: 91-92) uses the concept 'wayfaring' to define 'ways of knowing' as one moves 'along a line of travel'. He does not refer to moving along online but refers to how people come to know and learn their way around physical landscapes, as they move along them. The path of a 'wayfarer' is improvised

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along the way, and they pause for a rest and return repeatedly to places already visited (Ingold, 2007). Therefore, in addition to ‘rhythm,’ the concept of ‘wayfaring’ helps to understand and explore how people move in and out of various digital devices, apps, games and social networking sites, constructing rhythmic and often repetitive (even if improvised) journeys. The concept of ‘wayfaring’ allows us to unpack the habitual dwelling and moving in and out of digital media spaces to open up a new perspective on digital media use and access.

Methods

The importance and intricacy of the different journeys and paces of young people’s movement in the digital landscape emerged from our study of how young people with physical disabilities use the internet at home, recorded through video diaries. We asked participants to produce video diaries of their internet use as ‘a route to comprehending those aspects of experience that are very often sensory, unspoken, tacit and invisible’ (Pink, 2013: 47). The diaries formed part of a two-year ethnographic study, which involved overt participant observation and qualitative interviews with students, teachers and parents in a special school in England.

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During the ethnography the researcher identified potential participants who would be able and willing to keep video diaries to provide insights on their use of the internet at home. Sixteen potential participants with physical disabilities were identified from a special school that catered for primary and secondary students with a range of abilities. The school was mixed gender but there were more male than female students. The list of potential participants was discussed with the school principal who advised on who would be able to give informed consent to take part in the study, and who could take part without it being too much of a burden on their everyday life. The final sample consisted of eleven participants (four female and seven male students, all 14-19 years old). Participants were recruited via private face-to-face meetings in which the researcher explained the research process with them and provided details in a booklet form. Written consent was sought from the participants and their parents to keep and use a video camera at home for research purposes. All participants had physical disabilities that limited their bodily movements, and some participants were also diagnosed with mild intellectual or developmental disabilities.

The participants were given a hand-held video camera and instructions on the safe and ethical use of video recording as advised by the school (i.e. not posting recordings on YouTube or recording people in public places). The

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study was tailored to the needs of the participants by agreeing that the participants could film their use of the internet sporadically over a one-year period. One participant (Noah) could not physically record the diaries (after several attempts) and asked the researcher to assist him in recording his video diaries at home. Another participant (Mick) who could not physically do the recording himself asked his parents to assist him with recording the diaries.

The study received full ethical clearance from the University. The participants assigned themselves a pseudonym and material was anonymised to ensure confidentiality. The names, physical conditions, and other compromising information such as details of the school, parents, or participants' disabilities have been removed or changed. The video diaries were only viewed and accessible by the research team.

The videos included narration to inform the researcher of what the participants were doing online as well as personal reflections. Action shots of internet use show participants' reactions to what pops up on the screen. When filming their internet use the participants were continuously exposed to new online content on their Facebook newsfeed, on news sites, private messages or emails and the video captured their reactions and engagement with the

messages. Furthermore, the diaries allowed participants to express their experiences and feelings in the moment.

The presence of the researcher can be observed and heard in two of the participants' video diaries. In one instance the researcher was recording the diary. In another the participant often 'spoke aloud' to the researcher to explain what he was doing as he moved through the internet and engaged in digital activities. The camera can thus be said to have taken the place of the researcher when the researcher was not physically present, as the participants gave it the role of a conversation partner (Buchwald et al., 2009).

The next section presents excerpts from three video diaries, using the analytical concepts of rhythm and wayfaring to make sense of them. We selected three cases of male participants with different physical disabilities to reflect the spectrum of rhythms, pace and digital journeys that were evident across the video diaries. We did not choose female students for the illustrative cases, as girls tended to do different things with digital media, which would have added another dimension to the analysis. The first case focuses on Scott (who is more physically able than most peers in his school) and how he performs fast repetitive journeys in and out of digital media. The second case presents Noah's journeys, focusing on repetitive replaying of a platform game.

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Lastly, Mick's video diary shows a slower rhythm, intermittently using a fantasy role playing gaming site and being aided and distracted by his parents, who are also engaged with their own digital devices and conversations.

Speeding in and out of Digital Media

Scott films his own diary, which shows that he is proficient in finding his way around the internet, reflected in the number of online activities he performs as well as the pace, rhythms and pauses that define his five-minute journey within and beyond the internet:

	Running Time Hours/minutes/ seconds
1. Scott is sat with his black laptop on his bed, recording with his left hand. Rap music plays in background. Black bedroom walls and drawn black curtains envelope the room in darkness. <i>Err twenty ninth of January. It is ten to eight in the evening.</i> Sound notification from Facebook	00:00:00

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<p>messenger alerts Scott to a new message. Camera shuffles in his left hand. Bright light radiates from the laptop screen. The Facebook newsfeed partly comes in clear view.</p>	<p>00:00:23</p>
<p>2.</p> <p>The camera pans across his laptop screen. Quickly a chat window on Facebook comes to view. <i>Just on Facebook, just sort of browsing through the newsfeed.</i> Scott scrolls down his newsfeed with his finger tapping at a steady pace on the laptop keyboard. <i>There's nothing really happening.... I'm really not even paying much attention to it, because I'm really busy having a conversation with someone [his girlfriend].</i> The camera pans from the newsfeed to the private chat window. Heart emoticons and smiley faces appear. <i>That's the only reason I am on here.</i></p>	<p>00:00:46</p>
<p>3</p> <p>The camera focuses back on the newsfeed. Sound notification from Facebook messenger. The camera returns to the private conversation. Girlfriend sends hugs and kisses. <i>That's the only thing I'm doing.</i> Scott clicks on</p>	

<p>a different tab to show, <i>I brought some</i>, [clears throat] <i>some lyrics up so I can sing along to a song</i>. Focuses the camera on the webpage, shows lyrics to a pop-rock love song. <i>Haven't done much else throughout the day</i>.</p>	00:01:05
<p>4 Scott clicks the mouse to bring up a list of visited websites to show to the researcher. He talks through the list as he scrolls down. <i>The things that come out of it, the things like jokes and stuff</i>. Zooms out the list, focuses the camera on his laptop keyboard.</p>	00:01:30
<p>5 Pans the camera back to the history list. <i>Checking emails, train tickets, stuff like that because I'm going away to Derby so it's good for looking at times...Er online banking</i>, [zooms in] <i>I use online banking very cautiously</i>. Continues to scroll down the list. [zooms out]. <i>That's all I've done today, and anything before that is all Facebook for the whole day</i>.</p>	00:02:08
<p>6 Clicks on a tab, screen flicks to the Facebook newsfeed. <i>At</i></p>	

<p><i>the minute, I'm also using my iPod touch. Scott holds up his iPod in his right hand in front of the camera and swipes across the springboard, goes past many applications before tapping on the Instagram icon with his thumb. And I'm using Instagram.</i></p>	<p>00:02:18</p>
<p>7</p> <p><i>To edit and publish some photos for my own personal use, so that's another use of the internet that I've done today [sound notification from Facebook messenger]. The Instagram app uploads a list of selfies that failed to upload online the previous time he was using the app [another chat notification]. Scott brings his thumb down on the iPod to the camera icon, taps turning it on. At the bottom right hand corner of the iPod screen is a small image of photographs taken on the device. The last one shows a close up shot of his eyes. Scott taps on the image three times before the device responds and brings Scott's photos up in a list of albums.</i></p>	<p>00:02:36</p>
<p>8</p> <p><i>Erm what else have I done? Pauses. That's about it generally.</i> Scott taps and selects an album on his camera</p>	

<p>roll with his thumb. A gallery of his pictures including selfies, images with school friends, girlfriend and two pictures of his eyes spring up on his screen. He taps on the image of his eyes, and it fills the screen. App now allows him to scale and crop the image. <i>Not done much else.</i></p>	<p>00:02:50</p>
<p>9 <i>Just doing this photo right now.</i> Scott zooms in and out into the eyes with his finger and thumb to crop the image.</p>	<p>00:03:02</p>
<p>10 Instagram takes Scott to a screen to enhance the image. A row of filter options are displayed along the bottom of the screen [sound notification from Facebook messenger]. Scott taps along the filter icons eighteen times, from left to right, before returning to the same ones again. <i>Trying to find one that brings out the colour in my eyes best because that's why I'm doing it. Gonna go with this one.</i> He uses his thumb and finger to place a focus on the two eyes, this makes the eyes light up deep blue. <i>Adding a focus.</i> Takes his thumb and finger off the screen, <i>I think that'll do!</i> Pauses. He appears to be looking at the edited</p>	<p>00:04:06</p>

image.	
11 Taps on the next icon twice at the top of the screen and shares the image online.	00:04:14
12 He moves his thumb down the iPod, presses on the home button, moves his right hand holding the device away from the camera and places it down on his bed. Scott focuses his attention back to the laptop.	00:04:18
13 <i>Now I'm just on Facebook chatting, got some new messages.</i> The camera pans to the chat window and back to the news feed. A close-up image of a teenage boy appears. <i>I don't know who the hell that is.</i> Scott starts to scroll down the news page. <i>Yeah I guess I'll just do this for the next couple of days, yeah byeeeee.</i>	00:05:05

There are different rhythms at work in Scott's diary. The first is the rhythm of him moving or flicking, in a fast-paced succession, back and forth between different online platforms. In the first minute of the diary (sequences 1, 2 and

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3) his attention shifts from a Facebook message to Facebook feed to Facebook chat, back to Facebook feed and again to Facebook message, until he ends up searching for lyrics to a love song he was listening to. Throughout this quick rhythmic action his voice-over explains he has been ‘just on Facebook,’ doing this ‘all day’ or ‘not much.’ This fast-paced flicking through platforms repeats in all his 10 diaries, so clearly constitutes a habitual rhythm, revealing the fairly frenetic, repetitive activity that constitutes his seeming inactivity or not doing ‘much’ on Facebook.

The second rhythm is constituted by Scott’s movements between devices (i.e. his iPod Touch and laptop). In all his diaries Scott uses the two devices simultaneously. During the two-minute sequence of using his iPod Touch (sequences 6-12) Scott, further, moves between different apps, from Instagram to Camera, to Albums to Photo Edit and back to Instagram. All the while the Facebook rumbles in the background, sending messages to the laptop screen. This movement between devices and platforms is illustrative of how the so called ‘convergence’ culture operates at the micro-level (Jenkins, 2006).

The third rhythm is driven by Scott’s hands, which swiftly tap on the keyboard, swipe and touch the iPod screen (Moores, 2014). Rhythms of the

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hand are revealed when he shows himself picking up the iPod touch from his bed, positioning it in his right hand and comfortably placing his thumb in front of the screen to repeatedly tap, scroll, and flick through online content. This rhythm illustrates the facility and dexterity of Scott's movements, how the repeated actions by his thumbs have become 'attuned' with the use of the devices (Ingold, 2011).

The final and fourth rhythm is created by the broader context of Scott's use of digital media. He remains seated in his bed, but yet he is constantly in motion in his media rich bedroom (Bovill and Livingstone, 2001), with access to two internet enabled devices (laptop and an iPod Touch), rap music booming out of the sound system connected to his iPod and becoming part of the atmosphere of his room marked by the type of music and the darkness, which all create his own personal and private social space in the family home. Using Lincoln's (2012: 150) concept of 'zoning' to understand how bedroom space has different zones, which integrate and merge through media objects, we find the bedroom is a 'portal of communication', a space Scott uses in the evenings to get online and socialise from home, the same bed he sleeps on becomes a site where he can dip in and out of a variety of activities by using the laptop and iPod Touch to socialise, scroll for updates, seek information and create content and publish online. The room provides a porous, sensory

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environment, creating a 'polyrhythmia' of Scott's rapid movements in and out of digital media, music and the dark, enclosed solitude of his room.

Scott's journey can be described as a form of 'wayfaring' (Ingold, 2007), as it does not entail a destination. Instead, he is continually making his way along as he uses the internet. His movements are embedded in online conversations, the visual content he uploads and websites he logs onto, which are traceable from a history list. Scott chooses to slow down at times, for example when he is engaged in editing (18 times) and deciding whether he is satisfied with the image of his own eyes he uploads on Instagram. He also pauses to reflect on his journey online, when he scrolls down the history list and thinks about what else he has done online whilst filming himself in conversation with the absent researcher. The list of websites previously visited illustrate some habitual and perhaps unique places he traverses online besides those filmed in the diary, such as buying train tickets, online banking and 'jokes and stuff.' However, even if Scott's journeys are wayfaring, spontaneously meandering in and out of digital media, they are also highly rhythmic (i.e. repetitive and patterned); in all his diaries he repeats the same quick flicking back and forth the same platforms, sites and devices with intermittent pauses. We suspect that those rhythms are not necessarily

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unique to him but apply to many other young people, disabled and able bodied.

Replay!

When using the internet, Noah prefers to play online games. His mother has encouraged him to use social networking sites to interact with his friends and broaden his use of the internet, however, his video diaries, filmed by the researcher, show his continued interest in gaming. Often seen gaming online in school during lessons and at break times, at home too, he was found to be engaged in the same activity where he enjoys outperforming his previous score online:

	Running Time hours/minutes/seconds
1 In a bright airy living room, Noah is sat on a swivel chair in front of his desktop computer and being filmed by the researcher. Noah smiles at the camera as the computer continues to load. The researcher positions the camera on the desk.	00:00:00

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<p>Noah enters his login details and opens and closes a few folders on the computer.</p> <p>Researcher: <i>What are you doing?</i></p> <p>Noah: <i>Showing you which games I play.</i></p>	00:02:06
<p>2</p> <p>Noah drags and clicks the mouse with his right hand over the Internet Explorer icon. He waits for the screen to upload. The Google homepage uploads, Noah types 'extreme' in the search bar, and the site offers him suggestions for his search. He scrolls down and clicks on the second suggestion, 'Extreme Pamplona'.</p>	00:02:20
<p>3</p> <p>Gaming site loads. Noah clicks to start the game. As the site loads the first level, Noah moves his right hand across the computer screen to turn the speaker volume on. Pumping music starts to play. Screen loads the first level to the game.</p>	00:02:38
<p>4</p> <p>Countdown to the level appears on the screen. Sound of a hooter and energetic Spanish music</p>	

<p>begins to play. A bull is unleashed behind a male figure. Noah controls the movement of the male figure by tapping on the arrow keys on the keyboard.</p>	<p>00:02:39</p>
<p>5</p> <p>The male figure starts to run as Noah starts tapping on the keyboard.</p> <p>Researcher: <i>You still play this!</i></p> <p>The male figure runs in the game, jumping over a number of obstacles, giving off grunts, as it jumps, rolls and falls.</p> <p>Noah: <i>Know which one I like?</i></p> <p>Researcher: <i>Which one?</i></p> <p>Noah: <i>I like the policing one</i> [referring to a level of the game featuring a policeman]. Noah successfully completes the game and saves the man from being hit by the bull. Sound of cheers.</p>	<p>00:03:27</p>
<p>6</p> <p>New screen shows level completed in 48 seconds.</p> <p>The male figure appears panting on the side of the screen. Noah's mouse is placed on the screen,</p>	

<p>where two flags emerge. He is presented with a choice to click one flag.</p>	<p>00:03:34</p>
<p>7</p> <p>Noah: <i>So, which one would you go for? That one [points to a German flag] or that one [points to a French flag with his mouse].</i></p> <p>Researcher: <i>Errrr, let's go for Germany.</i></p> <p>Noah: <i>That one.</i> Noah moves the mouse back over the German flag and clicks to select the next level. Game begins. Noah jumps over many higher obstacles than before, one after the other.</p>	<p>00:03:51</p>
<p>8</p> <p>Noah successfully completes the level. Screen shows level is completed in thirty-one seconds, Noah has now unlocked two further flags.</p> <p>Noah: <i>Now, that one [Union Jack] or that one [points to a Swiss flag with the mouse].</i></p> <p>Researcher: <i>Because we are British, let's go for the Union Jack!</i></p> <p>Noah: <i>Now here's one you'll like.</i> He moves the</p>	

<p>mouse to click on the Union Jack.</p>	<p>00:04:33</p>
<p>9</p> <p>Game begins. Male figure jumps out of a window chased by a police officer.</p> <p>Noah: <i>Here's one bit I really like. Swinggg! Yeah!</i></p> <p>Noah swings the animated character in mid-air and lands him safely before continuing with his run. <i>Missed meeee!</i> The character jumps over obstacles backwards and forwards.</p>	<p>00:04:59</p>
<p>10</p> <p>Researcher: <i>Oh no, he didn't!</i> The policeman grabs the male figure. The level comes to an end. Noah and the researcher laugh. Level over in 68 seconds. The game presents options to repeat the same level or restart the game from the beginning.</p> <p>Noah: <i>I'll play it again.</i> He moves the mouse and clicks to replay the same level.</p>	<p>00:05:01</p>
<p>11</p> <p>Noah plays and loses the same level in 43 seconds. He replays the level again and loses in</p>	

<p>94 seconds. Noah replays and completes the level in 31 seconds.</p>	<p>00:05:44</p>
<p>12</p> <p>Noah clicks on a new unlocked flag. and successfully completes the new level in 3 minutes.</p> <p>Noah moves the mouse to click on the final level.</p>	<p>00:10:26</p>
<p>13</p> <p>Level begins. The level is a repeat of the level played in sequence 4. The male figure is chased and caught up by a bull in one minute 33 seconds.</p> <p>Level over.</p> <p>Researcher and Noah: <i>Oooo!</i></p> <p>Screen shows option to replay the level again.</p> <p>Noah moves the mouse to click on the replay option.</p>	<p>00:11:19</p>
<p>14</p> <p>Level restarts.</p> <p>Noah: <i>Come on, come on, come on. Here we go. Look, stuck!</i> Refers to the bull that is stuck by an obstacle preventing it from reaching the male</p>	

<p>figure as he crosses the finishing line and wins the level. Sound of cheers.</p> <p>The animated man has his arms raised up with a smile on his face and fists clenched celebrating his win.</p>	<p>00:13:20</p>
<p>15</p> <p>Noah closes the game and flicks to the Google homepage.</p> <p>Researcher: <i>What else do you do?</i></p> <p>Noah: <i>I've got Facebook!</i> Noah searches the site on Google and clicks on the first listed site. It now takes him to the Facebook page where he enters his login details.</p>	<p>00:14:14</p>
<p>16</p> <p>Noah: <i>Here we go.</i> Screen shows Noah's newsfeed page and friends list, which he scrolls down for 1 minute 32 seconds. Noah moves to Facebook games and uploads a karaoke game, Lyroke, which he plays for 4 minutes 41 seconds.</p>	<p>00:22:42</p>

The first rhythm that emerges from Noah's diary is that of repetitious playing of different levels of a platform game, *Extreme Pamplona*. Noah moves from one level to another in a cyclical rhythm (Lefebvre, 2004 [1992]), as each new level entails a new beginning. To reach a new level involves a series of steps that he follows i.e. he clicks to start the level that leads to a countdown, followed by the sound of a hooter, which gives him the cue to start running (by tapping on a key on the keyboard) to escape a character i.e. bull chasing him and making it over a finishing line. When he successfully completes the level, he is awarded with unlocked flags, he taps on a new flag that emerges after completing a level to move onto a new level. This takes place, in succession, eight times. Beginning at a fast pace, in sequences 4 to 6, Noah completes the first two levels in 48 seconds, illustrating a rapid gaming rhythm that is typical of platform games (Compton and Mateas, 2006). This is followed by him playing the third level in quick succession in sequences 7 to 8 taking him to 31 seconds. From sequences 4 to 8, in total he spends 1 minute and 19 seconds playing three levels.

Completing quick chases allows Noah to build a momentum of completing quick levels, however when he plays the fourth level in sequence 9 he becomes *stuck*. The game introduces difficult jumps and chases and these translate into longer gaming episodes. The second rhythm is one of slowing down,

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caused by kinetic friction (Cresswell, 2014), brought about by a static and a moving body i.e. the animated character controlled by Noah is unable to jump over an object and causes a disruption for Noah. Being unable to jump over obstacles translates to longer sequences. In sequences 9 to 11 it takes Noah 3 minutes and 29 seconds to replay the same level three times, before he is able to successfully move on to the next level on his fourth attempt.

This repetition of longer sequences of levels, being chased, losing the level and clicking to replay the same level gives rise to the second rhythm, jarred by friction. This friction stands in contrast to the first rhythm of rapid gaming, illustrating a state of *flow* achieved by Noah's level of skill matching the level of difficulty presented by the game (Shin, 2006). However, there is also some variation in the rhythm. On his fourth attempt at the harder level Noah manages to complete the level in sequence 11 in 31 seconds. On sequence 13 and 14, however, Noah is presented with playing the first level again, which he completed quickly in sequence 4, however here it takes him two attempts before he is successful.

The third rhythm is constituted by the way Noah moves from one site to the next. He spends a total of 13 minutes 20 seconds on the gaming site *Extreme Pamplona*, before moving to Facebook for 1 minute 32 seconds and then onto

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playing another game called Lyroke for 4 minutes 41 seconds. Whilst Noah moves fast, completing levels in quick succession, he stays on one gaming site. This rhythm stands in contrast with Scott, who swiftly moves from one site to another and back again and also shifts between two devices. The way in which Noah stays on a few gaming sites and repeats the same game may be due to him having a mild cognitive disability. The repetitive game, which he is able to play successfully, gives him a sense of achievement. However, this type of repetitive playing, slowed down by the increasing difficulty of the levels, is probably typical of able bodied gamers as well.

Traversing Online and Offline: Mick

Mick is a long term gamer of *Dawn of the Dragons*, a fantasy, multi-user online role playing game, whereby a story is created and unfolds around the player's dragon avatar, which engages in raids and quests. Mick interacts with online gamers on Facebook to discuss strategies for playing the game, he also finds support from his parents, who are avid players of the game. Mick films his video diary with the assistance of his parents:

	Running Time hours/minutes/seconds
1	00:00:00

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<p>Opening shot of a still blue dragon on a computer screen. Mick is engaged in a Caracalla raid, the screen shows a still image of a skeletal character; directly beneath the image is a chat window with three players engaging in a conversation. At the bottom of the screen are updates on the developments taking place in the game. Mick is in his wheelchair, in front of desktop computer in the living room, the camera is positioned at an angle, capturing partial shots of his computer monitor. A reggae song plays in the background. Computer screen catches reflections of Mick's father checking the camera.</p>	<p>00:00:12</p>
<p>2</p> <p>Mick moves the mouse and clicks on an icon that brings up a list of player names.</p> <p>Father: <i>I think you might have your list on a hold up...</i></p> <p>Mick mumbles, burps, and clicks on the list his father is referring to. The screen flicks to load the stats of the game. Mick clicks on an icon that</p>	

<p>takes him to another screen that informs him on his avatar's health. He then clicks on another icon titled <i>engage</i> and another screen loads up.</p> <p>Father: <i>That's better...Yeah?</i></p> <p>Mick: <i>Yeah!</i></p>	<p>00:00:29</p>
<p>3</p> <p>Mick's mother mumbles in the background.</p> <p>Mick turns towards his mother.</p> <p>Mother: <i>Not going to start the next chapter, because if I do, I won't be able to put it down again.</i></p> <p>Text continues to change at the bottom of the screen; it updates Mick on the damage caused to the health of his avatar. Mick turns his head towards the screen.</p> <p>Mother: <i>I don't think [name unclear] has gone to Japan.</i></p>	<p>00:01:18</p>
<p>4</p> <p>Mick moves his head away from the screen and back again, he then moves his mouse and clicks on an icon. A list of names pop-up, he moves his</p>	

<p>mouse on the screen and pauses.</p> <p>Mick: <i>I'll just have to explain to the researcher that I've not got the whole picture</i> [refers to the camera not being able to record the whole computer screen].</p> <p>Mick uses his mouse to check the health of the avatar and clicks to <i>engage</i> in a raid.</p>	<p>00:02:32</p>
<p>5</p> <p>Mick's father mentions something [unclear], Mick and his father both giggle.</p> <p>Song changes.</p> <p>Mick: <i>I just thought</i> [nudges the camera, camera wobbles up and down].</p> <p>Father: <i>What you trying to do mate?</i></p> <p>Mick: <i>I was trying to see.</i></p> <p>Mother: <i>That's how low my sugars have got.</i></p> <p>Father: <i>2 point 1.</i></p> <p>Mick: <i>Dad.</i></p> <p>Father: <i>Yeah.</i></p> <p>Mick: <i>I was just gonna say I've recorded mother singing, I'm gonna put it on YouTube,</i></p>	

<p><i>this is how rubbish my mum sings you'll get booed off.</i> Giggles, stretches his arms and leans back in his wheelchair.</p>	<p>00:04:08</p>
<p>6</p> <p>Mick moves the mouse and clicks on an icon to <i>engage</i> his avatar in a raid.</p> <p>Mick: <i>I won't be able to record much anyway.</i></p> <p>Father: <i>Katy Perry is this, isn't it?</i> [refers to the song].</p> <p>Mick: Moves the mouse over the screen and places it on top of an icon he clicks on next. <i>And we're gonna let it burn, burn, burn</i> [sings along to the song]. Clicks on the icon. Keeps the mouse on top of the same icon. <i>I don't want you singing and recording dad.</i></p> <p>Mick turns his head away from the screen.</p> <p>Updates from the game flash on the screen.</p> <p>Clicks repeatedly on an icon five times.</p> <p>Mick: <i>What?</i></p> <p>Mother: <i>I said I wonder where Cinnamon Tree is, takeaway in [the area] it's Indian!</i></p>	

<p>Mick continues to click repeatedly nine times on the icon, he pauses.</p> <p>Mick: <i>Really, I could! Dad?</i> Moves the mouse around the screen. Clicks back to check damage to the avatars health.</p>	<p>00:06:29</p>
<p>7</p> <p>New song plays.</p> <p>Moves the mouse around the screen. Clicks on his avatar to checks the stamina.</p> <p><i>Bing!</i> [Sound notification from Facebook].</p> <p>Father: <i>Have you opened chat?</i></p> <p>Mother: <i>No, I am trying to sort out some food.</i></p> <p>Father: <i>We planned chicken haven't we?</i></p> <p>Mother: <i>I don't feel like.</i></p> <p>Father: <i>If we go now..., I've just got a personal best, want to know what it was?</i></p> <p>Mick: <i>What?</i></p> <p>Father: <i>Five billion nine hundred and thirty-two.</i></p> <p>Mother: <i>That's not your personal best, you had that seven billion one?</i></p>	

<p>Father: <i>No I didn't have the seven!</i></p> <p>Mother: <i>Excuse me! The other week? You did!</i></p>	<p>00:08:00</p>
<p>8</p> <p>Mick clicks to check statistics on the health, stamina and damage to his avatar. This activity leads him to switch between three different screens. He returns back to the main page, places the mouse over an icon and clicks three times to <i>engage</i> in a raid.</p> <p>Father: <i>Oh yeah I did seven point four six.</i></p> <p>Mother: [Raises voice] <i>Right, so shut up!</i></p> <p>Mick pauses, looks away from the screen.</p> <p>Mother: <i>Come on then.</i></p> <p>Father: <i>Alright won't be long, what do you want the...</i></p> <p>Mick: <i>Errr...can I get... Errrrmmm</i> [stretches his arms].</p> <p>Father takes out his wallet from his trouser pocket <i>I'm having spam fritters you want spam fritters too?</i></p> <p>Mick agrees, then leans back in his chair and</p>	

looks outside as his parents leave the house.	00:09:12
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Mick's diary is marked by a slow rhythm, underpinning his intermittent interaction with the online game. The rhythm is characterised by 'dead time' (Watts and Urry, 2008) broken up by sporadic, brief and quick online activities taking place on one gaming site. Mick's online activity begins with him observing textual updates to a raid he is engaged in online. The screen shows a still image of a skeletal character, underneath the image continuous updates to the game are flashed. To make moves in the game, Mick monitors the damage caused in the raid to his avatar. To do this he flicks back and forth between three different screens (web pages) on the website. These screens include game statistics, his avatar's health, and the settings of the game. In sequence 2 Mick clicks between these three different activities and returns to the main game page. 2 minutes and 3 seconds later Mick clicks to check the health of the avatar before returning back to the main gaming page in sequence 5. 4.5 minutes later in sequences 7 and 8 he repeats this again.

Mick then battles in a raid by tapping on an icon repeatedly 15 times in sequence 7 to defeat the character. 3 minutes later in sequence 9 he

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repeatedly taps three times on the same icon again. In between this, Mick clicks back and forth between the gaming page and to health statistics of his avatar in sequence 8 and 9. However, whilst there are fast-paced periods of active engagement with the game, these periods are interspersed with Mick not engaging in the online game, which accounts for the fact that the few checks and one raid take a total of 9 minutes and 12 seconds.

The second rhythm is constituted by the way in which Mick's gaming is frequently interrupted by his parents, which acts as a distraction. At times this brings friction to his gaming, as Mick physically turns his head away from the computer screen and towards his mother. In contrast Mick's father plays a more supportive role; he watches over and assists Mick's online activities. Many of the parental disruptions are verbal interjections made particularly by his mother, conversations also take place between and with the parents. For example, in sequence 1 and 2, Mick's father assists Mick in setting up the camera and directs his online activities after being online for twenty-nine seconds. In sequences 3 and 4 Mick's mother mumbles in the background, which draws Mick's attention away from the computer screen and towards her. He returns to the game forty-nine seconds later before pausing again in sequence 5 to discuss the recording of the diary with his father. While his parents continue to talk, Mick briefly intervenes in the conversation, still

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being away from his online activities for two minutes twenty-eight seconds after clicking on an icon in sequence 5. In sequence 7, Mick once again returns to the game, while his parents engage in a conversation about a local restaurant, sugar levels and a disagreement over the father's best score in a game online. In sequence 8, Mick is distracted from his online activities by his mother raising her voice. This is followed by the family engaging in a discussion about getting a take away, where Mick remains diverted from his online activities. The way in which Mick's slow rhythm of gaming, the multi-user game's rhythm, his father's assistance and his mother's interjections collide with each other, breaks the harmonious journey of Mick's activity and constitutes a state of 'arrhythmia', where the different rhythms are out of sync (Lefebvre, 2004 [1992]).

Like Noah, Mick engages in one online activity or game at a time. He does not move back and forth between sites like Scott. Noah interacts with the researcher in between his gaming. However, Mick spends significantly more time interacting with his parents offline than playing the online game. Mick's 'wayfaring' takes place between the game and listening to his parents' interjections and conversations, sporadically taking part in them or becoming the target of their interventions (of helping him with the game or the recording, or being asked about a take away meal). This type of 'wayfaring' is

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typical of young people's use of the internet. Young people move seamlessly from interacting with family members, to doing their homework online, or using social media (e.g. when at the dinner table with their parents) (Haddon and Livingstone, 2014). However, Mick's rhythm is also partly influenced by his disability. Rather than 'plunging' or escaping into his online world in the middle of a family mealtime, Mick is thinly engaged with the online environment, being more oriented towards and distracted by his parents, while relying on them for help. His disability also comes to the fore as he nudges the camera, stretches and shuffles about in his chair, and struggles to place the camera back into position.

The slow rhythm of engaging with the online game is guided by the type of game Mick is playing. The game requires Mick to wait and observe opponents' moves and make decisions to purchase an item for the avatar. This kind of waiting around is also illustrated in Scott's diary, who waits for a response to chat notifications and Newsfeed updates on Facebook. However, Scott passes the time by switching between other online activities, just like people waiting in airports fill the time by reading, dining, etc. (Bissell, 2007). In contrast, Mick fills his waiting time by interacting with his parents.

Conclusion

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This article analysed video diaries of three young male students with physical disabilities using digital media at home. It draws on the concepts of ‘rhythm’ (Lefebvre, (2004 [1992])) and ‘wayfaring’ (Ingold, 2011) to make sense of the pace and trajectories of moving about online. The three young males with physical disabilities were fairly different in terms of their pace and journeys. Scott’s rhythm of internet use is fast as he quickly moves back and forth between numerous online sites, activities and devices (i.e. chatting, browsing social media, searching information, uploading content on his iPod and laptop). Noah’s use of the internet is also fast paced. He completes eight levels of one game before moving on to another one. However, unlike Scott, Noah’s movements take place on one gaming site and one device: his desktop computer. He replays several levels of the game, which he intermittently finds difficult and which creates longer sequences of game play. Mick’s moving about online is limited to one gaming site on one device. He remains fixated on a few screens. He occasionally engages in making attacks, purchasing items, and checking the overall status of his avatar in fairly quick succession. But overall his online activity takes place at a slower pace with several interruptions from his parents.

Slowing down and being immobile is an integral part of the experience of using digital media. Scott can choose to pause and give his mindful attention

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(Parkins, 2004) to the image he wants to upload online. Noah, however, is slowed down by the game becoming increasingly more difficult. Mick is unable to make moves in the game at a fast pace, due to the format of the game and the fact that he is not able to quickly manoeuvre the hardware or the software. He therefore engages with the site at a slow pace. Slowness is sometimes the result of a disruption caused by a slow internet connection as experienced by Scott, kinetic friction produced by the game (Cresswell, 2014) as experienced by Noah, and power relations i.e. parents who both help and interrupt Mick's online movements on the gaming site. The journeys of moving about online also give rise to moments of waiting (Bissell, 2007). While Scott waits for an online message he 'wayfares' into other activities. In contrast, Mick waits while listening or taking part in a conversation with his parents, fidgeting and stretching.

Furthermore, Scott moves about within and between digital media with dexterity, using his hands and fingers to hold the camera and slide the touch screen and message. Noah is engaged in simpler but rapid movements of tapping his keyboard with his fingers to play the platform game. Mick's movements are slower both on the keyboard and in his chair, making him less attuned (Ingold, 2011) to perform the kinds of complex rapid movements that Scott performs and which many digital media users may take for granted.

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Overall, the video diaries demonstrate how young disabled people's use of digital media is largely shaped by habitual rhythms of moving about, within, and between digital media, which are repeated over and over again. These habitual rhythms and the ways in which they become engrained in everyday practices also illustrate how inequalities are embedded in the embodied, habitual ways of moving within and between digital devices.

Research on inequality has often focused on access. For example, it has been noted that less privileged young people often use the Internet via a mobile phone, which gives them more restricted access (OECD, 2016). The same observation was made in an ethnography on young unemployed people, who often had limited access and connection to the Internet (Thornham and Cruz, 2016). Elcessor (2016) has argued for a broader concept of access to digital media vis-à-vis disability, which would encompass regulation, hardware, software, user experience and content. Goggin (2016) has discussed how digital media could help overcome or hinder the mobility of disabled people in offline worlds. Drawing on these works, we suggest that access can also be understood in terms of being able to *move in and between* digital media, and we also suggest that analysing the embodied and rhythmic journeys or 'wayfaring' within the digital opens up an important additional perspective on

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how inequalities are embedded and reproduced through the use of digital media.

Throughout Scott's journey he remains largely in control. For instance, he directs his habitual wandering from social media feed, to chatting with his girlfriend and uploading his picture on Instagram. His movements are driven by habit (repeated in a similar way, day-in-day-out) and are stalled by friction (i.e. the time taken for programmes to download or the time his girlfriend takes to respond to a message). However, Scott is also able to direct his journey and move fluidly and quickly from one site and device to the next in the privacy of his bedroom, enveloped in his favourite music and darkness, without being too stuck or interrupted by offline distractions. This stands in contrast to Noah, whose game playing, however fulfilling, is driven by the pace of the game. This dictates Noah's rapid rhythm and eventually slows it down and halts it when continuing becomes too difficult. Similarly, Mick's 'wayfaring' in and out of the role playing game is frequently interrupted by his parents, who help him, distract him, and occasionally have a conversation with him or amongst themselves. Mick is in the public space of the family living room and is unable to manoeuvre the camera or aspects of the computer to protect his private space, or fully direct his online journeys, creating a slow and continuously interrupted rhythm.

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Lefebvre's (2004 [1992]) work was distinctly political, seeking to pinpoint everyday 'tactics' created by the subaltern that disrupted the 'strategies' of the powerful. In a similar way his work on rhythms drew attention to the everyday and habitual paces and movements, which created political and power effects. In the spirit of Lefebvre's (2004 [1992]) work, we have sought to explore how the rhythms of digital media use are interlaced with, perpetuate, and disrupt inequalities. Mobility studies has tended to equate a fast pace and movement with privilege and power. In our case studies, Scott is clearly the most privileged of the three participants discussed and he moves rapidly between multiples sites and devices. Noah's gaming is also characterised by rapid movements, however, it remains stuck on one gaming site, continuously repeating the same cycle of the game. We do not contend that gaming as such is necessarily a sign of a lack of privilege or power, but it is the way in which the gaming is habitually performed in Noah's case, which illustrates him being driven or hooked by the repetition of the game rather than driving his own journey.

Following Elcessor's (2016) observations about key dimensions of access, our case studies show that moving about in the digital involves hardware (iPods, laptops, PCs), software (apps, games, chats) and content (games, news,

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messages). However, the diaries illustrate that it is the embodied, habitual journeys – and the frictions, obstacles, pausing and repeating marking these journeys – between the devices, sites and content that is also important in terms of access. The case studies illustrate that broader elements beyond the digital come into place in shaping the digital rhythms and inequalities, including structures of indoor space (closed bedrooms, open living areas), furniture (beds, desks, closed curtains), family members, relationships and communications online (or lack of).

We suggest that the concepts of ‘rhythm’ and ‘wayfaring’ help to analyse these often unnoticed, embodied and habitual aspects of digital media use and its inequalities. In our case, the concepts helped to unravel how young people with disabilities may have more privileged journeys through the digital, traversing diverse sites and activities, or less privileged ones, entailing limited movements within one site or slow movement with intermittent engagement with the digital. The concepts of ‘wayfaring’ and ‘rhythms’ clearly have future methodological potential for enabling in-depth studies on the everyday, habitual movements of individuals – both disabled and able bodied – in the contemporary digitally saturated landscape.

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social media, with contributions to methodological debates on ethnography and reflexivity.

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