Sheffield Hallam University

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BELL, Alice <http://orcid.org/0000-0001-9737-4081>

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Reading Digital Fiction and the Language of Immersion

Alice Bell (Sheffield Hallam University, UK)

Alice Bell is Professor of English Language and Literature at Sheffield Hallam University (UK). Her main publications include *The Possible Worlds of Hypertext Fiction* (2010) and *Digital Fiction and the Unnatural* (2021, co-authored with Ensslin), *Analyzing Digital Fiction* (2014, co-edited with Ensslin and Rustad), *Possible Worlds Theory and Contemporary Narratology* (2019, co-edited with Ryan) and Style and Response (2021, coedited with Browse, Gibbons, and Peplow).

Abstract

This chapter explores digital fiction and the methods that can be used to investigate how readers cognitively process it. It begins by outlining six generational types of digital fiction and three waves of associated scholarship. Exemplifying third-wave research, it then profiles two empirical studies which show how reader-players negotiate and respond to the interactive nature and immersive potential of digital fiction. While previous research has theorised interactivity as a barrier to immersion, the chapter shows how interactivity can contribute to a reader's immersion within some texts. Adopting a cognitive perspective, it analyses the language that reader-players use to talk about their experiences of digital fiction to show how they conceptualise those experiences. The first case study shows how reader-players of Judi Alston and Andy Campbell's (2015) digital fiction installation *WALLPAPER* use pronominal references that suggest that they are doubly-embodied in the actual world and storyworld at the same time and thus that they experience spatio-temporal immersion (Ryan 2015). The second case study shows that reader-players of Blast Theory's (2015) serialised app-fiction *Karen* use metaphors which suggest that the storyworld has intruded on or else merged with the actual world, an experience that contributes to what Bell (2021) defines as 'ontological resonance'. The chapter concludes that empirical research can reveal the nuances of immersion in digital fiction, and recommends that future empirical research be undertaken to investigate reader experiences of narratives across literary media.

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INTRODUCTION

Digital technologies offer writers and programmers a whole array of tools with which they can build narratives. This chapter focusses on an emergent yet fast-evolving form of interactive, computer-based narrative: digital-born, literary, and ludic narrative media, or digital fictions, which combine forms of written, oral, cinematographic, aural-acoustic, animated, ergodic-interactive, and ludonarrative storytelling. More specifically, digital fiction is "fiction written for and read on a computer screen that pursues its verbal, discursive and/or conceptual complexity through the digital medium, and would lose something of its aesthetic and semiotic function if it were removed from that medium" (Bell et al. 2010). It is a form of experimental fiction whose structure, form, and meaning are dictated by the computational context in which it is produced and received. It includes works of hypermedia fiction (produced using Flash and/or other digital, web-based multimedia software and programming languages, such as HTML5, QuickTime, and JavaScript), Interactive Fiction (IF), app-fictions for tablets and smartphones, videogames that have a strong narrative element, and narratives created in Virtual Reality (VR).

Semiotically, digital fictions may be entirely text-based, involving written language only, or they may combine literary creativity with other modes such as sound, image, animation, and/or film. Typically, yet not exclusively, digital fictions can be read, played, or experienced in multilinear ways, and reader/players often make choices about their journey through the text or storyworld by, for example, following links or responding to textual or visual prompts from the work. They are therefore involved in the construction of these multimodal narratives and must interact throughout the reading experience. Digital fictions are thus examples of what digital media scholar Espen Aarseth (1997) defines as "ergodic literature" in which "nontrivial effort is required to allow the reader to traverse the text" (1). The nontrivial effort that Aarseth identifies in ergodic literature generally is characterized in digital fiction by the role that readers have to play. This includes and readers making choices about their journey through the text or storyworld by, for example, following hyperlinks, responding to textual or visual prompts, or embodying an avatar. They are therefore involved in the construction of these multimodal narratives and their reading experience is much more active or "nontrivial" than that typically associated with reading non-interactive media such as print.

SIX GENERATIONS OF DIGITAL FICTION

One of the earliest forms of digital fiction is Interactive Fiction, also called text adventure games. IFs were a highly popular type of interactive reading game in the 1970s and 1980s, with seminal works such as Infocom's *Zork* (1980), produced by Infocom, but IFs continued to be produced throughout the 1990s and into the twenty-first century by prolific authors such as Emily Short and Adam Cadre. Typically, IFs largely use the second-person to describe a fictional world in which the player is a character – the "you" of the narrative. The reader/player must enter text commands in response to fragments of text displayed onscreen with the commands then generating more of the story.

From the late 1980s, hypertext fictions were developed. In all kinds of hypertext fiction, readers follow hyperlinks which lead them to different parts of the text. While a finite number of hyperlinks exist within a text, thus setting limits as to its structural organisation, readers are ultimately responsible for their journey through the text and thus partially determine the order with which the story is unveiled with some structures resulting in multi-linear narrative contradictions. Pre-web, hypertext fictions, such as John McDaid's (1993) *Uncle Buddy's Phantom Funhouse* and Shelley Jackson's (1995) *Patchwork Girl*, were produced in software such as HyperCard and Storyspace and were largely text-based or else used grayscale images as afforded by the technology. Web-based hypertext fictions, such as Caitlin Fisher's (2001) *These Waves of Girls* and Kate Pullinger et al. (2010) *Flight Paths,* took advantage of Web technologies such as HTML, Javascript, and Flash. Like pre-web hypertexts, these narratives require that the reader engages with the digital technology corporeally and cybernetically through mouse clicks or cognitively by making decisions about her or his journey through the text. However, authors of web-based fictions were able to access a wider range of tools, leading to digital fictions that combine verbal text with graphics, pictures, animations, and music.

N. Katherine Hayles (2008) defines the affordances of digital fiction in terms of a shift between first-generation hypertexts and second generation hypermedia. While the first generation, exemplified by Storyspace hypertext fiction, can be defined largely in terms of the link-lexia structure, the second generation of digital fiction, typified by Web-based works, has evolved with technology to contain more sophisticated and semiotically varied navigational interfaces. Extending this typology, Ensslin (2007) defines the third generation as "cybertexts … which are characterised by a gradual transfer of control from user to machine, leaving the former increasingly powerless" (10). This third generation therefore gradually or entirely remove any agency granted to the reader so that the autonomy of the machine code is foregrounded.

Representing what Hans Kristian Rustad (2012) defines as the fourth generation of digital fiction, social media narratives utilise the affordances of Web 2.0 technology to allow readers to interact with and sometimes partially construct stories on social media platforms (see Ondrak 2018). *The Sun Vanished* (Elliott 2018) and *I Work for the Web* (Wittig and Marino 2015), both published on Twitter, allow readers to respond to questions and/or calls for help from protagonists as well as discussing the nature of the narratives as they unfold. The Instagram Zine *Filter* (2021-) profiles E-lit for Instagram including works such as *I Got Up 2020, Pandemic Edition* which uses the multimodality and sequentiality of Instagram to "document home confinement during the COVID-19 pandemic from June 2020 to May 2021" (burrough 2021). Leonardo Flores' (2019) notion of third generation electronic literature bypasses Ensslin's definition of physio-cybertext and also conflicts with Rustad's definition. In addition to literature "social media networks", Flores defines it as literature that uses other "established platforms with massive user bases such as … apps, mobile and touchscreen devices, and Web API services". His conceptualisation of third generation literature thus merges various technologies on the basis of their potential audience size as opposed to their respective technological affordances.

In recent years, however, the distinctiveness of participatory narratives in mobile, collaborative, and/or deeply immersive environments has been shown. Born-digital app-fictions, which are read via

apps on tablets and smartphones (Ensslin and Bell 2021), might be defined as the fifth generation of digital fiction because their distinctive use of touch-screen technology and/or a device's built-in location services. Much like pre-web and web-based hypertext fiction, readers navigate app-fiction such as Steve Jackson's (2014) *Sorcery!* via text-based multiple choices and/or as an avatar navigating a 3D space but the deployment of touchscreen as opposed to a mouse or keyboard means that the reader's haptic engagement with the text is more intimate. Readers of Samantha Gorman and Danny Cannizzaro's (2015) *Pry* and David Wiesner's (2015) children's app-fiction *Spot* use a wider variety of touchscreen gestures to navigate the text's multi-layered content including a finger pinch to zoom in and out of fragments of text and images. Other app-fictions, such as *Story City* (2016) and Naomi Alderman and Rebecca Levene's (2012) *Zombies, Run!*, utilise locative storytelling (Raley 2010; Abba et al. 2021) techniques and technologies such as GPS to anchor the narrative to specific locations in the real world. Thus, while Flores places social media fiction and app-fictions in the same generational category, the exposition of these digital fiction forms here shows that they utilise very different affordances to create technology-specific experiences.

A contender for the sixth generation of digital fiction is a newly emerging and highly immersive form of digital fiction which involves first- or third-person avatar navigation through three-dimensional worlds. Story-driven games, such The Chinese Room's (2016) *Everybody's Gone to the Rapture*, ask the reader to piece together written and/or spoken narrative fragments as they explore intricately rendered 3D digital spaces. Taking the immersive potential of digital media even further, narratives produced in Virtual Reality use technologies such as HTC Vive and Oculus Rift to make what was once a "castle in the air" for narrative (Ryan 2015, 35) a viable and, crucially, more affordable form of storytelling. VR fictions, such as *Dear Angelica* (Oculus 2017), allow readers to enter a 3D fictional world relatively passively. They are able to move their head to explore their immediate environment but their main role is to view and listen to the story in a cinematic type experience. Others such as Mez Breeze and Andy Campbell's (2018) *Perpetual Nomads* offer a more active experience by allowing readers to contribute to the story by solving mysteries or influencing their journey through the storyworld.

In addition to the conflicting generational chronologies and definitions outlined in the scholarship above, it is also important to note that generations of digital fiction are not necessarily as distinct as the terminology might imply. As Ensslin (2007) notes, a text such as Michael Joyce's (1996) *Twilight a Symphony* is "at the same time, a prime example of hypermedia and one of the first and few quasi-cybertexts" (148). Moreover, one generation does not replace another. First and second generation hypermedia fictions are still being written today, alongside the publication of third, fourth, fifth, and generation fiction, albeit using different software such as Twine or Unity as opposed to the Adobe Flash or QuickTime (see Ensslin and Skains 2017).

DIGITAL FICTION, READERS, AND THREE WAVES OF SCHOLARSHIP

Irrespective of the software or hardware used to make digital fiction, theorists have always sought to understand the relationship between the texts and readers. In the 'first wave' of theory that accompanied hypertext fiction, poststructuralist textual models were deployed to conceptualise its form. Since readers can choose which links to follow in a hypertext, they were considered "co-producers" of the text, and thus Barthes's (1990 [1974]) notion of the "wreaderly" versus "writerly" texts has been invoked as a comparable model (e.g., Moulthrop 1991, Landow 1994). Because of its unfixed electronic form, hypertext was also compared to Derrida's (1981) decentered text (e.g. Bolter 1991) and conceptualized as an embodiment of Deleuze and Guattari's (1988) rhizome (e.g. Landow 1994, Burnett 1993) because of its multi-linear form. It was also seen as a medium which might facilitate Cixous's (1991) l'écriture feminine because of the unfixed structures and unstable boundaries that it permits (e.g. Landow 2006). In the first wave of scholarship, readers were also often situated in a binary relationship with their print counterparts (e.g. Douglas 1994) with digital writing conceptualised as something that would liberate the reader from what Robert Coover (1992) proclaimed was the "tyranny of the line" that had previously constrained readers of print.

While conceptually alluring, the first wave of scholarship does not offer a way of analysing individual texts nor provide insight into how readers process them. As a means of addressing these gaps, a second wave of digital fiction research shifts the emphasis of scholarship towards applying replicable

methodologies to individual digital fiction works (e.g. Bell et al. 2014; Bell 2010; Ciccoricco 2007, 2015; Ensslin and Bell 2021; Punday 2019). Analysing the linguistic, narratological, multimodal, and/or interactive devices at work in a range of digital fictions, second-wave scholarship has focussed on areas such as: narrative voice (e.g. Bell and Ensslin 2011), narrative perspective (e.g. Ciccoricco 2012), fictional dialogue (Thomas 2007), immersion (Ryan 2015), hyperlinks (e.g. Bell 2014), literary ludicity (e.g. Ensslin 2014), and user-interface elements (Punday 2014). Because this kind of scholarship often utilises theoretical models and analytical frameworks from cognitive narratology and/or stylistics, there is an inevitable disciplinary focus on the reader's relationship to the texts and the fictional worlds they construct thus providing new analyses of individual texts and new theoretical understanding about how readers process textual features (see Bell et al. 2014).

What is now being defined as a third wave of digital fiction research (Bell et al. 2018) seeks to empirically investigate digital fiction reading by collecting and analysing reader responses to individual texts (e.g. Gardner 2003, Pope 2006, 2010) using both qualitative and quantitative data collection methods. More recently, third-wave digital fiction research has used empirical methods alongside second-wave analyses of or conclusions about individual texts to examine the effect that particular textual features (e.g. hyperlinks; second-person "you") have on readers (e.g. Bell et al. 2019, 2018; Ensslin et al. 2019; van der Bom et al. 2021). Drawing on empirical methods developed in the disciplines of cognitive poetics (e.g. Whiteley and Canning 2017; Bell et al. 2021) and psychonarratology (e.g. Bortolussi and Dixon 2003), third-wave research thus extends the remit of second-wave scholarship by offering empirically substantiated and medium-specific theoretical, methodological, and analytical insight into digital fiction reading.

In what follows, this chapter profiles third-wave digital fiction research by reporting on two empirical studies which were conducted as part of the Arts and Humanities Research Council-funded Reading Digital Fiction project (AH/K004174/1) in the UK. Methodologically, both studies draw on and extend Bortolussi and Dixon's (2003) psychonarratological distinction between "textual features", which are "objective and identifiable characteristics of the text" (37) and "reader constructions", which are

"subjective and variable mental processes" as responses to the text (37) by utilising their framework for the examination of born digital texts. Applying this approach to a sixth generation fiction, exhibited as an installation, and a fifth generation app-fiction, the case studies combine a medium-conscious examination of textual features with the analysis of the language that readers use to talk about their experiences of the text. This chapter thus offers a new methodology for the examination of digital fiction and provides new analytical and theoretical insight into the way that readers experience the affordances of digital fiction. In particular, the two case studies show how pronominal reference and the use of metaphor can reveal ways that readers conceptualise their relationship to and role within a storyworld and thus offer fresh understanding of the way that immersion is cued in and experienced by readers of digital fiction.

CASE STUDY 1: THE *WALLPAPER* INSTALLATION

WALLPAPER by Andy Campbell and Judi Alston is a first-person, 3D narrative game (Ryan 2015: 234) which was exhibited as an installation at Bank Street Arts in Sheffield, England, in November 2015. The text utilises videogame technology to tell a story about protagonist PJ Sanders, a computer engineer at a company called Poppitech, who returns to his remote family home in the UK following the death of his elderly mother. To find out more about his elusive past, reader-players adopt Sanders' first-person perspective (as an avatar) and explore the house and its surroundings. The aim of the ludic part of the experience is to find a key to open the parlour room which has remained locked since Sanders' childhood. However, the experience is mostly made up of spatial exploration of the fictional world and reader-players come across various visual and textual objects in the house (e.g. postcards, letters, notes, floating circles of text) which reveal information about Sanders and his family. Within the installation, the work was projected onto a large screen inside a dark, enclosed purpose-built room within the gallery. The reader-player sat opposite the screen and used a mouse and keyboard to navigate the text. Depending on the number of visitors in the gallery, reader-players might be joined in the room by others. However, the interface allowed only one person to operate the computer, and therefore only one person was responsible for navigation and the first-person perspective of Sanders.

The study aimed to investigate how readers conceptualise immersion in naturally occurring texts – that is texts that have not been created purely for empirical research. Four reading groups (14 participants in total) were recruited to take part in the reader-response study which aimed to investigate the way that immersion is experienced (or not) in the exhibited text. In terms of protocol, the participants were asked to experience *WALLPAPER* at the gallery individually and subsequently meet as a group to discuss it. The participants had varying levels of experience with video-gaming and with digital reading. Mixed age and gender groups were chosen for the study in order to gain access to a range of different perspectives on *WALLPAPER*. Moreover, because *WALLPAPER* combines straightforward gameplay and reading, participants did not necessarily need to have experience of videogaming. None of the participants had read much if any digital fiction before, so this was a new experience for most participants.

Participants were told that the researchers were interested in immersion in *WALLPAPER* but that they could talk about whatever interested them about the experience. The protocol aimed to maximise the "naturalistic" (Allington and Swann 2009) nature of the study by allowing "readers to interact freely" (Peplow et al. 2015: 6) and thus offering "greater ecological validity" (Peplow et al. 2015: 6). However, because the study aimed to "generat[e] hypotheses based on informants' insights" (Flick 2009: 203) on a particular topic, a researcher was present at each group and she guided the discussion according to a semi-structured protocol thus introducing a level of experimental intervention to the study design. Therefore, while the researcher had a set of topics and associated questions for discussion, adopting a semi-structured approach meant that the researcher was also "free to allow for unplanned talk" (van Peer et al. 2012: 82). The approach taken was thus semi-naturalistic in that it allowed data to be collected on a specific topic while acknowledging the limitations of a researcher-led session. All sessions were audio-recorded, transcribed and subsequently thematically coded using the computer-aided qualitative research tool NVivo, before discourse methods were applied to the linguistic data.

In terms of navigation, *WALLPAPER* uses what Thon (2009) calls a "subjective point of view" in which the reader experiences the storyworld from both "the spatial and perceptual perspective of the player's avatar" (282) and also a "subjective point of action" in which "the action position of the player coincides with that of the player's avatar" (290), so that the reader-player controls the actions of the avatar directly. Readers are introduced to Sanders via a letter from his employer, displayed visually onscreen and read by a voiceover, at the beginning of the narrative. The sender (a member of the Human Resources department) states "I am very sorry for the loss of your mother" but notes that Sanders' role at the company has "become questionable" because of his inability to complete a work project. Such details about a recent bereavement and difficult professional situation encourage readers to emotionally identify with the character and thus feel a perceptual relationship with him. However, the use of the second-person "you" throughout the letter alongside the reader's control of the onscreen first-person perspective also encourage the reader to assume the role of Sanders.

In his exploration of the second-person in fictional narrative, Herman notes that some forms of "you" can be used to refer to both a fictional and a real addressee simultaneously, producing what he calls "double-deixis" in which "narrative *you* produces an ontological hesitation between . . . reference to entities . . . internal to the storyworld and reference to entities . . . external to the storyworld" (338). Herman's conception of this form of pronominal reference as "hesitation" might suggest that the referent of "you" moves back and forth between addressees. However, in elucidating this category further, he describes double deixis as a "blend" (342), a "hybridized combination," (342) and, more frequently, a case of the "superimposition of deictic roles" (345), terms suggesting that "you" is simultaneously actual and fictional.

As Bell et al. (2018) show, pronominal self-representation throughout the data suggests that reader-players did feel simultaneously positioned inside and outside *WALLPAPER* at the same time. Examples include the use of the second-person: "Someone was talking to you … when you kept flicking the light switch" (Eleanor, WALLPAPER-A, 508) and the first-person "I did wander round-

round the garden and … think I should go in the house now" (Will, WALLPAPER-C, 1047)[1]. In both examples, the participants mention the interactive tasks they undertook: flicking a light switch and wandering around the garden. In the first example, Eleanor uses the second-person "you" to refer to Sanders in the storyworld and the player-as-Sanders in the actual world at the same time and thus uses "you" doubly-deictically, assuming the first-person perspective initially offered to them by the letter from Human Resources and enforced by the subjective point of view and action they experience when navigating *WALLPAPER*. The use of "I" by Will also suggests an alignment between the avatar's actions in the storyworld and the reader-player's actions in the actual world, thus leading to the use of what Bell et al. (2018) define as doubly-deictic "I" in which the reader-player refers to themselves in the actual world and the character that they are controlling in the storyworld at the same time as though they are operating and existing inside and outside the fictional world simultaneously.

From a theoretical perspective, the doubly-deictic pronoun use, which is widespread in the data, is significant because it empirically supports Ensslin's (2009) concept of "double-situatedness" in which she proposes that reader-players are "'embodied' as direct receivers, whose bodies interact with the hardware and software of a computer [and] … 're-embodied' through feedback which they experience in represented form, e.g. through visible or invisible avatars" (158). Moreover, while the participants do not talk explicitly about being immersed in the narrative, their use of doubly-deictic forms of pronominal reference imply that they did at least experience "a sense of being present on the scene of the represented events" (Ryan 2001: 122) and thus also provides some qualitative evidence of spatio-temporal immersion with the associated phenomenological effect of feeling partially or intermittently "transported" (Gerrig 1993, cf. Green and Brock 2000) into the storyworld. The immersion-as-transportation metaphor has been criticised by some digital media scholars on the basis that reader-players are "not literally transported to another place while reading or playing" (Thon 2008: 30), and also that it implies "a unidirectional plunge into a virtual world" (Calleja 2011: 168). However, the data from the *WALLPAPER* study shows that readers of some digital fiction do sometimes use

[1] All names are pseudonyms. Letters refer to the group and numbers to the line number(s) in the dataset. The data from this study can be accessed at: http://doi.org/10.17032/shu-160006

language which suggests that they experience immersion asa form of transportation or relocation to another space – while also being doubly-situated – and thus further empirically substantiates the reading-as-transportation metaphor across media (cf. Green et al. 2004).

CASE STUDY 2: THE *KAREN* APP-FICTION

Karen is an app-fiction for smartphones published by Blast Theory in 2015. The app uses full motion video and interactive interface elements to construct a storyworld around protagonist Karen, a middle-aged British woman, who is assigned as the reader's life coach. Over the course of eight days, reader-players receive seventeen short videocalls from Karen in which she divulges information about herself or else gathers information about the reader by asking them questions in the second-person and requiring them to input text or select an answer from a number of onscreen options. The interactive experience relies on the reader-player being in conversation with Karen and, if the reader-player misses a scheduled interaction, they receive a text message notification from Karen to say so, each signalling varying degrees of formality (e.g. "I'm ready to get going when you are") or inappropriate over-familiarity (e.g. "Erm, yeah, we should do a session"). Karen meanwhile becomes increasingly erratic as she crosses more personal boundaries by asking readers to help her with her dysfunctional personal relationships.

The app is classified as "Entertainment" on the Apple and Google Play app stores, offering a paratextual clue as to its fictional status. However, there are various devices in place which also work to make this experience feel authentic. First, the interaction takes place on the reader's smartphone or tablet and thus on a device with which they will likely take part in the digital communicative methods that the app exploits in their daily life. The use of the full motion video feels like a real Skype or FaceTime call and the notifications mirror messages that readers would receive from any other app and appear alongside notifications from real people such as text messages or emails. Thus, the Karen experience exploits and blends into the user's everyday interaction with their mobile device.

While the *Karen* app is intended to give a semblance of authentic life-coaching, Karen's incompetence and inappropriate behaviour as a life coach as well as the humour elicited by the multiple-choice responses that readers are offered show that it is not. Karen is not real and, because the actor playing her is performing a script, the reader cannot interrupt or guide the conversation as we would in a real conversation. However, the familiarity of the linguistic interaction, the way in which Karen responds to the reader's input, and the interactive conventions of digitally mediated communication on which the app relies combine to make the experience feel as though it could be real. In fact, some app-store customer reviews of *Karen* reveal a tension between what people know is a fictional experience and what appears to be a real interaction. One review reads: "Immersive, Interactive, Unique mixed-reality game, feels real, has a lasting impact" (Apple Store 2015). The observation that the experience "feels real" suggests an interplay between what the reader-player knows is a fictional experience, but which also has at least a semblance of verisimilitude with the response having longevity beyond direct interaction with the app.

Bell's (2021) study aimed to explore reader responses to the ontological play at work in *Karen*. The empirical study involved 20 participants (32-76 years of age) who were members of five book groups in the North of England, UK. Participants were each asked to experience *Karen* individually and then meet up in their respective book groups to discuss it. In terms of media experience, all participants read fiction on a regular basis and were competent smartphone users. Few of the participants played computer games regularly. Only two participants declared that they had read a digital fiction app before, but app-store reviews of *Karen* indicated that very few people had experience of this kind of fiction before they encountered the app either. The digital reading experience of the participants thus matched that of the more general *Karen* app audience.

The study was designed as a "naturalistic" (Swann and Allington 2009) empirical study which sought maximum ecological validity by presenting the text in its original form, using readers' discussions about the text in their usual environment, and using minimal researcher intervention. Discussions

therefore took place in the venues the book groups were usually held in such as people's houses or a local café. Unlike the *WALLPAPER* study reported above, a researcher was not present at the discussion in order to more freely allow the readers to focus the discussion on what they were specifically interested in without being intermittently being asked specific questions. The participants were thus given relatively modest and unobtrusive instructions in terms of what to discuss in order to reassure them that the researchers were not looking for any particular responses. However, since the study aimed to elicit responses about the potentially ontologically intrusive nature of the app, participant instructions explicitly invited them to discuss: the story experience as a whole (i.e., the story itself and experiencing the story on a mobile phone); the main character Karen; their relationship to Karen; and anything else they would like to talk about. As in the *WALLPAPER* study, the *Karen* group discussions were audio recorded and subsequently transcribed. The datasets were coded for emerging themes using NVivo with data within relevant themes subsequently analysed linguistically.

As Bell (2021) shows, almost all the participants in the five reading groups experienced very strong emotional responses to Karen as a character. Typically, participants felt that Karen was "unprofessional" (Elaine, B: 294) and even described her as "weird" (Annie, A: 311-3) because of the erratic approach to life-coaching she takes in the app. Some participants, however, also felt concern for Karen, experiencing feelings of guilt about their behaviour towards her (e.g. "I actually started to feel responsible for her unravelling" [Laura, A: 487-8]) as well as strong emotive responses to her predicament ("the decline of her life … was quite painful to observe" [(David, D: 13])[2]. The unequivocal personal responses to Karen, as exemplified in the latter two extracts, suggest that these participants were emotionally immersed in the narrative, experiencing "subjective reactions to characters and judgements of their behavior ..., emotions felt for others …, emotions felt for oneself" (Ryan 2015: 108). Such responses might also suggest that they were transported to the storyworld in

[2] All names are pseudonyms. Letters refer to the group and numbers to the line number(s) in the dataset. The data from this study can be accessed at: http://shurda.shu.ac.uk/id/eprint/60

which Karen exists in order to experience those emotions. However, the app also generated responses that implied a more complicated ontological relation.

As Bell (2021) shows, two participants from two separate groups explicitly remarked on the way in which the character Karen and/or the storyworld seemed to intrude into their personal space. Jennifer, for example, states "I just felt it was like somebody was actually interfering in my life" (C: 114) and thus explicitly attributes responsibility to the fictional character Karen for "interfering," a verb which implies an undesirable presence. In an evaluation of the Karen app towards the very end of their discussion, some participants in Group A note a similar feeling:

> Kim: It came into your life
>
> Nancy: Yes
>
> Annie: Yeah, whether you liked her or not (1488-1490)

Kim uses the spatial deictic verb "came" which indicates that the actual world forms the proximal centre of her experience with "it" – a pronoun which refers to the experience as a whole - moving into that domain. Nancy and Annie both agree with Annie noting that Karen's presence was non-negotiable. Importantly, Jennifer and Kim use the prepositions "in" and "into" which both invoke the spatial metaphor of life-is-container. This conceptualisation implies that their lives represent a physical space that other entities - a fictional character or a narrative experience in this case - can also occupy. Both of these particular examples of metaphor show that the intrusive experience occurred in the past so that participants no longer feel, at the moment of reporting, as though Karen is involved in their lives. However, what is notable in both examples is that Karen is perceived as coming into or being present in the actual world as opposed to the readers being transported into the storyworld, even though the readers know that Karen is not real. Narratologically, this experience represents a form of "convergent interactional metalepsis" in which the boundary between the actual world and a storyworld can become blurred if not appear to completely dissolve such that the worlds appear to

converge (Ensslin and Bell 2021: 72-9). From a cognitive perspective, the data above shows how convergent interactional metalepsis can lead to : "ontological resonance" which occurs when "reading/viewing/playing a fictional work … results in a prolonged response and aura of significance which is generated by perceived bidirectional ontological transfers both during and after the experience" (Bell 2021: 431). This concept acknowledges the part that transportation plays in generating resonance, because readers must be transported into a storyworld in order for elements of it to be brought back into the actual world. It recognises both the blurring of fiction and reality that can happen in texts that play with the boundary between reality and fiction but also the prolonged felt effects of those ontologically transgressive texts. Importantly, the readers' experience of *Karen* above is impossible; characters cannot transfer into the actual world. However, ontological resonance is achieved in *Karen* precisely because readers *feel* as though the storyworld and the actual world become part of one another, ontologically resonating.

CONCLUSION: DIGITAL FICTION AND THE VALUE OF EMPIRICAL RESEARCH

In her seminal work on interactivity and immersion in digital literary media, Ryan (2015) suggests that interactivity can prevent or stifle immersion because of its self-reflexive potential. However, she notes that "the key to immersive interactivity is ... [when] the participant's verbal contribution ... count as the actions and speech acts of an embodied member of the fictional world" (209). She thus suggests that it is only when reader-player can make verbal contributions in the storyworld that they can become truly immersed. This chapter has shown the many creative ways that authors have utilised digital technologies to tell stories and create rich storyworlds. The two empirical studies show how readers can be spatio-temporally and emotionally immersed in digital fiction by being granted agency within those worlds, either by contributing to the story through multiple choice questions as in *Karen* or by embodying an avatar in a 3D narrative game as in *WALLPAPER*. As such, this chapter demonstrates that immersion can be achieved in digital media not just through verbal contributions as Ryan maintains but also through spatial exploration of the storyworld. The further development of a third wave of digital fiction scholarship that seeks to understand how readers respond to and process

individual works will help us to better understand the way that other historical, current, and future narratives can immerse reader-players (or not) in digital literary media.

Empirical research is a relatively new paradigm for digital fiction scholarship. However, what the two case studies show is that reader responses can provide a way of developing new or empirically validating existing theory, even when – or perhaps especially when – that theory is accounting for experiences that are ontologically impossible. The value of a qualitative empirical approach in particular lies in its ability to drill down into individual examples of language use which implicitly express a relationship between the reader and the storyworld. When readers are embodied as avatars in *WALLPAPER*, some feel as though they are present in the actual world and storyworld at the same time – doubly-situated – even though this is physically impossible. When readers of *Karen* feel like Karen is intruding into their real lives, they feel as though the storyworld and actual world are uncannily merging – ontologically resonating – even though that is physically impossible. It is perhaps the capacity for digital literary media to render impossible experiences possible that makes these storyworlds so alluring.

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