# 'An Infinitude of Possible Worlds': Towards a Research Method for Hypertext Fiction

### Spencer Jordan\*

Department of Humanities, Cardiff School of Education, Cardiff Metropolitan University, Cyncoed Campus, Cardiff, UK

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While the investigation of creative writing as a research method is gathering apace, little work has been done into the specific case of hypertext fiction (fiction written through a digital medium). This paper argues that, while there remain certain similarities between paper-based and digital texts, fundamental differences in design and construction remain. If hypertext fictions are to be successfully understood, then the role and purpose of the digital writer needs to be more fully analysed as part of the creative process. This paper argues that Possible Worlds Theory offers a way forward. With its focus on the ontological structures created by hypertext fiction, Possible World Theory actively embraces narrative indeterminacy and ontological changeability. In this sense the method provides a structured means by which the creative manipulation of the unique affordances of a digital medium by a writer can be theorised.

**Keywords:** hypertext, digital, fiction, research, method, interactivity

### Introduction

As Kroll and Harper have written, 'the development of creative writing as a research discipline ... has not yet been well documented' (2013, 1). However, with the increasing popularity of creative writing courses across UK universities (a trend likely to be sustained by developments such as AQA's new A level in Creative Writing), the need for a critical understanding of creative writing as a research method could not be more apposite. In part this is being pushed by the UK's regulatory and quality landscape. Although there is not yet a separate Quality Assurance Agency (QAA) subject benchmark statement for creative writing, the National Association of Writers in Education (NAWE) produced their own in 2008. Under 'Subject Knowledge and Skills', NAWE's recommendations are unequivocal: creative writing courses need to provide students with 'critical awareness - the ability both to contextualise writing within a given historical/cultural/stylistic framework, and to reflect constructively on the student's own process and product' (2008, 5). This chimes strongly with the QAA's own discussion of creative writing in their subject benchmark statement for English.

It would be wrong, however, to see this critical engagement with process as something driven solely by the need to meet external quality issues. Pressure has also come from within the discipline itself. Historically, Donnelly has argued that the creative writing workshop has suffered from an *absence* of theory which has led to what she identifies as the 'self-marginalisation' of creative writing studies from other, more established, disciplines (2012). Yet, as Kroll and Harper make clear, research methods within art and design has a long and successful heritage (2013, 2). They argue that it is at this disciplinary intersection that creative writing can adopt some of the approaches of an already established method: 'creative writing involves imagination, practice and critical engagement, working together ...' (2013, 3). Brook (2012) is more forceful. In his critique of practice-led research within creative writing, he calls for a significant 'intellectual realignment' (2012, 7) in which the inward-looking assumptions of *practice-based* research (research *into* practice) are replaced by a

more interdisciplinary (and critically-informed) *practice-led* approach (research *through* creative writing). Yet, as Webb and Brien (2008) have noted, creative writing is a very particular mode of research in which knowledge and interpretation are uncertain. They suggest that Keats' concept of 'Negative Capability' offers a suitable epistemological model: that condition 'when a man is capable of being in uncertainties, Mysteries, doubts, without any irritable reaching after fact and reason' (Keats, 1899, 276–7); or, as Webb and Brien go on to say themselves, 'the capacity to accept ambiguities and uncertainties',

In this sense then, the critical exploration of creative writing can be seen to be at a key moment. An understanding of the difference between practice-led as opposed to practice-based research is gaining wider recognition across the discipline (Brook 2012, 2). Alongside this, a more sophisticated epistemological understanding of the knowledge generated by these investigations itself is emerging.

summarising their approach as 'agnostic research' (2008, 3).

This paper builds on these ideas by arguing three related points. The first is that the specific case of digital texts (stories created for a digital medium) are not explicitly addressed by existing critical practice strategies and approaches. Kroll and Harper's *Research Methods in Creative Writing* (2013), for example, does not explicitly discuss a critical framework for digital texts. This lacuna relates to the second point made by this paper: that the creative process underlying digital texts is significantly different from that of non-digital texts and that it is this difference which necessitates consideration of new theoretical frameworks (frameworks not necessarily borrowed from non-digital methods). Thirdly, this paper will propose one such theoretical framework for hypertext fiction.

## The Case for Digital Stories: Hypertext Fiction

We live in a world in which almost all media are now dependent on some kind of electronic technology, either in terms of how it is made or/and hosted. Even traditionally-printed novels today almost certainly started life as an electronic file on a word processor. In this sense, almost all creative writing is digital at some time in its life cycle. Yet Ryan concludes that for a text to be

considered a 'digital text' it 'must not merely use but necessitate the computer for both production and display' (Ryan 2004a, 329). In other words a digital text is one in which the computer is an *integral* and *inviolable* part of the text itself. Without the computer, there would be no text. It is this definition that is taken forward in this paper.

There is already a long tradition of writers and artists who have explored the potential offered by digital texts. From the 1980s, as technology improved, the use of both video and sound rose to the forefront of experimental practice, pushing the boundaries of what a 'text' could be considered to be. Early computer games such as *Final Fantasy* (Square, 1987) began to offer increasingly detailed narratives, elaborately enriched with game play. But it was only with the growth of the World Wide Web that ordinary writers were able to access a platform through which electronic texts could be (relatively straightforwardly) created and published.

Although the term itself predates the World Wide Web (see, for example, Nelson 1981), 'hypertext' has come to refer to any document written using hypertext markup language (HTML) and then accessed through a web browser. As well as supporting multimedia, hypertexts embrace the two key characteristics of their underlying code: interactivity (the actions of the reader to some degree determine the story) and multi-linearity (there are differentiated 'pathways' through the story, see Ryan 2004a, 338). This is as evident in Bobby Rabyd's groundbreaking *Sunshine* '69 (1996) as it is in more contemporary hypertext fictions, such as Rutget van Rijk's *The Mobius Case* (2005).

Over the years a number of products have appeared which specifically support the creation of hypertext fictions. Perhaps the most popular is Storyspace, a 'hypertext writing environment' developed in the late 1980s by Eastgate Systems and still going strong. Over the years it has been used to produce some iconic hypertext fictions, including Michael Joyce's afternoon: a story (1987) and Shelley Jackson's Patchwork Girl (1995). StorySpace is not free and involves the downloading of the 'writing environment' onto the author's computer. It is specifically marketed at those writers interested in producing 'large, complex, and challenging hypertexts'. More recently, and in contrast to StorySpace, James Pope and James Ready at Bournemouth University have created a web-based platform for both the creation and hosting of hypertext stories. Unlike Storyspace, Generator is openly accessible and designed to support the non-web-specialist writer, such as those students undertaking a more traditional creative writing or English-based degree, those 'interested in the form but nervous of sophisticated multi-media writing and design tools' (Pope 2013, 206). Based on his own experience of teaching digital writing, Pope offers useful guidance for any digital writer when it comes to the construction of hypertext fictions. Interestingly, much of what he has to say is in regards to a more considered approach to the inclusion of interactivity and multi-linearity within any story. He notes that 'readers expect and want all of the "traditional" pleasures of reading when they come to the screen' and that 'the balance between effort and reward is a crucial and overarching component of reading pleasure in hyper-fiction' (2013, 208).

In many ways this reflects a wider change in the analysis of hypertext fictions, what has come to be seen as a shift from first to second wave hypertext theory. First wave theorists tended to emphasise the correlation between hypertext and literary theory (Bell 2010, 10). Theorists such as Delany and Landow stressed the degree to which hypertext was 'an embarrassingly literal reification' of poststructuralist theory (1991, 10), highlighting the central role of the reader in transcending the 'linear, bounded and fixed qualities of traditional text' (Delany and Landow 1991, 3). Such an experience was understood to be deeply immersive, the reader physically (through interactive control) situated 'within' the system: 'We are the medium and the medium is us' (Hayles 2001, 37). Taking this further, the reader and text were understood to exist within what has been termed the same ontological domain. As will become clear, ontology is of central importance to debates about 'text' and 'reader' and how one can understand the relationship between them and the generation of knowledge and meaning.

In perhaps an inevitable riposte, second-wave theorists have instead emphasised how both the structure of a hypertext, and the reader's role, provide a 'means of prohibiting her or him from fully engaging with the narratives that hypertext novels contain' (Bell 2010, 15). Theorists such as Aarseth have noted the degree to which a hypertext causes estrangement and discontinuity - 'the sudden displacement of the user's position in the text' (1994, 69) – while Snyder notes that 'the need to make choices never lets you forget that you are participating in the making of a fiction' (1996, 89). Taking this further, Ryan has argued for the anti-immersive nature of hypertext fiction (2001, 2006), highlighting the connection between hypertext fiction and 'alienation from the fictional worlds they describe' (Bell 2010, 16). In this sense, second wave hypertext theory draws attention to the way hypertext fiction emphasises the reader's role outside of the text and the artificiality of the consequent reading experience - 'whenever the reader comes to a link and is forced to make a choice, the illusion of an imagined world must break down, at least momentarily, as the reader recalls the technical circumstances of the electronic medium' (Bolter 2001, 138).

More specifically, Bolter goes on to discuss how hypertext fictions emphasise reader estrangement by use of 'narrative devices such as contradictory stories, non-chronological ordering of events, overtly visible navigation tools, and the use of intertextual references' (Bell 2010, 17). In this sense it is both the medium and the self-reflexive nature of the narrative (how the writer designs the text) that has an effect on the reader's experience. In this second wave theory, Hayles' 'we are the medium' becomes a complex sequence of repositionings, as the reader moves through various ontological domains.

Yet, as Bell has noted, both first and second wave theorists have tended to avoid the close analysis of published hypertext fictions themselves (2010, 19). More pertinently, she notes that 'hypertext theory still lacks an appropriate and systematic framework' for analysis (2010, 19). To this end Bell has posited the use of Possible Worlds Theory (hereafter PWT) as a suitable framework.

### **Possible Worlds Theory**

In his philosophical tracts, Leibniz defined a God who firstly conceives of every possible world before choosing one for mankind to inhabit ([1710] 1985). In the twentieth century this notion of a 'plurality of possible worlds' (Ryan 2001, 99) was developed as a philosophical discourse (see, for example, Lewis 1986), a logic-based system that provided a means of analysing the truth value of propositions. Although it is not intended to go into the history of PWT, it should be understood that a key idea was that any world is theoretically possible if it satisfies the laws of noncontradiction and of the excluded middle (Ryan 1991, 31). By the 1970s PWT had begun to be used as a research method within literary studies. As Ronen notes, this appropriation by literary studies is not straightforward, involving, to some degree, 'a naive adaptation or an inadvertent metaphorization' of the concept of PWT (Ronen 1994, 7). Yet as Pavel comments in regard to his own use of PWT, 'the notion of world as an ontological metaphor for fiction remains too appealing to be dismissed' (Pavel 1986, 50).

For some literary theorists, PWT affords a framework by which they can consider the relationship between the actual world of the reader and the semantic domain of the fictional text. To give just one example, Eco used PWT to examine the plot of the short story, 'Un drame bien parisien', examining the possible worlds built by the readers as they moved through the text (Eco 1978). In essence, PWT allows theorists to understand fictional texts as constructing alternative 'worlds' from which, further, embedded worlds can then be created. Ryan, looking specifically at hypertext fiction, distinguishes two systems of modality: the 'actual world' (where we live as writers/readers) and the 'textual universe' created by the hypertext fiction (Ryan 1991, viii). The textual universe consists of a 'sphere which the narrator presents as the actual world ... [and] a variety of APWs [alternative possible worlds] revolving around it' (Ryan 1991, 22). Bell (2010, 25) represents Ryan's framework using the following categories:

#### **Table 1** Bell's representation of PWT.

Actual world: the ontological domain in which the reader is situated

Possible Worlds: the ontological domains created by the desires of those inhabiting the Actual World

*Textual Actual World*: a possible world created by a fictional text. It forms the centre of a Textual Universe.

Textual Possible Worlds: possible worlds created by the desires and dreams of the characters from within the Textual Actual World

Textual Universe: comprises a Textual Actual World and the associated Textual Possible Worlds

Such a framework is particularly appropriate for analysing hypertext fiction, where 'every lexia [web page] is regarded as a representation of a different possible world, and every jump to a new lexia as a recentering to another world' (Ryan 2001, 222). The verb 'recentering' is critical here and is an important part of both Ryan and Bell's argument. Behind it lies an important

philosophical assumption about how PWT is understood. For both Bell and Ryan, PWT is based on what they term an 'indexical' definition of actuality (Ryan 2001, 101). In this definition, the theorist can conceptualise other worlds as 'real' in regards to the point of view of their inhabitants. In this sense, the Actual World (and its associated possible worlds) is always relative to the position of the observer (rather than being absolute). The notion of 'recentering' follows on from this assumption, describing how the reader can actually be understood to recenter into different ontological domains (Ryan 1991, 22).

As Bell states, PWT openly embraces the multi-linear characteristics of hypertext fiction, thereby removing the need to reduce such fictions to a single, quantifiable pathway, as is associated with first-wave analyses (Bell 2010, 26). PWT offers a means of conceptualising the narrative complexity of hypertext fictions, in which the story is created by the reader as she progresses (recenters) through the text.

### Possible Worlds Theory and Creative Practice

As Ryan and Bell argue, PWT offers a highly sophisticated framework for analysing published hypertext fictions. Yet as digital stories become more popular, especially within degree programmes, a lacuna is opening up in terms of understanding what Kroll and Harper have called 'the processes as well as the ideas and actions' of the digital or hypertextual author (2013, 2). Miller has provided a useful guide in terms of how digital texts can be constructed (2008). Yet the creative process itself has yet to be properly explored in the way that Donnelly and Brook champion in their discussions of practice-led research. As Ryan and Bell have already shown, differences exist in terms of how hypertext fictions can be understood alongside their more traditional counterparts, such as interactivity and multi-linearity. For those trying to understand the practice of composing a hypertext fiction, such characteristics within the form of the medium pose key questions: what, if anything, differentiates the practice of a non-digital writer to that of a digital writer; and, perhaps, more importantly, how can one begin to conceptualise those creative processes themselves. This paper provides a tentative response to those two questions.

Kroll and Harper, citing Richard Sennett, emphasise the false divide between the artist, craftsperson, critic and audience, and state that their book is an attempt to help heal these rifts (2013, 2). Importantly, they stress that, even when dealing with theoretical speculation, creative writing, as research, should be primarily practice led. For Kroll and Harper, this is one of the main outcomes of their book: 'creative writing ... always has practice at its conceptual core, even when dealing with issues of critical understanding' (Kroll and Harper 2013, 2). This surely remains as true for hypertext fiction as it is for non-digital texts.

This blend of imagination, practice and theoretical engagement will vary from project to project. In her own chapter, Kroll embraces the metaphor of 'laboratory' as a site of experimental and theoretical enquiry for the creative writer (2013). In this creative 'laboratory', methodological frameworks are central, helping to 'communicate significant findings to others' (2013, 115). Kroll uses Deleuze and Guattari's notion of the rhizome to suggest how non-

traditional, innovative research within the discipline can be conceptualised. A rhizomatic system is not hierarchical but 'subterranean' and planar, allowing nomadic, cross-disciplinary connections. As Kroll notes, this conception seems especially useful within the discipline of creative writing where writers 'construct and follow pathways that the product and process suggest' (2013, 117–8). As Deleuze writes, 'To write is certainly not to impose a form (of expression) on the matter of lived experience. Literature rather moves in the direction of the ill-formed or the incomplete' (Deleuze 1998, 1), a philosophy that chimes strongly with Webb and Brien's 'agnostic research' (2008).

Yet if there is an area requiring critical exploration by Kroll's creative 'laboratory', digital texts would surely be high on the list. Although Ryan and Bell have shown how PWT offers a powerful analytical framework for analysing *published* hypertext fiction (with the researcher as 'reader'), this paper argues that it can also provide a conceptual model by which the actual creative processes themselves can be considered (where the researcher is the 'writer').

The following analysis is based on the work of 25 students studying English and Creative Writing at a UK university. These students were directed to write and publish a hypertext fiction on the Genarrator platform as part of a secondyear option module. Teaching was conducted through twelve weekly two-hour workshops. Pope's suggested curriculum for inducting non-technical writers into Genarrator was used as a template for the module (2013, 216-7). When it finally came to reflect on their practice, however, things became less straightforward. All the students had completed reflective essays for their non-digital stories. Perhaps it was only natural that they took this experience and applied it to their hypertext fictions. The tutor was soon faced with a preponderance of reflective essays examining a variety of themes, including characterisation, setting and structure. Although useful, it became apparent that this traditional focus was limiting. In essence, what was missing was a conceptual model by which the hypertextual and cross-technological implications of narrative construction for the writer (as opposed to the reader) was represented. It seemed there was no obvious framework to use.

Watching the students construct their stories and having spoken to them as their narratives developed, it became clear that PWT might offer a way forward. After all, it was God Himself who was the real focus of Leibniz's philosophical tract, the creative force producing all possible worlds before selecting the best: 'The result of all these comparisons and deliberations is the choice of the best from among all these possible systems' (Leibniz [1710] 1985, 225).

Table 2 Revised representation of PWT.

Actual world: the ontological domain in which the WRITER is situated Possible worlds: the ontological domains created by the desires of the WRITER Textual Actual World: the 'story' created by the WRITER. Refers to both the TAW of a specific technological platform and the final, composite, hypertext fiction. Textual Possible Worlds: Alternatives to what is given in the TAW Textual Universe: comprises a Textual Actual World and the associated Textual Possible Worlds

Table 2 shows how such a framework would look when reconsidered for the *writer*. What is argued here is that, just as when applied to the *reader*, PWT provides a framework by which the underlying ontological structures inherent in the *writing* of hypertext fiction can be deconstructed. This argument is based on three propositions. The first is that, within the creative process, the *writer* is also an active *reader* of her work. Secondly, for this *writer/reader*, there remains a clear separation between the Actual World, her imagings (possible worlds), the Textual Actual World (current lexia) and the TPW that are to be created from this. And thirdly, this ontological separation is apparent in all writing (fiction and non-fiction) but is made particularly prominent by the hypertextual nature and cross-technological construction of digital fiction.

The first proposition should not come as much of a surprise to anyone working within creative writing research. The ability to read one's work as it is being written, and then again as part of ongoing *post-hoc* editing is a recognised component of creative writing (Jordan 2013). This proposition states that there is no easy divide between writer and reader during the creation of the text. Unlike Leibniz's Divine Wisdom, the writer must be ontologically situated within the Actual World.

The second and third propositions follow on from this. Bell has shown how PWT can be used to understand the reader's engagement with a digital text. The essential point here is that the breakdown of ontological domains remains equally pertinent for the creative process. The key difference, however, is that, for the reader, Table 1 remains an essentially linear process, with the reader progressing from the Actual World towards the Textual Possible Worlds offered by the text. For the writer, however, the transition from domain to domain in Table 2 is more complex and not necessarily linear. Instead, it can be represented as a constant oscillation, backwards and forwards, through each domain, embracing Deleuze's notion of the 'ill-formed or the incomplete' (Deleuze, 1) or Keats' 'Negative Capability'. Although this occurs within the writing of any text, it becomes especially prevalent in the construction of hypertext fiction where each lexia becomes a separate possible world. This is reinforced when one considers a key difference between the writing of digital and non-digital texts: for hypertext fiction, the site of creativity, the platform on which creative work is undertaken, is not stable, but moves freely across a range of technologicallydiverse programmes. Students in the workshops discussed here created background scenes using Photoshop. Genarrator and Word were used to add text and dialogue. Video and sound were first edited using appropriate software before being manipulated in Genarrator. Some students developed external web 2.0 sites, such as fictitious FaceBook and Twitter accounts, which were finally linked to lexia within the hypertext fiction. Each of these technological platforms offers a very different set of creative affordances. Within each platform, the story remains interpreted and explicated in very different ways. Most obviously, different platforms may be used to create elements of the story that represent different characters and perspectives (a recorded voice, a letter, a scene or location). Yet even unintentionally, different technological platforms will implicitly enable a multiverse of actual worlds, each a separate narrative and ontological domain in its own right. Table 2 exists not just non-lineally for the

digital writer. A separate Table 2 must also exist for each separate platform across which the hypertext fiction is created. In this sense, the production process itself is 'hypertextual': piecemeal and isolated, the various creative elements coming together for the final instantiation of the story on *Genarrator*.

For these reasons, this paper argues that, for the hypertext-fiction writer, PWT offers a powerful theoretical framework. In essence, PWT offers a means of modelling two important characteristics that underpin the creation of hypertext fiction. The first is PWT's utility in offering a means of capturing the writer's recentering into various domains, a repositioning from the Actual World and Possible Worlds, into the Textual Actual World and the proposed Textual Possible Worlds. This movement, as has already been said, is non linear, a constant oscillation in which the writer analyses the story from a variety of recentred domains. Secondly, however, and specific to digital texts, it has also been argued that hypertext fiction is created across a 'plurality' of technological platforms. This paper has argued that within each platform a unique set of affordances governs the instantiation and explication of the 'story' - more specifically, that within each platform, the 'story' exists independently of the whole, a 'narrative' locus with its own specific set of possible worlds. It is PWT's ability to model this complex relationship that remains its strength, potentially enriching our understanding of the creative process.

#### Conclusion

This paper has argued that there is a general lack of research into the actual creation of hypertext fictions. Not only is creative writing still very much focused on traditional 'writing' but underlying conceptual models that help define and explore the creative process itself remain tentative (Kroll and Harper 2013). This is particularly so for electronic texts where the very affordances offered by the medium (the ability to create hypertextual, nonlinear texts, for example) requires a rather more sophisticated conceptual model than that usually offered. Kroll's discussion of Deleuze and Guattari's rhizomatic system offers one such critical framework (Kroll 2013). However, this paper has championed the use of PWT, a conceptual model that has been used by theorists such as Ryan and Bell to examine previously-published hypertext fiction. What has been argued here is that PWT also offers a powerful model for conceptualising the creative process involved in creating these digital stories. Further work remains to be done, of course, but the notion that digital writers, operating across a range of technological platforms, ontologically recentre within a complex plurality of possible worlds seems both intuitive and enabling from a creative perspective. 'And even though one should fill all times and all places, it still remains true that one might have filled them in innumerable ways, and that there is an infinitude of possible worlds among which God must needs have chosen the best' (Leibniz [1710] 1985, 128).

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### Correspondence

Any correspondence should be directed to Spencer Jordan, Department of Humanities, Cardiff School of Education, Cardiff Metropolitan University, Cyncoed Campus, Cardiff, UK. (sjordan@cardiffmet.ac.uk).

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