

Title: Reinventing the book: exploring the affordances of digital media to (re)tell stories and expand storyworlds

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Reinventing the book: exploring the affordances of digital media to (re)tell stories and expand storyworlds

Volume 1 of 1

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University of Bedfordshire

Research Institute for Media Arts and Production

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Author's Declaration

I, Claudio Pires Franco declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

Reinventing the book: exploring the affordances of digital media to (re)tell stories and expand storyworlds

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- 1. This work was done wholly or mainly while in candidature for a research degree at this University;
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- 6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
- 7. Parts of this work are based on material that has been published, as indicated on the sections: 'Playing Nature Mage', 'Challenges of cross-media game adaptation' and 'The game', all in chapter 5, under the parent section 'The Nature Mage game'. Note that all three sections contain footnotes explaining that some of the ideas discussed were first presented in published work. Also note that whilst they are not mere copies of the published material, they do share a similar structure and some of the wording and sentences used in the published material, which is clearly identified. in the footnotes and listed in 'References'.

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Abstract

The focus of this thesis is on analysing the affordances of new technologies of the book. It looks at the transition between the affordances of the material book and the digital, focusing on the formal aspects of the book and its digital production and consumption. The research uses a coreperiphery model to locate innovation, looking first at a range of practices and then at selected producers and artefacts to identify relevant uses of the affordances of digital media, namely participation, co-creation, online reading communities, and the potential for cross-media extension of stories into other forms. The analyses of selected digital artefacts evaluate their strengths and weaknesses and ask: how have the affordances of the digital medium been used? What do these affordances offer to producers and consumers? And how have certain affordances changed the use value, the pleasures and the suitability of texts for their intended functions? This evaluation takes into account professional publishing contexts and a range of practices, looking at the ways in which producers make, classify and present their works. Affordances theory is used throughout, and ultimately shows that good design practices reinvent the medium, push the boundaries of the book, whilst considering the habits, needs and expectations of readers/users. A practice-led project is subject to analysis and reflection on practice in order to draw further insights and recommend approaches and tools for designers, publishers and other producers. This project experimented with reader engagement and co-creation to adapt the Nature Mage fantasy book series (Duncan Pile, 2011, 2013, 2014, 2016) onto enhanced digital book and digital game texts. Media-specificity is used as a framework to look at the ways in which stories can be translated and expanded onto new forms that explore the affordances of digital media. The adaptations are located at the intersection of media, shaped by a range of intertexts from both analogue and digital media, and offering not simply another way of enjoying the narrative but texts that explore the digital affordances also to design features that relate to ludic, creative and social motivations and pleasures. Ultimately the thesis revisits the very definition of the book, its functions, its value and the ways in which emerging digital artefacts are doing the work of books and — thanks to new affordances and their hybrid nature — are not only changing the experience of reading, but also mixing it with the work of other media forms and genres. In doing so, this thesis contributes to furthering professional practice by highlighting a range of uses of the affordances of the digital medium to reinvent the book in the next chapter of its evolution.

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1. Introduction

This thesis analyses what is happening to books as they meet digital media and are transformed into new forms. The book is analysed as a form of communication, as a medium amongst others, and writing is taken as a mode amongst others. The main focus is on fiction, with brief excursions onto other areas, but special attention is given to the ways in which digital media have the potential to transform storytelling and to expand narrative and storyworlds across media. This focus is reflected in the practice-led research project to adapt the fantasy book series *Nature Mage* by self-published author Duncan Pile (2011, 2013, 2014, 2016).

Digital media, the so-called new media made possible by developments in computing technologies, have changed the ways in which pre-digital media are produced, distributed and consumed. The computer has affordances that have enabled the emergence of different forms of media — new genres, aesthetics and conventions — that in spite of doing things differently are also strongly connected to the traditions of the cultural forms that preceded them. This thesis looks at the book, and at what is happening to the book as it meets the digital medium, highlighting innovation in the production of digital forms of the book. The arrival of new technologies, in tandem with cultural, social, political and economical changes, in the right conditions enable the emergence of new ways of making and doing things: new ways of working, new ways of informing and educating, new forms of entertainment. Within the last decade several technological, economical, cultural and social developments have changed considerably the landscape of what we call the book. The so-called digital revolution multiplied the number and reach of technologies, devices and platforms though which humans create cultural artefacts, socialise, collaborate, and engage in a myriad forms of communication for diverse purposes. In the domain of communication across all fields and meaning making in general there are important semiotic changes with an ongoing move from page to screen, from print to digital, and from the dominance of the mode of writing to increasingly multimodal ensembles where writing is mixed with other modes (Kress, 2010). Developments in digital media and namely in the uses of the world wide web — which is maturing as both producers and users become more familiar with the medium and its possibilities and constraints — have created a fertile ground for experimentation and innovation across the media and creative sectors. Such changes have been having important effects on the landscape of book production, publishing and reading. In the past 20 to 30 years these have included: the

growth in the use of e-readers; the growth in self-publishing (facilitated by new digital platforms); new forms of book publicising using social media; new forms of book sponsoring via crowdfunding; new forms of writing books in more iterative ways based on frequent reader feedback on *lean publishing* platforms; crowdsourcing initiatives to bring together *amateurs* as co-creators of media artefacts; the rise of fan writing in platforms such as Wattpad; the emergence of story and book apps for tablets and smartphones; the growth in narrative or story-focused games in general and a resurgence of game-books in digital format; an increasing range of types of digital (often also referred to as 'interactive' or 'electronic') forms of literature; and the blurring of clear borderlines between books, apps and games, to name just a few of the most prominent kinds of texts thriving in digital media. The research looks at recent changes in processes of book production, current innovation in the range of formats of the book, arising forms of collaboration and reader involvement, processes of adaptation from the book into other formats and other media, and the changing dynamics across media and creative industries with ongoing movements of intermediality, convergence and hybridisation.

The research includes an industry analysis looking at a range of different kinds of producers and their distinct approaches to the use of the digital medium to produce new forms of the book. The analysis includes looking at marketing and curation strategies, at industry discourses around the use of digital media, and the ways in which both publishers and other kinds of producers involved in the digital book market classify, describe and present their texts to consumers. The range of attitudes to the digital medium is wide, from more traditional publishers who see it mostly as a channel to remediate print books and the experience of reading them, to technology start-ups who are tapping the properties of computers to explore affordances that result in artefacts which reinvent the book, borrowing both from their print (and wider analogue) ancestry as well as from the conventions of other digital forms. Thus the study is not just about books and the book industries. It explores the changing concept of 'the book', whose definition has been stretched and made more complex by developments in digital media, and which triggers deeper reflection on the ways we define both digital and analogue forms of the book. This study is also about kinds of texts for which the appropriation of the book metaphor may be seen as more problematic. These are texts that — whether or not labelled as books — somehow do the work of books (fulfil similar functions and offer similar pleasures). The study is not just about core book publishers either. As it stands, often innovation happens at the periphery. Publishers at the core of the industry are not the

main players in the landscape of digital books, not even when it comes to ebooks, and even less so when it comes to more innovative forms. This thesis therefore looks also at producers at the periphery, including an analysis of the texts and approaches of game studios, of ventures that bring together book publishers and technology-savvy producers, and of other less well-defined creative sectors such as interactive fiction producers and electronic literature authors.

The thesis tackles an important question for the publishing industry: how should it redefine the book as it meets digital media, digital technologies, devices and platforms? Through the use of multiple methods — interviews with producers; the analysis of producers' websites, online shops and marketing materials; the textual analysis of a sample of digital books — the research analyses a range of approaches to the exploration of the affordances of digital media and identifies propitious conditions (and challenges) to innovation. The textual analysis pays special attention to examples that explore the specific affordances of the digital medium to create artefacts that seek to reinvent or do the work of books in new ways. The aforementioned methods are complemented by direct research with readers and reflection on practice based on a practice-led project that experimented with reader engagement and co-creation to expand and adapt the Nature Mage series onto an enhanced digital book and a digital game. This involved the design and creation of an online community to engage with readers, which was sustained for one year, and the creation of design concepts for both an enhanced digital book and a digital game based on Nature Mage. This book and game concepts included the collation and iterative development of design ideas, the creation of sketches, user journey diagrams and high-level design documents, but not the actual final production of the artefacts, which would entail the need of a much larger team, dedicated budget and experts in different areas of design and programming. Nonetheless the practice of working on the design concepts for these artefacts constituted a fundamental pillar for the thesis.

The *Nature Mage* digital adaptation concepts are situated in-between media — in-between genres, conventions and aesthetic devices; in-between distinct but overlapping economies and production cultures — and analysed in light of the wider study of the ways in which the affordances of the digital medium enable or facilitate the creation of new kinds of the book. Hybrid forms of the book are seen as texts that go beyond narrative and reinvent and expand the concept of book by mixing its conventions with new ways of reading and also with other activities, motivations and pleasures (such as co-creating, participating or playing a story-game) influenced by a wider series of digital formats, genres and activities.

This thesis focuses on changes within the last five to six years, roughly coinciding with the period of growth in access to tablets and smartphones (particularly after the launch of the first consumer tablets with the iPad in Spring 2010) to identify emerging trends. During the time of this study change happened very quickly and excitement with digital media was always accompanied with uncertainty. Developments in the technology of mobile devices and applications presented opportunities for authors, publishers and other kinds of producers (in the wider sense of media studies) to expand the book and what books can do: communicate information, educate readers, tell stories and entertain and amuse in a myriad ways — goals closely associated to the main book publishing segments, namely fiction (novels, storybooks) and non-fiction (reference, education, academic and professional). For the most, however, digital media have been used to remediate familiar forms of the book. The fact is that '[w]riters and readers still often conceive of text as located in the space of a printed book, and they conceive of the electronic writing space as a refashioning of the older space of print' (Bolter, 2001, p.13) Janet Murray asserts that 'we cannot be satisfied with just reproducing older information formats in digital form, settling for mere remediation.' (2012, p.45)1 A key goal of my study is to highlight examples of innovation, of the tapping of digital affordances in ways that go beyond the mere remediation of print.

Key concepts for professional practice-led research

This thesis applies academic perspectives from book scholars and media studies to analyse movements of the book across media, for the publishing professional, and specifically its increasing intertwining with digital media and other creative industries. It builds on concepts from disciplinary fields in a complementary fashion, drawing connections between different perspectives and key ideas. Key media theory concepts and tools include: media affordances, media specificity and comparative media analysis; transmedial narratology; remediation; multimodality and semiotics; convergence; adaptation studies, intertextuality and intermediality.

The concept of *affordances* constitutes a core framework throughout. It is the analytical frame that brings together the several viewpoints and other key terms and methods. Affordances help

¹ I highly recommend this Janet Murray's book for publishers, authors and producers who are considering or already exploring the digital medium to create books and new kinds of book-like texts. Janet Murray is a practitioner, an experienced digital designer, and her book provides an excellent overview of the potential offered by the affordances of digital media to create new kinds of artefacts. The many examples and exercises are particularly useful for starting practitioners, and there are also reflections that seasoned professionals will find thought-provoking and inspiring.

uncover the relations between other concepts, and help in the interpretation of the different directions and developments of digital books in a more cohesive, holistic fashion — one that takes into consideration technology, contexts, the social players involved (producers, users, academics) and their motivations. The research analyses the digital affordances explored by different kinds of formats with a selection of works, as well as the ways in which their producers describe classify and present them, revealing distinct marketing strategies that align more or less with the world of the book or other media.

This body of selected works reveals increased levels of intermediality, of convergence and hybridity, of eroding borders across media and often across genres. But it also reveals specificities in the uses of specific devices and affordances of digital media, perceived as more or less suitable for specific genres, for specific audiences and contexts, and always framed by economic, technological and production considerations.

Digital books in the non-fiction or reference segment — for example encyclopaedia, dictionaries, academic journals and educational textbooks — have found a suitable home in the digital medium. For Jay David Bolter '[b]ibliographic databases and technical documents have long been regarded as legitimate texts for the computer; novels, short stories, and poems have not.' (2001, p.121) Affordances of digital media such as speed of updating, the addition of multiple modes and media, and the ease of distribution — together with business models adapted to the new medium — have meant that digital formats have been widely adopted in the reference segment.

When it comes to fiction, and the realms of storytelling, the possibilities and affordances of the digital medium have been explored mostly by small-scale businesses, whose hybrids between apps, games and books have sometimes earned them prizes and recognition in enterprise niches, but are still far from widespread awareness and adoption. Issues around discoverability, around haphazard and confusing typologies and ways of presenting digital books to consumers are also explored, through the analysis of online shops, the descriptions of texts, industry articles and interviews with some important players in the business world of digital books.

The analysis of the thesis is then brought to bare on a specific publishing project. The research uses a practice-led approach to reflect on professional practice with a real hands-on project that involved the creation of design concepts for the adaptation of a fantasy story from the *Nature Mage* book series, onto a digital game and an enhanced ebook. The focus is on design concepts rather than the actual production of the artefacts, which was out of scope. The project explores

reader research and engagement, and contributes to '...the still under-researched area of fan participation and involvement through social media.' (Ryan and Thon, 2014, p.17) The reflection on practice looks at the opportunities and challenges posed by the use of digital media and co-creation or crowdsourcing approaches, whereby fans are invited to take part in the creation of material inspired by the source books.

The design concepts for the *Nature Mage* adaptations were based on an understanding of the ways in which readers view the story. The distinctiveness of the affordances of the source and destination media means that the *Nature Mage* narrative is told and used in different ways, often combined with other pleasures that go beyond text and story (such as ludic, social and creative pleasures and motivations). The analysis of the source texts and the adaptations requires then a medium-specific approach (Hayles, 2004), one that looks at *Nature Mage* as a 'transmedial narrative' (Ryan, 2004) and as a 'storyworld' (Ryan and Thon, 2014) that is expanded across media.

The research aims to keep a balanced standpoint and thus looks both at opportunities and challenges posed by the digital medium, which includes reflections on what worked well, and what did not, in the Nature Mage project. By looking at a wide range of practices of different kinds of producers, from different industry sectors and of varying sizes and 'cultures', the research highlights barriers and suggests strategies and processes that may help other producers tap the affordances of the digital medium.

Reinventing the book: key considerations

The title of this thesis — 'Reinventing the book: exploring the affordances of the digital medium to (re)tell stories and expand storyworlds' — highlights the view, explored throughout this work, that the concept of book is being stretched. As something elastic, capable of being made longer or wider, the concept of book is encompassing new forms across media. The book is adopting new shapes and is converging with other forms of media and communication. It is travelling across media, and besides a myriad print and analogue formats it is morphing into digital and hybrid forms. Importantly, the term 'reinventing' entails the notion that the book isn't being replaced — new forms are simultaneously drawing on print traditions and taking on new influences from the digital medium. This leads to guestions around remediation, intermediality and intertextuality, and

about the proximity and distancing from the book, as well as to classifications and the ways producers present their digital *books*.

At times the book as analogy, the book as a *label*, is being stretched — like a rubber band expanding to breaking point, sometimes perhaps too far. Often for marketing reasons, when new forms try to borrow the status of the print book, other times thanks to haphazard classifications of new forms, the concept is stretched, or ignored, replaced by *app* or *game* or other classificatory terms, as and when this is convenient to the marketing strategies of producers.

The title also points to a focus on storytelling: '(re)tell stories and expand storyworlds'. Most works analysed are on the fiction segment, and more specifically in the fantasy genre and other hero's journeys. Non-fiction is approached for the sake of argumentation, for example to contrast the segment in relation to what is happening in the area of fiction, but also to illustrate and attempt to interpret wider transformations taking place in the meeting of the book with digital media and the more common and effective transposition of reference genres onto digital forms.

The 'exploring the affordances' in the title denotes the practical side of the study, which pays particular attention to the ways in which producers can tap on properties and features of the digital medium to design new forms of fiction or adaptations of existing books that draw on and expand their storyworlds. The hands-on project with the *Nature Mage* books explores the use of the affordances not only to create a new digital form of the book and a game adaptation of the stories, but also to involve readers in research and in participation in the very co-design of concepts.

Research questions

The primary question of this thesis is:

How can the affordances of the digital medium be explored to produce new kinds of book-inspired artefacts that (re)tell stories and expand storyworlds?

The question departs from a practical perspective, the *how to* angle looking at examples of the use of affordances in effective ways, in order to draw inspiration for the hands-on-project.

The primary research question can be dismantled onto a set of secondary questions:

How have the affordances of the digital medium been used? What do they offer to producers and consumers? How close or how far to the central concept of the book as a paper codex or its ebook remediation are these texts? How have certain affordances

changed the use value, the pleasures and the suitability of these texts for their intended functions?

More specifically, the analysis of the digital artefacts covered by this thesis uses the following framework for each text under analysis.

From a production perspective:

What are the affordances of this digital text? How does it remediate older forms and conventions but also use medium-specific affordances? How is it using (or not using) the digital medium affordances in new ways? Why not?

What does it offer the producer? What can publishers and other digital producers take from it as a example of practice? Both in terms of business models and in terms of design, the artistic side, the aesthetics of these new kinds of digital artefacts.

What production cultures, business models and views of the book and of the digital medium lead to different approaches by producers, from those who simply want to remediate the book as closely as possible to print, to those who are innovating and creating new kinds of artefacts?

The emergence of new forms entails changes — often slower than the rate of creation of new forms — in the ways that producers classify, select and present works to potential consumers, to address issues around discoverability:

How do producers frame, describe and present them? Do they align them with books? Why?

Creating new forms of media, often hybrid genres and unfamiliar artefacts that do things differently raises a series of challenges. Because of their novelty or unfamiliarity new kinds of texts, new formats and genres pose challenges in terms of usability and user experience (UX):

How have producers tackled challenges around design and user experience? Have they taken into consideration user needs?

And from a related consumer and usage perspective:

What does it offer the user/reader? Does it fulfil other functions? Does it offer any other pleasures or meet other motivations? How familiar and easy to navigate is the text? And how easy is it to find?

When focusing on the practice-led research with the *Nature Mage* project the questions change slightly: one, they become more specific (to the text being adapted, to its genre and audience); and two, they are extended (to incorporate a focus on cross-media narrative adaptation and the expansion of storyworlds, and on audience involvement):

What potential do digital media offer for the adaptation of existing fantasy print books? What happens to the source story as it travels across media? How can the affordances of digital media be used for audience involvement and co-creation in connection with books and new media forms of the book? What is gained with audience involvement? What are the challenges of such involvement?

Finally the thesis also raises questions from an academic perspective: how are different fields of academic study reacting to these more recent forms of media? Why are some fields largely ignoring them and others appropriating them? What multi-disciplinary skills, methods and tools are required to study them?

Contribution to professional practice

The questions outlined here are tackled throughout the thesis, and key findings and conclusions are brought together in final chapters to provide professional guidance for all those interested in using the digital medium to tell their stories, expand storyworlds and involve their audiences. 'Appendix 5' provides a series of references for digital producers, including relevant conferences, websites that showcase digital books, books and resources to learn new skills, free-to-use digital platforms that can aid in the design and production of digital books and relevant academic research groups.

Besides contributing to professional practice, these key driving questions are explored and linked to core theoretical concepts and current debates in academia.

Outline of chapters

Theoretical framing

This chapter identifies gaps in current research, namely in the field of History of the Book and Publishing Studies, areas which, it is argued, have hesitated to engage in the study of digital and new media forms of the book beyond ebooks. Digital forms of the book, especially the more innovative, which push the affordances of the digital medium and stretch the book, are framed as somehow *in-limbo*, in-between media, hard to classify and often falling into a no-man's land, at the periphery, and away from the central interests of any academic fields.

The theoretical framework draws on communication and media theory, social semiotics, media adaptation and intertextuality, and on recent transmedial narrative scholarship, which together form the basis of a multi-disciplinary approach that, it is argued, is better prepared to interpret new media forms of the book in an increasingly digitally-centred and converged media landscape.

Affordances theory is discussed in detail as the bedrock for the analysis of digital artefacts, and related to the approaches of comparative media analysis (Hayles, 2004) and media-conscious narratology (Ryan, 2014). The practice-led part of the research, with the *Nature Mage* project, is analysed as a story travelling across media, for which comparative media analysis, transmedial narratology — allied with concepts from adaptation, convergence and intertextuality — form a suitable analytical framework.

The chapter also includes a context and background section entitled 'The book meets the digital medium', which covers firstly digital encounters with the book before the tablet, highlighting the ways in which innovation often arrives from outside the book and publishing industries. and then in more detail more recent background events and contexts, from the launch of tablet devices, the main period of focus for the thesis. This section refers to the often untapped potential of the digital medium, and of the limitations of the ebook, and the need to reinvent the digital medium (Murray, 2012) when stretching the book into new digital forms. The core-periphery model proposed by Coser Kadushin and Powell (1985) is introduced to help interpret trends in innovation.

Methodology

The 'Methodology' section outlines the methodological approach that was used to close gaps in knowledge and achieve the professional and academic goals defined. It explains the ways in which the current digital landscape of the book industry was analysed, how some works were selected for closer scrutiny, and how interviews with industry and academic figures helped to shape my arguments. This chapter also covers issues around ethics and other challenges posed around audience involvement, crowdsourcing and the rewarding of participation.

Digital forms of the book

The next chapter, 'Digital forms of the book and other bookish artefacts', is centred around the analysis of a selection of digital artefacts that stretch the book and locate new hybrid digital forms at the intersection of media, of industries, of genres, practices and conventions. The chapter looks

at the ways in which producers classify and present digital forms of the book and related artefacts, and the ways in which we use analogies and metaphors to refer to new, unfamiliar forms, which touches on issues around curation (Bhaskar, 2016) and discoverability. The chapter also discusses the usability of new forms, and explores good design practices, drawing on design thinking and user-centred design.

The works analysed are located in-between media, as hybrids drawing on the influence both from their print ancestry through processes of remediation (Bolter and Grusin, 2000) and from a range of other forms, especially digital genres that make new media forms of the book not just books, but also part-games and social networks. The longest and most important section presents the analysis of a selection of digital artefacts, which tackles the main research questions outlined here. Textual analysis is mixed with material from producer interviews and the analysis of producers' websites and press releases to bring together complementary angles. Simultaneously,, the analysis works as a way of highlighting design elements and ideas from several texts that inspired the practice-led part of the thesis with the *Nature Mage* adaptations.

The Nature Mage project

This chapter starts with a section that sets the context for the reader involvement angle in the practice-led professional project. This section outlines important differences in behaviours and attitudes of recent audiences, generally along generational lines, to notions such as *canon*, *original* and *author* (Kress, 2010). This section avoids the trap of technological determinism but looks at the promise of participation allowed by the digital medium (Jenkins, 2006), counterbalancing it with its critics and barriers to actual participation, both of which will be patent when reflecting on the *Nature Mage* practice. The chapter then focuses on the hands-on professional project to adapt a book into a game and an enhanced digital book that constitutes the practical professional backbone of the research. By joining reflection on practice with the theoretical frameworks explored in previous chapters, the chapter engages with key academic debates and professional challenges. Departing from an overview of the source stories, it presents a detailed analysis of the key challenges and insights derived from the adaptation and audience participation efforts.

Besides analysing the ways in which the affordances of the digital medium were tapped to involve readers and produce a new form of the book, this chapter also looks at going a step further and (re)telling the story in a more distinct way through a digital game. Both these exercises — the

digital book and the game expansion — allow an exploration of they ways in which the narrative is transformed as it travels across media. In other words, here the thesis engages in comparative media analysis, and in the study of narrative across media. The *Nature Mage* adaptations are then situated at the intersection of genres and conventions from analogue and digital media, and shown to be explicitly inspired by a series of intertexts analysed in chapter 4.

Discussion and Conclusion

The 'Discussion' revisits the research questions, collates key findings from all previous chapters, and engages in further discussion of emerging themes. The 'Conclusion' brings the key findings together, highlighting key contributions of this work to theory and practice. It provides a set of recommendations for producers (including tools and methods to use in projects exploring the affordances of digital media) and academia, it identifies gaps in the research and sets priorities for further investigation.

2. Theoretical framing

This chapter identifies gaps in current research. The more innovative forms of the digital book are in-limbo, in-between media, at the periphery of both books and other creative sectors, and away from the central interests of academic fields and that focus on more clearly separated media that precede them. On the one hand, History of the Book and Publishing Studies have hesitated to engage in the study of digital forms of the book beyond ebooks; on the other hand, digital forms of the book and book-inspired forms of digital storytelling artefacts have not typically been defined as objects of study by the fields that typically study digital artefacts, namely communication and media studies or the more professional fields of HCI (human-computer interaction), UX and digital design. Texts that bridge across media require multi-disciplinary approaches. Besides drawing on disciplines that traditionally engage with the book and study the history of its shapes and its players, the book is also treated as a medium. Hybrid digital forms of the book are better analysed relying also on concepts that study the digital medium, and using methods developed for the study of digital artefacts.

The digital (r)evolution

This thesis is not concerned with looking at digital *versus* print, or with taking on the fashionable subject of the survival of print. 'Digital discourses are often framed by notions of threat to, and contrast with, print, which obscure the complex relations between older and newer forms of the book.' (Franco, 2014, p.32) This study treats the book as a resilient cultural form, not just a physical object, a cultural artefact, the material object of print, but the very idea of the book, its status and cultural value, its structures and conventions (some in turn inherited from previous media and communication forms), in a constantly changing world where media forms evolve, arise and coexist. Indeed, even the very print book has been changing and adapting to its digital counterparts. Whilst digital forms of the book remediate, simulate and imitate print conventions and gestures, 'On the other side of the screen, many print texts are now imitating electronic hypertexts.' (Hayles, 2004, p.69)². There is no '...historical progression, of newer media remediating older ones...' (Bolter, 2004, p.55), all media exist in a 'genealogy of affiliations', in networks whereby at any given time all media influence each other. As Lev Manovich said in relation to cinema, 'We no

² Hayles mentions some examples, including Bolter and Grusin, 2001.

longer think of the history of cinema as a linear march toward a single possible language' (2001, p. 8). Books also follow many marches and possible languages.

Rather than taking the simplistic view of a digital revolution that breaks with and threatens the book, this study attempts to look also at evolution, at continuation, at the passing on — and yes, adaptation — of the rich heritage of print, whilst also exploring the affordances and possibilities of the digital medium to stretch the book and create new kinds of texts and experiences for users (in their multiple roles as readers, players, viewers, co-creators).

In this environment almost anything is possible; the limits are those of imagination, and more tellingly, time and money. Since the earliest days of the web, a new genre of literature has grown in the margins of creative writing. Variously called electronic literature, interactive literature, new media writing, network fiction or locative narratives, with connections to both video games and digital art, they contain graphics and images, are digitally produced, interactive and multimedia. They can be cross-platform, multiply authored, geo-locative and dynamically and algorithmically produced (so-called generative text). These dithyrambic works are profoundly different experiences to print artefacts ... (Bhaskar 2013, pp. 50-51)

Bhaskar adds that '[a]s multimedia and interactive elements are more commonly fused into traditional books and publisher workflows, electronic literature has a chance to increase its visibility.'(51) However, '[p]ublishing has not made significant strides into the subculture of electronic literature [...] despite, or more likely because, of its attempts to redefine the written word.' (Ibid.) In the contemporary media landscape — and in society at large — where digital media are changing quickly and providing opportunities to change the ways we do many things, 'a demand for "the new", for innovation and creativity is countered by anxieties around loss of control.' (Kress, 2010, p.145)

Discourses that pose digital in direct opposition to print (new media *versus* old media) have not only obscured and ignored the possibility of a landscape where digital and print coexist, but also blurred the consideration of the affordances of the digital medium — in its many devices, platforms and formats — to produce new kinds of artefacts that stretch the book and create new kinds of experiences. Indeed many in the publishing industries seem to look at digital media (beyond ebooks) as a threat rather than a fertile ground on which to experiment and create new kinds of artefacts. Similarly to the ways in which publishers initially reacted with weariness to e-readers and

ebooks, when it comes to the more innovative kinds of digital books and book-like artefacts covered in this thesis the feeling of unease is evident (and like the 'Here be dragons' signs in old maps of the sea, this fear is particularly acute when faced with something one does not really know well or understand).

Academic fields more closely related to the book have also hesitated to engage with the more innovative forms of digital books, those that are more embedded in the conventions and practices of digital media. Ebooks have come of age, but other kinds of electronic, digital books have not had as much widespread success continue to be consumed by niche groups, but for most fail to gain widespread popularity among larger producers and with the public, and generally lack recognition from academia as texts worth studying with any great level of attention. Marie-Laure Ryan proposes that the definition of objects of study is inescapably linked to the motivations of scholars.

In media theory, as in other fields, what constitutes an object of investigation depends on the purpose of the investigator. Ask a sociologist or cultural critic to enumerate media, and he will answer: TV, radio, cinema, the Internet. An art critic may list: music, painting, sculpture, literature, drama, the opera, photography, architecture. A philosopher of the phenomenologist school would divide media into visual, auditive, verbal, and perhaps gustatory and olfactory (are cuisine and perfume media?). (2004, p.18)

More traditional book scholars may not include many digital forms (beyond ebooks) in their definition of book, their object of study; nor will they consider new digital firms producing story-apps and game-books and other digital forms as book publishers. Martin Eve (2017), in a review of a book by Adam Koehler (2017) on creative writing, asks the revealing questions:

[H]ow do we conceive of digital writing as different from other forms of production? Is simply using a word processor enough of a mediation to call writing 'digital'? Or should we be interested in e-literatures that more fundamentally harness the potentially radical possibilities of the digital space but that involve new types of labour (coding, design, digital preservation)? The affordances of the digital are certainly different. But are radical works in this space still 'writing'?

Frania Hall points out that 'digital media lead to the blurring of edges between different creative forms, from books to film, games to visual archive' (2014, p.20). Digital book production has led to

a 'growing overlap between different creative industries' and 'the blurring of boundaries between different sorts of creative products (e.g. between a book app and a game)'. (p.21) I believe it is important to study these new forms, whether we consider them to be literature, or writing, or books. They merge influences, conventions and affordances of all these older genres and media, and often do the work of books, but above all they are representative of an era of media convergence and of opportunities of expression that tap new possibilities offered by the digital medium. So far, a lot of the time what we see is a polarisation of discourses and standpoints — especially in industry but also in academia — between those who defend the superiority of print and those who see in digital media the only plausible future for books. Jay David Bolter proposes a more nuanced approach:

We should instead treat the predictions of both the enthusiasts and the critics [of digital media] as part of the ambiguous present that constitutes the late age of print. Their predictions reflect the struggles among various cultural factions that are trying to work out the relationship of digital technology to its predecessors. Although we need not try to decide whether the printed book will in fact disappear in 10, 20 or 50 years, we can try to understand the current relationship between print and digital media [...] (2001, p.7)

History of the Book and Publishing Studies, in their limited engagement with digital media seem to be mostly focussed on the transference of content – the digitisation of the material book — to a large extent with little consideration for the (different, specific) affordances of digital media. It is important to move away from viewing digital media simply as a platform to digitise content. Often the functionality of the digital version of the book is different from the paper equivalent. Livemargin.com, for example, an online platform that allows writers to share their writings at any stage (from sketchy draft to more final) and see the comments of others on the margins, and comments on the very comments in chains of conversations, is not simply doing what an equivalent technical print book was here to do, i.e. perform a mostly one-way communicational function. The digital books written in Livemargin, together with all the comments and conversations derived from the original text, turn them into *spaces*. According to Bob Stein (2013), the book is a place of conversation; the margins become as important as the original text, and in the digital book this becomes an organic, living and evolving text. The experience is qualitatively different from annotating or writing in the margins of a paper book even when marginalia is included within the

notes of the book itself. The margins here are not simply a commentary, usually individual, but a collaborative contribution that can grow and develop, shape the central text, or even make its way into it.

This thesis is focused precisely on these kinds of changes, on what is different in books designed for the digital medium, when its affordances are tapped to offer producers and consumers opportunities and experiences that are different from print. For some publishers the digital medium provides a new channel to do what they and authors were doing before (tell stories, entertain, pass on information, educate); this channel may be useful, it may be very *suitable* indeed, for those very uses — when that is the case why not use them rather than be limited to a technology or material? Some will want to try new formats, affordances and combinations, others won't — those who do will stretch the current boundaries of the book.

Innovation in digital books and the core-periphery model

History of the book studies show that it has not been publishers — or at least established publishers — who have been leading innovation in the use of digital media to reinvent the book. In their work analysing the culture and commerce of book publishing Coser, Kadushin and Powell (1985) propose a framework to look at publishing industries that although somewhat dated is still adequate to help interpret trends in the digital transformations of the book identified in this study. The authors draw initially on the sociology of organisations to claim that the 'size of a firm plays a determining role in influencing the behavior of individuals within the firm' (1985, p.38). Therefore, considering the size of publishing houses and analysing the ways in which they operate is important to define the structure of the industry, and to explain its dynamics.

At a macroeconomic level some economists identify an important split between core and peripheral industries in an economy. Core industries are oligopolistic, formed by vertically integrated, large firms. At the periphery are smaller firms working in areas with relatively cheap entry costs and which sell in risky and competitive markets (Coser et al., 1985, p.42; drawing on the ideas of Edwards, Reich and Gordon, 1975; and of Tolbert, Horan and Beck, 1968). Within mass media, they propose there are two kinds of cultural industries: producer-orientated, which maintain close relationships between artists and audiences and foster experimentation; and distributor-orientated media, which tend to cater for large audiences and '...favor formula rather

than innovation.' (Ibid; drawing on ideas of Hirsch, 1978) They provide an example of the smaller, bolder kinds of media:

[...] Off-Off Broadway theatres serve small audiences, have a close artist-audience relation, and reward originality and the breaking of molds and traditions. Indeed, the audience often consists of people who are themselves involved with the theater.

In contrast, Broadway productions require full houses, aim for quantitative success criteria, and are less likely to take many risks, which means '... prospects for delivering original and complex ideas are clouded from the outset by the economic organisation of distributor media.' (Ibid.) Coser et al. draw on both axes (core-periphery and producer vs. distributor orientations) and suggest there are similar distinctions within book publishing sectors. They propose there is a split between core, large companies that are distributor-orientated, vertically integrated and dealing with large investments, and periphery smaller firms, often with specialised audiences and facing lower entry costs that are more adequately described as producer-orientated firms. These 'small firms are frequently pursuing projects overlooked or cast aside by larger houses.' (Ibid., p.46)

Major segments of the publishing industry had already grown in 1985 to a 'high-stakes business' in which 'the emphasis on 'big' books, which generate high-volume sales, necessarily confines a house to a predictable pattern of operation.' (1985, p.44) Coser et al. refer to Bourdieu (1977) and his typology of publishing houses based on whether publishing decisions are oriented towards a short or long time span, where he suggests that ' [...] the more 'commercial' the orientation of a firm the shorter its time perspective and the greater the tendency to produce books that will meet an existing demand [...]' (Coser et al., 1985, p.44). The lack of risk-taking characteristic of formulaic distributor-orientated industries found in core publishing 'tends to preclude the publication of books that are original or experimental [...]' and as a result peripheral publishing houses 'are moving into the territory that has been vacated by the large trade houses in the quest for blockbusters.' (1985, p.45)

Thirty years later these ideas help to analyse developments in the use of digital technologies to produce new kinds of books. Yet again, this study shows, innovation and experimentation in the use of the affordances of the digital medium to create new forms of the book are being led by smaller firms, and at times by individual digital writer-artists, at the peripheries of publishing. The application of this core-periphery model to recent developments in the digital technologies of the

book, however, also has some limitations, to do with a higher level of complexity in the current landscape of publishing and its relation to other contemporary media. From more or less well-defined silos of media and creative industries that indeed already collaborated and affected each other, we see now higher levels of convergence with firms that produce digital forms of the book having on foot in publishing and another in other media. Often those leading in innovation are not from the publishing industries, so we see several industries and sectors intervening in the changing landscape of the new digital forms of the book; as such a dichotomy between core and periphery, between large and small, and so on, requires a more nuanced analysis. Then the question of orientation towards longer-term gains, and of experimentation and originality, is further complicated by the need for new skills. Publishers, if they want to produce original forms of digital books that tap the affordances of the medium, need new skills across a range of areas, from design to user experience, to distribution and new business models. These matters will be revisited throughout the thesis, particularly when analysing digital book artefacts, their producers and their approaches.

Coser et al (1985, p.50) include in their book a quote from Oscar Dystel, former president of Bantam Books, the largest paperback publisher at the time, that is about content and ideas in print books, and an excessive focus on big books and big sales following known formulae, but that could well apply to the current state of innovation in digital forms of the book:

This lack of publishing variety and innovation [...] does not allow us to live up to our cultural and social responsibilities as fully as we should to provide the widest possible choice of books [...] that explore the fringes of the present and the frontiers of new thinking.

Nowadays we see once more a reduced level of involvement from major publishers in digital book innovation, a position for the most part mirrored by technology giants. And yet again originality and experimentation is to be found at the periphery. Dystel's far cry for bolder experimentation and for pushing boundaries is mirrored by others today. Janet Murray, herself a designer of digital products, dedicated a whole book to a theme that touches on this: Inventing the Medium (2012). Her work does not look at publishing, but to the wider encompassing landscape of the digital medium to include all kinds of artefacts that explore the affordances of the computer. For Murray innovation in digital media design is often driven by small groups of technologists who rely on prototypes '...to introduce potential users to new possibilities.' (2012, p.7)

Affordances theory

This section engages with the concept of affordances and shows how it can be applied to the study of digital forms of the book. A framework based on comparative media analysis is also presented as a tool to be used throughout this thesis to compare and contrast the affordances — and practices — of the print book with what the digital medium is capable of doing differently, whilst also considering continuities and remediations across technologies.

For McLuhan (1964) the book is a channel, a medium; it is content-agnostic and you can throw anything at it. He argued that the very medium, not the content it can carry, should be the focus of study, because a medium affects the society in which it is used not only by the content delivered, but also by the very characteristics of the medium.

But what happens when the medium of the book changes? What difference does the technology make for what books can and cannot do, what they can represent, and how they represent it?

In this thesis I treat the book as a medium, and look at it to a certain extent as a platform at the same level as any other platform, as a technology amongst many. There are of course other social and cultural reasons to conversely see the book as very different to (other) media, and this will transpire throughout the analysis. But by taking the book as a concept the can be transported across platforms, and by treating both print, digital and other technologies as platforms used by real people, with actual goals and motivations, we can more clearly analyse the ways in which these technologies, these platforms and media, actually make a difference for the kinds of books they afford. Looking at book technologies in this way also allows me to say that the book in its many shapes is embedded in a wider ecosphere of other media, and that it can be studied using media theories and frameworks, as well as those more focused on the book.

Defining affordances

The concept of affordances is useful for a discussion of media technologies, what these allow, and the ways in which they differ. How different are the books designed for digital media? What kinds of books can be invented by exploring the affordances of the digital medium? What is specific about these? What is continued from print, what is tweaked and what is more specific to the digital medium and influenced by other genres and conventions of digital forms?

James Gibson, a psychologist, coined the term *affordances* in 1977 in the article 'The Theory of Affordances', which was later expanded (1979). An affordance is defined as what the environment offers or furnishes the animal. For examples the properties of surface, of a 'substratum, ground or floor', make it afford support (1986, p.127). Different objects posses qualities or properties that *afford* certain uses. What animals and humans perceive is the affordances of objects, not their properties or qualities. Affordances are '... the functions that the physical properties of an object make possible.' (Murray, 2012, p.60)

Gibson argues that an affordance is independent of the individual's ability to recognise it or even take advantage of it, and so, should not be confused with individual perceptions of the world.

The word 'affordance' was invented [...] to refer to the actionable properties between the world and an actor (a person or animal). To Gibson, affordances are relationships. They exist naturally: they do not have to be visible, known, or desirable. (Norman, 2004)

Affordances are not the same as the properties of an object, or of a surface; hey are what the object or surface allow an animal or human to do with, on it or through it. This is clearly related to and conditioned to a certain extent by the physical properties of said object or surface, but also dependent on the relation between a specific individual and a specific object. The properties of a surface (the ground or floor) make it afford support — but only for certain kinds of animals (Gibson, 1986, p.127), depending on factors such as how hard or slippery the surface is, how heavy the animal is, or the shape of its feet. Although any surface has physical properties that are more or less stable and can be precisely measured as physical properties, '[a]s an affordance of support for a species of animal, however, they have to be measured *relative to the animal*.' Affordance '... refers to both the environment and the animal...' and '[i]t implies the complementarity of the animal and the environment.' (ibid.)

Continuing the ecological analogy, different animals identify and make use of different affordances in an environment, they occupy a 'niche' in that environment. 'But, for all we know, there may be many offerings of the environment that have *not* been taken advantage of, that is, niches not yet occupied (Gibson, 1986, p.129). This can be fruitfully used as an analogy to the media ecology of digital forms of the book: as we will see there are some digital publishers producing new kinds of texts for limited audiences, and for which the term niche (in both the ecological and the more daily meanings) could well be applied. But in order to occupy a niche a

producer — whether a traditional publisher looking to experiment with the digital medium, or a technology start-up - needs to be able to identify, to grasp, the affordances of the digital medium, and the ways it can be used to create new forms.

Learning to perceive an affordance is something that is transmitted from human to human, and for Gibson it forms an essential part of socialisation. This notion that perceiving an affordances can also be a learned process is an important consideration for later applications of the term in areas such as HCI, interaction design and user experience (UX). And for a discussion of the range of attitudes of a range of producers to the use of the digital medium, making more or less use of its specific affordances.

For Gibson affordances are identified directly by the senses. If a chair can be discriminated as having certain properties, '[...] it should *look* sit-on-able. If it does, the affordance is perceived visually. If the surface properties are seen relative to the body surfaces, the self, they constitute a seat and have meaning.' (1986, p.128) Code, however, is rarely seen. What is afforded by a digital device, or by a programming language, is not perceivable by most people, including publishers and other producers. Often the only way to make an affordance visible is to show working software, even in prototype form, as mockups or sketches that simulate what the software being designed will actually do. Producers with little experience of working with digital media will find it hard to grasp what they afford; what is or is not feasible; the potential and limitations of a given device, platform or programming language.

Earlier thinkers such as Kofka (1935), Gibson argues, were wrong to think that '[t]he value of something was assumed to change as the need of the observer changed.' (Gibson, 1986, p.138) Rather, '[a]n affordance is not bestowed upon an object by a need of an observer and his act of perceiving it.' (Ibid.,139). However, in some complex cases that go beyond mere physical objects or clearly visible natural elements in an environment, for example when it comes to digital artefacts, or the potential offered by a computer, it becomes a lot harder to perceive affordances. At this point it may be helpful to think of the digital medium as a multi-layered environment. The digital medium is based on electronic devices such as computers, tablets and smartphones. Programmers create applications, typically using existing code engines and coding languages, that run on operating systems on these devices, and are accessible via interfaces and virtual spaces (such as game worlds, spreadsheets, word processor pages and many others). Some of these applications are platforms that allow the user to create artefacts with them (for example a Word

document), others are final artefacts per se; increasingly there is a mix of the two kinds, where an artefact, often made from an existing pre-defined template, can be customised and tweaked and extended by its user (for example a Facebook page). Behind the applications is a layer of code and engines and operations that for the most are invisible to users, and to anyone who is not a developer or has never studied computer coding. Besides, code is very malleable. Lev Manovich talks of the 'programmability' nature of new media, its '...most fundamental quality', which makes it very different, and not easily comparable, to other media. (2001, p.47) The range of options for creating something like a digital game or an enhanced digital book is very wide (and dependent on factors such as team size, know-how, budgets, timescales, and so on). In his theory Gibson (1986, p.189) referred to the malleability of certain substances and the ways in which they can be shaped to create affordances.

Solids also afford various kinds of manufacture, depending on the kind of solid state. Some, such as flint, can be chipped; others, such as clay, can be molded. [...] To identify the substance in such cases is to perceive what can be done with it, what it is good for, its utility [...]

Digital artefacts are, a bit like moulded clay, the result of moulding digital code. Teams of producers can use existing platforms (e.g. create a book using an iBooks Author template); tweak an existing tool or open source code to create their own tool to make new templates; use existing programming languages (e.g. html) to create a more bespoke; or even (conceivable but rarer) crate their own coding language.

In the case of the digital medium, code can give rise to several artefacts, which in their turn provide or create the potential for further affordances. It is possible to think of affordances at several levels: at the level of the medium in general; at the level of the devices; at the level of the programming languages; at the level of the platforms (such as iBooks Author) used to create digital texts. Clay affords moulding; by moulding clay one can make a mug, which affords carrying liquids, and therefore being used as a drinking utensil. But sometimes we also see unexpected uses of objects. For example Mudlark's (a creative digital agency) use of Twitter to somehow re-enact Romeo and Juliet (Mudlark, 2010).

Exploring affordances

Affordances are important; these have to be grasped and tapped. But the ways in which they are explored, the uses the objects are put to, are of equal value to an analysis of digital forms of the book. For example, a stone affords tens or different uses; none of its affordances actually defines how it is used by different people. User needs are crucial to an understanding of the ways the digital medium is being explored and the kinds of things code and the processing power of computers can, to use an analogy be *moulded* into. For Janet Murray the design process ought to start with the question 'Who needs this object and for what?' (2012, p.39), a question that needs to be answered at three levels: function, context, core (how it links to deeper human activities and values), which will be used in the analysis of the *Nature Mage* digital artefacts. Designers and producers (in the wider sense of cultural media - anyone involved in the commissioning or making of a media artefact) can avoid mere replication and think of new ways of doing things by looking at contexts, needs, functions and value for users.

We should not be focused on making an electronic version of a book, record collection, television show, etc.; we should be focused on serving the information, entertainment or community needs that these particular books, records, television shows are addressed to, by rethinking those needs in terms of the affordances of digital media. (Ibid.)

This is why looking at innovation, and highlighting the work of those who are seeking to meet user needs in ways that tap the affordances in more original and valuable ways is so important.

Donald Norman (1988) appropriated the term *affordances* in the context of design and human—machine interaction to refer to just those action possibilities that are readily perceivable by designers and users - thanks to factors such as their goals, beliefs, and past experiences. A major theme of his 1988 book linking cognitive psychology with design 'was the attempt to understand how we managed in a world of tens of thousands of objects, many of which we would encounter only once.' (Norman, 2004, n.p.)

When you first see something you have never seen before, how do you know what to do? The answer, I decided, was that the required information was in the world: the appearance of the device could provide the critical clues required for its proper operation. I was really talking

about perceived affordances, which are not at all the same as real ones. The designer cares more about what actions the user perceives to be possible than what is true. (Ibid.)

Norman suggests an important distinction between physical and screen-based products: affordances, both real and perceived, play a more important role in physical products than they do in the world of screen-based products, for which 'cultural conventions are much more important.' He suggests that in graphical, screen-based interfaces 'the designer primarily can only control perceived affordances.' (Ibid.)

Now consider only the touch sensitive screen that enables the system to support the affordance of touching. In this circumstance, designers sometimes will say that when they put an icon, cursor, or other target on the screen, they have added an 'affordance' to the system. This is a misuse of the concept. The affordance exists independently of what is visible on the screen. Those displays are not affordances: they are visual feedback that advertise the affordances: they are the perceived affordances. The difference is important because they are independent design concepts: the affordances, the feedback and the perceived affordances can all be manipulated independently of one another. (Ibid.)

The digital medium has certain features that offer certain potential, but the ways in which it is used are up for grabs, need to be defined and moulded, which may often simply mean making use of an existing property, of a feature, or a whole platform or device, for an entirely different and unexpected purpose — for instance transposing the characters and interactions of Shakespeare's Romeo and Juliet onto Twitter — or more complex like creating new programming languages. The ability to grasp the affordances, or imagine new artefacts that clay or code could be moulded into is dependent on the eyes of the beholder, on the culture of their industry and sector, on experiences, skills, understanding of digital, and so on.

The means for making meanings and the means for communicating these meanings are shaped, first and foremost, by social and economic factors. In a social-semiotic theory the assumption is that the cultural technologies of representation, production and dissemination and the affordances and facilities that they offer are used within the frame of what is socially possible at any one time. Communication always has been and will remain subject to social, cultural, economic and political givens. The environments, conditions, choices are mediated

by the interests of members of social groups so that practices, resources and technologies of communication respond, at different rates at different times, to social, economic and technological developments. (Ibid.)

The contexts, conditions and interests of different producers will be investigated in this thesis when analysing a selection of digital forms of the book.

Affordances and media specificity

Different media offer different possibilities for the shaping of texts. 'The materiality of an embodied text is the interaction of its physical characteristics with its signifying strategies' (Hayles, 2010, p. 103). As Lev Manovich pointed earlier (2001, p.66) content is always embodied, although it is sometimes '...assumed to exist before its material expression' in some 'idealized medium-free realm'.

Katherine Hayles (2004) proposed a way of studying media texts, media-specific analysis (MSA), that takes into account the specificities of the medium in which the text is instantiated. In a move to regain a balance between the extreme positions of either paying exclusive attention to the text, regardless of the characteristics of the medium, or having the view that the medium frames, determines entirely and *a priori* what a text can do, Hayles brought forward a standpoint whereby both the text in a specific instantiation, and the medium used for the instantiation are given attention. Hayles defends 'it is time to turn again to a careful consideration of what difference the medium makes' with a shift to 'medium-specific analysis' (2004, p.69). For a long period focusing first on purely literary analysis of books, and secondly — with Barthes expanding textuality beyond the print page — shifting the focus from books and works to texts, the medium, its materiality and characteristics, has been largely ignored.

The kind of media-specific analysis proposed by Hayles looks at media affordances — the resources, the features, the abilities and possibilities of the medium, always socially and culturally located — and the ways in which texts are shaped and framed by the characteristics of the medium. Comparative textual media is a subfield of comparative media studies, and looks at media that are primarily textual, whilst comparative media studies explicitly include media that are not primarily textual. Comparative media studies follows the maxim that 'We should understand and productively explore the respective limitations, affordances, and possibilities of different media

forms by directing our focus to the specificity of each medium rather than simply looking at *the* content.'

Hayles added that 'The apparent division between the traditional and the digital can be rethought within a framework of comparative textual media. The print book, after all, is a medium, along with the manuscript, the digital text, and so forth.' (Pötzsch and Hayles, 2014) Furthermore Hayles is keen to counter any views that medium-specific analysis means analysis of a medium in isolation from other media; on the contrary, MSA looks at *citations* and *imitations* across media, at remediation, simulation and instantiation of (conceptually split) content on different media.

Gunther Kress's theories of multimodal social semiotics provide a view that is at the same complementary to ideas around media specificity, but that also works as an antidote to straying too far in looking at differences between media, or at choosing for analysis media, or genres, or specific texts and artefacts, that are indeed very different. In the context of increased multimodality, we should consider that:

Each [mode] offers specific potentials and is therefore in principle particularly suited for specific representational communicational tasks. However, in communication several modes are always used together, in modal ensembles, designed so that each mode has a specific task and function. Such ensembles are based on designs, that is, on selections and arrangements of [semiotic] resources for making a specific message about a particular issue for a particular audience.

Print and digital media: continuities, changes and specificities

In what follows I intend to look at continuities, changes and specificities separately, for the sake of analysis an delineation of some important points. In practice, it is often difficult to define with absolute certainty whether the use of an affordance, or a certain feature of a digital artefact, is new and unique, or whether it is partly based on older conventions, or both.

Continuities: common affordances, inherited conventions

McLuhan (1964) states that the book obeys certain conventions. Many of these conventions have been carried through from print onto digital media, because they had value. Elements and conventions such as index, contents table, pages and page numbers, and also whole genres and

segments, have been transposed from print onto digital books. Or rather, to some kinds of digital books, namely ebooks. As it will be shown later, ebooks are even classified and showcased as print books, most often presented simply as yet another format amongst paperback and hardcover. Even so-called *born-digital* ebooks most often follow same categories, the same genres, the same conventions and traditions. With ebooks the way of writing books changes very little, and the book remains very close to its print form. There is very little design going into the process that is any different from the design work for print. Partly because the people who produce books are in many cases pretty much the same, their audiences are identical, and the communicative goals (e.g. entertain, tell a story, inform, teach a subject) have not changed dramatically. And even formats that depart further from print still draw on conventions developed with print books, some even before the printing press. Pages are useful organising structures; tables of contents are useful whether they contain links or page numbers.

Lev Manovich shows 'how conventions of the printed page, cinema, and traditional HCI interact in the interfaces of Web sites, CD-ROMs, virtual spaces and computer games' (2001, p.47) Many digital forms of the book, too, are hybrids in-between media, genres and forms; artefacts at the crossroads of a network of intermedial and intertextual influences. In this thesis I analyse whether the characteristics and affordances of print are also present in digital forms, and how they may be remediated in more for less new forms, which may add to their function, their value, or lose *potential*. For example, the digital medium properties afforded the use of hyperlinks, which in turn when used in online dictionaries make the digital version quicker to use than its print equivalent.

Printed books 'function as what Murray terms 'legacy media'; pre-digital media [...] from which digital simulations derive their organizational structure', retaining 'many of the genre conventions of print: title pages, colophons, frontispieces, tables of contents, forwards, prefaces, introductions, prologues, epilogues, afterwords, conclusions, glossaries, bibliographies, appendices, etc.' (Leach, 2015, n.p.)

Differences (of scale and reach) between print and digital books

Some properties of print and of digital media result in very distinct affordances. For example. Leach (2015) drawing on Bourdieu's concept of symbolic capital highlights an important characteristic of print: they can be physically displayed and thus carry cultural capital. Conversely

the secrecy allowed by ebook readers and tablets has arguably facilitated the spread of erotic titles such as *Fifty Shades of Grey*.

Other differences in what is possible in print and digital are more a matter of scale. Some affordances are not necessarily really *new* in digital, but *enlarged*. In *Inventing the Medium*, Janet Murray (2012, p.8) draws attention to the problem of perceiving recent technologies as 'new media,' as if the most observable quality of these forms of mediation were their novelty. For example, '[i]t is possible to write in a hypertextual style for print [...] to achieve many of the literary or rhetorical effects of hypertext, just as it is possible to write on the computer without taking advantages of hyper textual linking.' (Bolter, 2001, pp.40-41) it is mostly a question of choice by the producer of the text, which as we will see is strongly influenced by culture, habit and economical factors. There is extensive remediation of prior media conventions, genres, and affordances, and 'new' media are just as dependent upon specific social and institutional functions as all previous media. Ebooks are, as print books, dependent on editors, publishers, and the whole publishing industry machinery.

Some affordances and characteristics of digital books are not necessarily new but rather enabling of doing similar things to a higher degree, for example engage with hundreds of thousands of readers on social media, in comparison to what authors could have hoped to achieve via analogue channels such as letters and book signings. Drawing on the earlier illustration of the ways writers can use hypertext style in both print and digital media: it is true that both media afford it; however, digital media allow it to be made at a much greater scale, and quicker thanks to the procedural and encyclopedic affordances of the computer. It is imaginable that a human writer could spend years writing a hypertextual fiction with thousands of branching paths; with the help of digital devices and tools created for that specific purpose, both to help organise the logical branching and in some cases even to generate branches procedurally (relying on AI to create story bits), digital media facilitate a quicker creation of larger multilinear texts.

The affordances of digital media have changed the nature and reach of some activities that already took place. The *novelty* afforded by the digital medium is often in the degree or scale rather than essentially what is a similar activity or feature. Which leads to the question: does the digital medium offer anything really *new*? Especially considering how design and the tapping of affordances is so closely linked to what came before, to established practices, conventions and business models. Bolter and Grusin (2000) think that 'what is in fact new is the particular way in

which each innovation arranges and reconstitutes the meaning of earlier elements.' (p.270) To me, however, it seems that although remediation is indeed an important element in all media, it is also true that different combinations, different arrangements and 'multimodal design ensembles' (Kress, 2010) that tap the affordances of digital media also offer new kinds of texts and new pleasures — even if sometimes simply by rearranging and combining existing elements and ideas in novel ways.

Reinventing the book: tapping the specific affordances of the digital medium

Lev Manovich (2001, p.70) points out that with computers, as with all other cultural languages, only a few of the possibilities of doing things '...appear viable at any given historical moment.'

Just as early fifteenth-century Italian painters could only conceive of painting in a very particular way — quite different from, say, sixteenth-century Dutch painters — today's designers and artists use only a small set of action grammars and metaphors out of a much larger set of all possibilities. (2001, p.71)

He adds that 'Cultural interfaces rely on our familiarity with the 'page interface' while also trying to stretch its definition to include new concepts made possible by the computer.' (p.74) Analyses of digital books focused on ebooks are less likely to find uses of specific affordances of the digital medium. '[B]ooks written today have alternated between analogue and digital states during the composition, editing, printing, and dissemination processes.' (Leach, 2015) With a focus on content, they are seen as virtually the same entity, albeit embodied differently. However, in this thesis I am not simply talking about transferring the *same* content from one format or technology to the other, or on having a file that can be instantiated in print, PDF or ebook. For ebooks that may for the most part be the case; although they still explore different affordances, experiences and possibilities, they also exhibit identical content and experiences that can be similar.

Change is exponentially increased when you move more deeply into the affordances of digital media beyond remediating books, onto new forms, the hybrids, that have as much to draw from books as from other kinds of texts, media and creative sectors such as games, social media, art and others. This is where the jump from using the digital medium to simply remediate print onto those who see new affordances, new avenues to explore, new ways of doing the work of books, for example telling a story in a way that adds new elements to the experience, one that pushes and

taps the specific affordances of the digital medium. And because these new forms are influenced by a range of texts, genres and conventions from across media they are better understood as *inbetween* media, in complex webs of intermedial and intertextual influences. This is what the analysis of digital forms of the book, and the design concepts for *a Nature Mage* digital book and game will show.

We have seen how much the digital book owes to print; how its production is embedded to a great extent in the same industries and processes; and how it is often the same producers who are commissioning and promoting them. We have looked at continuities at the level of segments, genres and textual conventions. And at changes in degree in practices in and around the book (such as engaging with readers face-to-face or online) that the digital medium enables to be larger and easier to organise (for example, being able to involve more readers in research or fan groups online). In this section we focus more on the uses of the specific affordances of the digital medium to create innovation in the forms of the book.

Lev Manovich (2001) reiterates Kay and Goldberg's (1977) claim that the computer is a *metamedium* that encompasses 'a wide range of already-existing and not-yet-invented media' (p. 105). Manovich is interested in looking at '...the ways in which new media relies on older cultural forms and languages, and [...] the ways in which it breaks with them' (2001, p.8) to open 'new aesthetic possibilities' (2001, p.9). He is looking for what is *new* and unique about how new media objects do things, whilst also exploring how the 'conventions and techniques of old media [...] operate in new media.' (2001, p.8)

Manovich paved the way for subsequent analyses of new media cultural objects that take as a starting point the principles and operations of the computer rather than a priori existing theories devised for older media. With a focus on cinema, he wants to 'discuss how computerisation offers new opportunities to develop the language of film.' (2001, p.12) Here the goal is similar, for books. Part of this exercise includes analysing '...emergent conventions, recurrent design patterns, and key forms of new media.' (Ibid.) Manovich says that as we do not know what radically new cultural forms will look like but cries out to artists and critics to '...point out the radically new nature of new media by staging — as opposed to hiding — its new properties.' (2001, p.330)

Janet Murray (2012), herself a designer and producer, thinks about how to design artefacts that explore the affordances — even undreamt ones — and push the boundaries of the digital medium. Murray looks at the ways in which designers can think about what users need and want that can be

achieved through tapping the affordances of new media, indeed including remediated elements and practices adapted from other analogue media, but especially seeking new conventions and new ways of dong things that add value to the user. For Murray, affordances are tapped to meet a use, to offer some value, otherwise the result is bad design. With digital books we see some old uses of the codex being re-designed by tapping the affordances of the digital medium. For example, the use of the 'margins', which had been gradually inhibited with the advent of libraries. With the digital medium some designers found a new way to do it, and made it valued once more, for example in lean approaches to publishing whereby authors publish early drafts of manuscripts (often technical) and get feedback on the 'margins' in online platforms such as Leanpub (Ruboss Technology Corporation, 2010) and SocialBook (SocialBook Inc, 2011).

Designing new artefacts is harder than simply remediating (here to be understood as attempted close replication in a new medium) existing formats. Whilst '...designers in established fields are often engaged in a process of *refinement*, creating slightly improved or distinctive versions of an artefact...' digital designers are '... more often inventing something for which there is no standard model, like word processing in the age of the typewriter, or video games in the age of pinball.' (Murray, 2012, p.3). Innovating is often difficult because '...we are dealing with an immature medium, which is much more diffuse and has much cruder building blocks at its disposal than a mature medium like print.' (Ibid.) In the digital sphere the building blocks are often invented when designing a specific artefact.

A difficulty with innovating in the digital medium is the pace at which technology has been changing, at a much higher pace than for any other medium. Website and mobile phones, for example '...have incorporated wholly new functionalities and required new formal conventions almost every year since the mid-1990s.' (2012, p.5) Another barrier to innovation is the inheritance of '... too many building blocks that are quite familiar and practical, but suited to legacy media formats...'; applying legacy conventions to new digital frameworks is often unproductive; designers cannot '...merely transpose the design criteria...' of older media onto digital practice (Ibid.) A good example suggested by Murray is the transposition of the practice of writing extensive rules in board games, which when simply remediated in, say, a mobile game, makes it very cumbersome and unappealing. Good onboarding in digital games includes player tutorials and learn-as-you play levels and missions, which rely heavily on visual cues, sounds, and so on to help the player learn

the rules and the interface. The role of the designer ought to be inventing and defining conventions, the building blocks, that tap the affordances of the new medium.

Whilst designing artefacts in established genres 'can be a matter of refining existing conventions' designing is often 'a matter of inventing new conventions within a more open-ended context of possibilities.' (Murray, 2012, p.26) And innovating is often the result of 'reframing familiar activities, such as rethinking the context in which they can be performed.' For example, the portable radio introduced the notion that listening to radio was not just something to do indoors, in the living room, surrounded by family and neighbours. As we shall see digital forms of the book also do this, they *do the work* not just of books, but also of familiar activities, for example telling a story to a child. Designing innovative digital books ought not to be limited to reproducing content; rather it should consider at social practices and user needs.

Designers have to think about the needs of their users that lie beneath the particular artefacts and practices by which they currently go about satisfying those needs. (Murray, 2012, p.43)

Murray identifies key four affordances of the digital medium (procedural, participatory, spatial and encyclopedic) and suggests the use of a *grid* of affordances and their uses, with examples taken from real products, to make it easier for producers to think of the best ways to tap the affordances of the digital medium. This grid is particularly useful as a design tool for producers.

Conclusion: the analytical framework

Ultimately, the analysis of digital forms of the book needs to consider all three aspects of the relation between print and digital media: continuities, changes and new things. We are faced with an inseparability of print and digital forms, and of old and new media, in a continuum of diversified change and multiple paths. As Hayles points out, it is not about choosing analogue or digital but rather about the 'synergistic interaction' between the two (2012, p.29), looking at what is continued, what is increased, what is lost, what is new — and how all this results in gains and losses, and moreover on whether and how new digital forms can do the work of books differently, adding value to meet the needs of users and provide pleasurable experiences.

The analysis moreover needs to look both inside and outside of the (core) publishing industry, and there is a need to understand the contexts of producers. Murray's and Hayles' ideas around affordances form the bedrock of the analytical framework for the texts analysed, including the *Nature Mage* digital adaptation concepts. The key questions asked for each artefact, already outlined in the Introduction, are summarised below:

What are the affordances of this text? How does it use medium specificities? How is it using (or not using) the digital medium affordances in new ways? Why not?

How far from the book and close to other forms is it?

What does it offer the producer? What business models support it?

What does it offer the user/reader? How does it do the work of the book? Does it fulfil other functions?

Nature Mage: a special focus on narrative across media

Besides using the framework defined above for the analysis of the *Nature* Mage digital artefacts, in this practice-led side of the research there is more of a focus on narrative, on storytelling and how it changes as a story is adapted across media. The analysis of the *Nature Mage* digital design concepts will extend the questions above and focus also, more specifically, on the ways in which the narrative (or storyworld) is adapted — and the ways stories are told differently when tapping the affordances of the digital medium. In this context the ideas and concepts brought forward by Katherine Hayles around media specific analysis are pertinent. She defends that 'The power of MSA comes from holding one term constant across media [...] and then varying the media to explore how medium-specific constraints and possibilities shape texts.' (2004, p.69) Hayles suggests using a factor, for example genre, as a constant, and vary the media a certain genre is instantiated in, so as to identify what changes. Hayles explains she is not as much interested in similarities and differences, but rather in 'simulation and instantiation', and on 'citations and imitations' across media, 'to explore how medium-specify constraints and possibilities shape texts' and to understand '... literature as the interplay between form and medium...' (2004, p.69).

Hayles defends also the need to develop '...theoretical frameworks capable of understanding electronic literature as media-specific practices that require new modes of analysis and criticism.' (2004, p.71) Considering Hayles' suggestion that media-specific analysis works well when looking at a constant across media; and considering that the research-led project involved

the adaptation of a narrative (*Nature Mage*) across media, it made sense to use narrative as a constant in the analysis of the *Nature Mage* digital adaptations, namely the digital book and the game design concepts.

The work and ideas of Marie-Laure Ryan and Joel Thon (2014) are useful in this regard. Drawing on a series of works on the ways narrative changes as it travels across media and particularly when it meets digital media, in *Storyworlds across Media*. Ryan and co-editor Thon replace *narrative* with *storyworld* (when compared to Ryan's 2004 *Narrative Across Media*, another edited book with a collection of essays to develop a 'media-conscious narratology'). This change '...acknowledges the emergences of the concept of 'world' to only in narratology but also on the broader cultural scene.' (2014, p.1) In her previous work the main focus was on comparing the 'expressive power of different media with respect to the cognitive construct constitutive of narrativity, for stories and their words are crucially shaped vey the affordances and the limitations of the media in which they are realized.' In this latest book the 'across' takes an addition meaning to refer '... to the expansion of transmedial worlds across multiple media.' (2014, p.2) Besides expanding the scope of narratology, considering storyworlds as 'representations that transcend media' provides a 'center of convergence and point of comparison to media studies.' (Ibid.)

Storyworlds exist outside of any single media or istantiation (or material concretisation). The concept 'captures the kind of mental representation that a text must evoke in order to qualify as narrative.' (2014, p.3) Different media add different aspects to the world; they '...converge around [a] world by presenting different aspects of it'. (Ibid.) Ryan and Thon want to analyse the 'distinctive narrative resources' different media offer. In this regard, they say, it is not *convergence* but *divergence* (from a common point, the storyworld) that they are interested in. This is where their approach resembles Hayles' ideas around media-specific analysis, when she advocates the use of a *constant*; she uses genre (hypertext) as an illustration, but it could well be a specific story, or in this case the wider concept of *storyworld*: 'To parody the title of an article by Seymour Chatman, the leading question now becomes: what can medium x do in terms of storyworld creation (or representation) that medium y cannot?' (Ibid.)

In order to do this Ryan and Thon go on to ask to what extent existing tools to analyse narrative can be used across media. Their answer is to conceptualise the relations between narratological concepts and media categories as '...a scale ranging from 'medium free' to 'medium specific', with various degrees of transmedial validity in the middle.' (Ibid.) Some narratological concepts apply to

all media, others are specific to a single medium, others yet can be applied across a number of media, even if at times applied as metaphors. In the 'medium-free pole are the defining components of narrativity: character, events, setting, time, space and causality.' (2014, p.4) These concepts, and a few more yet to be defined, were used in the design and subsequent analysis of the cross-media journey of the *Nature Mage* narrative. In analysing the journeys of storyworlds across media Ryan and Thon point out to two kinds of relations between media that are important for a 'media-conscious narratology':

Through multimodality (a term that is currently replacing multimediality; see, e.g., Kress and Van Leeuwen [2001]), different types of signs combine within the same media object – for example, moving image, spoken language, music, and sometimes text in film – while through intermediality, texts of a given medium send tendrils toward other media. (Rajewsky [2010] cited by Ryan and Thon 2014, pp.9-10)

Examples of these *tendrils* include cross-medial adaptations, references in a text to other media objects, imitation by a medium of the resource of another medium.

The analysis in subsequent chapters will take into consideration both multimodality and intermediality — alongside considerations constructed around the concepts of intertextuality and adaptation — and apply them to the analysis of new forms of the book, and particularly the raft of texts, genres and media conventions that influenced the design of the *Nature Mage* digital artefacts.

From a practical, professional perspective, the analysis of the *Nature Mage* project also includes examples, advice and reflection on how to actually do a cross-media transition, drawing on the project as an example of narrative as a constant, travelling across media, and considering ways the material can be handled, as a resource that taps the affordances of the digital medium, always influenced by the economical and cultural conditions of producers. Besides being typically based on a single main source text cross-media adaptations are also influenced by and a series of intertexts (both in the source and destination medium); by the language, devices and conventions of the destination medium; and by extra-textual factors. The latter are linked to the wider social, economical, industrial, cultural and political contexts in which adaptations are produced; including the people who produce them, their motivations, their intentions, their experience and aesthetic preferences (Johnson, 1986; Sloane, 2006; Kerr, 2006; Bennet and Wollacott, 1987).

Importantly, when a narrative reaches a new medium, particularly a medium that is not just concerned with narrative, something important happens, something which is at the same time obvious but at the same time often overlooked by analyses that highlight narrative so strongly: effectively, many of these instantiations in genres and platforms such as videogames, social media networks or fan sites are not simply yet another site for narratological world building. They serve other functions, meet other needs and motivations, offer other pleasures. A game is a game, not s story; it may tell a story, but it offers ludic pleasures, socialising opportunities, mental challenges, and so on. Likewise a fan community may serve many purposes beyond the building of a world. Seeing all these as parts of storyworld building is fine, but it should not overshadow the experiences of the real people who use them and make them happen, the lived cultures (Johnson, 1986) around a storyworld or brand. The *Nature Mage* digital artefacts not only retell and expand a story, they do it in different ways that mix narrative with ludic, creative and social pleasures and motivations. They do not simply try to do the work of the book in presenting a narrative, but bring together a myriad practices that surround the book.

3. Methodology

Chapter 2 introduced an analytical framework to look at digital forms of the book and the *Nature Mage* adaptations. The framework is based on the theory of affordances, and more precisely on media-specific analysis, including a special focus on transmedial narratology with the analysis of the *Nature Mage* adaptations. Here the focus is on the research methods and tools used to gather data and analyse it.

Marie-Laure Ryan and Joel Thon argue that '...detailed case studies for coming to terms with the various forms of transmedial worlds in contemporary media culture...' are needed which show "...how a text-based media analysis can be combined with both an interview-based qualitative and a survey-based quantitative approach to get a clearer picture of the specific patterns of use through which fans participate in transmedial worlds.' (2014:17) The research that forms the basis of this thesis relied on a mixed-method approach that brought together surveys, web analytics, interviews, workshops, the analysis of online content of the online reader community, textual analysis of websites and digital artefacts, and reflection on practice (which included the analysis of production documents, diaries and conversations with other producers). This thesis looks at the nature of practice and leads to new knowledge that has significance for practice, to progress the exploration of digital affordances to design new kinds of digital forms of the book. The engagement with a hands-on project of digital adaptation of a book was a crucial part of the research. The involvement of readers in the processes of adaptation and in other research stages (eg survey, workshop) was important to explore the use of digital affordances for alternative ways of producing digital artefacts with increased participation, and what differences, advantages and challenges this kind of approach carries.

The kinds of digital texts that are the main focus of my project are hybrids which do not sit easily within current media categories. As the result of convergence, intermediality and intertextuality, they are a set of 'texts that push boundaries and defy classifications and analytical/theoretical approaches' (Franco, 2015). Their analysis requires approaches that mixes book theory with media and communication studies, and textual and document-based methods typically used to study books with the more ethnographic approaches typical of recent studies of digital media and audience behaviour online. As Klastrup and Tosca say:

[R]esearch into transmedial structures and products is constantly challenged by the fact that new digital communication formats and practices continue to emerge, providing new opportunities for transmedial content production. These new formats and new production modes force us to revise how we analytically approach transmedial works. This revision includes considering the many ways fans can now be involved with a transmedial world, not the least through social media, an area of user-involvement that has so far not been examined in this context. (Klastrup and Tosca, 2014:295)

The research that I present here is a contribution to this area of study.

The research questions and professional objectives detailed in the Introductory chapter were not just set a priori, but evolved as the practice-led project evolved, as new needs, challenges, changes and questions were raised. As the project developed some aspects of the practice-led project had to be refined, new questions arose, and hence there were changes in focus and on the selection of relevant literature, with also some alterations to methodological approaches. The project design was also adjusted as it evolved: from an initial focus on a game adaptation of a book to later on the design of a digital book. Most themes and research questions were driven by a mixed process of following professional, practical goals, as well as exploring academic interests raised by previous research, and sometimes by the reading of further relevant literature. All these interacted to form the evolving angle and focus for the thesis, thus dictating to a great extent which kinds of literature were analysed. As it progressed I appropriated some of the surfacing themes, relevant concepts and questions onto the scope of the thesis.

Method by method

Through the Nature Mage project I engaged with over 70 readers, two invited artists, secondary school pupils from six classes and two teachers (English and Arts). The process also involved informal discussions with colleagues, digital designers and other researchers working both in industry and academia, and more formal semi-structured interviews with over ten businesses working in the area of publishing and digital media linked to books and cross-media adaptations. Throughout the project I had regular and numerous conversations, meetings and more formal semi-structured interviews with the author Duncan Pile.

Desk research

Over the five years that I worked on this thesis I collated a series of articles about works and actual works that exemplify the diversity of digital forms of the book. For this I set up notification alerts and regularly visited Industry publishing websites (*The Bookseller, Publishers Weekly, FutureBook*, amongst others) and more academic but still practice-orientated websites (such as The Literary Platform). I did extensive searches on Google and Google Scholar for academic articles related to a number of keywords combinations ('digital books', 'book apps', 'digital publishing', etc.).

This desk research³ was crucial in equipping me with a good level of knowledge of the key actors, companies and academics in the diverse range of fields of digital forms of the book. It also allowed me to understand trends, draw hypotheses, hear about important changes and launches, and identify pertinent academic works, conferences to attend, and potential subjects for industry interviews.

The online community

Chapter 5 and 'Appendix 4' provide more detail on the design and features of the online community of readers, as well as presenting reflections on challenges (copyright matters and rewarding participation) and educational uses of the community. Essentially this online forum was designed as a reader engagement tool, a breeding and testing ground for ideas and a space for research leading to the analysis of posts and interactions. It was formed by three main areas: 'Explore' (to see user-generated content, comment, rate and share); 'Create' (to upload user-generated content); and 'Forum' (to engage in discussions.

The findings of my research relied on analysing community contributions and interactions, including user-generated content such as derived writing and artwork, comments reacting to the uploaded works, and conversations between users and the author.

Anyone wanting to upload content on the website would be asked to register.⁴ On registration we collated an email address, a username, date of birth (to ensure we asked whether the

³ Overall, I have collated in excess of 500 news articles, press releases, screenshots, webpages, academic papers, book excerpts, journal articles, conference presentations and other material relating to the convergence of books and publishing with digital media. Together, the material occupies about 3GB of data on a folder, and forms a kind of library, organised into thematic folders, which I have used throughout the research.

⁴ University ethics approval was sought and given.

participant was at least 16 years-old) and a few details about them, such as Nature Mage books read and 'favourite books of all time'. The last step on the registration asked users to read a series of rules (that were also accessible on the website), which we termed 'The necessary bit'. It was a piece of copy that *had* to be there but did not seem to add to the enjoyment of the website; if anything it was a hurdle, a hindrance on the very objectives: allowing users to have some fun by creating, observing and discussing the Nature Mage stories and derivative works. However, it was important as it defined that the copyright of anything added to the website belonged to both the user doing the upload and the author Duncan Pile, who thus became authorised to potentially use the material in the making of a *Nature Mage* digital book and any other subsequent works. We went through some three iterations until we were happy that it was not too long, but still mentioned the necessary wording to clarify copyright issues, and importantly give the author of the books the right to use any material.

An important matter in the use of the online community for *crowdsourcing* had to do with rewarding participation. The section 'Challenges of participation' in chapter 6 deals with this, and more detail can be read in 'Appendix 4'. These and other matters are also discussed in the section 'The online reader community: rationale and design considerations' of chapter 5.

Industry interviews

I interviewed book publishers, industry analysts, digital authors and digital media producers working with publishers or launching their own digital texts. Overall I successfully engaged with twelve industry practitioners, including: transmedia producer Andrea Phillips; digital book veteran Bob Stein, Director, Institute for the Future of the Book; Cally Poplak, Managing Director, and Stephanie Gauld, Digital Publisher, both from Egmont UK; Michael Bhaskar, Digital Publishing Director at Profile Books; Geoffrey Long, Lead Narrative Producer/Program Manager, Narrative Design at Microsoft; Richard Monson-Haefel, Founder of Noble Beast; Peter Armstrong, Founder & CEO of Ruboss Technology Corporation (Leanpub); Kristen McLean, Editor - Books & Consumers: The Children's Book Consumer in the Digital Age Project, Nielsen Entertainment; Jon Ingold, Creative Director, and Joseph Humfrey, Art & Code Director, Visual Designer, Co-Founder both at inkle; Louise Rice, Executive Producer, Touch Press.

All interviews included a period of preparation with some desk research and the preparation of a semi-structured interview guide. Interviews were conducted (where possible) face-to-face, but with

many producers based in the US, there were also online interviews via Skype, telephone, and two via email conversation. Some of the interviews were followed by emails asking for further comments or clarifications after the analysis of interview notes and recordings. Some interviews were audio or video recorded but others, due to the nature of the (public) spaces where they occurred, relied simply on note-taking. Interviewees were asked for permission to take notes and/ or have the interview recorded, and briefed on the context of the interview and the use of the material. Anonymity was offered but not chosen by anyone. Commercially-sensitive questions were avoided, and in the rare occasions where I thought I could be getting near any sensitive areas I would introduce the question in a way such as 'If this something you can reveal or comment on...'

Workshop with readers

Soon after Ocbrook school started using the Nature Mage community the author arranged for a visit by both of us. The plan was to engage with four classes from years 10 and 11, most of which had read at least excerpts of the stories and had used the online community. There were a few students who had not experienced either of these, and for those I prepared questions that focused on initial reactions to the website (which was shown on screen and described) and on more general questions around book reading, online habits, user-generated content and reactions to digital books and our ideas for a Nature Mage digital enhanced book. According to the 'Session Structure' document that I produced to help structure day, the main goals of the visit were to 'ultimately inform the design of a Nature Mage (NM) digital book' and 'receive feedback on the community website, in order to improve it'. The session structure document also included notes, a schedule and a moderation guide. The workshops involved presentations from the author and researcher to stimulate thought or clarify questions and themes under discussion, followed by individual and group discussions and writing, around three main themes: the books, the community website and ideas for a digital book. These themes included questions around the books (best parts uniqueness, opportunities for expansion), reading in general, the online community (reactions, improvements, how to encourage participation), general online behaviour (forums, usergenerated content), and ideas for a potential Nature Mage digital book. 'Appendix 3' shows the full discussion guide used drafted for the session. Parts of the workshop involved individual exercises in order to guarantee the involvement of all participants. A period of time to work on ideas

individually would then be followed by a group discussion. Forms from individual and groups were collated from all sessions and analysed. The results of the analysis of this and other research tools (community and survey) are explored in detail throughout chapter 5, where the views of readers and their ideas for the digital book and game are discussed in detail.

In the face-to-face workshop we also asked participants to tell us what they thought of our approach and ideas thus far, and how we could improve the community. We handed in a form to that effect, so that students, in small self-organised groups, could feel more at ease to express their opinion.

Analysis of websites and digital artefacts

My research onto new kinds of digital books relied on a number of approaches: the analysis of industry awards in relation to innovation and digital books; the analysis of publishers and other players' online 'stores' and websites; and producers' descriptions and positioning of their texts. These core methods were complemented by the analysis of articles from industry experts and publications and insights from discussions with producers during interviews carried out throughout the project. The search was carried out at specific points in time (April 2014 and then again, more intensively, in September 2016) — in a rapidly moving industry it is just a snapshot (or two). Chapter 4 provides detailed analyses.

The search for examples of texts (books, or perhaps something else) that could inspire, and suit, an adaptation of the Nature Mage story involved a continuous scanning of book-related websites for new works and researching through academic sources. From blogs on digital publishing, to searching on the websites of major and smaller publishers, to talking to authors and producers in expanding networks of contacts, to checking the works mentioned in academic works, I collated articles, industry reports and screenshots of about 80 examples of digital forms of the book; I meantime used about 30 of these and looked in detail at descriptions, screenshots and reviews of another 10 or 20, a selection of which is analysed in chapter 4. This selection does not aim to be a representative sample, but a manageable number of works that represent a range of approaches, from those closer to the core of publishing and more conservative in the ruse of digital media, to others towards the periphery, who make more use of digital affordances to produce more innovative forms of digital books. The bigger publishers and technology giants were included, as well as smaller companies that represent the periphery across different segments. A special focus

as put on fantasy as the genre of *Nature Mage*, since part of the reason to analyse fantasy works was to draw inspiration for the design of the *Nature Mage* digital artefacts.

Reflection on practice

The research leading to this thesis incorporated reflection on my own practice. This reflection included the analysis of production materials relating to the project: tens of email conversations with the author and invited artists; a project diary; design documents for the digital book and digital game adaptations; wireframes, mock-ups and other documents where ideas, sketches and screenshots of other artefacts were recorded to aid in the design of the *Nature Mage* artefacts.

Another related analysis consisted of looking at the highlights and notes on the margins of the many industry news, academic articles and my own mind maps and diagrams, to see how I was thinking about certain maters, and how my thinking had evolved throughout the project.

4. Digital forms of the book

The engagement with a hands-on project (*Nature Mage*) included an ongoing *scanning* of the market for launches of new digital book texts, especially innovative examples. The focus was spread across the industry, from the largest corporations to small start-ups, and included looking well beyond ebooks to highlight innovation in the use of the affordances of digital media to produce new kinds of *books*, to tell stories, and to make hybrid texts that combine a number of conventions, traditions, devices and modes typically used across previously distinct media.

The starting section of the chapter, 'The book meets the digital medium', covers the first digital encounters of the book with digital media, highlighting the ways in which innovation often arrived from outside the book publishing industries. This is followed by an outline of more recent background events and contexts, from the launch of tablet devices, the main period of focus for the thesis when the convergence of books and digital media diversifies and intensifies greatly.

Then the chapter presents an overview of the kinds of digital books that the big players (in publishing and technology giants) have been recently producing, facilitating and promoting in the market. This analysis considers the ways in which producers have been classifying and presenting their books to consumers, raising some debate around discoverability of new forms, and from a more practical perspective, reflecting on the ways different strategies of alignment (of product positioning) with the book or further away from it, have been used by producers in specific contexts. All this serves to stimulate important considerations for current and future producers.

The chapter then presents an analysis of a selection of digital artefacts that tackle the core question: how are the affordances of the digital medium being explored to produce new forms of the book? Textual analysis is mixed with material from producer interviews and the analysis of producers' websites and press releases to bring together complementary angles. Simultaneously the analysis works as a way of highlighting design elements and ideas from the several works that inspired the practice-led part of my research and the *Nature Mage* digital designs.

The chapter ends with a section where these digital forms of the book are mapped and located in-between media forms, both influenced and shaped by a range of analogue and digital media forms. They are seen as hybrids drawing both on their print ancestry and a range of digital genres that make these new media forms of the book not just *books*, but also part-games, part social networks, part fan spaces.

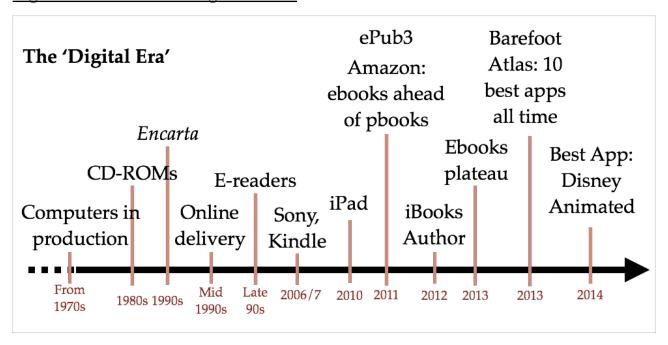
The book meets the digital medium: short history and background

Historical encounters between the book and digital media

Many retellings of the origins of the communications revolution have focused on the development of the internet and the web (Miller, 2011), the effect on publishing being of a secondary interest except to academics in publishing studies (Phillips 2014, Bhaskar 2013) and book history (Kirschenbaum 2007, 2008). In offering a chronology here I aim to explain the diversity of new media forms of the book. By locating some of early experiments with the digital book we can see the range of creative and communication industries involved. As early as the 1970s when computers began to be used more widely for commercial applications they were employed in the production of print books. Paul Luna says it was all about reducing the costs of turning text into publishable data and extracting maximum value from the data. Importantly, Luna states the 'printed output [is] only one of [the] aims' as the digital of text in a file can be repurposed as a printed book, an ebook, or be adapted into a myriad of other formats therefore 'any print publication should be considered as just one instance of that text' (2009, pp.392-393)

This notion of *the file* means that digital media facilitate the perception of content as independent of format. The digital medium becoming agnostic. However, Marshall McLuhan's and Quentin Fiore's (1967) analysis of the influence of the electronic medium on the meaning of the content in *The medium is the message* shows the medium is not transparent, i.e. neither the paperback or the ebook are simply *containers*, for even the flexibility of length is affected by the eventual form, for example professional contracts cause publishers and authors to adhere to a specific number of pages in print, whereas the recent digital trend of short — or shorter — stories, on mobile phones and serialised ebooks has changed the nature of writing in the genres suited to a flexible format length — from business and self help to fiction. These have suited some time-pressured readers' 'snacking' behaviours.

Figure 1: Timeline for digital books



Some of the earliest examples of digital books were in the 1980s the encyclopaedia CD-ROMs. Grolier's *The Knowledge Disk* encyclopaedia was a leading example. In 1993: Microsoft's Encarta encyclopaedia was finally brought out. It was initially planned in the mid 1980s but was put on hold due to commercial doubts. Its first sales were very low and it was expensive at US\$400. Then prices were lowered, and it was given as an integral part of Microsoft software bundles, which made it widely owned. The content was based on existing print encyclopaedia, including photos and illustrations, but also with the addition of features that explored the multimodal affordance of the digital medium, with the addition of sound clips, videos, interactive content, timelines, maps, a clickable atlas and homework tools that mixed several of these features. It was one of the early digital reference textbooks. Dorling Kindersley had meantime been positioning its print production for digital publication through its characteristic white backgrounds and rich photographic illustrations. Their *The Way Things Work* sold 1.25 million copies and CD-ROM publications were worth £25m/year.

The backgrounds of these three firms were very diverse: 'apart from Grolier, the first publishers to use the CD-ROM medium were not the large book publishers but Microsoft' (Chadwyck-Healey, 2009, p. 456), who was not an encyclopaedia publisher but had the technology and development skills. Coming from a print book background Dorling Kindersley was a new entrant into the digital industry and required new technical skills. Just as in this case, this thesis will show that innovation

in the use of new technologies to make books often comes from the periphery of — or altogether from outside — the book publishing industries.

In spite of being late to the party, by the mid 1990s almost every major trade publisher had a multimedia department to publish CD-ROMs. CD-ROMs 'enabled print publishers to become electronic publishers' (Chadwyck-Healey, 2009, pp. 457-458) but they did not drive the change and experimentation, this was done by technology firms and new digital publishing ventures⁵.

The decline of CD-ROM was brought about by the migration of content to the Internet which was beginning to offer free access to similar content, albeit less well-checked and edited. As online delivery became established, starting with reference books, bibliographic databases and journal articles — not an entire surprise given the first users of the Internet were scientists, researchers, academics. Professional and academic publishing developed the affordances of web technology: boolean and string searches gave access to vast text corpuses, hypertext links between databases and bibliographic data available through online union library catalogues. For publishers there were other benefits: reduction in printing and production costs, swifter publication timings, and less need for warehousing and shelf space in libraries. The Internet also became the medium of preference for books such as dictionaries as online they are easily updatable and retain currency and credibility. The other advantage of having dictionaries online is that the hyperlinking and searching functions, together with (and of course dependent on) good user interface design, allowed for improvements in some aspects of the user experience in relation to using paper dictionaries: searching became faster, as did jumping from a term to other related terms, seeing Thesaurus references for the same term (jumping across databases). For learners of foreign languages, the ability to guickly search and translate terms and the ability to listen to the right pronunciation also became useful features. Made possible — or easier, or more effective (e.g. quicker) —thanks to the properties of the digital medium and the way in which good designers made the most of them.

E-readers were launched in the 1990s; initially not very successful, once they improved in terms of design and functionality and were accompanied by strong distribution systems, sales figures rose. The Sony *ereader* was the initial leader and later the Kindle with its e-ink technology and whispernet connectivity became a competitor. The combination of a non-reflective white screen

⁵ Here it is important to note that certain kinds of publishers, namely specialist publishers who had already a background in delivering databases to computer terminals, such as medical and business publishers, were in a better position to be early exponents of digital publishing — but generally they did this by making texts that above all simply remediated the print books available, but distributed via digital means.

upon which a black typeface flowed was distinctly book-like and it was marketed as a book reading device. Internet connectivity, which was included in the early Kindles, was basic and experimental. With the Kindle attached to the Amazon online store the delivery system was assured. Sony used the publisher's standard epub format which was vendor independent. It was not just the technology therefore but the purchase and delivery system which gave rise to success in the market. Later other competitors joined the market, the Nook linked to Barnes and Noble, Kobo linked to WH Smith⁶, and others, with Kindle currently dominating the market. Interestingly, and contrary to common believe that innovations are adopted by the younger generation of digital natives, older people were the biggest customers of e-readers, while fee and paid-for books such as flip books were available for younger ones on Nintendo devices. On a later section here we will discuss the importance of audience behaviours across generations, and the ways in which this makes them more or less receptive, or likely to use, certain technologies and artefacts. In the case of digital books, ebooks and e-readers tried to remediate paper book as faithfully as possible (with 'electronic ink', screens that looked like 'real pages' as in the aptly named Kindle Paperwhite, and so on), keeping many similarities with print books in the ways they were produced and experienced. This made them attractive to audiences who liked books and that could see in their use other advantages enabled by the affordances of the digital medium in the use of e-readers, for example portability, searching functions and integrated dictionaries⁷. Other audiences, generally vounger, were accustomed to books but also to other kinds of devices and activities such as playing digital games. These users, more used to the mixing of narrative with puzzle-solving and multimodal screens were more open to more innovative and less bookish kinds of digital books.

The more recent impact of tablets and mobile devices

Between 2010 and 2016 (the period of focus in this work⁸) a number of changes and events stand out as relevant for the context of the thesis; what follows is a description of some key moments

⁶ This link between the ereader and the bookshop led to a level of disintermediation as it disrupted the book chain. The number of different devices and online shops, together with proprietary behaviours that made the travelling of books-as-files across user accounts and devices fragmented the market.

⁷ But as we shall see uptake even of ebooks was far from immediate.

⁸ The works analysed in this thesis, the developments and the bulk of the material (analysis of the market, textual analysis, interviews with producers and the practice-led work) is delimited between early 2011 and late 2016, with a few rarer incursions into more recent developments.

chosen for their relevance to interpreting and understanding what changed in the digital book market, and the ways in which producers⁹ tapped the potential offered by the digital medium.

During this period e-readers such as the Kindle became commonly widespread devices¹⁰. Sales peaked in 2013 (Statista, 2017) and then started to decline. The sales of ebooks followed a similar curve. By January 2011, e-book sales at Amazon (the ebook leader) had surpassed its paperback sales (Amazon, 2011). In May of the same year its e-book sales in the US exceeded all of its printed book sales (Rapaport, 2011). By 2013 the growth of ebooks reached a plateau, although industry views on this vary (3D Issue, 2014).

Forms of digital books and digital writing (such as electronic literature and hypertext fiction) have been around for several decades now, but within small niches of producers, consumers and academics. Recently, a significant expansion in the number and spread of digital devices available to consumers has led to a growth in the range of digital book forms. These devices, often associated to important social and cultural changes (such as the advent of citizen journalism and the ever-wired cultures of youth in rich countries), are exerting a strong influence in media consumption habits. According to the programme of the MIX 2017 conference¹¹, 'Literary forms are morphing and changing in response to the affordances of the smartphone and tablet...'. Mobile personal devices are in this way indicated as key technological devices enabling change thanks to the affordances — and accessibility — they offer.

Following hard on the internet-linked e-reader was the tablet. A multipurpose device with internet connection which created a radical shift in the digital creative industries as the platform provided new opportunities for audio visual products (the wide range of digital formats is further explored in this chapter). For the book trade one swift result was that the sale of ebooks overcame those of print books in volume and value on Amazon. The key player was Apple's iPad and by April 2014 the iPad was in its fourth generation. Many other companies entered the tablet market and their devices had e-reader capability: Samsung's Galaxy, Google's Nexus, HP Touchpad, to name but three. Publishers and digital producers responded to this tablet market with new products. In 2010 Amazon introduced 'Kindle Editions with Audio/Video' for users of its Kindle application on the

⁹ I use the term *producer* in its wider sense: a person involved in the production of a media text as described by Johnson (1986) in his 'circuit of culture' model.

¹⁰ In the so-called *developed world*, with a special focus of this thesis on the UK and the US.

¹¹ This conference, now in its third year, brings together practitioners and academics from a diverse range of fields in a way that showcases artefacts that push the boundaries and 'mix' writing with other modes and digital media forms.

iPad, iPhone and iPod touch (Hollington, 2010). The launch highlighted uses of the format for the reference segment with the launch of a city tour of London and a book on baking and an announcement that Amazon were working with publishers Wiley and Avalon Travel to explore the potential of the new 'functionality'. In 2012 Apple released *iBooks Author*, a free software for creating multimodal enhanced ebooks for the iPad and published in Apple's iBooks bookstore (Apple, 2011), where Apple created a textbook section, claiming that its objective was to 'reinvent the textbook' (Lowensohn, 2012). iBooks Author was released as a free tool for the production of enhanced ebooks — or, as Apple calls them, 'multi-touch books' — giving anyone with a Mac computer access to its platform. To stimulate content creation for these new devices awards were established for digital books, acclaiming this format amidst competition in the app market from tens of thousands of other apps. These were, in the US the Digital Book World's 'Publishing Innovation Award' (Publishers Weekly, 2010), launched in 2010 for a first attribution of awards in 2011 and known from 2014 as the 'Digital Book Awards', and in the UK the Bookseller's 'FutureBook Innovation Awards' (Johnson, 2011), also launched in 2010 for a first attribution of awards in 2011.

Meantime, following the arguable plateau from about 2013 ebook sales fell by 1.6 per cent to £554m in 2015, the first drop recorded in the seven years industry body the Publishers Association had been monitoring the digital book market; the Codex Group's April 2016 survey of 4,992 book buyers found that e-book units purchased as a share of total books purchased fell from 35.9 per cent in April 2015 to 32.4 per cent in April 2016 (Milliot, 2016) ¹². In February 2017, the Association of American Publishers released data that showed the U.S. adult e-book market declined 16.9 per cent in the first nine months of 2016 (compared to 2015), whilst Nielsen Book (the Nielsen division that provides survey-based stats for the book market) measured an overall total decline on the a-book market of 16 per cent between 2016 and 2015, across all age groups (Duffer, 2017).

In 2016 mobile phones and tablets overtook e-readers as the most common device used to read ebooks, with readers favouring multifunctional devices over dedicated e-reader brands such as Kindle and Nook (Cain, 2017). These kinds of devices created a radical shift in the digital creative industries as the platform provided new opportunities for audio visual products.

Tablets and smartphones paved the way for a number of new forms of books and other kinds of digital narrative, while also growing the number of people with access to ebooks The popularity of

¹² Note: the Codex survey mentioned includes e-books published by traditional publishers and self-publishers and sold across all channels and in all categories; AAP figures are just for trade sales.

mobile apps, especially in the games and entertainment categories, grew fast. So when ebook sales arguably reached a plateau, some publishers looked towards digital media beyond ebooks. Two digital books, *The Barefoot World Atlas* and *Disney Animated*, received important awards: respectively, one of the Ten Best Apps of All Time (2013) and Best App of the Year (2014). These are significant accomplishments because they mark the affirmation of digital book apps amidst vast competition in the app market.¹³ Mobile devices such as tablets and smartphones are changing the ways in which media are consumed and produced. Having books recognised in this form is culturally significant.¹⁴

In March 2017 the Guardian newspaper reported that sales of physical books outperformed digital titles in the UK (Wood, 2017)¹⁵. The fall in sales of e-books led publishing professionals to coin the term, 'digital fatigue' (Ibid.). Importantly it suggests a perceived need to change digital strategies, to come up with new ideas for the digital medium. Publishers and analysts are trying to find alternative sources of demand for the digital space (Springer, 2017).

This brief chronology of digital books demonstrates the many commercial players have an influence on or a stake in the digital book market. Each sector has its own existing texts, many of them audiovisual, and historical platforms (or media) from the analogue television set, or tape recording to database publishing via dedicated terminals, and of course each has its professional production processes. Convergence through digitisation was slow in comparison to the effect of the mobile media tablet.

However, as we shall see, the ways in which the affordances of digital devices have been explored continues to reveal very diverse approaches, hesitation to innovate and push boundaries, and challenges to the production and distribution of original formats that both extend the book, and perhaps due to its mingling with other forms of digital media, also threaten the book publishing

¹³ There are tens of thousands of apps on the App Store and Google Play, and every year thousands of new apps are launched. Hence the significance of the achievement.

¹⁴ Mainstream literary-critical circles and literary awards have largely (or totally) ignored digital books, especially of the more innovative kinds. These two award-winning apps may not be the best examples, since neither is a novel, the genre of election for literary circles, but there are signs of what could arguably be seen as a form of discrimination based on technology, which means some of the more creative kinds of works can hardly be recognised more widely by critics and then publics. For example, some literary awards are given only to works published in print. The result is that digital books, and particularly the most innovative kinds of digital books, can only be recognised by awards in other circles, such as the publishing industry and the technology and digital media sectors. I think this state of affairs deserves further reflection.

¹⁵ The report adds as a possibly correlated reason the fact that it can now be cheaper to buy the physical version of a book compared to its digital version, due to Amazon's deal with publishers that allows agency pricing.

industry in this more conservative view — as a separate sector that deals only with books as we know them.

Conservative design and curation issues towards the core of publishing

This section is based on the analysis of the production, classification, presentation (curation) and marketing alignment of producers of digital books at the *core* of publishing (as defined in the coreperiphery model proposed by Coser, Kadushin and Powell, 1985): the *big* 5 established book publishers at the very core of mainstream publishing in the UK, and (by analogy) the *big* 3 technology giants involved in the digital book market: Amazon, Apple and Google.

The analysis is based on looking at publishers' websites, web stores, the descriptions of digital texts by publishers, press releases, specialist industry articles and interviews, and material from my interviews with several producers. The focus in on the kinds of digital forms of the book that are curated and highlighted by publishers, including consideration of the ways these are categorised and described, and paying particular attention to the ways in which they highlight features made possible (or simply framed as being made possible, or enhanced by) the exploration of the affordances of digital media. The key questions answered here are: What formats are showcased? What affordances of digital media are highlighted? How do publishers frame what is gained, and what is different, in the digital books that they produce? What segments and genres are seen as most suitable for digital media forms and why?

In his book on curation Michael Bhaskar (2016) claims that 'creators have never had it harder...' (p. 303) For each successful app or book there are thousands of failures that aren't economically viable. '[T]here's a new kind of problem: [...] information overload. The question now isn't about how we can produce or transmit more information — the question is how will we find what matters?' (p. 89) And he suggests that the term *curation* can help analyse and understand the situation and practices required to succeed in digital media. For Bhaskar, curation involves a number of actions such as 'refining and displaying, explaining and simplifying, categorising and organising.' (Ibid.)

The interaction of the book with other forms of digital media (such as apps of all sorts, narrative games, electronic literature, interactive fiction and the like) is resulting in new forms of the book whose curation, classification and presentation is in its early formative baby steps. The analogies and categorisations that are being used can be revealing of the ways in which producers are

aligning their works more towards books or more towards digital media; of how they are presenting these texts to readers and users; and how their various strategies contribute to, or stifle, a meaningful exploration of the affordances of digital media to produce new forms of the book.

The big 5 publishing houses in the UK

The analysis of the big 5 publishers shows that the ways in which they are producing and promoting texts that tap the affordances of digital media is for the most very limited. The majority of examples found revolves around the production of ebooks with added extra content in 'enhanced editions' with sound and video. Other more innovative uses include adding interactive maps, science demonstrations and games to support enjoyment and learning (often portrayed together).

Another finding from this analysis is that there are some trends in the kinds of content, or the genres, that are published as apps or enhanced ebooks. Some genres are found more often than others as enhanced ebooks or apps, namely children's books (mostly storybooks), movie tie-ins, travel books, cookbooks, and other kinds of educational or reference books (such as language learning and documentary. These are typically highly visual genres, often with images, sounds and video — genres and modes for which the multimodal affordances of digital formats are more typically seen as *suitable*.

The analysis shows that excursions from the more traditional publishers are not going very further onto digital; they remain very near the edges of digital media, close to print, in the lands of ebooks (common for all), sometimes enhanced ebooks (for the majority), and more rarely book apps. However, even when they are made by publishers, often these formats are often 'hidden' and hard to find¹6 (even if one wants to find them, never mind for consumers who go onto these websites with other purposes in mind).

The analysis also reveals that approaches to the presentation and categorisation of digital books vary across the industry. Some kind of digital format — typically ebooks — is highlighted on most homepage or shown on the main navigational menus of publishers' websites. Other formats, however, are rarely given any prominence, with Penguin as the exception for having a page dedicated to apps, clearly accessible from the navigational menu on the homepage.

¹⁶ Penguin stands out as the exception, for having a page dedicated to apps, clearly accessible from the navigational menu on the homepage, and shoulder to shoulder with ebooks and audio books.

In terms of book categorisation — which emerges in 'browse', 'filter' and search features — it is clear that genres and segments, often combined, are the most important criteria, followed by specific titles, authors, collections and imprints. Format is a less commonly highlighted criterion, although it does feature in some 'browse' and 'filter' options of 'Books' webpages. Only in one of the 'search boxes' was format included as a possible search term — all other websites suggested to users that they could search by author, book, title, or keyword.

The classification of formats, in some cases very detailed for print and other analogue formats, shows 1) a considerable range of formats; and 2) a level of inconsistency across the industry. The classification of digital formats is often haphazard, feeling like an 'afterthought' or an 'add-on' that sticks out from an otherwise well-formed body of established categories. Some instances of this include the classification of both ebooks and enhanced ebooks as 'eBooks', i.e. under the same format classification; the labelling of 'enhanced ebooks' as 'apps'; the difficulties in finding both formats; and a common lack of explanation about them — often, even inside the descriptions of individual titles, there is hardly any definition or information about the kinds of content they offer, essentially to answer the question: what are these things called 'enhanced ebooks' or 'book apps'? This causes discoverability issues.

Trouble at the core: haphazard curation and the promise of suitable genres

In an online article aimed at dispelling myths about book apps, industry app expert Karen Robertson (2014), writing about the first myth, '1. You can tell the difference between a book app and an ebook', explains:

Sometimes you can and sometimes you can't! I often say 'a book app is an ebook on steroids' because, from a functionality perspective, you can do so much more with a book app. Ebooks are for reading and book apps are for engaging and interacting. The truth of the matter is that even a simple digital book (with basic enhancements like a few sound effects or animation for example) can qualify as a book app. What separates an ebook from a book app is how it's developed and where it's sold. [...] But it's not all about bells and whistles. A great book app starts with quality writing, so editing is essential.

Robertson's attempt is symptomatic of both the need from many in the industry to grasp the diversity of formats, but also of the difficulty of achieving clearcut, satisfactory classifications.

Robertson's attempt combines the use of various criteria: modality (a mix of 'media' and loosely-defined features such as interactivity), production tools and distribution platforms.

Ebooks are associated with the mode of written text, and are 'for reading'; apps are 'for engaging and interacting'; however they are 'not all about bells and whistles' and have to start 'with quality writing'. Which means that after all they are also for reading. Adding a few modes beyond written tex to ebooks turns them into apps, it is argued: 'a simple digital book (with basic enhancements like a few sound effects or animation for example) can qualify as a book app'.

In this case the difference, shown on a diagram borrowed from book app author, Chris Pedersen, from Purple Carrot Books, is that ebooks 'need an app' to be read, whilst apps are themselves apps. Ebooks are downloaded from Amazon, Barnes & Noble and other online ebook shops, whilst book apps are downloaded from the App Store or Google Play. Nothing is added about production tools.

In another online article also published on the Digital Book World website, probably the leading¹⁷ international online publication about digital books, book marketing and branding specialist Beth Bacon (2014) presents 'Some Differences Between Ebooks, Enhanced Ebooks, And Apps'. This 'thought piece' adds a third kind of digital book: enhanced ebooks, which are positioned in-between ebooks and apps; the article focuses on 'digital storybooks for children'. Bacon uses similar criteria to Robertson, namely 'media / capabilities' (modes and features); 'how to build' (production tools, adding the expertise angle), 'selling locations' (distribution platforms) and adding 'device'. The affordances of apps are presented as 'Nearly endless: interactive scenes and diagrams, animation, record and share your own narration, vocabulary building, guided narration, instant glossary definitions, parental controls and much more.' They offer 'unlimited potential from a feature standpoint'. This is the kind of statement that has caused great excitement in the industry: the promise of endless new potential and capabilities to explore. Since apps are the result of coding, their potential is of course open, but also limited by technical constraints such as processing speeds, memory and storage limitations on devices, the parameters of the commercial programming languages and protocols used, and so on. So they are not really 'endless' or 'unlimited' — they are simply more open because they depart from a blank canvas, not from a preexisting structure offered by a tool such as iBooks Author for the production of enhanced ebooks.

¹⁷ Based on the large amount of content they provide, their large annual conference and the search results they achieve with consistent top places on Google Search for 'digital books' and related keyword searches.

However, even tools such as iBooks Author also offer a great deal of flexibility with customisable widgets that use HTML5. And many apps are created with reused code, or on top of existing 'engines', which means some are produced in a fashion not very dissimilar to ebooks (limited to the structures of word processors and formats such as ePub) and enhanced ebooks.

Ebooks essentially remediate print books; enhanced ebooks are further away from print but still utilise any of the conventions found in print (and their electronic counterparts ebooks), namely table of contents, chapters and paragraphs; typically large amounts of writing compared to other modes; a linear, finite, bounded (Kirschenbaum, 2008) story or information. However, thanks to the widgets and the addition of 'windows' of HTML5 content and the ability to add hyperlinks that drive the user/reader *outside* the book — whilst still being *in* the book — enhanced ebooks such as those made with iBooks Author, can also be somewhat open and unbounded, albeit if they simply contain 'windows' to content that sits outside it, somewhere on the Internet. In the case of the *Nature Mage* digital book design this is discussed even further by exploring the possibility of changing the very book by going outside of the book, creating further content, which would then be regularly brought in by its producers — thus updating the book that users would have on their devices. Does not this make the digital book, in this case an enhanced ebook, in fact infinite? An organic, evolving text in this resect similar to the 'social books' facilitated by Bob Stein's platform.

In terms of modes and features, apps are presented as being able to provide a 'richer, more dynamic experience for the end user'. Together with enhanced ebooks they 'have a broader range of capabilities, including interactivity', which is once again highlighted. *Interactivity* is indeed one of the core *buzzwords* of the digital revolution. It has been stretched, misused and appropriated by marketeers and digital 'evangelists' — many of which with vested interest in selling tools and expertise in digital production — as the 'holy grail' of digital book apps. Whilst several studies (Vaala, 2012; Marsh et al., 2015; Kucirkova, 2014), mostly focused on the children's app market¹⁸, have shown that interactive features can also be counter-productive in terms of engagement, they have also shown that, when used in certain ways and contexts (specific kinds of content, for specific users with specific purposes and on certain conditions), features that explore the sensory, customisation and multimodal affordances of devices such as tablets can indeed achieve high

¹⁸ This has been one of the leading sectors in digital innovation, and probably the most active in the app space, with largest number of apps and other kinds of digital experiments.

levels of engagement and satisfaction. Bacon nearly touches on this dimension of specific context. She starts the article by saying that:

Digital storybooks for children come in many flavors: ebooks, enhanced ebooks and apps. What's the difference between the three? They each offer different capabilities, require different production tools, have different price points, and serve different consumer needs.

I find the last sentence particularly revealing; it hints at a criterion of a different nature from all other analysed thus far, and which focused on *texts* and their *production*) — the assertion that they 'serve different consumer needs', thus also considering the *readers* or *users*. Bacon, however, does not explore this avenue of enquiry further in the article.

From a user perspective, the use of some apps and enhanced ebooks will feel ver similar. Does it matter to them what it is called? Or in what programming language or form of binary code it has been produced or stored? These are details that producers know and discuss, but they escape the awareness — and interest — of most users. Likewise, to the 'untrained' eye certain ebooks will feel very similar to enhanced ebooks, especially in occasions where a reader/user chooses to go through a whole enhanced ebook without once choosing to play a sound or video. Thus the experience will feel identical, or at least very similar.

Bacon later adds in her article a relevant quote from Dominique Raccah, Publisher and CEO at Sourcebooks, a company that creates books in all three formats debated: 'Each format lends itself to a different audience or type of book'. This is a very important assertion. It is no coincidence that textbooks, storybooks and movie tie-ins are some of the most common and successful types of digital books (whether in app or enhanced ebook formats). These genres — by virtue of their content, and the objectives of their use, both from producers and for consumers — suit multimodal and interactive analogue formats. For example a pop-up book, a book with sounds as you turn the page and buttons to hear a character sing; or a book with detailed illustrations and diagrams, perhaps with zoomed-in images of certain parts of diagrams, or maybe with flaps that can be raised to reveal a hidden layer of content in a drawing (as I have seen used to illustrate the inside of a human body and its organs); or a book with evolving sketches of a movie character and behind-the-scenes photos, diagrams and interviews. Digital books for these genres use similar materials and identical ways of interacting with the story and/or information, albeit in different ways, combining modes in texts that allow for more extra content and layers of content than their

analogue counterparts. In digital books these are hidden, available at a click or swipe, but in analogue and print formats they need to be there, materially, even if also hidden behind a piece of paper or card, or an electronic speaker on the back of a 'talking book' — but all pieces add volume and weight.

At times digital books have also innovated in a deeper sense, by adding features and inviting users to perform interactions that are indeed more novel, and further distanced from print and other analogue forms of the book, but often borrowed — or at the very least influenced — by other formats and genres from within digital media, which in some instances have themselves borrowed from offline, analogue practices of paper and print. This network of influences across and between analogue and digital texts will be explored in more detail when I present my attempts at locating digital storytelling texts such as the Nature Mage enhanced ebook at the intersection of print and digital.

The 'big 3' technology giants: curation issues and suitable genres

The focus of the analysis here is on the kinds of books they are producing — or facilitating the production of (through platforms and standardised formats). Big technology giants such as Apple, Amazon and Google are not focused on creating or marketing the more innovative kinds of digital books. The analysis shows that similarly to the big 5 they are also focusing on digital formats closer to the print book; Amazon on 'enhanced ebooks' and Apple on their equivalent 'multi-touch' books, made with iBooks Author. Google do not have their own format or platform but distribute book-related apps and enhanced ebooks.

Google embarked on its mission to digitise the books of the world, but has not, to the best of my knowledge, created any production tool or digital book-like artefacts that explore the affordances specific of the digital medium. The way the Google Play store is structured, and the various routes to finding either book apps or enhanced ebooks and Google's interchangeable uses of these labels result in a confusing experience for consumers. Google Play clearly highlights certain ebook segments/genres: children's books, comics and to a lesser extent textbooks. App producers that distribute and sell their works via Google Play seem to think along similar lines: the most common genres found were of a similar nature to these: 'learning books' and 'colouring books' for children. The genres found for the (few) enhanced ebooks included reference books about babies, languages, fitness, a 'how to' guide and a movie tie-in. While these are not comics or children's

books, most are — like textbooks — aimed at learning and reference. What all seem to have in common (reference, textbooks, children's and comic) is a very visual nature, or put another way, the common usage of visual modes of representation such as photos, diagrams, tables, drawings and videos. They achieve different goals but make similar uses of some of the affordances of apps and enhanced ebook formats.

Amazon, who started by selling books in a US market used to books-by-post and then virtually single-handedly turned ebooks onto familiar consumer products, have not put much energy onto producing or marketing forms of the book that make use of the affordances of digital media in ways that are innovative. Amazon is focused on ebooks, and with Amazon Prime is using ebook subscription (packaged with the subscription of other media) as a business model. In terms of more innovative formats, Amazon has enabled the production and distribution of ebooks with some enhancements, but with narrow applications and just scratching the surface of the affordances supported by devices such as tablets and smartphones. Amazon (2016c) have a webpage dedicated to explaining the 'features available in Kindle Books'. In this webpage, appropriately named 'Features Available in Kindle Books':

Some books sold in the Kindle Store have enhanced features. [...] Text Pop-Up; Panel View; Print Replica; Whispersync for Voice; Immersion Reading; X-Ray; Text-to-Speech; and Kindle Editions with Audio/Video. Some books contain audio and/or video clips to provide an interactive experience.

The description above is deepened by further descriptions of each feature in about three to five lines each. Some of these features seem to have been designed for specific genres, as this extract, from yet another webpage titled 'Enhanced Features for Kindle Books' (Amazon, 2016d) suggests: 'Some books sold in the Kindle Store have enhanced features including audio and video clips, Kindle Text Pop-Up for children's books, Kindle Panel View for comics and graphic novels, X-ray, and Text-to-Speech.' It seems therefore that two of the features if not purposely designed for specific genres, are at least framed as such: pop-ups *for* children's books and panel view *for* comics. This points out that producers thought that these features — afforded by the digital medium platform Amazon use for their enhanced editions — were appropriate, or *suitable*, for such genres and their audiences. At their launch Amazon effectively framed 'Kindle ebooks with audio/ video' as particularly suitable for certain genres (Hollington, 2010):

Some of the first books to take advantage of the new technology include Rick Steves' London which provides walking tours with narration and Rose's Heavenly Cakes which includes video tips on preparing the perfect cake. [...] although only nine audio/video titles are presently available, Amazon notes that this is only the beginning and they are collaborating with major publishers such as Wiley and Avalon Travel to take advantage of this new functionality.

Amazon clearly highlighted the potential of the affordances of the new digital devices (tablets and smartphones) for Reference titles. Once again we see this tendency to associate digital formats and multimodality as *being good at* 'doing the work' of Reference and non-fiction books. This notion of *doing the work* of books was inspired by Ian Bogost's analysis in the book *How to do things with videogames*, where he expires the spectrum of uses of games, and of media in general. Games, he argues, can do many things, from art to training, from promotion to relaxation, to name a few of the 20 'things' he lists. The spectrum of uses typically increases as a medium matures and the potential for certain uses is feasible and conceived of by producers. For example, videogames are now seen as a medium through which education and learning can happen (James Paul Gee, 2007), a notion which still meets a lot of criticism and resistance, but which would have been virtually unthinkable of two or three decades ago. Games can *do the work* of books in learning, as an app such as *Google Maps* can do the work of a paper map, in the sense that they fulfil similar functions and can put to identical uses.

Enhanced ebooks were seen at the time as the new hope for more innovative digital formats. Again the genres highlighted follow a trend: cookbooks, travel guides, visually-rich texts where image and sometimes audio and video are combined with written text. But in most cases, still making very little use of the potential offered by the affordances of the new devices — again with a conservative approach, reliant on established genres and, as we shall see in the case of movie tie-ins, on popular brands and characters.

Apple's 'multi-touch books' are framed as particularly suitable for reference and non-fiction, and more specifically textbooks, business promotional texts and lifestyle-related uses such as travel diaries, family recipe books or DIY project books. 'iBooks textbooks', for example — the genre most highlighted and promoted by Apple — made with iBooks Author are framed as enhanced ebooks that tap the multimodal and interactive potential of the medium. According to Apple, these

textbooks 'offer a full-screen experience full of interactive diagrams, photos and videos' (Apple, 2016e). Users are able to 'dive into an image with interactive captions, rotate a 3D object or have the answer spring to life in a chapter review. Highlighting text, taking notes, searching for content and finding definitions in the glossary are just as easy.' (Apple, 2016e)

The education angle is patent on the webpage 'iBooks textbooks for iPad' (Apple, 2016e), which shows an image of someone using an iPad with a textbook 'page' open, revealing a good-quality image representing a cell and the text 'The Living Cell'. This image is accompanied by a title heading 'iBooks textbooks for iPad', which claims:

It's time to turn a new page on learning. On iPad, textbooks invite Multi-Touch interaction: flick through photo galleries, rotate 3D objects, tap to pop up sidebars or play video and audio. With iBooks, reading is beyond fundamental. And more engaging then ever.

Besides the somewhat cryptic statement 'reading is beyond fundamental', it is evident that Apple are presenting this kind format as an 'evolution' from previous formats or ways of learning. The 'Multi-Touch' interaction (note the capitalised use of 'multi-touch') supposedly makes reading more engaging. Once again, we see a producer using the *interactivity* argument to promote a digital format. This kind of discourse continues further down on the Education webpage:

Not Just Reading — Interacting. The textbook transformation. Today's students have grown up completely immersed in technology. iPad, iPod, computer — these are the ways they interact with their world. They need a textbook made for the way they learn.

Again we see a references to new 'interactions'; in fact, Apple promises that with these formats we move from the realm of 'reading' to that of 'interacting'. The format is clearly aimed at a specific audience, who has 'grown completely immersed in technology', and which is portrayed as requiring new ways of learning.

Although both Amazon and Apple are offering platforms and standardised formats for the production of digital books, the ways in which they curate (classify, present and promote) them reveals inconsistencies counter-productive to the production enablement effort. There are many issues with the ways 'enhanced ebooks' are classified, presented and described to consumers. It is often very hard to find them (even when actively searching them), and proactive introduction is scarce and inconsistent. To add to this, there are other issues that can become hurdles to the

awareness and usage of these kinds of formats, namely: complex information and considerations around device and software compatibility; knowing where to buy them from ('what store?'); other issues such as having accounts synced across devices, ownership of digital works, borrowing, sharing with family, and the perceived dangers of in-app purchases (for apps, of course).

Amazon's and Google's app sections for books present a few 'book apps', but also a myriad other apps, some of which of very low quality. Even Apple, with the most established app store, is quite poor in terms of books, or bookish content. There is no 'Books' section in the App Store or iTunes (although after a great deal of searching I was able to find that 'Made for iBooks' have been placed under 'Audiobooks'). iBooks only seems to sell ebooks and is being positioned away from iBooks Author, whose dedicated website and several webpages do the job of promoting Apple's enhanced ebooks, namely their 'iBooks Textbooks'. The terminology used is often confusing, with inconsistencies and overlaps.

The ways in which digital books are classified and presented to consumers thus vary considerably, and this is particularly obvious when it comes to apps. It is often down to publishers or producers to decide which category they want to class their app under (e.g. 'game' or 'book'). For example, lest us look at the strategy adopted by Australian digital production company Wasabi, who present themselves as creators of 'interactive storybook apps' for pre-schoolers. They chose to place the same app under different categories in different online shops. Wasabi chose to place their app *Gorilla Band* (Wasabi, 2015) under the Books category in the App Store, whereas in Google Play it can be found under Education¹⁹.

A large slice of the industry — even technology giants — seem to be focused mostly on selling ebooks. For Amazon this seems obvious, but for Google and Apple there are also opportunities in apps and Apple's iBooks Author project. However, the promotion of such digital book products has been haphazard. Even Apple, with its might in device spread seems hesitant to more proactively show digital formats such as their 'multi-touch books' on their 'shop windows'.

At this moment in time enhanced formats and book apps are often hidden or embedded somewhere in online stores; the terms used to describe them are often inconsistent and overlapping, with consumption further complicated by issues such as compatibility of formats,

¹⁹ It would be good to hear directly from the producers about the rationale behind their decision. I have asked Wasabi for an interview, and am still awaiting a reply to some questions sent via email.

devices and software. Many discussions centre around the future of print, but it seems that with so many problems the very future of some digital forms is at stake.

From the core to the periphery: analysis of a range of digital books

More common genres, closer to print and to the core of publishing

As we have seen thus far, when one searches for contemporary — and even older — examples of apps, enhanced ebooks and other forms of digital books (beyond ebooks), certain segments and genres (and by association certain target audiences) are more commonly found than others. This happens mostly towards the core of publishing, where publishers tend to be more conservative, more aligned to established working cultures, and more attached to the print book. But it is also patent towards the periphery, in some cases because there is a perceived market for digital artefacts for certain generations (like the children growing up using tablets and apps since they are babies) and for the more easily perceived value of using the affordances of digital media to produce texts that often manage to do the work of print more effectively, thus adding value for readers (and users). Because they are based in more concrete, more objective needs (e.g. learn how to cook a recipe and all that this involves), non-fiction genres have been perceived as having in digital media and new formats a suitable home. Just as it made sense to move dictionaries and encyclopaedia onto CD-ROMs and later online, where academic journals also found a suitable space, now it is also perceived that digital forms of the book, and namely enhanced ebooks of different shapes, are appropriate formats for certain genres as they add or augment use value²⁰ and meet user needs in effective ways. As we will discuss later, fantasy and the less functional realm of storytelling, and of adult fiction in general, have not generally been seen by the more conservative publishers as segments and genres that require much from digital beyond ebooks, and that could benefit from more innovative uses of the digital medium in ways that explore their affordances more fully. For innovation in these segments one has to look further away from the core, towards the periphery of publishing, which is done in subsequent sections, after we look at the more common — and framed as most promising — formats, genres and segments.

²⁰ Here 'use value' is deployed to mean the *usefulness* or the *utility* of a text and its affordances in meeting the needs (i.e. the task a user is trying to perform, for example locate a site of interest in a foreign city; or more subjective needs, such as expanding one's pleasure with a novel or film by engaging in fan fiction). An online dictionary can be said to hold higher use value where it makes finding a word quicker, or updating meanings easier, than on a paper support.

Enhanced ebooks: promising genres and the notion of suitable content

Overall, sales of enhanced ebooks 'have fallen short of expectations since publishers began investing in the format roughly five years ago.' (Swanson 2015). Together with children books, comics and graphic novels, textbooks and non-fiction and reference (such as travel guides and cookbooks), movie tie-ins are framed as a suitable candidate for digital book production, and unsurprisingly for this very reason also one of the most commonly found genres for enhanced ebooks. As we have seen Apple highlight the potential of their iBooks Author for the production of textbooks — which is being explored by traditional educational and reference and non-fiction publishers such as DK Publishing — but the general publishing industry seems to see a greater opportunity in movie tie-ins, in this 'historically difficult to market format.' (Swanson, 2015; see also Reid, 2012). At the beginning of 2015 the enhanced edition of Chris Kyle's memoir, American Sniper, led Apple's iBooks bestseller list, 'consistently landing several spots above the title's standard e-book in a rare victory for enhanced e-books (especially over their un-enhanced counterparts).' (Swanson, 2015) The book contains 'supplemental material' indirectly related to the movie, including interviews with a Navy Seal and his wife. According to Harper Collins CEO Brian Murray the book had sold over 166,000 copies, which was seen as a great result for an enhanced edition. Clare Swanson, the writer of the article, goes on to say that 'Other publishers are also successfully experimenting with incorporating movie tie-in content into enhanced e-books.' These included Grand Central and Penguin Random House. According to Beth deGuzman, vice-president of digital and paperback publisher at Grand Central, 'an MTI enhanced e-book is always on the table for us with big- screen and small-screen adaptations'. deGuzman explained that these editions are 'a win for everyone involved. The more marketing and exposure, the better the chances of success for the adaptations.' (Ibid.) Both film, original book and enhanced editions can benefit. According to Nina von Moltke, senior VP, director of digital publishing development, 'Movie tie-ins do represent a great opportunity, as they enable us to leverage the marketing of the studio, providing additional promotional opportunities for what are often backlist titles.' (Ibid.)

TV and movie tie-ins have been associated to enhanced ebooks by the publishing industry, who seem to see in these an opportunity to explore the production of multimodal books. The production of these kinds of books is dependent on studios providing the 'extra' material required, which pends — according to deGuzman — on 'the movie studio's recognition that movie tie-in editions

serve as crucial marketing tools for the movie.' Nina von Moltke added a word of caution regarding the marketing intentions of these books by saying that Penguin Random House 'always keep a reader's interest in mind and are careful not to turn a book into a marketing vehicle for a movie. What seems to work best in the market are editions that provide unique and relevant content.' (Ibid.) Sharyn Rosenblum, Vice President senior director of media relations at HarperCollins, wraps up the article with an explanation of their strategy:

From a corporate strategy point of view, we continue to experiment with product in conjunction with our authors and where the technology and the content can marry up nicely to offer a richer consumer experience. [...] We believe that there is value in adding features for fans, we need retailers to support visibility and exposure to these products. (Ibid.)

The question of marrying up technology and content is important; it again points to the notion that certain technologies are (seen as) suitable for certain kinds of content. Expressed in other words, some content (in certain genres), consisting not just of written text but other materials or assets across modes, find a suitable *home* in enhanced ebooks and similar digital forms. And note that the question of discoverability is once again raised — inseparable from innovation and the 'value' added by new 'features' — in the call for 'retailers to support visibility and exposure'. Discoverability is identified repeatedly as one of the greatest challenges to overcome in the digital era; it relates to having multiple names and stores and devices for similar texts, and ultimately yet again shows the importance of classification and curation for industry and consumers.

Movie tie-in: The Wolverine Revealed

Made with iBooks Author by Fox Home Entertainment (2013), it is a free 'multitouch book' for iPad and iPhone, available on the iBooks store and on iTunes under the 'Graphic Novels' category. According to the producers 'Through this interactive experience, both new and long-time fans will gain a deeper love and appreciation for [...] The Wolverine.' (Ibid.) The main goal of the book is to promote engagement with the franchise, an assertion reinforced by the fact that it is freely available. Users can see, read and watch content related to the world of Wolverine, including character analyses, storyboards and videos. There are detailed (image and writing) descriptions of weapons and of key plot events with pop-ups used to reveal further details for several creatures

and devices. In the publishing industry this kind of book is often called a movie tie-in (also referred to as MTI).

Another two examples of movie tie-ins are the 'multi-touch books' Frankenweenie: An Electrifying Book (Disney, 2012) and Doctor Who: The Vault (by Marcus Hearn, 2014), also made with iBooks Author. The intention of the former seems to be mostly promotional by creating a paratext that can engage with consumers as part of a wider marketing effort around the release of the film; again the book was free. The latter, linked to the Doctor Who series, an exemplar fan series, documents and curates relevant historical materials about this classic of TV, including sketches, letters, old drawings and so on. It is also a free book that promotes the series, albeit with more of a historical documentary-type feel.

A game universe guide: Codex: Space Marines (Enhanced Edition)

This is an enhanced ebook for iPad, launched by Games Workshop (2015), in two versions: a free sample and a full paid version (costing £29.99). This is the Warhammer 'codex' for their Space Marines games. According to the producers (Games Workshop, 2015):

Codex: Space Marines is the most comprehensive guide ever to these superlative warriors. It contains all the rules and information to allow you to use your collection of Space Marines in games of Warhammer 40,000, along with information on their history and organisation, artwork showing them in action and galleries of beautifully painted Citadel Miniatures.

According to Lexicanum, 'The Community Created Warhammer 40,000 Encyclopedia', 'codex [...] is the name of a source book for Warhammer 40,000 armies and factions containing background information, pictures, and rules.' (BoLS Interactive LLC, 2015) There are plenty of Warhammer books in print formats. The website further explains that 'Since its creation in the 1980s, Warhammer 40,000 has had seven distinct versions or editions. With each edition, the Codex of each army has changed to reflect the new rules and units.' This codex in particular provides a wealth of detail surrounding the world: origins, races, and so on, in a very detailed paratext for Warhammer fans. Interestingly it incorporates navigation instructions from the start, which explain users about interface icons, what these do, and how to use them. This is important from a user experience and usability perspective because this may be a new format for many users. Users can read about key characters, listen to audio quotes, learn about iconography and

heraldic traditions of the world and read backstory texts on its origins. The product is aimed at engaging current fans deep inside the world, at cross-selling products (there are links throughout the book to the Games Workshop online shop) and eventually creating new fans by distributing free samples. In this franchise there are also specially commissioned novelisations, physical models, high street shops that also function as gaming points, and events where gamers come to play. Knowing the lore of this 'universe' and having these books to refer to when gaming is important to the players. Having a digital reference book allows them to quickly find and retrieve information when they are playing. There is nothing groundbreaking about the use of digital affordances in this book, but having it in a digital format does add value to users.

Halfway works: innovation in common digital genres and segments

Most of the digital books analysed thus far were produced using existing platforms and standard formats. This is the case with most digital books produced by and sold by the more traditional publishers at the core of the industry. Using existing platforms and standards is not seen here as either good or bad — it depends on the very design of the digital artefacts, on whether it meets real user needs effectively, on whether it adds use value or extends the pleasure with a storyworld.

From here onwards we start moving to more innovative formats, typically bespoke, designed and made for a specific purpose²¹. These kinds of artefacts are more likely to tap the specific affordances of the digital medium in novel ways, and thus push further the boundaries of the book.

As we have seen children and non-fiction reference are two of the segments that publishers — even more traditional ones — have been trying to tackle with digital books. Here I present two examples for each segment, to show the ways in which the affordances of the digital medium are being explored for different audiences and different goals.

A storybook platform with personalisation features: Me Books

Me Books (Made in Me, 2012) is a platform that allows the creation and distribution of illustrated books, storybooks and comics. Made in Me are a digital studio that also make games, other kinds of apps and websites. The platform allows the inclusion of features and the ways of reading typical

²¹ Of course sometimes existing *engines* are used too; engines are the chunks of code that have functional roles to play, and that often are used across several texts as a skeleton of basic code on top of which bespoke code is built. For example, Inkle's Inklewriter branching narrative platform, which provides a working scaffolding for anyone wanting to design branching narratives — the tool does the branching, the author (or perhaps game writer, designer, or producer) adds the content.

of other digital books for children. Readers have the option to read the words, flicking through more or less illustrated pages, hear the story read by famous figures (such as Sir David Jason), and click on certain characters to see animations and/or hear sounds. Most stories make extensive use of images, in remediations of storybooks. Users can create their own hotspots by drawing areas with their fingers around the screen, and then record their own voice retelling the story. The recordings can then be played back. In a way this platform remediates the successful Leappad proprietary electronic book, but adding an element of customisation with the addition of user-generated content. Me Books is available as an app on iTunes and Google Play and relies on in-app purchases: the platform and a limited number of titles are free, but most are paid for. Some titles were produced or commissioned by the app makers, although most are added or commissioned to them by brands that have their own characters and stories (such as Peppa Pig and Disney). The encyclopedic affordance of the digital device is used to store a number of titles in a small, portable device; the recording affordance is presented as a way of making the texts personal. This product not only remediates a book (or an ebook); it also mediates the very act of reading with a child, where changing one's voice to imitate different characters is common practice. The affordances of the tablet are tapped to allow the definition of any hotspots and related recordings, which get stored in the app for re-listening. In offering such features the app provides use value as it meets and expands actual social reading habits.

A digital container: Disney Animated

Disney Animated (Touch Press, 2013) is an app with a hybrid character, which mixes text and visual content, animation and other kinds of activities from a range of other digital media genres. It won Apple's Best App award 2014, and a number of other awards, and was hailed by many digital book publishing websites as an example for publishers. It was distributed at the time on Apple's iTunes and App Store, and it worked on the iPad tablet. The app was paid for, and at £9.99 it costed more than most apps. It consists of an amalgamation of content and activities, from the more book-like, visual reference content on the history of Disney and aspects of its work explaining, for example, how their stories are created, to several interactive tools where users can: customise the face of a horse that features in the film Brave; make a ball bounce to play around with the principles of animation; and create their own 3D character animation. These activities are clearly inspired by tools and features typical from other digital media such as 3D animation

software and avatar creators in games. It makes use of affordances specific of the digital medium, namely the procedural and participatory affordances, to respond to user input in the creation (from a range of defined parameters) and customisation of characters and animations. The reference side of the app relies less on affordances specific of the digital device: text and images are presented side by side. Thanks to the mix of types of content this app could be described as a digital container rather than a book.

A scholarly tool: The Waste Land

Touch Press, an example of a new breed of digital publisher formed by a team of publishing veterans and technologists, produced the app T. S. Eliot's *The Waste Land* (Touch Press, 2011) in partnership with Faber. The app, which has relied on a paid for monetisation strategy, currently costs £9.99, a considerable price in an online store where many titles are free (relying on in-app purchases). According to Henry Volans, Head of Faber Digital, Faber were 'delighted to partner with Touch Press for this marriage of literature and the revolutionary iPad. The Waste Land app is a flagship project in Faber's mission to re-imagine poetry for the digital age.' (Faber, 2011) The app mixes the original poem with reference materials. The poem is shown in its entirety and the app offers multiple ways to read the text or explore aspects such as its meanings, references, and historical context. According to the promotional website, 'a wealth of interactive features illuminate T. S. Eliot's greatest work, including audio readings, detailed notes and expert insights [in recorded interviews]' (Touch Press, 2011). It is also possible to watch a recorded performance of the poem, hear famous writers read it, 'and explore the original manuscript with Ezra Pound's handwritten edits' (Ibid.). This app offers an in-depth analysis of and important literary work, allowing readers/ users to explore as much or as little as they wish. The app, announced with a strong marketing effort, was described as bringing 'alive the most revolutionary poem of the last hundred years, illuminated by a wealth of interactive features.' The attempt to align with the source text is clear: the 'design carefully respects the typography and integrity of the original poem, yet offers spectacular new ways to explore The Waste Land's significance and influence.' (Ibid.) The care with remaining 'faithful' to the source text is evident. It is an example of hybridisation, of intermediality at operation, but with a big focus on remediating, on bringing the work as known before, with its original manuscripts and annotations, onto a digital package. There was, it seems, an effort to associate the app closely to the book, a big name in literature, to borrow from its status, from its cultural capital, to convince the least convinced that digital media, namely apps, could deliver quality, could be taken seriously and thus help breakthrough onto an emerging market. The app's exploration of the affordances of the digital devices in which it runs is simple but effective. The reference scholar material (annotations, comments, readings, and so on) is shown through various modes (images, video, audio) and allowing quick navigation through hyperlinks and the choice of layers of content shown on screen at any given time; one can choose to focus on the original manuscript, on the typed 'clean' edition, or see both. The app remediates the various materials in a simple way that is not groundbreaking. However, with its careful selection of materials, and by presenting the kinds of materials that scholars actually use when engaging in the real-life context of studying a work of literature, the app's designers have considered how scholarly analysis is done. They have built on the user needs of scholars, thus presenting an app that has real use value. What changes most in exploring digital affordances is the amount of material that can be shown in one text, the ease of transportation, and the speed with which it can be accessed and easily cross-referenced.

Music practice: Henle Library

The Henle Library is another app developed by Touch Press (2016b). Aimed at performing musicians, students and teachers it is framed as being able to *redefine* 'the way you experience sheet music'. Touch Press continue by explaining that they 'are working closely with the G. Henle Verlag to bring their content and heritage to iPad. Henle publish the world's best classical music scores and, together, our goal is to use the latest technology to improve the way musicians use these scores'. There is a clear focus on *use*, and on redefining that use by exploring the affordances of the digital medium. I am not a musician, and have not tried the app, but from the reviews and descriptions that I have read, it seems to provide added use value for musicians. Here are some of its highlighted features, from its iTunes store webpage:

Browse a store of over 100 Urtext editions

Annotate each work with a range of tools, and share your notes with your teacher, students, or fellow performers

Get exclusive fingerings and bowings by famous musicians for selected works

Save and print your personalised scores

Record and share your music and take advantage of the loop tool to improve your rehearsals

Set your in-built metronome (Ibid.)

The app is not simply a book, but it 'does the work' (i.e. fulfils the role) of sheet music books, together with fulfilling a number of other needs that musician users may have in their daily practice routines — features such as annotations, recording or the simple but useful metronome. None of the features are new *per se*, but the app is a seemingly effective combination of useful features in a single *package*. The Henle Library is a good example of 'user-centred design' (as defined by Norman and Draper, 1986). It involved a good understanding of users, of their needs and contexts, to then re-invent the ways in which they perform certain tasks by tapping the encyclopedic, participatory and multimodal affordances of the digital medium.

Digital book design towards the periphery of digital publishing

In this section the focus is on a) examples of works in genres that are more rarely found in digital formats in mainstream publishing — adult fiction in general, the realm of storytelling, and namely fantasy, a genre that was of special interest to inform the research-led *Nature Mage* project; and b) texts that exemplify some of the most innovative formats and explorations of digital affordances. In parallel to analysing examples of texts, the section also covers the curation strategies of their producers. This selection does not aim to constitute a representative sample, but a manageable number of works that represent a range of approaches, from those closer to print and ebooks to others that make deeper use of digital affordances. Examples of fantasy works are included to provide a view of the ways digital media are being explored to tell stories in digital books within this genre, and because ultimately some of these works have inspired the Nature Mage digital book design. In contrast to the preceding sections, which analysed practices more towards the core of publishing, here the focus is on the smaller and more recently founded digital publishers at the periphery of publishing. By exploring the affordances of digital media in deeper and new ways the producers covered in this section are pushing the boundaries of the book; they are mixing conventions and genres and are creating new formats, the hybrids in-between media repeatedly mentioned in this research.

Fantasy: Steampunk Holmes: Legacy of the Nautilus

This app was produced for tablets in the US by Noble Beast (2013), a start-up formed by people with experience in digital media development, on the back of a successful Kickstarter campaign (Noble Beast, 2012). In an interview with Noble Beast founder, Richard Monson-Haefel (2014), I was told they use a mix of own investment and crowd-funding to develop apps. Steampunk Holmes was sold across several platforms as an ebook, enhanced ebook or app, all featuring the same core story and illustrations, but with added features such as animation of images and audio reading in the formats and platforms capable of handling such enhancements. It is adult fiction, an adaptation of Sherlock Holmes in a steampunk environment, so it mixes the detective novel with the steampunk theme. In the app version, the more multimodal of all versions, the text consists mostly of remediated book pages, with the addition of several features that are optional (or to explain better are there for whoever wants to use them, but have to be activated); the aim was to avoid disruption to anyone who simply wants to read the story. Thus in parallel with text and illustrations readers can hear the story being narrated, listen to musical backgrounds suited to different parts of the plot, and access a range of extra features, which can be accessed at any time via a menu. As the plot unfolds, new characters are introduced and added to a sort of glossary of characters. By clicking on a character card, users can learn more about them and see an enlarged version of their illustration. There are also colour illustrations, and a map where key/kernel events in the narrative are plotted. Lastly, it is possible to access cards for machines that feature in the story, such as Holmes' super-charged motorbike the WidowMaker, and watch animations that demonstrate how they work, the kind of feature likely to appeal to a steampunk audience.

The app won the Digital Book World's award for 2014 Best App - Adult Fiction, which 'recognizes advancements in digital book publishing' (Ibid.), and where nominees had to perform on several levels: design, innovation, and entertainment value.

Noble Beast's decision to also make available other versions of the story, such as an ePub format enhanced e-book, PDF and 'web edition'. was a marketing strategy aimed at maximising reach. Noble Beast (2012) explained further in their Kickstarter campaign page:

Steampunk Holmes: Legacy of the Nautilus is multi-channel publishing project for the Web, eReaders (kindle, Sony, iBooks), audio players, tablets, and print. In other words, a complete editions of the books are going to be released on several different reading platforms so that

everyone, no matter how they read, can enjoy the series. Our motto is to 'leave no reader behind'. No matter what your favorite reading platform is Steampunk Holmes will be there.

In interview with me Richard Monson-Haefel (2014) explained that the *extra* material was important but should not distract from the mere reading of the written story, if that is the intention of the reader. Therefore features such as the audio recording or the interactive map could be enabled or disabled. This preoccupation with avoiding distractions resonates with a wider point made by Janet Murray when reflecting onto role of designers in exploring the affordances of the digital medium:

Advancing the medium does not mean choosing the newest platform to implement a project or adding in the coolest new bells and whistles. [...] Even if the new technology is stable, it is not helpful to use it if it distracts from the task served or meaning expressed by the artifact. (Murray, 2012, p.42)

In the case of Steampunk Holmes, the core meaning could be conveyed by the means of text and illustrations; animations, interactive maps and character cards made it more attractive aesthetically and allowed for different ways of accessing, unravelling and revisiting the story.

Fantasy game-book: Steve Jackson's Sorcery!

This work is an adaptation of a print *game-book*, Steve Jackson's *Sorcery!* series (Jackson, 1984). It is a paid for tablet and mobile app by Inkle (2013a), a team of game and software developers, and it has won several game awards (Inkle, 2013b).

This is probably the example in this thesis that stands further away from the concept of *book*. Inkle never use the term, and would rather call it an 'interactive adventure'. During an interview (Inkle, 2014), Creative Director Jon Ingold told me they are not really bothered with what people call it, insofar as they enjoy it. Discoverability, however, was important for Inkle, and as we will see later this was achieved both by entering awards competitions and by having their products recognised by Apple's Editors, the human curators (Bhaskar, 2016) that highlight quality content in Apple's online stores.

The key feature highlighted by the producers for this text is clearly the interactive, story-changing element: 'the story rewrites itself around your actions' (Inkle, 2013b). The interface is

clearly influenced by fantasy tropes and digital games, but with a material, parchment look and feel. Users (most of whom would probably identify themselves as *gamers* rather than *readers*) access different parts of the narrative and activities via paths on a map, like on a board game. They read parts of the story in bits of parchment sown to each other in growing chains of written content. The branching mechanic is powered by another of Inkle's products, Inklewriter, a free-to-use HTML5 'tool designed to allow anyone to write and publish interactive stories. It's perfect for writers who want to try out interactivity...' (Inkle, 2012)

Stopping at different locations users have choices to make; they can opt for alternative responses to dialogue and actions; they can earn spells and powers, and battle monsters and other enemies whilst reading a kind of live narrative report of their fight. The result is a text where users read the story but also where they navigate its world, make choices, learn and progress through different paths. Producing such a branching narrative requires skills that a growing body of game and interactive authors are developing, with more traditional author and scriptwriters often trying to acquire such sills. Games currently represent a large and growing slice of the creative industries, and as such the sector has attracted talent from other media and industries.

I have called Inkle's Sorcery! a *game-book*, but could it be called a *book-game* instead? Is it more of a book or more of a game? It depends on the mode in which the consumer wants to engage with the text. Many studies of motivation and engagement with multimodal, multifaceted texts such as videogames show that these vary greatly even when considering players of a same, single game²². Different players can focus to different degrees on different aspects, for example the story, ludic activities, or socialising with other players.

Fantasy: Sorcery! 3

Sorcery! 3 (Inkle, 2013a) is a sequel, again based on Peter Jackson's print game-books, but offering players a much more open experience than the initial Sorcery! game. 'With tens of thousands of choices, the story rewrites itself around your actions.' (Ibid.). It is also described in the online gaming platform Steam (Inkle, 2016b) as an 'open-world narrative adventure' where as a player you can 'create your own unique story where every decision you make is remembered.' The work, which is most often described by others as a game, has received enormous praise for its interactive narrative power, particularly for the way in which it both draws, and at the same time

²² See for example Tosca and Klastrup (2011) and Richard Bartle (2004).

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departs, from the original works. This is how it has been described in the games website Rock

Paper Shotgun (Walker, 2016a):

This is spectacular, a brave and fascinating evolution of what can only just be described as

'interactive fiction' at this point. A bold step away from the confines of the source material,

and a coherent and completely novel (fnarr) experience.

The long article about the game continues, further describing how 'Sorcery! 3 makes a huge

diversion from the previous two games, and indeed from the book on which it is based':

Instead of following the choose-your-own-adventure formula of weaving through a linear

path, it opens things up such that you're able to relatively freely move around the wilds of

Kakhabad. [...] the game gains a greater focus on the passing of time, with movement

seeing the sun creep across the sky, night requiring rest and shelter, and rations a far more

prominent feature of the game. It has, in quite a remarkable way, managed to combine

Jackson's original Fighting Fantasy story with elements of survival games.

This work moves away from the notion of book and even from the (multi-)linearity typical of many

works of interactive fiction. It is still storytelling, it still makes extensive use of written text, and

branching narrative — but it also moves beyond these in the direction of exploration, open games,

survival games and virtual worlds.

Adventure: 80 Days

Another work by Inkle (2016a) that is worth mentioning is 80 Days, a retelling of Jules Vernes' story

as a digital 'adventure'. The team pro producers explained as follows their aim for this game:

When we set out to make 80 DAYS we had a few goals - we wanted to tell a great story, with

a strong sense of the world it was in. We wanted interactive fiction narrated from an 'I' not a

'You' [...] that could be played multiple times. We didn't totally believe that was even possible

with a narrative game - surely you play to see the story, and then it's done? When watching

the trailer remember, every line drawn on the globe is a journey, and every journey has a

story, and every story has choices, and every choice is remembered... (Inkle, 2016d)

The text is described as a 'multiplayer, massively branching interactive fiction...' (Inkle, 2016e) and has won numerous awards and accolades, including Editor's Choice on the App Store and TIME's Game of the Year, an it was nominated to another seven awards (Inkle, 2016d), which seems a testament to its quality, something which in the opinion of some games and entertainment industry press (Arend, 2014) had been lacking in other attempts at doing 'interactive fiction': 'Players are sometimes wary of interactive fiction because it can seem old-fashioned or dull, but 80 Days smashes both of those notions to bits. This is modern storytelling that engages and delights.' The number of awards and nominations and the very positive reviews seem to show that there is an appetite for this kind of product (at least in the gamer community). Another press review (Cameron, 2014) adds yet more praise:

[I]t is one of the finest examples of branching narrative yet created. [...] It's taken the long-ignored strengths of Interactive Fiction and Twine²³ and applied them in the right way on the right platform to give the player an experience that feels wholly unique, and more importantly, wholly their own. [...] There are just too many variables, too many individual stories, for any one trip to be the same, and when you're talking about a narrative-led experience, that's a mighty fine accomplishment.

EDGE magazine added that it 'captures the original text's wide-eyed spirit of adventure, its fascination with the technological advancements of the time, and the wonders of the world itself -9/10' (Gamasutra, 2015). These comments highlight a very important aspect of the adaptation: the fact that it builds on the 'essence' of the source story, it extracts core characteristics of its 'spirit', and mixes them with the medium of the game and Inkle's branching narrative engine. The source material, the original narrative, is suited to such treatment, and in the opinion of critics it benefits from the addition of an element of free exploration in the open parts of the game where players/ readers can choose to wonder off and see new places. it would be very hard to replicate this in any practical way in a print or other analogue format. The procedural and encyclopedic affordances specific to digital media means that the artefact provides a unique experience at least in this dimension: the sheer number of branching ways to experience the story.

²³ Twine is an open-source tool for telling interactive, nonlinear stories. Available at: https://twinery.org (Accessed 15 September 2017).

Digital publishers: curation towards the periphery of digital publishing

This section looks at the ways some of the more innovative players in the digital book area have been classifying, presenting and describing their digital forms of the book. The producers and covered here — whose works have been shown above — move away from more conservative conceptions of 'publishing' and the 'book'. In many ways, just as some of the examples of digital texts stretch the notion of the *book*, they stretch the notion of what being a (book) publisher means.

Profile Books

Independent publisher Profile Books have been establishing partnerships with digital storytelling companies in the UK, namely Touch Press and Inkle. Michael Bhaskar was Profile's Digital Publishing Director²⁴ between 2010 and 2015, during which time the organisation launched three book apps through partnerships.

Profile's website homepage (Profile Books, 2016a) does not highlight digital formats, but hovering over 'Books' on the top navigational menu shows different genres and Collections, including 'Profile Apps'. The page dedicated to apps (Profile Books, 2016b) explains that In 2014 they 'published two apps, both paid for, and both of which made the bestseller lists': 80 Days (in association with Inkle) and *Incredible Numbers* (with Touch Press). Another app released by Profile, also in partnership with Inkle, was *Frankenstein* (Profile Books, 2016d), whose description is more *bookish*, more closely aligned to the world of book publishing and print formats. Here is how it is described on the website, partly drawing from the descriptions and critic reviews from other sources:

"This masterful new adaptation of Mary Shelley's classic novel may be the best interactive fiction yet" — Laura Miller, Salon.com

"the most eye-catching development in April's digital publishing" — The Guardian '

The year is 1792 and in his Paris laboratory, Victor Frankenstein is building a man... Guide his tale with your choices in this unique literary app.

The description reveals associations with publishing and book-related tropes thanks to the use of terms such as 'fiction', 'publishing' and 'literary', and the reference to 'Mark Shelley's classic novel'.

²⁴ He is now Co-Founder and Publishing Director at Canelo Digital Publishing, https://www.linkedin.com/in/michaelbhaskar (accessed 20 September 2016)

This is still framed as publishing, an adaptation of a classic, but in a new light, a development in publishing with the exploration of interactive fiction via a 'literary app'. The publishers align themselves with the world and language of books as a way to perhaps borrow from the status of the book and the very work adapted. The app's website adds that this is 'a new way of experiencing Mary Shelley's classic tale of terror and revenge.' with 'The original text [...] fully adapted into interactive form'. The experience, we are told, is very different from reading the book: 'This is a reading experience like no other, that will put you into the heart of the story.', 'Frankenstein is an unputdownable reading experience, and a whole new kind of ebook.'. It is also described as 'novel-length' and a 're-telling of the classic story', again keeping it also close to the book format and its 'classic' status. The work includes illustrations of 16th century anatomical engravings, the full text of the original Frankenstein, as published in 1818, and an annotated gallery of illustrations. All of these contribute to the sense that this is an innovative work, yet well connected to the original and its time, serving also a kind of documentary function for the science of the time — an important theme in the work and life of its original author Mark Shelley. Its use of the affordances of the digital medium is simple but efficient, with visual style and aesthetics such as the rich science illustrations functioning as a mark that makes it feel like a work of quality.

Noble Beast

Noble Beast label what they do as 'transmedia interactive book apps' (2016b). Steampunk Holmes: Legacy of the Nautilus is described as 'a mashup of Sir Arthur Conan Doyle's Sherlock Holmes, characters, and stories from other 19th century works set in an alternative steampunk universe.' (Ibid.) There is no attempt to categorise it in terms of format. In the Kickstarter campaign that funded the work's production, it is described as 'an enhanced, interactive iPad adventure book set in a steampunk universe.' (Noble Beast, 2016a) Once again the word 'interactive' is used, this time next to iPad and book. It is a book, interactive, for the iPad, and produced as an app. There is an alignment with the book here, which is felt when using/reading the app; it could well be called an enhanced ebook as it feels and acts in a similar way, with a similar use of the affordances of the digital medium, namely multimodality and the ability to display added layers of content at the command of the reader-user.

In another crowd-funding (but unsuccessful) campaign, this time for an app called *Noble Beast Classics* (Noble Beast, 2016c), the producers similarly presented different versions, defined by a

greater or smaller number of used modes and features, and described with by analogy to makes of cars. For example, the top text, the app 'Fully-Enhanced iPad Edition', was classed as 'the Bentley of Enhanced Books'; this was followed by the 'Fully-enhanced Android edition', the 'Enhanced web edition', the 'Enhanced iBooks Edition', the 'Full-color PDF edition' and finally the 'Plain-text ebook edition', classed as 'the Honda of ebooks'. By placing these versions on a scale, the publisher allocated different values to different formats according to the amount of features they provided, and how multimodal they were. From the plain text ebook with text and illustrations, to the addition of pop-up character profiles on the iBooks editions, to the background music, interactive maps and other multimodal, interactive features of the fully enhanced edition. Moving up the scale means effectively coming across texts that make further use of the affordances of the digital media that support them. In doing so, Noble Beast cleverly create a product that can both attract those looking for novelty and an exploration of the affordances of the digital medium, as well as more conservative readers who just want a good story, and perhaps some illustrations.

Touch Press

This publisher's website homepage (Touch Press, 2014) features a large header at the top, with a good quality image of what looks like a comfortable lounge with an enormous TV screen and a pair of large, expensive-looking speakers on each side. Good taste and quality transpire as meanings form the image. One can read on top of the image 'Culture for the app generation', that is, digital products with taste. Straight below is another heading, 'What we do', which explains:

Touch Press is changing the way culture is experienced with our extraordinary digital products. Apps like Juilliard Open Studios, Henle Library and Beethoven's 9th Symphony have helped redefine what is possible on the App Store and we continue to push the boundaries of what can be done on mobile devices and on television. We work with premium brands to shape their digital product strategy and to release exciting, innovative apps that deliver high quality content to discerning consumers.

This description points to the publishers' alignment with a certain kind of culture, one could say with 'highbrow' culture. Touch Press's recognition has risen within the entertainment industry when they adapted T. S. Elliott's The Wasteland (Touch Press, 2011), which again shows how they have picked works and aligned themselves with literature, music and science to 'deliver high quality

content to discerning consumers'. Touch Press deliver 'culture', but for the app generation. On another page (Touch Press, 2016a) they add that:

At Touch Press we pride ourselves on our ability to rethink what can be done with the technology we carry with us every day. We approach all our projects with skill, respect and creativity so that we can craft extraordinary experiences for everyone.

This highlights the fact that the company is innovative, at the forefront of stretching the exploration of the affordances of the digital medium — but with 'respect', which relates to the way they deal with the cultural material (the literature, the music, and so on, whose high status in our culture deserves respect, and a worthwhile digital treatment) that they then 'craft' onto 'extraordinary [digital] experiences'. The whole content is aligned around terms that denote quality, a strategy that is patent in the ways two of their apps are described. Touch Press try to mix a reverence to literature with an innovative approach. According to the blurb found on their website:

Books are one of the defining inventions of civilisation. Today publishing is being transformed by digital technologies. The aim of Touch Press is to create new kinds of books that re-invent the reading experience by offering information that is enhanced with rich media and that adapts dynamically to the interests and experience of the reader. (Sadokierski, 2013)²⁵

They look back, appropriate the status of the book, but then look forward to digital and transformation of books and reading — but as a continuation with, rather than a complete break from the book.

Inkle

Whilst some producers use and abuse the term *interactive*, Inkle have been producing works that are exemplars of the use of interactivity²⁶ in storytelling. A blog post by Inkle at the time of launching one of their works reads: '80 DAYS has finally been unleashed. Right now, people are boarding trains, steamers, boats; catching malaria, inciting mutinies, sleeping rough and being captured in the jungles of North India and more...' Inkle do not try to define what the work is in technical terms, they do not try to label it according to any existing mainstream labels such as *app*

²⁵ The original page where this was stated by Touch Press in their manifesto is no longer available online.

²⁶ Understood here as the ability of user choice to define paths in a multilinear world of many possibilities, allowed by the procedural and participatory affordances of the medium.

or simply *game*, at least not in a rigid way. It is available under 'Games' in iTunes and the App Store, but also described as a 'multiplayer, massively branching interactive fiction' (Inkle, 2016e). Their texts mix well-known stories with a raft of game conventions, all converging onto a complex engine that produces branching narratives. Mixing story with ludic elements and mechanics is part of the process of production for Inkle. In a webcast posted on their blog (2016f) they discuss the right balance between game and story elements by asking the question 'when is the game part of your story game too much game for your story?'. They add: 'In all our projects, we try to marry the gameplay and the narrative elements so tightly together that neither could be removed'. Inkle's 80 Days isn't a book, but it does the work of a book, albeit in a different way, in one that makes it also a game, but with a literary feel to it. It is a good example of producers trying to understand the essence of a story, and then exploring how to best make use of the affordances of the digital medium to retell the story in a new way — but to a degree consistent with the initial intentions, chosen themes and focuses of the author.

What can we infer from the curation practices of publishers at the periphery?

The strategies adopted by the several digital publishers covered here are both diverse and present some common trends. Above all the best examples weave together materials from source adaptation texts with affordances of digital platforms that *make sense* to (that somehow *respect*) the spirit of the original works (however this is defined by producers, critics or consumers). This is the case with works such as *80 Days*, *Sorcery!* and *Steampunk Holmes*. In other cases, publishers look closely at their audiences, at their contexts and ways of doing more functional things, to then reinvent how these can be done by taping the affordances of digital media in ways that add (use) values and meet user needs. Works that exemplify this are the *Henle Library* and *The Waste Land*.

In the works — and in the framing, presentation and descriptions of their works — we see different degrees of alignment with previous works and with more established cultural artefacts or traditions: some of the most innovative publishers are keeping away from very strict labelling; and align their works more towards digital media forms; others seek alignment with the *book*, probably to borrow its status and open the doors to certain markets and real or imagined audiences more likely to pay for a book than a *game* or an *interactive adventure* — forms that are sometimes portrayed, even in academia, as somehow inferior to books and reading.

In-between media: mapping digital forms of the book

The use of new technologies is resulting in an array of new digital forms of the book: cross-breeds between books and games; hybrids in-between books and social media; yet-to-define forms, in a growing range of kinds of digital books. The book increasingly overlaps with other media, and across formats and devices. The definition of the book has moved on from its material definition of a paper codex and in its digital form has been applied to a wider number of forms on different media. The borderlines between books and other media have eroded, and as new, hybrid and converged forms emerge, it is not entirely clear where books end and other media being (or viceversa). This merging of forms is happening in a wider context whereby 'since the 1970s there has been an ongoing and increasingly far-reaching blurring of the boundaries of *genres* and of *generic types*.' (Kress, 2010, p.25) Anthony N. Smith and Roberta Pearson (2015, p.2) talk of 'the need to move beyond fixed categories and boundaries in attempting to respond to the ever shifting and evolving practices and affordances facilitated by new technologies'. Katherine Hayles explains how the distinction between print and digital (she calls them 'electronic') forms is undermined by electronic books that look like print and by hybrid forms that remediate each other in both directions. But she adds that:

In the rich medial ecology of contemporary literature, media differentiate as well as converge. Attention to material properties enhances our understanding of how some digital works are evolving along trajectories that increasingly diverge from books as they experiment with the new possibilities opened up by electronic environments. ((2004, pp.85-86)

Divergence and convergence depend often on one's standpoint. In many digital works on can see both divergence from books and convergence with other media forms such as games and a range of apps. This chapter illustrates the diversity of ways in which new kinds of books are being made when producers use digital media. It has shown what is happening to books as they move onto digital media and meet new affordances, and merge with other kinds of texts, the inventions and devices from other media, thus creating hybrid formats and genres in a spectrum that goes from texts closer to the *book* to texts that are closer to digital genres and conventions. These texts reveal different levels of connection to the book at one or several of the following points: 1) they adapt known narratives that often started as books — the book is a key source of material for

cross-media adaptation; 2) many are texts produced by publishers and authors in attempts to explore new technologies; 3) these are texts that keep structural affinities with the book and that draw on genres, conventions, aesthetics and representational devices of print — as well as writing as a core mode — to make meaning; and 4) regardless of how close or further removed from books, these are texts that *do the work* of books, which is to say that they meet user needs typically met by print books.

In this section I want to try and bring together the different kinds of digital book forms that were covered, to analyse them in a more holistic way, to compare and contrast them with each other more easily, and to locate them in relation to the book and digital media genres and formats that are also shaping them as these new forms draw on their conventions and the ways they explore the affordances of the digital medium. This will be done by *mapping* the texts, by representing categories of digital forms in diagrams that help think about the relations and the intermedial influences between analogue and digital forms. In doing this I also explore ways in which the notion of *book* is being stretched as publishers, authors and digital producers explore the affordances of digital media and give rise to a myriad of digital book forms.

These mapping efforts led to a final diagram that represents visually an analytical lens with which to analyse these new forms of the book. This diagram (whose evolution is explained) was produced based on different ways of looking at books that draw on several theoretical concepts, namely remediation, convergence, hybridity, and the theory of affordances, media specificity and comparative media analysis. As such, the diagram constitutes a multidisciplinary framework to analyse converged formats, locating them at the confluence of both older and newer media.

The value of such an approach, from a professional perspective, is to facilitate producers' understanding of the large diversity of digital forms of the book. By mapping them and showing where they stand in relation to other forms — together with more detailed analyses of the ways affordances are being explored — it will become easier for producers involved in, or interested in, exploring digital media to create new forms of the book to understand how these are made, what other forms and genres they draw inspiration from, how they are shaped by conventions from both analogue and digital genres, and thus also where to look for ideas and inspiration. The mapping is thus a tool not just to understand existing artefacts but also, from a production angle, a tool to guide producers in their search for influences (design ideas and conventions) that can help shape new products.

The mapping of digital forms of the book

The following mapping exercise adheres to some guiding principles: the mapping is not concerned with the discussion of print *versus* digital; it does not focus on the question of the survival of print, and it conceptualises of the evolution of the book as a branching history, not a linear evolution of replacement; the diversity of print and analogue formats and genres needs to be considered; one cannot simply compare digital formats to one kind of book, typically the novel; the concept *book* is being stretched as books and their producers meet and converge with other kinds of texts and creative sectors. These principles guide the analysis.

The 'linking of entities — humans with humans, with places, objects; objects with objects; objects with processes [...] — is a major resource for making meaning. Much of semiosis is about linking of various kinds: linking by and through actions; by adjacency and proximity, temporal or spatial.' (Kress, 2010:119) The attempts at mapping (*linking*) new forms of digital forms of the book with other media forms and genres that I present here are based on three main theoretical approaches: remediation theory, media convergence theory and multimodality and social semiotics. It takes into account: the ways in which digital media forms of the book are influenced by analogue books and other forms of digital media such as games and websites; the movement towards increasingly multimodal forms where previously-separated modes (from previously-separated media 'silos') coexist; the tendency towards using participatory and interactive (or customisable) modes in both the production and consumption of digital texts. All these changes are conditioned by fairly specific socio-cultural and technological changes. The directions these new forms are taking are also shaped by economical factors (such as production costs and profitability) and the perceptions held by writers, publishers and digital producers of the value, or suitability, in exploring the uses of certain digital forms for certain genres.

Mapping 1: Away from print

The first diagram (Figure 2) is based on *divergence* from print and on the combination of modes and new (or enhanced) affordances allowed by digital media.

More multimodal and/or making use of

cross-platform or cross-media / transmedia)

affordances of digital media (e.g. usergenerated content, interactivity, ludic features,

Social book "Bridging" **Books** Enhanced eiBooks Game books books ePub3 Author "Multimedia Story / Book Digital Narrative e-books e-books" fiction Apps games

Figure 2: Digital book typology: multimodality and affordances angle

More book-like,

closer to print

books

It illustrates the diversity of the digital book space, and how far some of these emergent forms move away from the codex by exploring the affordances of the digital medium, often drawing on practices and conventions related to other kinds of digital works. The logic of the axis, and of the placing of digital forms along it, is based on how far they move away from printed books in terms of levels of multimodality and features such as interactivity, which are closer to (and influenced by) other media such as games. Beginning from the left: Ebooks, sometimes referred to as *normal* or *vanilla* ebooks, are the simplest and most remediated form of digital book. Then there are enhanced ebooks in EPUB 3 format (for example, Amazon's enhanced ebooks), which typically add images, video, and/or sound but still follow the aesthetics of the ebook.

There are also more visual types of enhanced ebooks, so-called 'multimedia ebooks', such as those made with Apple's iBooks Author ('multi-touch books'), which are further distanced from the black-writing-on-white-background of ebooks and simple enhanced ebooks. They still have pages, paragraphs, and other print conventions, but add digital features such as pop-up text, images with labels and zooming functionality, slideshows, videos, 3D objects, and 'widgets' that allow programmers to add bits of HTML5 code (for example, to embed a live website within the text).

As we move towards the right of the axis, forms become more merged, overlapping with other media and blurring the lines between digital books that maintain print conventions and other forms such as digital games, hypertext websites, or even social-networking platforms. For example, Bob Stein's *Social Book* (SocialBook Inc, 2011) allows users to comment on any bit of text, image, or video, comment on other readers' comments, and turn the reading—or discussion of the content—into a social experience. Inkle's (2013) *Steve Jackson's Sorcery!*, based on the original series of game-books, is an interesting example of adaptation, remediation, and the exploration of new affordances with digital. This work is described on Inkle's website as 'an epic interactive fantasy'. It has been labelled as a 'game' and as 'interactive fiction' and mentioned on websites dedicated to discussing digital books. It includes a mix of elements such as words, a multilinear narrative, game-like fights, and an interactive map on which the protagonist moves (controlled by the *player*, or could we say *reader* or *user*?).

Bridging Books (Engage Lab, 2008) are an example of hybrid media books, which literally link physical objects (in this case a book) to a digital device (in this case a tablet). As the pages of the print book are turned, the iPad shows content that extends, or expands, the printed page (e.g. an illustration expanded into an animation). Here the book is a hybrid that works across media: print and digital.

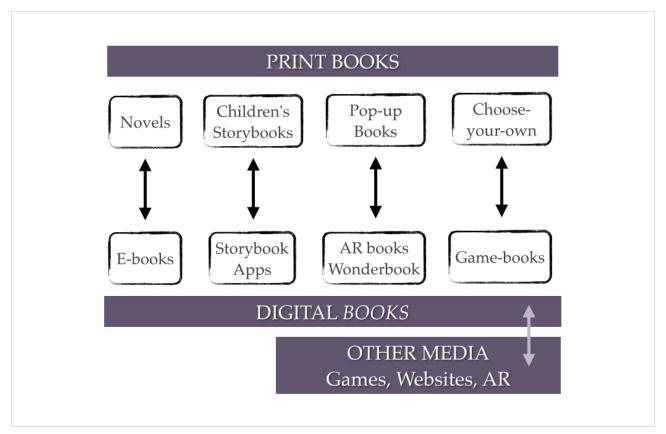
The main weakness of the diagram shown in 'Mapping 1' relates to the problematic placing of different forms along the axes, and namely when inferring that features such as multimodality and interactivity increase as we move towards the right. Digital books, and in particular the more innovative kinds – such as story apps an enhanced ebooks – do tend to be multimodal. However, even analogue books can contain a multitude of modes (written text, images, texture, moving parts, and even sound as the reader turns the page). This means that multimodality is not a unique or necessarily *more digital* characteristic. The other problematic concept used to define the axes is that of *interactivity*. Once more, it is wrong to state that digital books offer more interactivity than print books. In general they tend to do, but if we think, for example, of looking at a print story and activity book for children against a simple remediated ebook, where all the reader does is turn a digital page, in fact one could claim that the activity book offers a higher level of interactivity.

A final problem with this diagram is that if fails to take into account the diversity of print formats, a gap that is addressed in the diagram shown next in 'Mapping 2'.

Mapping 2: The diversity of print and continuities between print and digital

The diagram above presented digital books as if distancing themselves from print; by contrast, the second diagram (Figure 3) does not place digital in opposition to, or at a distance from, print. Rather it takes the *diversity* of print formats as the starting point and looks for *continuities* rather than contrasts between older and newer media. This enables us to conceive of a different classification angle for digital books based on remediation²⁷ and convergence²⁸.

Figure 3: Digital book typology: remediation angle



This diagram takes into account the ways in which different kinds of digital books build on—or clearly draw inspiration from—print book genres and their conventions. Game-books, for example, draw on the kind of choose-your-own adventure books and also role-playing games. Storybook apps take their name—and core form—from print storybooks for children, with typically the addition of animated objects, voice recording to retell the story, and other kinds of content and features characteristic of digital media.

²⁷ This is based on Bolter and Grusin's (2000) *Remediation*, and Bolter (2001), where he focuses on 'writing' and explores notions of continuity and remediation across print, computers and hypertext.

²⁸ This is based on convergence theory, namely as defined by Henry Jenkins (2008).

The diagram also takes into account the ways in which the more innovative kinds of digital books—I mean those which go well beyond presenting mere writing and images—also draw inspiration, and use conventions from, other media. For example, children's story apps use interactive actions inspired by the ludic features of games and digital creativity tools similar to those offered in children's websites. This results in the creation of texts that do not easily fit into existing classifications, texts that are hybrids between books and other forms of communication/media. They explore the affordances of the digital medium, especially of devices such as tablets, although other platforms and technologies such as the internet, augmented reality, and digitally connected physical objects are also being explored.

Books clearly influence digital books and story apps. But in turn print also seems to be influenced by, and adapting to, forms of digital publishing. Bolter and Grusin (2000) suggest that, when older and newer media collide, the flows of influence (aesthetics, conventions, etc.) are not one-way only, from older to newer media. Heiko Hartmann (2014) has presented an interesting analysis of the ways in which 'digital publishing creates new kinds of printed books', showing how genres such as print travel guides are adopting both remediation and differentiation tactics to face competition from digital forms that fulfil similar functions.

For producers it is useful to think of existing genres and formats that do the work of the digital artefacts they are trying to design. It is often by looking at the ways things are done in the analogue world, considering pain points and opportunities for improvement, that good digital design is delivered.

Mapping 3: Convergence

The relationships and influences between print and digital can be represented with a simpler, more generally applicable diagram, as shown in Fig.4.

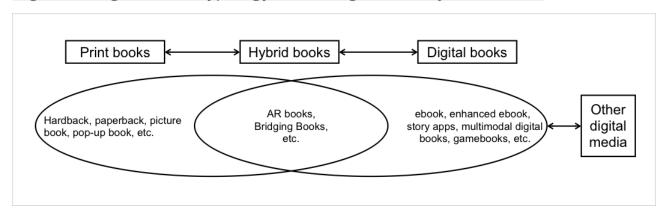


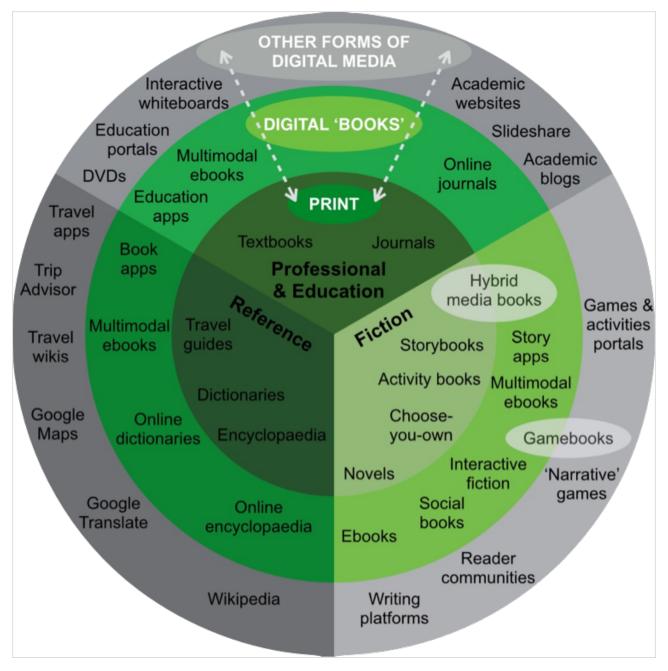
Figure 4: Digital Book Typology: Print, Digital and Hybrid formats

Print books – typically novels, fiction – are remediated into the simplest forms of digital books, ebooks. Other more innovative forms of digital books, such as story apps and game-books, are heavily influenced by the conventions of other media, such as digital games and other kids of apps. They, to a large degree, are also hybrid forms, but between books and other forms of media. Hybrid media books can be seen at the convergence of two technologies. Augmented reality books, for example, recognise certain images on a print book, and show the *reader* (or should it be the *user*?) further content via a digital device such as a smartphone or a tablet.

Mapping 4: Digital books at the intersection of print and digital media

Based on the diagrams above the next step was to try and bring together two key aspects: firstly the need to situate digital books at the intersection of print / analogue formats and other digital media forms; secondly, and related to the above, the need to show that specific print segments, formats and genres (these often go hand-in-hand together) achieve a continuation over to digital. Fig. 5 shows an attempt to bring together the angles expressed thus far into a single perspective.

Figure 5: Digital books in the wheel of intermediality



This wheel aims to simultaneously represent: the diversity of print; the diversity of digital books; the relationship and influences between print and digital books; and the influences that other kinds of digital media forms have in digital books. When I produced it in May 2015, in readiness for the By the Book 2 conference, I added a speaker note that read: 'This is a revised attempt to locate digital books at the intermedial intersection of print traditions and the affordances and conventions of digital media.' For Janet Murray, as the digital medium evolves and more stable forms and practices are established, it is possible to think of the four key affordances of digital media as a grid offering '...conventions and genres that have become sufficiently standardised to be adopted across projects and platforms.' (2012:88) What I present with this wheel is similar. It is a

representation of the genres (with their very own more or less established conventions for doing certain things) that are visibly influencing the design of the new digital forms of the book covered by this research. Earlier hand-drawn sketches on which this diagram is based took into consideration the need to look at both continuities and contrasts, at traditions and innovations, whilst taking into account the diversity food in print (and analogue) books. A circle with concentric rings was used to represent different media and forms: print in the middle, then 'digital 'books", and finally 'other digital media' in the outer ring. The slices related to major segments of print publishing. As one moved from the centre to the outer areas of a specific segment — for example 'professional and academic' — one could see several forms for that segment across media. Following the example we would have: print books (and journals) at the centre; then 'online access', 'journals' and 'PDFs' in the 'digital books' ring; finally 'websites (e.g. academia.edu)', 'blogs' and 'Slideshare' in the outer ring of 'other digital media'. Some forms were placed across overlapping rings. This aimed to represent the ways in which some forms — for example gamebooks — are clearly hybrids that draw on conventions from both sides, from both rings (print and digital) and their forms and genres (e.g. choose-your-own-adventure books and role-playing games). As 'converging formats and evolving genres' (Murray, 2012, p.21) these hybrids are formed by the bringing together of elements from across media, as '... formats that we once thought of as fixed and separate, like spoken and written messages, books and games, movies and file cabinets, television and telephones are being deconstructed into their component parts and reconfigured for interactivity.' (Murray, 2012, p.9)

The thee slices represent to key segments in publishing: Reference, Fiction and Professional & Education. The three concentric rings represent media and formats: print books, digital books and other forms of digital media. Mapped around the wheel, around thematic areas, for example travelling, are the different kinds of texts — in print, digital book, and other media — that influence each other. This is a bi-directional influence, also from digital back to print; as Hartman's (2014) study has showed travel print books are being influenced by the aesthetics and functionality of their digital media counterparts. 'Hybrid media books' and 'game-books' are the more obvious border crossers, with one foot in each territory, but there are a lot more to explore. It is impossible to cover all areas and all genres, so a selection is used to illustrate the intermedial and intertextual intersections of digital books with the other rings.

Online dictionaries and encyclopaedia keep structural affinity with books. Encyclopaedia — which could also be on the digital media circle because some are hosted on websites — have been in their majority transposed onto digital; they are no longer bound by the page, but use hyperlinks, multimodality and search boxes to quickly find content, view images and explanatory videos and navigate onto related themes. However they also keep a strong affinity with their print 'ancestry': they are organised alphabetically, displayed on 'pages' (now webpages or pages on an app or enhanced ebook), and also rely on a large amount of written text as well as other modes to illustrate the different topics. Like books they are typically closed systems, with pre-defined navigation structures, and updatable but only by their owners; wikis like Wikipedia are similar, but they make the most of one of the most distinguishing affordances of digital media: user participation in the generation of user-generated content. They still work similarly to an encyclopaedia but are more open, more dynamic and less stable, and without any kind of 'official stamp of quality' — a question to which we will return later when discussing the attitudes of different generations to canon and textual authority.

If we look at the fiction segment, and focus on storybooks and activity books for children, we can see their digital book equivalents in storybook apps, which often integrate both the more narrative character of storybooks (often accompanied by moving characters, touching the book, and so on) with the more hands-on kinds of tasks offered by on the one side activity books, and on the other side websites such as games and activities portals like those found on the CBeebies website²⁹ (BBC, 2017).

Influences can go even beyond the media shown, to reveal a whole raft of intertexts and intermedial influences on genres and on specific texts. For example, 'interactive adventures' such as Inkle's *Sorcery!* draw on analogue game-books and on *choose-your-own adventures*, which in turn are linked to the fantasy literature genre, but also to role-playing boardgames and to MMORPGs. If we tried to go even wider and further back in time, we would find a raft of artistic, literary, and other social and cultural influences in a great web of intertwined intermedial conventions, genres and intertexts that have shaped fantasy as we now know it.

²⁹ The snippet on the Google search results page when one searches for 'Cbeebies' reads 'CBeebies helps pre-schoolers learn whilst they play fun games, watch clips, sing songs and make things with their favourite CBeebies characters and shows.' (Accessed 28 September 2016).

Conclusions

The bigger players towards the core of publishing tend to use digital books in a conservative way, limited to a number of genres (and audiences) for which the digital medium and specific formats are thought to be adequate for. Inconsistent classification and showcasing (curation) practices cause issues around discoverability, which is only made worse by the fragmentation of digital distribution channels. Fantasy and adult fiction in general have lagged behind in terms of experimentation, whereas non-fiction reference and children segments are more commonly found. Smaller digital publishers at the periphery of publishing are leading the path of innovation in exploring the affordances of digital media to produce new forms of the book and new kinds of digital artefacts characterised by high levels of convergence and hybridity, drawing both on analogue and digital genres and conventions.

A good digital book does not necessarily need to be designed on the back of groundbreaking technology, or need to significantly invent new ways of doing things, new design conventions, which invite or facilitate new cultural or social practices. There are indeed such cases, where particularly artists and technologists are experimenting and pushing boundaries. And there are also examples where the design of certain features explore digital affordances in gimmicky ways that add detract from the experience of using the artefacts. But rather than relying on a radical departure from other formats and conventions, most good digital books are built on a solid understanding of user contexts, needs and wants, and on focusing on how to provide use value with new artefacts that tap existing social and cultural practices but reinvent them in ways that somehow improve the experience.

Examples of innovation shown here are tapping the affordances of digital media in ways that are informed by user needs, by use value of a text, and by trying to reinvent the kinds of pleasures provided by a genre (for example the adventure exploration of the *80 Days* source material) in a new medium, tapping its affordances to produce new kinds of texts that stretch the notion of book, of storytelling, and mix it with other pleasures and motivations. These texts can be said to not only do the work of books, but also tap onto ludic offers, social motivations and current social and cultural trends; they are hybrids at the intersection of converging media, genres and conventions.

The *Nature Mage* project drew on these key conclusions. It involved understanding readers (also *users*), their views and practices, their motivations and ideas for the digital adaptations of the

fantasy stories. The project drew on inspiration, conventions and ideas from a range of texts and genres, both digital and analogue. The processes of design and the resulting concepts are analysed in detail in the next chapter.

5. The *Nature Mage* project

This chapter introduces the *Nature Mage* story, explains the goals of the project and provides an overview of the processes followed to create the three key outputs form the project: an online reader forum (or *online community*) and design concepts for both a *Nature Mage* digital book (the main focus here) and a digital game also based on the books.

The *Nature Mage* digital adaptations are located within a wider context of media convergence and increasingly multimodal communication practices and artefacts, and analysed at the intersection of print traditions and the affordances of digital media. The digital book, for example, is seen as a book, but also as a social space for creativity and collaboration, and as a transmedial expansion of a written, closed story onto a multimodal, open and organic text. The intertexts and influences that led to design ideas and decisions for the *Nature Mage* game are also brought to light and discussed, whilst engaging with findings and ideas explored in previous chapters and with relevant debates within academia.

We have seen in chapter 4 a range of ways the affordances of digital media are being explored to produce new digital forms of the book. When analysing texts that tell a story the analysis touched on the question of narrative adaptation across media, for example by discussing the ways Inkle approached the adaptation of a story (Jules Vernes' Around the World in 80 Days) onto a 'multiplayer, massively branching interactive fiction' (Inkle, 2016e). Here the focus on narrative and its translation onto digital media is explored more deeply, also drawing on the concepts from media-specific analysis and transmedia narratology introduced in chapter 2, and which constitute a powerful toolbox to analyse cross-media adaptations of narrative onto digital forms of the book namely the Nature Mage adaptations, and in particular the game design concepts, which as we will see entail deeper transformations (or translations) to the narrative, and pose bigger challenges to producers. Different media tell stories in different ways. They share (and borrow) some conventions, aesthetic devices and the use (and remediation) of certain modes, but also have distinct ways of telling stories based on the use of distinct affordances. The key questions asked are: what happens to the narrative change as it arrives at a different medium/genre? Does it still occupy central stage, or does it share this with other elements? What is continued and what changes? What new conventions, by tapping specific affordances of the digital medium, are used to tell stories in different ways?

The theoretical framework of affordances and media-specific analysis is presented in more detail in the section '*Nature Mage*: a special focus on narrative and audience involvement' of chapter 2. However, a short summary of key points is useful here.

Katherine Hayles concept of media-specific analysis is pertinent here. She defends that 'the power of MSA comes from holding one term constant across media' (2004, p.69), which in this case is the Nature Mage story, as it travels across media, 'to explore how medium-specify constraints and possibilities shape texts' (Ibid.). Marie-Laure Ryan and Joel Thon's (2014) collection of essays to develop a 'media-conscious narratology' provides useful tools too, namely the concept of 'storyworlds' as 'representations that transcend media' and thus provide a 'center of convergence and point of comparison to media studies.' (2014, p.2) Different media add different aspects to the world; they '...converge around [a] world by presenting different aspects of it'. (Ibid.) Ryan and Thon argue this is useful to analyse the 'distinctive narrative resources' different media offer.

The chapter also looks at the exploration of digital affordances from a different angle, not only their tapping to design and produce a digital book artefact, but also the ways the affordances of digital media can be explored in the very processes, the very work of designing and producing digital artefacts, for example via the creation of an online space for interaction and collaboration between author, readers and others. The involvement of its target audience (mainly its readership, but also online community users and potential users/readers of the digital book and players of the game³⁰) in the process of design and attempts to engage readers in producing content for the faninspired digital book via an online reader forum shows that the affordances of digital media can change not only books but also the ways in which they are designed and made. The chapter tackles issues around participation and contextualises co-creation and crowdsourcing within wider social, cultural and namely media usage habits. It also discusses how the tapping of digital affordances for participation and collaboration also adds different dimensions to the book, a social dimension, and an organic dimension in an artefact that is continuously changing as readers add, discuss and review their very own content. The involvement of the audience raises the following core questions: what changes when audiences are involved in processes of design and production? What are the challenges and benefits of such involvement? How are relations of

³⁰ Most of the people involved in the project were indeed readers — and also users of the community, and potential consumers of the digital book and the game — but a few had only read excerpts, or heard about the books firstly via the community and the workshops about digital book and game adaptations.

power defined in a collective that gathers producers and consumers? Are there relevant cultural differences between producers and consumers that reflect on different attitudes to fan work? The research tackles these questions and discusses them in relation to wider academic debates around the concept of participation.

We have also seen that good digital design is usually based on a robust understanding of target audiences. The needs of users, their contexts, their ways of doing things and seeing the world, are taken into account in order to design artefacts that resonate with them, that engage by providing use value, whether practical or for enjoyment or education. The involvement of the audience simultaneously achieved two aims: inviting readers to participate, co-design and co-create content for the artefacts; and understanding their contexts and habits, needs, and views of the story.

Ultimately the chapter tackles the primary research question:

How can the affordances of the digital medium be explored to produce new kinds of bookinspired artefacts that (re)tell stories and expand storyworlds?

And two secondary research questions, framed by the research-led project and outlined in more detail in the 'Introduction':

What potential do the affordances of digital media offer for storytelling in general and for the adaptation of existing print books? Secondly, how can digital media be used for audience involvement and co-creation in connection with books and digital forms of the book?

The exploration of audience involvement methods, also built upon the affordances of digital media, raised a series of questions: how can audiences be involved in the process? What is gained from such involvement? What are the challenges of such involvement?

Finally, as we have already seen in chapter 4, many digital forms of the book are hybrid texts, intermedial artefacts that are not simply aimed at narratological world building, but serve other functions, meet other needs and motivations, offer other pleasures. We will see the ways in which the *Nature Mage* digital artefacts not only retell and expand a story, they do it in different ways that mix narrative with ludic, creative and social pleasures and motivations. They do not simply try to do the work of the book in presenting a narrative, but bring together a myriad practices that surround the book.

Contemporary audiences: contexts, habits and participation

The rise of new media forms of the book is linked to social, cultural, technological and economic factors that either facilitate or inhibit it. Debray states that 'a system of practices, codes, rules, and expectations—in short, a culture—always precedes and creates the mediational position for the development and successful assimilation of any given technology' (Leach, 2015, n.p.) 'Social changes typically viewed by technological determinists as caused by the sudden emergence of a particular technology are often already a part of the culture before said technology has been developed' (Ibid.). For example, Debray argues that 'changes in reading habits attributed to the invention of the printing press, such as reading the Bible individually, long predate Gutenberg's invention'; technology does not determine culture; nor the opposite happens. The dynamic between media technologies and socio-cultural institutions is bi-directional (Ibid.). Here I look at key changes in contemporary culture, habits and technology that provide a contextual background for the work of adaptation of *Nature Mage*, exploring its audiences, their cultures and habits with regards to media, which as we will see later framed the strategies adopted for their engagement.

The *Nature Mage* books belong to the fantasy genre and are located by the author, publisher and distributors in the YA (young adult) segment³¹. These two aspects are important. On the one hand, fantasy fans are typically some of the most prone to becoming involved in fan-related activities. Barker and Brooks state that 'The most ready and enthusiastic participatory groups seem to arise from a combination of two orientations: the Action-Adventure and the Future-Fantastic SPACES' (1988, p. 271). Fantasy fits into these 'orientations'. On the other hand, young people³² are often described as the *digital generation*, or the *digital natives*, in a rhetoric that has spread across numerous fields such as commerce, government, education and youth activism.

David Buckingham (2006:1-2) suggests that this term can be seen as a mix of the more established notion of *generational gap* with more recent technology rhetoric, thus resulting in the idea of a 'digital generation'. Although this is seen positively in fields such as technology and commerce and by cyber-optimists, it also reflects the fears and anxieties of adults who are not quite sure what children are doing with 'all those weird new gadgets'.

³¹ The term is generally applied for teenagers and people in their early twenties, but is sometimes stretched to include people in their late twenties, sometimes even thirties.

³² A term similar to YA but applied not only in publishing but in wider contexts.

The notion of a *digital generation* – a generation defined through its relationship with a particular technology or medium – clearly runs the danger of attributing an all-powerful role to technology. This is not to imply that, on the contrary, technology is merely an outcome or function of other social processes; but it is to suggest that it needs to be seen in the context of other social, economic and political developments. (Buckingham, 2006, pp.11-12)

Access to, and the uses of, technology vary immensely for different groups across nations, socio-economic groups, ages, and other axes. The use of technology is not inherently positive or negative, or prescribed to specific groups – although of course the question of access (and the *digital divide*) makes the axis of wealth more important than age or country. The use of technology has the potential to affect the lives of users, with the power to change personal relationships and social structures. Particularly when linked to high levels of consumption of media and entertainment forms, it has also resulted in the formation of especially well-defined groups of consumers or subcultures – for example hardcore MMORPGs³³ *guild* players, the *otaku* in Japan, or the US *trekkies* – for whom media and associated technologies assume greater importance, affecting their world views, social relationships and the meanings and relevance allocated to media consumption – and production.

The recent proliferation of mobile and portable devices and a myriad other computer-based web-linked devices has led to a significant rise in kinds of media text forms available to users. This has evolved hand-in-hand with changing media consumption habits and changes in media production. Most current digital devices allow users to consume texts from a range of previously separated media, from video, to games, to text-based communication, ebooks, TV on demand, and many more. Contemporary devices are multimodal, and have been facilitating a convergence of media, not only into the same devices, but also merging onto new kinds of typically multimodal texts that defy and blur old boundaries between communication forms, media genres and formats — both at the level of the very texts and at the level of industry sectors, the producers (the people, the businesses and collectives) who make them, which also show signs of convergence.

Marie-Laure Ryan (2014:1) talks of '...a media landscape in which creators and fans alike constantly expand, revise and even parody...' storyworlds across media. Thanks to the participatory nature of the digital medium — or rather, its participatory affordances — 'media now

³³ Massively Multiplayer Online Role-Playing Games, such as Word of Warcraft or RuneScape.

appears to us as something to be cut, pasted, reassembled, and distributed with ease.' (Murray, 2012:57-58) With wider and easier access to production and editing tools and equipment and distribution platforms, there has been an 'exponential explosion of user-generated and self-published content, often indexed by other participants through popularity ratings.' Audiences have a bigger role to play in the very curation of information available online.

Gunther Kress describes important changes in contemporary conditions of authorship, which he characterises as more open and participatory, with new practices and some rearrangement of power, and in 'urgent need of theorizing' (2010:21-22):

[T]he accusation of ('merely' or 'simply') cutting and pasting is a response that betrays a lack of theoretical work and hence incomprehension about new principles of text-making composition. It rests on a misconceived transfer of old conceptions of authorship to new conditions.³⁴

Younger generations in particular, growing in a new media era reveal different attitudes, resulting from a restructuring of power structures, and jointly an effect of the facilities offered by the affordances of digital media, which facilitate various forms of participation. Activities such as constant modification, as in wiki-like websites, and *amateur* user-generated content, are seen as normal and desirable. In a *sampling* and *mixing* culture, notions of originality and authorship shift and become more nuanced. Nonetheless, as we will see, in the context of a hands-on project, dealing with a *brand* and an author who wanted to protect it, and with the desire to use and possibly also combine user-generated content, tensions emerged between these new ways of doing and seeing things and more conservative, and persistent, notions of authorship and copyright.³⁵

Increasingly popular fan fictions (fanfic) based on transmedial storyworlds show that a number of fans wish to participate in extending them. Klastrup and Tosca's study (2014) of fan fiction linked to *The Vampire Diaries* 'evidences a desire to present alternatives to the narrative or to fill in perceived gaps.' (2014, p.315) Fans change elements such as plot lines, character values or

³⁴ Of course this depends on context too, in what specific conditions the cutting and pasting is taking place. Rap music, for example, has been targeted for *just* consisting of 'stolen' beats and remixed tunes. Others would argue that the mixing, remixing and adding lyrics achieved by some rappers has real artistic value.

³⁵ Here I am trying not to take sides. The matter of copyright is very complex. It defends artistic creation and sustainability. The International Publishers Association, for example, seeks to get worldwide adoption of copyright protection, which is difficult in some countries, so the situation varies across the world, with different lobbying groups fighting it out. The WTO and the UN, for example, support IPA's efforts.

events in 'subtle or more profound ways' thus contributing 'new associations and interpretations to the extended storyworld.' (Ibid.)

Uses and gratification theory (see Blumler and Katz, 1974; Ruggiero, 200036) in summary claims that consumers (different media audiences) actively choose to engage with specific media and texts because they get some kind of value and gratification from this use, typically psychological and social kinds of rewards. Whether participation is always a measured, calculated activity that with which participants seek more or less clearly defined uses and gratifications. several studies show that 'fans', by taking part in forums and in the production and sharing of derived works, are ready to spend their time for some kinds of reward, for example in the form of 'kudos' gained from participation and demonstrating their aficionado status in their knowledge of the storyworld. Fan forums often reveal hierarchies of participants, with aspiring contributors and leading contributors whose voices are highly regarded as guardians of canon — and sometimes fanon (Klastrup and Tosca, 2014; citing Jason Mittell, 2009). John Fiske talks of several forms of 'popular cultural capital' (1989) and the ways in which 'fandom offers ways of filling cultural lack and provides the social prestige and self-esteem that go with cultural capital' (1992, p.33) In Japan, new manga writers and artists are often recruited from within online fan sites (Azuma, 2009). In cases like this, the rewards become more real, whether there is an initial ambition or hope that as a fan of manga a participant would be offered a job. So in any case there is probably a large number of intertwining factors facilitating the participation of someone in such endeavours.

These were the kinds of activities and motivations that the *Nature Mage* project hoped to encourage and draw on, whilst simultaneously trying to manage the challenges inherent to participation.

Books, publishing and participation

In publishing, more specifically, there have also been important transformations in recent times related to an increase in participation and in the changing roles of readers and their relationship to authors and publishers. We have seen the emergence of commercial models such as *crowd-sourcing*, *crowd-funding*, *self-publishing* and an increased visibility for fan fiction with the emergence of more and more powerful writing platforms. Reviewing and sharing platforms, often

³⁶ Blumler and Klatz are often seen as foundational for the theory; Ruggiero reflects on its evolution and application to 21st century media.

integrated within self-publishing (*LeanPub*) and fanfic spaces (*Wattpad*) and others that are harder to define (*SocialBook*) have been eroding the walls separating writers from readers and authors from publishers. As I co-wrote elsewhere:

Conversations, author opinions, interactions with and between readers become part of the system. Bob Stein (2013) with his social book and social reading experiments, and history of reading scholars such as Bob Owens, suggest that readers' texts from marginalia to paratexts can become part of the work, assuming in some cases an equal value to the original words (Towheed and Owens, 2011). (Weedon et al., 2014, p.121)

Even in the websites of the big players such as Amazon readers have an important role to play in rating and reviewing books, not to speak on the collective unintended effect of supplying firms like Amazon with huge amounts of data they can analyse and use to market their products even more effectively.

Platforms like Wattpad have tapped the participatory affordances of the digital medium to design an effective tool that brings readers closer to authors, especially teenagers and young adults, who also see in the platform an opportunity for discovery of new talents and for sharing of amateur writings. 'Wattpad's Ashleigh Gardner demonstrated how authors and publishers can use the Wattpad platform to reach readers.' (Nawotka, 2013) The platform appeals especially 'to teens and young adults, and with over 18 million users, it is the largest platform of its kind.' (Ibid.)

Writers can upload stories, chapters or excerpts to their Wattpad to share their writing with fans. Many Wattpad authors also allow readers to collaborate on stories by giving them the chance to vote on chapters, ask questions about the characters/story or decide how the story will continue. (Ibid.)

Melanie Ramdarshan Bold (2016), in the article 'The Return of the Social Author: negotiating authority and influence on Wattpad', proposes that 'the rise in self-publishing, digital folk culture and social media participation, have revolutionized reading and writing practices. Readers can directly contact their favourite authors, and publishers, through social media and become authors, and publishers, themselves.' (p.1)

Another relevant area of change in contemporary media concerns the rise of multimodality and the use of visual modes of communication. Gunther Kress (2010) refers to the growth in visual

culture, at the expense of just textual (written word) culture. Manovich suggests that 'as new generations of both computer users and designers grow up in a media-rich environment dominated by television rather than by printed texts, it is not surprising that they favor cinematic language over the language of print.' (2001:78). As books meet the computer and converge with other media, digital genres, formats and conventions, are becoming increasingly multimodal, inviting diverse modes of engagement besides just reading. Some of these are not new as we have seen, but reinvented. And besides, there is a very diverse landscape: not just convergence, not just increasing multimodality — effectively there is coexistence of different media, and in some corners the resurgence in more established practices with people wanting to revisit artefacts such as handcrafted books and board games.

The *Nature Mage* story

The *Nature Mage* story could be shortly described with reference to previous well-known works in the fantasy genre as a meeting of *Lord of the Rings* and *Harry Potter*. A boy who becomes aware of his powerful magical powers needs to travel with his companions to the city of Helioport, where he joins a school for magicians and learns to control the immense power he holds as the long-announced Nature Mage. By learning how to control the forces of nature, at times a burden to the young mage, and at the same time by striving to manage his emotions as a growing teenager, Gaspi and his friends become crucial figures in the defence of the city from the renegade mage Shirukai Sestin. For a longer introduction to the story one can read 'Appendix 1', which presents a synopsis for the first book.

The second and third books in the series essentially evolve the story, adding characters and multiple narrative threads exploring the adventures and feelings of the main character and other key protagonists, namely John and Hephistole. There are also large expanses dedicated to backstories narrating the misadventures and turning evil of the main dark character Shirukai Sestin. As the stories unfold the reader follows the growing up of Gaspi and his friends.

The author introduces the stories as 'Epic Teenage Fantasy with a gripping plot and believable, down to earth characters. Perfect for fans of teen fiction and fantasy fiction alike.' (Pile, 2016b). As I explained elsewhere (Franco, 2016, p.211) the books are clearly influenced by several intertexts:

Drawing on an analogy with existing popular titles, the story is set in a Tolkienesque fantasy world with hints of Harry Potter and other wizard-in-the-making stories. [...] [S]imilarly to the Harry Potter series, Nature Mage 'echoes numerous so-called public school stories' (Gunder, 2004, p. 15), and is also influenced by a mosaic of other genres and sub-genres such as dark fantasy and horror. Drawing again on analyses of Rowling's work, *Nature Mage* could likewise be described 'as a generic mosaic in which there is a constant interplay between influences from [several] genres.' (Alton, 2003, p. 159)

Duncan is himself a fan of the fantasy genre. The Nature Mage books involve typical fantasy generic elements: magic, battles, tournaments, demonic beasts, magical beings and weapons, and they also contain hints of horror, with terrifying passages relating to torture, demons and the exploration and abuse of humans by other humans. The story is a mix of (at times dark) fantasy and 'coming of age' memes, which include the challenges of growing up faced by its teenage protagonists but also the tribulations and emotional challenges faced by several of the grown-up characters. Besides all the action and adventure typical of the genre, there is what I will refer to here as a strong *human side* to the story: growing up, relationships, emotional struggles, and troubling pasts. These elements are crucial for the author, they take considerable space and play an essential role in the books. They are not simply add-ons to make the fantasy action emotionally deeper. Here's how Duncan explained this human side of his stories:

In part, my books are written to teach young people essential life skills. Years of experience as a personal development coach has given me a passion for teaching conflict resolution skills, and my fantasy books are littered with positive examples of this. The teenage characters go through all the usual trials of youth: jealousy, enmity, and sporting and academic rivalry. (Pile, 2013b)

For Duncan this human side of the stories seems as important as — if not more important than — all the magic and fighting. For him 'fantasy writing is only powerful if it conveys real life messages, set within the framework of a fictional world.' (Pile, 2013b) The human side of the story is very important for what follows in this thesis. It proved to be one of the main reference points, and challenges, of working on the digital adaptations of the books.

The *Nature Mage* books also contain vast amounts of material more stereotypical of the action, magic and fantastic tropes of the fantasy genre: journeying, magical and martial training, demonic and magical beings, many kinds of mages and warriors, different races, cultures and lands and a great sword-and-sorcery tournament, amongst others. Many of these elements provide narrative resources and material that, as we shall see, seems very suited and easily transposable into digital formats such as role-playing fantasy action games and the kind of encyclopaedic reference books so often found as companions to fantasy and sci-fi stories, of which we will see some examples.

In interview with the author (Pile, 2012) it became evident that the cross-media potential of his property was an important factor in defining the choice of story, genre, and narrative and stylistic decisions. Duncan Pile had written a book previously, but in an entirely different genre. This time, he thought about the ideal genre to: a) attract a wide audience (who would receive his underlying messages about interpersonal relationships, friendship and so on); and b) create a story that lent itself to journeying across media. The chosen genre was fantasy, and this example is an illustration of the ways in which authors may be aware of the cross-media potential of their stories from the day they start writing them. In the author's perception fantasy is a genre that has the potential to reach a wide audience, not just in book form, but also thanks to the potential it offers to be adapted into film and game (the author saw it as a popular genre for both the film and game industries). Pile further explained that the writing of the book was shaped in ways that facilitate the adaptation of the story into screen. This is achieved in through two main ways: through the inclusion of what he termed certain 'structural elements' in the story; and through the use of a 'highly descriptive style, very visual and cinematic', which hints at the adaptation potential of the book. Examples of the types of structural elements mentioned include the existence of a large warrior tournament and several matches of koshta, a popular local sport in the land of the hero. The book includes other narrative elements that offer a fairly obvious route to more typical game adaptations: journeying; learning new skills and progressing (levelling up); the discovery of multiple magical powers; the fighting of minions and bosses; the reference to an ultimate super boss; amongst others.

The grouping of narrative resources provided by *Nature Mage* into two inter-related but distinct components — the more typical fantasy action tropes and the human side of the stories — forms an essential backbone for the analyses presented in subsequent sections. The challenges raised, the approaches taken and the reflection on practice that they entailed contribute to the media-specific analysis proposed for this chapter, where I will explore the use of affordances of digital

media for different purposes related to certain elements of the source stories. In other words, adapting the books onto digital genres such as enhanced digital book and a game requires thinking about ways on which the story and its crucial characteristics and effects can be translated in ways that keep the new works within the *spirit* of the books (as interpreted, discussed and negotiated b those involved in the production of the adaptations).

The Nature Mage project: background and approach

According to the biography found on his author website (Pile, 2012b), the author 'spent some time travelling around the world engaged in humanitarian work. He returned from his travels with his health depleted by malaria, and took several years to recover. He has since trained as a Life Coach, something he practices to this day.' Issues such as *conflict*, *self-confidence* and *relationships* are recurrent themes in his writing. The author visits schools as a guest speaker to entice pupils onto the pleasures of reading and writing, and uses online channels to communicate with his readers. Duncan has his own author website, www.duncanpile.com, and a presence in Amazon, Facebook and Goodreads. Engaging with readers via an online community seemed an natural extension of the kind of engagement that Pile already carried out.

The practice-led research into Nature Mage was designed to contribute to developments in professional practice through the following artefacts: a Nature Mage online reader community (also referred to as the reader forum); design concepts for a digital book; and high-level design specifications for a game³⁷. The practical design processes and challenges were used to reflect on current practices, to engage with key academic debates, and to provide professional recommendations to publishers, authors and digital creators.

The process of adaptation relied on the following complementary approaches: an analysis of the narrative to extract themes, events and other narrative elements that could inspire features in the digital adaptations; primary research with readers and users to understand their views, needs and desires; interviews, conversations, meetings and email exchanges with the author and invited artists; the scanning and analysis of examples of digital book forms (as analysed in chapter 4) for inspiration, for conventions and strategies of tapping the affordances of the digital medium. The involvement of the audience formed the core of the approach.

³⁷ For ease of expression these are also referred to here as the Nature Mage 'digital book' and 'digital game', or simply 'game'.

Audience engagement, creativity and participation

This section sets the context for the reader involvement approach by outlining important recent changes in behaviours and attitudes of audiences, generally along generational lines, to concepts such as *canon*, *original* and *author* (Kress, 2010). This section considers the promise of participation allowed by the digital medium (Jenkins 2006; Jenkins, Ford and Green, 2013), counterbalancing it with its critics and barriers to actual participation, both of which will be patent when reflecting on the *Nature Mage* practice.

It is worth noting that Duncan Pile's readership was small (the books had sold about 10,000 copies), which meant the online community had a small number of contributors. In the industry and in cases where we are talking about popular books, publishers would start with a much larger readership, which would bring both advantages (a large pool of user-generated content to draw from) but would also raise issues around forum moderation management, the ability of the author to get close to every contributor, the cost to host and store larger amounts of information, and other challenges that arise with a larger scale of involvement.

Typically the process of adaptation of a book onto another medium is led by a team of producers, for example from a film or game studio, eventually with varying levels of involvement from authors or publishers, either as part of a project team, more often only at certain checkpoints for approval, which is often achieved through the use of supporting documents such as brand or show bibles providing more or less well defined guidance about the story and characters being adapted. Audience involvement -- facilitated by the use of digital media -- provides alternative ways to produce adaptations where readers (of a source book) and users of the new media of destination (for example, game players) can have a role to play in influencing the design of crossmedia adaptations. Tapping the potential offered by online platforms and contemporary digital behaviours of increased participation, mixed with research and offline engagement, the aim was to move from producer-only readings to collective readings of the story to inform the adaptation. But why is it important to involve audiences? As I proposed elsewhere, by drawing on adaptation theory and namely examples from games studies, it is important to explore what audiences think, what they see as the canon of the source text, the essential elements that ought to be consistently translated onto the new medium, the new instantiation of the story.

Existing fans, typically the most intense critics of any adaptation (Tosca and Klaustrup, 2011) [...] will scrutinise an adaptation for consistency, and will also compare the style, the tone, and the effects of the game using the source text (the film or book) as a benchmark. A good game adaptation aims to capture the essence of a source text. This essence may not be a realistic target (Stam, 2000) – and here we are talking about a translation into a new medium, not a 'faithful' replica of a story – but nonetheless it is important to work around a notion, the producers' and audiences' notion, of essential elements and effects of a story. (Franco, 2015, p.48).

The core elements of the audience involvement mechanics involved calls to action (requests for participation) added to the books published from the moment the online community was launched, on the author's website, Facebook pages and other social media. These invited readers to the online community, whose key goals were to: engage readers, produce usable insights to inform the adaptations and invite users to upload their very own derivative works, which as *building blocks* could eventually make their way onto the digital book. Fig. 6 shows a screenshot of the Kindle preview of the 'Foreword' in *Nature's Peril*, where Duncan Pile (2014) explains and appeals to reader participation.

Figure 6: Nature's Peril 'Foreword': creativity and reader participation

Foreword

One of the most satisfying things about being an author is engaging with young people and having the chance to offer some inspiration. I meet many wonderful young writers who dream of one day penning a best-selling novel, and it is a joy for me to be able to encourage them in their aspirations. In recent years, "fan-fiction" has become a big deal. For those who don't know what this is – writers take other peoples' stories and create their own versions, posting them online. Sometimes it's an alternative ending and sometimes the next chapter, but whatever the subject matter, the fan-fiction community is positive and encouraging – an invaluable resource for creative young people.

Inspired by the fan-fiction model, I decided to do something similar with Nature's Peril and the rest of the Nature Mage Series. Nature's Peril has been released in three stages, with each excerpt containing a natural section of the book. In part, I've done this to ensure my readers don't have to wait a year and a half to read the next book in the series, but I've also done it for creative reasons.

My readers are invited to get more involved in the creative process of writing these books, and can post one of several things on a new fan-site (www.naturemage.com), which went live in August 2013: the next chapter of the book, a scene they would like to see in the next section, a re-written scene from any part of the Nature Mage Series, a predication of the rest of the plot, a drawing of a character/demon/scene/place/weapon, or a map of Antropel. If anyone comes up with something entirely different, I am more than happy to receive that as well. This is an exercise in creativity after all! My favourite contributions will be incorporated into an iBook once enough material has been gathered, with full credit given to the author/artist. I hope people like the sound of that, because I love it, and am very excited about seeing the entries. Ockbrook School in Derbyshire have made the community a part of their curriculum, and their wonderful students are already submitting creative writing. I am optimistic that many more schools will involve themselves now that the submissions have taken off.

Having said all that, I understand that many readers would prefer to read the whole novel in one go, so this is for all the patient people who have waited for me to complete the story! Enjoy Nature's Peril. After all the plot and character building of Nature Mage and Nature's Servant, the gathered momentum launches you into a story that is action-packed from start to finish.

The design of the very community was also reviewed (simplification of wording and the creation of a new section) based on insights collated via the community and via reader research, namely an online survey and face-to-face workshop session with readers. The online community provided a platform to collate and stimulate readers' readings of the stories. In parallel, and often informed or inspired by these, the author and researcher would suggest and tests ideas by bringing them back to readers for feedback and comments. Reader-inspired ideas would then coexist with ideas entirely generated by readers, and the ideas of the core team (author and researcher), and all would feed each other to produce more than the sum of their parts.

Since quite a lot of the adaptation work envisaged consisted of producing visual representations of the stories (as well as written expansions of backstories, the filling of gaps, and others) we also invited students from a number of local colleges and universities to take part. The invitations went out to course leaders in animation, illustration and game design courses; two animation and illustration students took part.

Soon after the community launch teachers at a school in the Nottingham area heard about it and made use of it as a platform to encourage creative writing and creative works for English and Arts. The author and I visited the school and engaged in face-to-face workshops with these pupils to discuss the books, their involvement and views of the community, and ideas for our adaptation project. These forms of engagement with readers, artists and secondary school pupils were complemented by the use of an online survey, the results of which are discussed in this chapter. The process was complemented by ongoing conversations with the author, ongoing note-taking in 'design ideas documents', and a detailed narrative analysis of the *Nature Mage* book.

The online reader community: rationale and design considerations

The community was a reader engagement tool, a breeding and testing ground for ideas, but also a space of research with the analysis of posts and interactions between readers, artists and the author. Reader involvement was an important part of the project. The adaptations could have been done just by producers, with no reader or user involvement. The involvement of readers is symptomatic, it reflects new ways of producing texts linked to digital cultures, habits and affordances that (arguably) facilitate consumer participation. This chapter explores the potential offered by affordances of the digital medium, as well as challenges and limitations. The audience involvement approach is also reflective of recent movements towards positioning users more at the

centre of design decisions, a tendency driven by practices such as design thinking, user-centred design (UCD) and user experience (UX) research — the importance of which for digital books and their success has recently been highlighted by the publishing industry (Kostick, 2011a, 2012; Fahle, 2011; Digital Book World, 2011) and by academic research (Kostick, 2011b; Vaala, 2012; Marsh et al., 2015). From the onset the design of the community — the way it aimed to involve readers and the ways it framed their participation — were planned by paying attention to the wording, the branding and the structuring and usability. This was done through a step-by-step approach, starting with hand-drawn wireframes, then clickable mockups (using the *Balsamiq*³⁸ prototyping tool) and finally several iterations of the actual online community, but on the *Ning*³⁹ social network platform.

Gunther Kress (2010:142-143) thinks that contemporary social conditions that stress choice and the appeal to *interest* (by consumers, or for example students) means an emphasis on agency in participation. Design also designs (defines) social relations, and in contemporary texts (such as multimodal textbooks and websites) there is less of a *command* relationship, and more of an invitation to take part, to choose from a number of possible ways of navigating the text. This was precisely the goal in the *Nature Mage* project. Now, when texts are less linear, when there are more options for users, it is also important to give direction and set the ground for engagement and participation (Kress, 2010: 169-170). Artefacts that are too open or complicated and with poor user interfaces and aids to new users run the danger of quickly losing their users as drop-outs. 'Appendix 4' provides more detail on the design of the community, which was guided by usability principles and by the need to offer different levels of participation.

I started the project with a very optimistic view of the potential of digital platforms for audience involvement. My thinking was influenced by industry developments, news and academic studies looking at phenomena labelled as user-generated content, *crowdsourcing* and *participation*, namely *Spreadable Media* by Henry Jenkins, Sam Ford and Joshua Green (2013). I drew inspiration from some of the case studies discussed in the book, particularly on the chapter 'Courting Supporters for Independent Media', where a number of case studies in "crowd' projects' were described (pp.248-257). One of the projects mentioned was *Star Wars Uncut*, a 'fan mashup remake of the original Star Wars movies' (Pugh, 2009). This project started with a simple website

³⁸ https://balsamiq.com/

³⁹ https://www.ning.com/

where *Star Wars* fans were invited to submit their very own remakes of scenes of the original first film. The film plot was split into 30-second slices and fans were invited to send their remakes of those exact 30-seconds, without diverting from the story, but using whichever technologies and means available to them. The result was the stitching together of hundreds of short scenes onto a 130-minute film that follows the same plot as the original, but giving the viewer a patchwork of scenes made in diverse styles and with different techniques and approaches, from hand-drawn, to scenes made with Lego, to paper spaceships and robots made of kitchen tinfoil. The project attracted quite a lot of attention at the time and was heralded as an example of the potential of digital media for participation and co-creation. The idea of developing an online reader community took form based on this and similar approaches, whereby consumers also participate in the creation of media texts.

The initial optimism surrounding the idea for the online community was tempered, at the design stage, by an awareness of the potential downsides and critiques that participation theory and the defendants of crowdsourcing and similar approaches had undergone. Scholars David Buckingham and Rebecca Willett (2006), Andrew Burn (2009) and Gunther Kress (2010) pointed out a number of issues including the possibility of seeing participation as free labour; inequalities in access to digital media; the diverging skills and savviness of different audiences even the so-called *digital natives* -- amongst other criticisms and called for a more nuanced approach the potentials of digital for participation. Even Jenkins et al (2013: xi) criticised the ways in which some 'consumers' of their theories had misused them.

In part our work stems from disappointment with the way some companies have reacted to the 'convergence culture' our research has examined. [...] many marketers and media producers have embraced simplified notions for understanding these phenomena, notion that distort how they perceive their audiences' needs, wants, and activities.

Jenkins et al. added that their book was not 'for those looking for easy ways to 'exploit' or 'leverage' the people their company purports to serve.' (2013, p.xi). Reading about the difficulties and critiques of participation, and being exposed to some malpractice within the market research industry (for example, the use of focus groups to do 'design by committee'), made me cautious, or rather cautiously optimistic.

I became aware of other challenges of participation, namely around issues such as copyright and value (Lewis, 1992), rewarding participation (Bernardo, 2011) and how (and how much) to structure and 'direct' participation (Jenkins et al., 2013; Burn, 2009). The ideas, examples and problems raised in these earlier studies have to a degree shaped the evolving approaches of audience involvement used in the Nature Mage project.

The online reader community: design overview

The affordances of the digital medium, namely the *Ning* platform, were explored in ways that aimed to: provide a usable space; provide enough information without overloading users; invite and enable easy participation via different levels (rate, comment, upload), for users wanting to commit and spend their time to different degrees. The structure was intended to be simple and easy to grasp, highlighting a quick explanation to users of what they could do in there. From the homepage users could easily access all areas, which could also be done via the navigation bar. Buttons – rather than hyperlinked text – were used to facilitate use on tablets and mobiles. The design was responsive, with the several panels being displayed differently across screens of different sizes. There were three main areas in the website: 'Explore', where users could simply see what others uploaded, comment, rate and share through social media; 'Create', where users could upload numerous types of media, organized by different books, kinds of content, and themes; and 'Forum', where users could engage in discussions started by the community administrators (author and researcher), or start their own. A more detailed outline of the community design rationale and evolution can be read in 'Appendix 4'.

The online reader community: usage statistics and user needs

I used *Google Analytics* to collect website usage metrics for the community. This section presents an overview of web metrics based on the statistics collated. Fig. 7 shows that for the 13-month period in which it was active, between July 2013 and July 2014, the website registered a total of 1,790 sessions from 937 users. Of these sessions, 47.4 per cent were returning visitors and 52.6 per cent were new visitors (who only visited the website on one occasion, i.e. one session). On average visitors saw just over 5 pages per session and spent some four and a half minutes on the website. 46.5 per cent of visitors to the website *bounced off*, i.e. only saw one page and then exited the website.

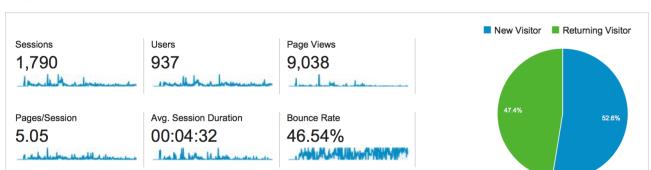
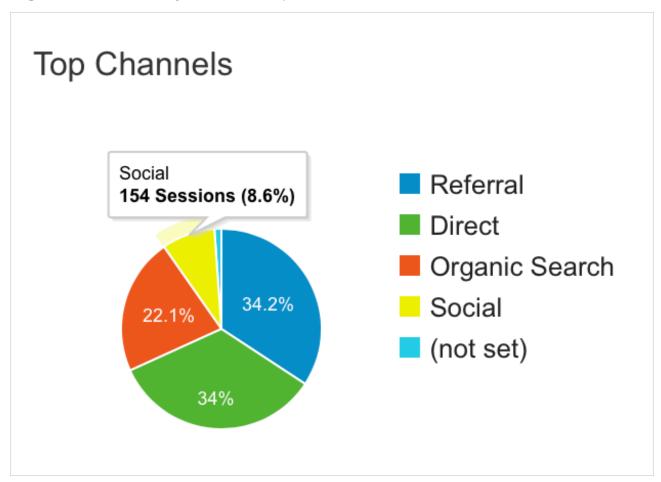


Figure 7: Community metrics - sessions overview

Nearly seven in ten visitors were from the United Kingdom, followed by the US, which was somewhat predictable given the North American readership. Fig. 8 shows where users came from to get to the community.

Figure 8: Community metrics - top channels



Just over 34 per cent of visitors were directed from some other website, for example Amazon, Goodreads or the author's website, where links to the community were added; 34 per cent went onto the website directly (i.e. using its URL, most likely from clicking its ULR on their browser history); 22.1 per cent originated from searching, for example using Google and then clicking on

one of the results linking to the community; 8.6 per cent came from social media websites (such as Facebook or Twitter), probably most of them by clicking on links added by the author to his Nature Mage Facebook pages, and eventually also thanks to the social media sharing buttons available on the website.

The main pages in terms of page views, shown on Fig. 9, were naturally the homepage, than the 'Create' page, which was positive given the main goal was to encourage visitors to create. The other top pages in terms of views were 'Explore', the 'Forum' and 'About the Books', which included freely-available excerpts of all the books published to date.

Figure 9: Community metrics - top pages⁴⁰

Page	Page Views	% Page Views
1. <i>I</i>	2,766	30.60%
2. /create	298	3.30%
3. /explore-creations	282	3.12%
. /community-forum	246	2.72%
5. /about-the-books	236	2.61%

In spite of the relatively large numbers of visitors, the community failed to meet our expectations in terms of actual engagement from users. We had not set any specific target number of visitors, or any specific proportion that we thought would become contributors (of any kind) to the website, but both the author and I had hoped for a more active engagement. The numbers of visitors were relatively large, but there were also less positive statistics, with nearly half of all visitors bouncing off the website (dropping from the first page they saw, which for vast majority would have been the homepage). This shows they a) got there in error, b) just wanted to have a quick peek, and/or c) did not like what they saw and read. A total recorded number of 937 visitors resulted in just below 70 members (visitors who signed up in order to be able to leave a comment or upload some kind of derived creation). Of these members, just over 50 were referred to the website via a secondary school that ended up using the online community in their classes and to set creative homework. This will be explained and discussed further down.

The numbers meant that the several referral channels — from within the books published meantime, on the author's website, on his Facebook pages, and on other websites — attracted a relatively good number of visitors but this did not translate into a large number of signed up

⁴⁰ "/" represents the root, the homepage.

members actively adding content to the website. Overall the website attracted some 30 ratings, about 15-20 comments and the uploading of some 40-50 derivative pieces of user-generated content inspired by the stories, including some fifteen by invited artists, about 20-30 from school users and fewer than five from other community users, *Nature Mage* readers who contributed with content.

According to an online survey, with responses by 29 users of the online community, the most popular activity was uploading their own story (72 per cent), followed by uploading an image (drawings, mostly, and some collages, at 31 per cent). Around 28 per cent clicked to 'like' a post, story or image, 17 per cent commented on other people's downloads and another 17 per cent 'only looked around' (which was one of the options they could tick in the survey question). We also asked a more open question: 'What did you think of the Nature Mage website? What did you enjoy or not enjoy?'. The majority of comments was positive. The positive highlights were the ability to see illustrations, especially of characters and creatures and the visual style of the website, which a reader termed the 'adventure style theme of the website.' Users of the website enjoyed its creative and social dimensions too, which is clearly patent in the following selected quotes: 'I think that the website is really good as you can get involved by posting your work and then you can get feedback from a real author.'; 'It was really creative and I liked the fact that you were able to see other people's work.' As for negatives, these centred around the amount of content: 'there should be more to look at like picture and profiles of places and characters.'; for a few it was 'boring' as 'there wasn't much to do on it'.

The first reactions of students who had never used the website but were shown screenshots, together with a brief overview, were positive. Feedback centred on the visual style, with some reference to structure and navigation. Comments included 'Magical, unique, funky', 'looks cool / good graphics and set out, well thought out', 'Easy to use, self-explanatory, attractive'. Another survey question, focused on participation, asked readers 'What do you think of the idea of being able to upload your own writing, art and other stuff based on the stories?' The vast majority were positive, which is to a great extent expected given they actually had chosen to use the website.

I really like this because it feels good to have your work read/seen by a published author.

I think it is good as you can talk and interact with other who also like writing. They can also comment on your work which means you can improve your writing.

I think its pretty awesome as we (the fans) can share ideas on what can happen next and discuss parts of the books we enjoyed and didn't enjoy.

The main themes from the statements above are: the interaction with others; the presence of the author and the importance of the author's comments; a sense of steering the direction of stories. Being part of a group of 'like-minded people' contributing and commenting on each other's works was seen as encouraging for creativity and to improve one's creations. The presence and input from the author was also valued and seen as positively engaging. Finally, it was possible to perceive a sense of empowerment where readers were asked to *guess* the next part of the book that was being written at the time by sending their own ideas and writings. In spite of readers thinking this was a good idea that gave them a role, contributions were limited and in the form of short comments on how readers thought the plot would develop.

In the face-to-face workshops we asked participants to come up with ways that we could improve the website. Some of the comments were about navigation, and about ways to make the website easier to use and navigate. Several ideas were about the addition of new modes and content, including games, sounds, and audio and video re-tellings of the story. There were also suggestions for quizzes and competitions, so that contributors could get something back, and ways to engage more with the author, including ways to ask him questions. Again it was clear that the proximity and connection with the author was important.

A second unexpected stage in the evolution of the online community started in October 2013 when the Nature Mage community came to the attention of teachers at a school in Nottingham, who wanted to use it for more formal educational purposes. This is described in more detail in 'Appendix 4', but in summary involved teachers creating a bespoke 4-page scheme of work with lesson plans and homework tasks that included using the online community to upload derived works, and the addition of a dedicated section on the online community, a simplified version of the 'Create' section, which the author coined 'Derived Creations'. This section was not linked to any book in particular, but split contributions onto three different kinds, based on a split between writing (written language mode), artwork (visual mode) and 'other' (the miscellaneous). Users could also rate and comment on works.

Even though '[t]he participatory affordances of current media technologies blur former distinctions of production and consumption, of writing and reading' (Kress, 2010:144), participation

is not something that just happens in every website that aims to engage with users in this way. 'Appendix 4' provides a more complete discussion about the challenges and strategies used, and for this reason it is a useful read for producers interested in developing engagement strategies, namely by thinking about suggested ways of rewarding participants. Ethically, it felt right to reward any contributors to the website, especially if their derivative works were chosen at any point to be included in an eventual digital adaptation. in summary, although at a point there were some discussions about potential financial rewards, the rewards offered on the online community to participating readers were rewards 'in kind', and included things such as an acknowledgement in the digital works, free digital copies or a personal critique of their writing by the author Duncan Pile. The rewards were associated to different degrees of participation: the more complex (time consuming) and better contributions (e.g. best rated) would get a higher reward. 'Appendix 4' shows a table with our ideas for 'reward levels'.

The design process of the *Nature Mage* digital artefacts

Here I describe and discuss the adaptation process that resulted in the creation and refinement of the adaptation concepts (ideas, sketches, not actual final, produced artefacts) for a *Nature Mage* enhanced digital book and a videogame. The adaptation process involved three main strands: the setting of direction and control exerted by the author; the detailed analysis of the source narrative in order to inform guiding principles, themes and ideas for the digital adaptations (presenting a framework that is useful for other producers); an analysis of insights derived from audience engagement (via the online forum, for example through the analysis of posts and comments) and key findings of the research with readers — to identify user needs, views and desires. Together, these defined the ways the affordances of the digital medium could be tapped to design engaging artefacts.

Author expectations, direction and brand consistency

As a fan of fantasy and an avid reader of the genre, Duncan Pile has been influenced by many fantasy authors and books. At the outset of the project Duncan suggested a number of fantasy titles for the invited artists to see the kind of visual style that he was envisaging for an adaptation of his *Nature Mage* stories. Pile added: 'I don't want my very limited tastes to restrict anyone else's creativity. [...] I'm also very open minded, and would like to see some different styles of

artwork.' (2013b) From the onset the author expressed a desire to provide some general direction in terms of style he was expecting his brand to carry from the pages of print to any media with visual representations. The understanding from the invited artists was that we were engaging in an experiment using an existing story, an existing *brand*, ultimately Duncan's brand, for which he had a lot more at stake. This meant we understood how important it was for Pile, and we were accommodating of his views and desires for the new materials produced. Besides referring to style, the author also added some lines on the kinds of elements or materials from the book that he would like to see transposed onto a visual mode.

I would absolutely love to see some sketches of weapons from the books, or types of demon, or any of the characters, or maps. [...] There's a lot of good material for art-work in there: types of demon like the Spirit of The Ruins and the Darkman, places like Heath's home in the forest, the natural amphitheatre the Measure takes place in, or the Eagles Roost mountain tribes. (Pile, 2013b)

The author also sent a selection of book excerpts to the artists, adding the following note: 'OK here are a load of scenes with strong visual impact — types of demon, places, character descriptions, fight scenes etc.' Pile thought his stories were very 'visual', prone to cross-media adaptations, and from the onset he scanned his writings to highlight material to be adapted. I was also involved in the definition of this kind of initial direction. The goal was to launch the online community already with some derivative artwork, in order to stimulate participation. See below an email that I sent to the artists, with the knowledge of the author, which is illustrative of the kind of direction provided. This piece of project communication also shows the rationale behind the direction, and how we started to envisage the ways in which derivative works such as illustrations and backstories would be used.

Here's a sort of summary of some of the things we discussed that could be good to draw. [...]: demons; elementals; weapons [...]; magical artefacts [...]; types of magic – using symbols / icons? Perhaps a typology of types of magic; map / maps (whole land, Gasp's village, Helioport, their continent); on iBook the map(s) could evolve, showing previously hidden / blank areas, growing; places, for example: Druid's home, lost city.

For beings, objects, types of magic, etc. we could have separate illustrations for each, but also sort of genealogical trees with all and how they relate to each other. We could produce sort of factsheets for each thing. On a possible iBook these things could be added to evolving lists, e.g. 'types of magic' where each time a new one appeared in the plot, it would be added to a growing list / tree.

Both on iBook and on community, we could create full pages with all weapons, all magic, etc. – encyclopaedic information about the world. Perhaps backstories could be added about the weapons, the magic types, etc... either by Duncan, by readers, or a combination of both – should we tell them explicitly from homepage that we want to expand the story and the world? Provide examples?

In terms of structure, and interlinking of different contributions, we could, for example, pick the drawing of BoneBreaker, and post it on the 'write' section (or whatever we're calling it), asking those into writing to send backstories. In the iBook, these backstories or facts about the weapons could be added as pop-ups from the images...

I also asked Duncan what types of things he'd prefer you to start sketching, to which he said: 'I like the idea of all of them. If I had to choose I'd say demons/elementals, maybe weapons after that, or maps, but I'm open to anything. Love the idea of arcane symbols to represent branches of magic. Let's leave it as open as possible.' (Franco, 2013)

The author and I thus gave some direction to the invited artists, aligning requests for artwork with our ideas for a potential digital book where multiple layers of interpretations for derivative works by artists and readers-as-contributors would coexist, possibly linking different modes, for example derivative writing and illustrations. It is evident from this excerpt that the affordances of the digital medium — and namely the iBooks Author as a possible platform for the production of the digital book — were being considered to start devising ideas for design. Affordances such as pop up text, hyperlinks, the ability to show or hide content were seen as suitable for certain kinds of content and features such as glossaries, cards, evolving maps and backstories. Some of these features were also clearly inspired on the design and features of other texts, namely digital texts such as *Steampunk Holmes (Noble Beast, 2013)* and *Sorcery!* (Inkle, 2013a), and by conventions and genres ultimately with an analogue ancestry such as glossaries, illustrations, cards and by existing

practices such as the commonly found writing of alternative versions and backstories by fans, whether using paper or more recently on digital platforms.

Before the online community was launched Duncan Pile sent an email expressing how he felt about having a mix of styles on the website:

The site is for the enjoyment of those who engage as well as for me, and other contributors will see and comment on submissions. My vision for this site is not that everyone does things the way I like — it is that people express their own creative renditions of the story I've begun to tell. I'm happy for tangents, cartoons, Manga, or anything really. (Pile, 2013c)

When it came to discussing which of the derivative works uploaded onto the community could make their way onto a possible digital book, the author had a slightly different perspective on the diversity of interpretations and styles. Duncan saw the contributions from artists in a different light, and thought these were more suitable. They were of a better quality, bought some consistency and were easier to direct and control, which made them ideal for the envisaged enhanced digital book. Pile had revealed some concerns with producing a digital book based on contributions that were a little amateurish and very diverse in terms of style and quality. The involvement of students and/or wannabe artists and writers aimed to alleviate these concerns. Pile valued the contributions of all readers, regardless of level of quality of their derivative works, but it was clear that they may not be suitable for a Nature Mage text — some were too derivative, moving away from the source and too diverse in terms of style, which meant a lack of consistency for the Nature Mage brand. This was not what the author envisaged for his stories. The following note, taken from my project diary (July 2013), shows some of the thinking behind these two ways of looking at quality and contributions:

Quality is not important for the community, but will be more selective for the iBook – likely art students and any good fan artwork – or also ask students to improve on any concepts sent by fans; perhaps mix 80 per cent prescription for art student with 20 per cent giving them some freedom to create own ideas

Readers' ideas could in fact make their way to the digital book selection, but we did envisage that most contributions would not achieve a standard of quality high enough to for the author to want to show them on a new work bearing his brand.

Consistency is often a challenge when fans are involved. Maria Lindgren-Leavenworth's research on fan fiction, as described by Ryan and Thon (2014:18), points out that:

[E]ven in franchises dominated by what Mittell describes as 'What Is' strategies of transmedial representation, there is usually some kind of fanon (as opposed to 'canon,' the term refers to fan-produced, unsanctioned products) that produces hypothetical 'What If?' narratives, thereby modifying and challenging the logically consistent storyworld of the canonical texts.

Henry Jenkins approaches the question of 'multiplicity' in participation. His focus is on 'emergent forms of storytelling which tap into the flow of content across media and the networking of fan response'.

A second set of issues has to do with continuity vs. multiplicity. Most discussions of transmedia place a high emphasis on continuity — assuming that transmedia requires a high level of coordination and creative control and that all of the pieces have to cohere into a consistent narrative or world. ... many projects which claim to tap 'user-generated content' do so in ways which protect the 'integrity' of the continuity at the expense of enabling multiple perspectives and more open-ended participation. They make the author or some designated agent an arbiter of what counts within the canon. On the other hand, there are forms of commercially produced transmedia which really celebrate the multiplicity which emerges from seeing the same characters and stories told in radically different ways. This focus on multiplicity leaves open a space for us to see fan-produced media as part of a larger transmedia process, even if we then want to try to sort through how different elements get marked as official canon or fan alternatives. (2011, n.p.)

Jenkins shows that there is a wide range of approaches to control and to keeping 'coherence', and that although often more control aligns with commercial attempts, this is not always the case. In reality, often fan works that are more 'open' or even contrary to the source story and the views of producers, are clearly distinguished from canon, and sometimes even criticised by producers.

Klastrup and Tosca think that 'fan products are not necessarily perceived as on par with the 'original' or incorporated into processes of meaning making.' (2014:315-16) For them 'canon' works

in relation to 'fanon', 'the fan-produced, unsanctioned developments of plot and character that over time acquire legitimacy within the fan community even though they may contest or be incompatible with canon elements⁴¹.' (Ibid.) In the case of *Nature Mage*, Duncan Pile would rather avoid inconsistency by exerting some level of control on the kinds of derivative works that would make their way from the online community (more free, showing diversity) to a digital book (more consistent, less *amateurish*). Before launching the community and opening it to the public, I noted down some thoughts in my project diary (July 2013) about visual representations and eventual processes of deciding on adequate artwork, in this case related to the representation of the hero, Gaspi.

Main characters (seems obvious, but perhaps harder – will readers want to see a visual representation? Can we involve them in picking / shaping the best possible Gasp? Duncan to ultimately decide what he should look like? Probably readers, and keep multiple interpretations by artists, and their progress (e.g. evolution of sketches)

I had envisaged that readers' opinions, and potentially ratings, would probably the decisive factors, but ultimately, when there were discussions about the suitability of representations uploaded onto the community website, even readers and artists turned to the author for his opinion. The plan was for the community to generate enough ratings, comments and conversations around uploaded derived works in ways that could develop some kind of 'fanon'. Simone Murray (2010, p.34) asks the question 'What forms of quality control might exist in an era of mass literary amateurism?' For her:

An historical perspective is crucial, as the concept of the 'professional' author is an entity emerging as late as the 18th century. Digital scrapbooking is likely to develop its own systems of evaluation and recommendation, drawing on the networked possibilities of blogging, quote functions, hyperlinking and the search engine algorithms that track these and rank search results accordingly. (Ibid.)

⁴¹ Based on this, Klastrup and Tosca claim that perhaps there is a need for 'a more encompassing notion of storyworld'.

Murray believes that design solutions similar to the ones I envisaged for the online community will take care of the problem by allowing what I would term some form of 'self-regulation'. The affordances of the digital media allow designers to create features that could facilitate this, which effectively happens (not without its very problems) in websites such as Trip Advisor, the App Store and most other online stores selling any product or service. In the *Nature Mage* community, however, the 'democratic' potential of these features did not concretise due to a low level of ratings and comments. In practice what effectively happened was that the author established canon both outside the community (via emails and conversations to provide direction) and inside the community, via comments visible to everyone. Perhaps if numbers of users, reviewers and commentators was larger the author would have given away some of his power in controlling canon — but this is hypothetical.

Mapping the story: narrative analysis

Source texts provide a wealth of narrative resources, aesthetic and stylistic options that can used when working on an adaptation. Good examples of cross-media adaptation rely on using the source material in a way that adds to the storyworld or to the *brand* in ways that are consistent with the original stories. There are of course exceptions, and in some cases adaptations and especially fan works that contravene the logic of a storyworld, but generally an adaptation is considered to be good (by producers, authors and fans alike) when it keeps to the *spirit* of a story, even when this means picking one aspect of it, but nonetheless drawing on its *essence* (on its ethos, style, worldview) to identify core narrative elements, core style choices and effects on the audience, to create a new text with a good level of *consistency*. (Carr, 2006; Krzywinska, 2003; Franco, 2015) Consistency should not be confused with the often attacked notion of 'fidelity'. Pamela Demory uses a comparison of the (different) openings of *Twilight* in the book and in the film adaptation to problematise the notion: 'the scene is bot completely different and eerily parallel, complicating our notion of what 'fidelity' to a text might mean.' (2010, pp.202-203). Justin Parsler (2008) similarly reveals the nuances of 'fidelity' by discussing the ways in which *crafting42* 'reflects a desire for fidelity both as a realistic game mechanic and as a device which needs to conform to MMORPG

⁴² In role-playing and other games this means making things out of materials found in the game world. As can be done in Minecraft too, and in myriad MMORPGs.

tropes and Tolkien's Middle Earth.' (Krzywinska, MacCallum-Stewart and Parsler, 2011, p.9). In Parsler's analysis the need to look at the various intertexts, from both source and destination media, is evident. This is crucial in an analysis of a cross-media adaptation where strict fidelity is impossible and adaptations are necessarily different due to a change of medium. Robert Stam illustrates this difference by quoting Fritz Lang's response (in the film *Contempt*) to a producer's accusation of infidelity to the script: 'Yes, Jerry, in the script it's written, in a film it's images and sounds... a motion picture it's called.' (Stam, 2000:56) Stam uses instead the term *translation*, which entails changes from source to end text, and suggests intertextuality theory as a useful framework for the analysis of adaptations that cross media.

As I wrote elsewhere, Thomas Leitch (2008) has shown that:

Many scholars — even those claiming to have overcome the age of moralistic comparative novel-to-film studies that value fidelity above all else — have found it very difficult to escape the grip of literary status and the fixation with novel-to-film adaptations. Leitch argues that they should instead focus on Bakhtinian intertextuality, according to which every text — adaptation or not — is influenced by a series of previous texts from which it could not help borrowing. (Franco, 2015)

Adaptations are 'deliberate, announced and extended revisitations of prior works' (Linda Hutcheon, 2006). In the realm of storytelling they manage several resources — the narrative of the source texts — and the conventions and affordances of the destination medium to produce something necessarily new, but typically 'in touch' with the source material, often to bring existing audiences across media. In this journey, the source narrative is transformed, often in ways that meet the expectations of both existing audiences (e.g. the readers of a source book) and target audiences (e.g. both readers open to gaming and players of the game genre of choice).

Instead of fidelity, here I draw on the 'wider notion of transmedial brand consistency', which in an empirical study of an adaptation by the BBC of a book (*Muddle Earth*) into a cartoon and digital game I defined as embracing 'medium-specificities and an understanding of game adaptations as the product of the multifaceted influences of intertextuality (relationships to other texts) and extratextuality (the specificities of production contexts).' (Franco, 2015, p.43) Brand consistency emerges in operation, when producers are working on an adaptation. It is flexible, it provides room for changes and negotiation on what is consistent within a brand or story, but importantly it requires

a thorough understanding of the narrative of a source text, which is used as term of reference for the production of a new text.

Ryan and Thon ask to what extent existing tools to analyse narrative can be used across media. Their answer is to conceptualise the relations between narratological concepts and media categories as '...a scale ranging from 'medium free' to 'medium specific', with various degrees of transmedial validity in the middle.' (2014, p.4) Some narratological concepts apply to all media, others are specific to a single medium, others yet can be applied across a number of media, even if at times applied as metaphors. In the 'medium-free pole are the defining components of narrativity: character, events, setting, time, space and causality.' (Ibid.) These concepts, and a few more yet to be defined, were used in the analysis of the Nature Mage books.

Narrative was the resource, the material with which all those involved in the design of the *Nature Mage* adaptations — author, readers, artists and researcher — could start thinking about how to create new texts. Eventually this happens through processes of combination of ideas, devices and aesthetics from other works across both the source and destination medium. In other words, the resulting text of a cross-media adaptation will be influenced by intermedial and intertextual influences and references. To start with producers and designers should get to know their source text well, in order to extract possible themes and ideas, establish core narrative elements and world principles, thus ensuring they understand the parameters within which the adapted texts can keep a level of consistency⁴³ with the source storyworld.

A number of concepts from narrative theory are useful to analyse the source narrative. Chatman (1978, pp. 12-25) suggests slicing narrative into two constituents: story (the *what*), the content of the narrative expression, and discourse (the *how*), the form of that expression, the manner in which content is communicated. Story is further composed of existents (characters, settings) and events (actions, happenings); the way in which the events are arranged constitutes the plot. Ryan (2014:34-37) proposes in turn an outline of the components of storyworlds. Many of these are identical to the components defined by Chatman, but they also add another two that help frame the narrative analysis of *Nature Mage:* 'social rules and values' and 'mental events'. Social rules and values are defined as 'principles that determine the obligations of characters', which includes aspects such as the 'aspirations of characters', the 'laws of the group', competing values, choices

⁴³ This level will vary, according to the source material, the audience, the medium and genre of destination, and other factors. For a deeper discussion on this and views on the flexibility of the concept of 'brand consistency', see Franco, 2015; Carr, 2016.

to be made between values and groups, and so on. Mental events are 'the characters' reactions to perceived or actual state of affairs', and include motivations of agents, emotional reactions to events, and the 'plurality of private worlds: the worlds of the beliefs, wishes, fears, goals, plans and obligations of the characters.' (Ibid.) These two components suggested by Ryan are evident in *Nature Mage* and are incorporated in the analysis of the story presented further down.

After reading and re-reading the first three books in the *Nature Mage* series (the fourth had not been published yet) I created narrative 'maps' of the story. These maps recorded key elements based on a narrative theory framework. The analysis output came in the form of nine A3 sheets of organised notes to guide my adaptation ideas and conversations with others involved. The maps recorded three elements from the source narrative: core existents (e.g. characters, settings, objects), kernel events (key moments in plot development), narrative themes (e.g. friendship, self-confidence, trust) and importantly associated ideas for the adaptations. Based on earlier insights from the author and readers on the ways they saw the story, the events were split into two kinds: action and the more *human side* parts of the plot, linked to emotions and relationships, which included what readers described as the 'touchy bits' and moments of 'conflict' as previously described by the author. They relate to themes recurrent in the story (self-confidence, control, friendship, selfishness versus altruism, amongst others) that condition the behaviours of protagonists, eventually becoming an important force driving plot development.

Modal transduction, intertextual repertoires and canon definition⁴⁴

Books, especially with no illustrations (as is the case with *Nature Mage*), are characterised by 'high modality' (Kress, 2009). They rely for the most on a single mode, in this case written text. The challenge is to translate meaning conveyed purely via text into a visual, multimodal medium; this is particularly testing in the case of the adaptation into game, a medium where (virtual) space movement and ludic logics intersect with representation.

The adaptation involves *transduction*, a process which Jeff Bezemer and Gunther Kress (2008:169) define as a 'change of representations' whereby 'semiotic material is moved across modes, from one mode (or set of modes) to another mode (or set of modes).' It constitutes a modal transposition, a 'move of semiotic material from one mode to another' (Bezemer and Kress, 2008: 175) in a kind of *translation* that has to fill several gaps.

⁴⁴ Some of the ideas presented here were previously proposed in Franco, 2016.

This 'filling of the gaps', realised with an 'epistemological commitment' (Kress, 2003), is done using not only the source text (with its more or less defined references) but also a myriad of other texts and experiences as threads to weave the new adapted text. A major task to create a game or digital book adaptation is therefore to transpose a text based on words (with no visual representation) onto the multimodal space of the digital medium. This includes creating settings, creatures, objects, and especially key protagonists (players and important non-player characters). (Franco, 2016, p. 217)

'Transduction' is a technical term, to do with semiotics and multimodality theory; it refers quite simply to the act of 'translating' from one *mode* onto another, and while its authors also discuss what happens in the selective processes that occur through it, they and the term does not categorise what *kind* of translation is done — for example, what is selected, what is dropped. Other academics characterise the process in more detail and suggest taxonomies. Wagner (1975) distinguishes between Analogy, Commentary and Transposition; Andrews (1984) between Borrowing, Intersections and Transformations; Leitch (2007) cites ten different categories, ranging from Hypertextuality to Intertextuality.

In order to illustrate the kinds of processes that occur with transduction, let us look at one of the main existents in fantasy stories: the characters. The descriptive elements of characters in books — their characteristics — include aspects such as the way they look, what they dress, their personality traits, behaviours, ethics, and so on. Some of these descriptive elements are more explicit, factual and more defined than others. Depending on writing style, and also on whether the text tends towards being more *readerly* or more *writerly*⁴⁵ (Barthes, 1975), descriptions tend towards leaving greater or fewer gaps to be bridged by the reader. MacFarlane draws on Barthes but distinguishes between 'that which can be transferred from one medium to another (essentially narrative) and that which, being dependent on different signifying systems, cannot be transferred (essentially enunciation).' (1996, p.vii) Fiske introduced the concept of *producerly* texts, whose 'gaps are wide enough for whole new texts to be produced in them' (1989: 104). Ryan's cognitive conception of narrative is also useful here; she approaches narrative meaning as a 'cognitive construct, or mental image, built by the interpreter in response to the text' (Ryan 2004: 8).

⁴⁵ Barthes suggested the terms *lisible* ('readerly') and *scriptible* ('writerly') to distinguish between a) texts that are straightforward, closely following convention and with pretty well-defined or closed meaning, from b) texts whose meanings are not as straightforward, more open to interpretation, thus demanding more work from the reader, who is figuratively said to write their meanings.

Narrative is defined as a mental image, or cognitive construct, which can be activated by various types of signs. This image consists of a world (setting) populated by intelligent agents (characters). These agents participate in actions and happenings (events, plot), which cause global changes in the narrative world. Narrative is thus a mental representation of causally connected states and events which captures a segment in the history of a world and of its members. (Ibid.)

Less defined elements include, for example, character behaviours, which over a number of pages allow readers to direct (e.g. through explicit statements) or indirectly (inferring from actions) build an image of personality, beliefs, ethical stance and other subjective characteristics. These tend to be open to a wider range of interpretations than objective aspects such as looks.

With their emphasis on causality, meaningful temporal sequences, and interrelation between behaviour and environment, narratives allow us to contracts models of how others may be feeling and acting, models that coevolve with our ongoing interior monologues, describing and interpreting to ourselves our own feelings and behaviours. (Hayles, 2005:197)

The Nature Mage books contain both more *writerly* and more *readerly* or *producerly* parts that allow readers to build an image of the characters. Let us look, for instance, at Hephistole, the Chancellor of the college and overall grand wizard in the story. Even the more factual, descriptive elements about Hephistole leave a number of gaps. Some questions arise about this character: how old does he look like? How tall is he? What expression doe she make? The book may provide fewer or greater clues, but readers (including producers looking to make an adaptation) always draw on their intertextual repertoire of wizards and wizard-like characters to weave their very own (more or less defined) mental image of Hephistole. The process is identical for an author as he weaves a text from his own cultural and textual repertoire, drawing on his mental image of the wizard. His mental image, however, is never equivalent to the words he uses to describe the wizard; the words are an attempt, of many possible, to pin down his image of 'wizard' onto a text, in what may be termed a process of textualisation (the concretisation onto a text). At the moment of making a sign '...representation is always partial [...] in relation to the object or phenomenon represented.' (Kress, 2010:71) The representation of an object is defined by what is 'criterial' of the category to which it belongs (for example, a *car* has wheels, it takes people inside it, and so on).

What is criterial will vary from rhetor to rhetor. This process involves a translation of a mental image or idea, through processes that involve selection, onto a text. In the case of the *Nature Mage* project this often took place publicly, online in the reader community, in a process of discussions and the meetings of individuals' interpretations and their intertextual media repertoires — in processes that I propose to describe as *collective intertextuality*.

Lev Manovich refers to 'The psychological processes of filling-in, hypothesis formation, recall, and identification, which are required for us to comprehend any text or image at all...' (2001:57) Ryan (2004), in reference to textual worlds, asserts the reader constructs in imagination a set of language-independent objects, using as a guide the textual declarations, but building this always-incomplete image into a more vivid representation through the import of information provided by internalised cognitive models, inferential mechanisms, real-life experience, including knowledge derived from other texts.

The *image* or *idea* of Hephistole — or any other character — draws on several intertexts within the fantasy genre, across media, across the times, and is based on our exposure to different materials. My image of Hephistole is⁴⁶ defined mostly by Gandalf, the great wizard from Tolkien's Lord of the Rings, and most strongly by its filmic adaptation. But my image of Hephistole is also influenced by the great wizard Professor Albus Dumbledore from the Harry Potter films; and by images of different Merlins I came across; and probably by a series of less conscious intertextual references to characters I have been exposed to. (Franco, 2016, p.221)

As intertextuality theory proposes 'the meaning of a text is generated by its relation to literary and cultural systems.' (Allen, 2000, p. 127)

Intertextual reading encourages us to resist a passive reading of texts from cover to cover. There is never a single or correct way to read a text, since every reader brings with him or her different expectations, interests, viewpoints and prior reading experiences. (Allen, 2000, p. 7)

⁴⁶ I say *is* rather than *was* because I keep this image with me even after I close the book; it exists outside of the books and outside of any texts, in *my* media universe. I have added it to my very own ever-evolving repertoire of wizards.

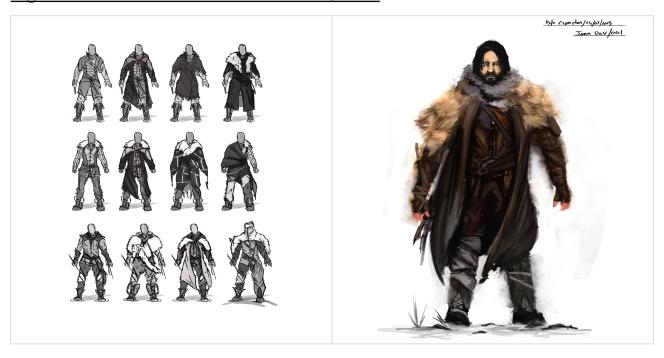
Janet Murray adds that 'We understand what words mean not because the meanings are fixed or absolute, but because we draw on shared contexts and associations to interpret them.' (2012:32). My image of 'great wizard' is shaped by many associations that I share with the author and other readers. Furthermore, it exists outside of the books and any texts in my media repertoire or media universe. As I read and weave an image of Hephistole I add it to my repertoire of wizards. Many of these wizards share characteristics, for example they are wise mentors for the heroes. They are formed within genres that through time developed certain conventions and shaped archetypal characters and common patterns such as those brought to light in Campbell's (2008) work on the hero's journey model.

But Hephistole is not always wise and strong, and in some ways defies the archetypal wizard-mentor, undergoing in the story a long period of self-doubt, low confidence, and near madness — all thoughts and attitudes atypical of the archetypal wizard. This is part of the human side of Pile's story and style of writing, for whom the fiction is as much about magic and demons and battles, as it is about humanity, growing, suffering, facing hardship and so on; these two aspects are weaved together.

Hephistole is wise, eccentric, paternal, enigmatic at times. He has a long white beard and wears great, usually colourful robes. *My* Hephistole is a patchwork of images, of intertextual cultural references I have gathered throughout the years; it is never fully defined and is shaped by — and at the same time changes — my image of 'wizard' and 'wizardness'.

'Wizard' is actually a relatively well-defined archetypal character in hero's journeys. Other characters in *Nature Mage* are not as typical, which means I have fewer, or less well defined, intertextual references I can draw on to build a mental image of them. Let us take John, the hero's guardian as an example. When the first drawing interpretation of John was uploaded to the online community by the invited artist Kyle Crompton (see Fig. 10), a reader revealingly asked 'Is that what John looks like?'

Figure 10: The sketches of a character, John



Duncan Pile replied in an online comment: 'I think it is an appropriate representation of Jonn... he looks like a strong, scarred man who has had his share of trouble!' This is an example of visual canon being established by the author. He is stamping the visual representation as *suitable*, consistent with the story, and with his notion of what Jonn could look like.

Another image that triggered an interesting reaction from the author was that of a demonic beast, an intelligent *warg*, a super-sized wolf commander of lesser wargs. These are excerpts from the book that the author sent to the artist working on the drawings:

Gaspi looked right and left, seeing [...] hundreds of fearsome dogs; dogs at least half again the size of the biggest hounds Gaspi had ever seen. They seemed to be covered in a kind of fibrous armour, and were unnaturally heavy at the shoulders. [...] Another Warg suddenly sprang out of the dark. It was twice as big as any of the others — more like a small horse than a dog — and something about it filled him with loathing and dread at the same time. [...] The Warg reached the plinth and spun around, its baleful eyes filled not only with the same driving hatred as the other Wargs, but with an undeniable intelligence. The Warg glared at Taurnil with a kind of wilful mockery, before growling a word Taurnil couldn't make out, and disappearing. (Pile, 2011)

Fig. 11 shows the first visual representation uploaded onto the online community by the invited artist James Ledsham.

Figure 11: The first sketch of the Warg boss



Duncan Pile commented via email that the larger warg did not look as intelligent and evil as he pictured it; it looked too animal-like. In this occasion, rather than simply approving an interpretation, the author tried to bring the sketches closer to his own mental image (and arguably the book's description) of the demon. The tweaked representation (see Fig. 12) was accordingly negotiated between artist and author, who effectively had a high level of influence when it came to the adaptation of his work.





Other drawings were entirely dismissed for breaking the rules of consistency with the story. This was the case of some settings — landscapes and buildings — that, according to the author, seemed more suitable to a Victorian age novel than to a fantasy story taking place in an undefined historical period akin to the medieval times of horse and cart, castles and swords.

The exercise of transduction is not limited to character representation. Let us take the translation of emotions (for example fear or horror) as an example. The affordances of a digital medium such as a game enable the combination of modes such as sound, music and colour (for example dark/light variations) to create the right kind of affects. The use of dark environments, alongside eerie sounds and music would be combined in order to achieve the desired effect in the digital medium. For this producers would draw both on the source text (the *Nature Mage* books) but also on the conventions used in other games to create suspense and horror — which in turn draw on the conventions developed in the film medium).

The examples covered here reveal the challenges of transduction, the intertextual nature of the processes of selection when translating onto a new medium, and the ways in which the affordances of a destination medium are used to translate mental images and emotions, drawing

on existing conventions and intertextual and often generic references. The online community platform afforded the posting of drawings and other derived works, and subsequent discussions about these — these opened the way to discussions of canon, ultimately resolved by the author in what was a small-scale community.

User views, needs and expectations

The analysis of digital forms of the book on chapter 4 has shown how good digital books are built on a solid understanding of user contexts, needs and wants, and on focusing on how to provide use value. Examples of innovation analysed tapped the affordances of digital media in ways that reinvent the kinds of pleasures provided by a certain story or genre, but in a new medium, tapping its affordances to produce meanings and offers that albeit in different ways add to the pleasure — or function — of the source works. In the case of more *functional* books (with specific uses), such as travel guides, it is easier to identify user needs; in the case of fiction, the needs can be fruitfully complemented by the notion that fans will want to extend the effects, the pleasures they get from the source texts, typically in ways that are consistent and that extend the storyworld, whilst also appealing to and offering motivations and pleasures more specific to the destination medium (for example, ludic pleasures in a game).

The use of the online community as a space to generate insights from readers was complemented by the use of other research approaches, namely a semi-structured online survey and a school visit whereby some 90 students from across different classes were involved in a half-day of presentations and workshops / group discussions. This section covers key insights collated using the three methods: the analysis of community content, the survey and the face-to-face school engagement. The insights are mostly general, about the stories regardless of what could be done with them in an adaptation, but nonetheless to inform the design of the game and digital book; specific ideas for each of these new media forms of the Nature Mage book are discussed in more detail in subsequent sections dedicated to each one of them.

In the online survey readers were asked a number of questions around Nature Mage: how it compared to other books; whether it had anything unique; what were their favourite parts; whether any parts were particularly memorable; their favourite characters; their opinion of the more human side of the story; and finally how they rated different elements of the story. Opinions were varied, with several readers stating the books were gripping and engaging, whilst others thought they were

at a level similar to other books they had read in fantasy genre. One of the readers, more into the fantasy genre, compared the story to specific titles (Skullduggery Pleasant and Power of Five), whilst another reader commented that 'it stands out a lot'. When asked whether there was anything unique about *Nature Mage*, anything that made it different from other books, about half of all readers replied positively, indicating a range of elements that stood out for them, and which included the mix of themes ('love and adventure'), the 'the warmth and humanity of the characters', the combination of more common with rarer kinds of magic (such as from the gypsies and druids), and the fact that 'it has a bit of romantic stuff in it that doesn't include vampires or werewolves' (a reference to the dark romance genre so popular at the time). In the school workshop that I moderated one of the readers also mentioned that she 'liked that the magicians had a sort of "human/teenager" side to them as well'. When asked about their favourite parts, readers highlighted the action, magic and events where Gaspi, the hero, played an important role. In a workshop session several groups of girls also mentioned as one of their favourite 'the part when Gaspi and Emmy fall in love'.

When asked whether there was any part that stood out in particular (and why) three main areas emerged: action scenes, such as The Measure tournament and the battle in Helioport; kernel events, such as 'when he finds out he has powers and at the college when he is taught magic' and 'when Gaspi stood up to the bully'; and finally some events more linked to feelings, emotions and relations, such as 'the fact that Taurnil honoured Lydia so much that he would have sex with her before marriage', 'when it mentions that his parents die' and 'The part when John says he will look after him better. It's stuck in my mind because it was very touching'.

The friendship between characters was clearly important, namely standing up for others. Personality traces found in various of the main protagonists were also highlighted: 'courage', 'bravery', 'good character', 'funny'. Readers were also provided with the following explanation as introduction to a question:

The Nature Mage stories are full of fantastical things: demons, remote tribes, creatures, warriors and mythical weapons and elementals. But the main characters also go through very normal, everyday problems that we all understand; problems of social awkwardness, jealousy, anger, addiction and vengeance. (e.g. the relation between Gaspi and Emmy, Jonn's issues with drinking, and the conflict between Gaspi and Everand).

And were then asked what they thought of this more human side of Nature Mage. Readers' answers revolved around two main ideas: firstly the realistic dimension, the fact that the protagonists go through real problems that everyone can go through; secondly, this made them more relatable, which made it easier to grasp them and could eventually help readers reflect on how to behave in similar situations.

The survey asked readers how much they liked specific elements in the story. Elements typical of fantasy — such as the different types of magic and magicians, the elementals, warriors and weapons and ancient magic — dominated the ratings. The wide range of magicians and magical beings seemed to be one of the main factors of engagement, which is patent readers' comments that it was 'amazing because they each have different types of magic which makes it very interesting' and statements such as 'great variations'. The ties of friendship between the hero, Gaspi, and his faithful companion Taurnil were also highly rated, as were the settings where the story took place — again very diverse and probably typical of the genre: distant mountains, misty islands, abandoned ancient cities. In summary, the main touch points with the story revolved around memes typical of the fantasy genre and the more human side of the story. As I explained elsewhere:

The fantasy memes included a fascination with the different kinds of mages, weapons, artefacts; the training period undertaken by the hero; his tie with the druid and nature elementals; and more action events such as the battle against demons in Helioport and the epic tournament The Measure. They would also like to know more about the 'Arcane Wars' (and lost secrets of the past) frequently mentioned throughout the story, and hear more detailed backstories for key characters. Readers enjoyed the mix of adventure, horror, lifelike situations, and what some called the 'touching bits', such as Jonn's struggles to overcome his difficulties. Readers mentioned they could 'relate to the characters' and to what they were going through; they could 'connect' with them and reflect on their own lives. Nature Mage readers thought the books were different for 'the warmth and humanity of the characters', who faced problems that 'could happen in real life'. Readers 'connected with the real-life challenges that protagonists face' and felt that the human and emotional side of the story was important and a distinguishing factor. (Franco, 2016, p.215)

These insights, based on readers' views of the story, informed the design of the game and digital book concept.

The Nature Mage digital book

On the use of existing platforms for production

The iBooks Author platform was seen as a tool that could be used to produce the Nature Mage digital book adaptation. Some producers have also used it to produce reference books for fantasy genre brands originating particularly from films: 'movie tie-ins' (as described in chapter 4). The *Nature Mage* digital book achieves some similar purposes in documenting the story world, which makes these kinds of works particularly interesting as a potential source of inspiration.

Janet Murray (2012) believes that working with existing platforms can be useful since as there are already design patterns and conventions — the building blocks — rather than invent them designers can focus on user needs and on how the existing building blocks can best meet them, even when some bespoke elements that can improve experience are added. The iBooks Author tool provided such building blocks and it was seen as an ideal tool for a team that did not have a developer or the budget to pay one. Murray suggests that the establishment of stable platforms 'like the Atari 2600, the Macintosh operating system, or the World Wide Web is an important precondition for the sustained development of expressive genres like arcade video games, word processing applications, or retail websites.' (2012:35) Importantly Murray adds that:

Limiting design to a strongly branded, widely used format or platform can provide assurance of technical support and a customer base for a new product. It can save development time and provide useful constraints to design, limiting the scope of a project within manageable, familiar boundaries. (Ibid.)

The iPad device affords certain features in the iBooks Author platform that could be tapped to create a digital book mixing storytelling with reference and a participatory angle. Specific design elements, such as pop up text boxes, the ability to hide or show and enlarge images, the addition of sound, video and hyperlinks were associated with uses that would fit with the idea of a 'fan-inspired' digital book where the original story lived side-by-side extra (optional) layers of content such as backstories, illustrations or video re-enactments of certain scenes. These design ideas are

later described in further detail. The design ideas for the *Nature Mage* digital book were not entirely limited to what the 'multi-touch' artefacts produced with iBooks Author can achieve. Some design ideas would probably require bespoke programming or the tweaking of existing code, but still making use of the iBooks Author 'widget' tool, which allows the addition of bespoke widgets built in HTML5.

The disadvantages of using established platforms is that their owners will most likely charge some kind of usage fee, either as a license or a percentage of any sales, as is the case with Apple and the iBooks Author platform. The other problem with Apple's tool lies in the distribution or retail side: as we saw in chapter 4, artefacts produced in the platform are promoted on the iBooks store, but get buried with very little distinction among hundreds or thousands of non-enhanced ebooks, which means we would not be able to rely solely on Apple's online stores for promotion and marketing, and would have to create our own digital shopfront, promote via social media and offline, potentially enter digital book awards competitions — all in an effort to increase visibility and discoverability.

Early ideas for the design of the digital book included 'different types of content – in a range of formats - based on the source book, and building on it, expanding it through text, images and videos' (extract from the 'book design ideas' file). This included feature such as maps of locations (possibly dynamic); illustrations of characters, settings and objects; video animations; author extras (interviews, explanations); branching stories; text providing extra information about a place or a character; typologies of weapons and spells, growing as these appear in the story; and possibly music and sounds. The main story would still be there in text, in a full or abridged version, but the range of other types of content would allow the readers to explore their interests in certain aspects of the story, if they so wished. These ideas formed a basis for the design of the digital book concept shown further down. The aforementioned document was complemented by a series of other working instruments, which included a 'sketching canvas' (for screenshots and collages of possible design and features), an 'iBook developments' folder where ideas and conversations were stored and a number of hand-made diagrams. The process of design was informed by the online community and reader insights through research. Ideas, considerations and conversations about the digital book were also recorded in other project documents, including a 'diary & evolution' file and a 'NM ideas' documents. An analysis of these was an integral part of the research method to inform reflection on practice. 'Appendix 2' presents a sample of responses to survey questions

whereby readers provided feedback and ratings for some of our design ideas. The three book design ideas favoured by readers were: 'the addition of illustrations'; 'a sort of "glossary" or encyclopaedia at the end of the book listing all the types of weapons, magic, demons, etc., with images and text'; 'pop-ups where you can read more explanations about something (e.g. more about a type of magic, or a demon or a weapon)'. This shows that besides being eager to see visual representations of the stories, readers were also interested in the kind of encyclopaedic collation and detail about story existents common in (or around) works in the fantasy genre.

We asked readers, both in the survey and at the face-to-face workshop, to propose any ideas they might had for the book. These included in the survey: videos of the author reading or explaining the story; a tool to create your own character, weapon, character or demon; a link to real stories of real people dealing with problems similar to those experienced by the protagonists; and the possibility of accessing another character's view on key parts of the story. Ideas from the workshop came in larger quantity and included an array of kinds of features and content from a range of modes usually found in other media. A number of readers would like to see games, for example 'fighting demons'; another reader suggested an interesting mechanic, a kind of gaming reward for reading: 'read one chapter and then you are allowed to play a bit of a Nature Mage game'. Several ideas related to making use of the interactive affordances of the digital medium, and included: 'interactive - be Gaspi in his world'; 'interactive tours of different settings'; and 'you can choose different paths that takes the characters to different situations'; essentially producing a work of interactive fiction. A number of ideas related to the characters, including being able to see them represented in illustrations, having 'an actor for the different characters with a video message talking about themselves' and 'pop-ups of other characters' opinion' of a certain character.

Another group of ideas seemed to relate more closely to the affordances offered in the online community, and more to do with participating and user-generated content. These included videos, 'reenactment of scenes by fans', and writing elements: 'comment box', 'do a competition where you write a review and whoever has the best review wins a prize' and a writing competition where 'the winner of the competition could have their creative writing on the iBook and get a signed book'. Some of these ideas also touched on the subject of rewards: their proponents seemed to think that participants should be able to get something back too. Other ideas included a 'timeline' (possibly an influence of using Facebook?), an 'audiobook', 'moving animation like fighting' and 'An audio comic so it's like a video'.

Although some were quite original, many of these ideas were built on ideas that we had previously introduced to readers, who then tweaked them, mixed them and added different combinations of ideas.

The Digital Book Concept

This section outlines the latest design ideas for the digital book. The description of envisaged content and features is accompanied by illustrative digital mock-ups and handmade sketches. The idea was to bring in the story from all the books, possibly book one (*Nature Mage*) first, for free, then other books in the series potentially paid for. The story would in principle be told in full, but could also be abridged to appeal to a more visual audience who may already know the books, and to avoid competing with the existing ebook. The main goal was to engage readers, but also facilitate the sharing of creations and, by launching a free edition, encourage people to buy the ebooks.

One of the challenges that we met soon after we started thinking about a digital book related to how much (of the source) narrative the digital book ought to include. It was possible to create a book with no story; the book would be a sort of reference book for fans. However, it would probably only attract and work for fans as it would be very difficult to grasp by anyone who had not read any of the books. The opposite alternative — adding all the story — could result in *cannibalisation* of the ebook: people who could access the digital book, either paying but especially if launched for free for promotion purposes, would be less likely to buy the ebook. The best option seemed to be adopting a middle ground: some of the source story, but abridged, combined with reference material and extra content. This kind of extra story material could be derived from expansions of the story (particularly by picking *breadcrumbs* left by the author) and unpublished material from his drafts, and complemented with alternative passages, backstories, reference information and the rewriting of scenes from the perspectives of different characters.

The author had purposefully left some gaps in the books (such as the several brief mentions of the Arcane Wars), which he spread throughout the story, with the intention of picking them at some stage, potentially on a subsequent volume (remember this was an ongoing series, with book four still in draft stage at that point). Klastrup and Tosca's study of fan fiction linked to *The Vampire Diaries* shows that 'The psychological gaps in the diegetic story can be filled in in fanfics that develop the perspective of minor characters or offer alternative readings of major characters'.

The author had also included visual elements — or rather, wrote in what he termed a visual, 'cinematic' style -- which he thought made the book more suitable for a cross-media adaptation onto a more visual medium. These parts of the books were prone to visual representations.

Importantly, and as we have seen in the case of *Steampunk Holmes*, the addition of these many optional extra layers of content ought not to distract users who simply wish to read the words, paying less attention to the interpretations of other readers, and to features such as the cataloguing of weapons and spells or the evolving map.

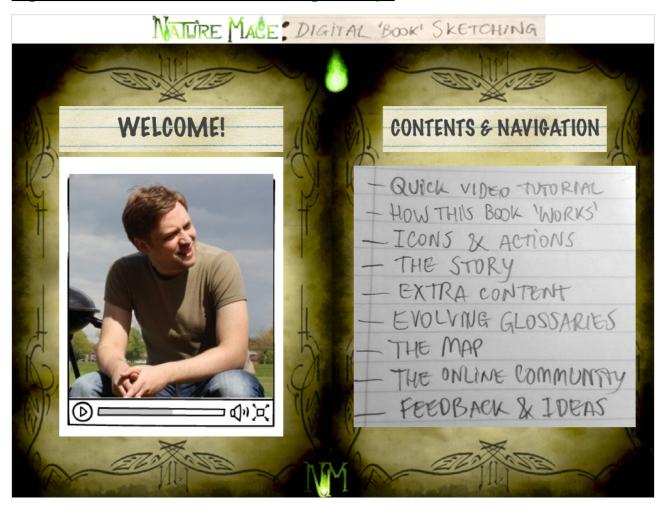
Advancing the medium does not mean choosing the newest platform to implement a project or adding in the coolest new bells and whistles. [...] Even if the new technology is stable, it is not helpful to use it if it distracts from the task served or meaning expressed by the artifact. (Murray, 2012:42)

For Jay David Bolter 'in the ideal [...] an electronic text can tailor itself to each reader's needs, and the reader can make choices in the very act of reading.' (2001:11) This is related to Kress's (2010) emphasis on *choice* and on 'designing the interaction' whilst still providing users with the freedom to define their own 'reading paths'.

The envisaged title for the book could be something along the lines of 'Nature Mage: a faninspired digital book'. The decision to term it 'fan-based' alluded to the fact that it would both contain fan works, and be inspired by the insight, discussions and ideas resulting from a close engagement with readers.

We envisaged that the book would start with a video introduction by the author (see Fig. 13), explaining the reasons for the book and what it offers readers. The background image for the book's pages was borrowed from James Ledsham's artwork for the online community. The ornamental work around the margins incorporates the initials 'NM', also used by James to produce a Nature Mage logo featuring a green globe (allusive to Gaspi's inner nature power, which the hero saw as a globe of green light).

Figure 13: Author welcome and navigation tips



Since this kind of text is relatively recent it would be wise to add some navigation tips. As Kostick (2011b) points out often producers overlook the user experience and usability of the new kinds of works and products they make. Without compromising on originality, it is important to not move too far away from standards and conventions users are already familiar with. When faced with entirely new kinds of icons, new ways to navigate digital pages or new ways to interact with page elements, many users will struggle. Poor signalling of what functions an object affords causes confusion in dealing with unfamiliar environments and artefacts (Murray, 2012:60).

Hayles (2004:82) explains that 'As a result of its construction as a navigable space, electronic hypertext is intrinsically more involved with issues of mapping and navigation than are most print texts.' From a very simple commercial standpoint, as many newer and more innovative forms of digital books have not become familiar to most audiences, this gains increased importance to lower barriers to their use and enjoyment. 'A large part of digital design is selecting the appropriate convention to communicate what actions are possible in ways that the human interaction can

understand.' (Murray, 2012:55) and if an interaction cannot be made 'immediately familiar', the goal ought to be making it 'easily learnable' (p. 98).

As can best in chapter 4 the designers of the enhanced ebook *Codex: Space Marines* opted for adding navigation tips and explanations of the meaning of navigation and feature icons on one of the starting pages. In the case of *Nature Mage*, the book would include a page about contents and navigation (see Fig. 13). Users would be able to watch a quick video tutorial, which would offer an overview of how to navigate the text (in the sense of media *text*, not just the *writing*), including explanations of 'how this book works' and 'icons and actions', which would describe the kinds of content and activities on offer by using different icons. Throughout the book icons would be used to denote certain actions, for example listening to background music at a certain point in the plot, consult a card for a character, or look at the evolving glossaries of magic, weapons and demons. In order to be recognised, the icons ought to be not just *in brand* (which means in a style aligned with the real of the brand's imagery), but also fairly consistent with existing conventions used across digital media.

The different constituents of the book — shown on the contents page — would include: 'the story' (from the original, source books); 'extra content', as discussed throughout this chapter, expanding the Nature Mage storyworld; 'evolving glossaries' for different kinds of story existents (such as characters and weapons); 'the map' (an expanding map of places and narrative events); 'the online community' (accessible from within the book) for users to create content; and 'feedback and ideas' (where users could leave comments and further ideas, or comment on ideas posted by the producers and other users).

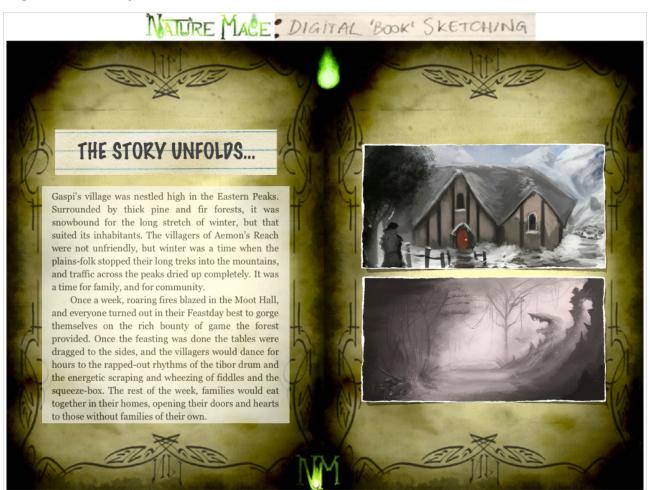
These design elements would not, in their majority, stand alone; the story, for example, would be intersected with extra content, with different stages of the evolving map. Importantly the book would never be a finalised text; the addition of feedback and ideas, and the ongoing addition of content to the community, would eventually result in tweaks and addictions to the content of the book. For example, a new drawing or a new backstory for a certain character or object could be added at any time, which would turn it to a text similar to the *SocialBook* outlined in chapter 4, where the additions (in analogy to the margins of a book) would be as important as the main text.

One of the ideas for the digital book was the inclusion of an expandable map of the story. First, only the hero's birthplace would be shown, the setting where the story starts. As the plot developed, and the protagonists travelled, new areas of the map would be shown, in an expanding

canvas. As the map expanded, races, events and character icons would be added for quick geographical reference of important plot events and story elements. These could be clicked or tapped to access further information on events and existents. Maps are an established tradition of the fantasy genre, influenced by works such as Tolkien's *The Lord of the* Rings, where mapping and detailed explanations of places, races and events are closely knitted. This kind of expandable map is commonly used in digital games, particularly MMORPGs, where players often start with a limited map view and as they move around, explore more areas and unlock quests, the map expands revealing visited lands and a little beyond, to stimulate the curiosity of gamers.

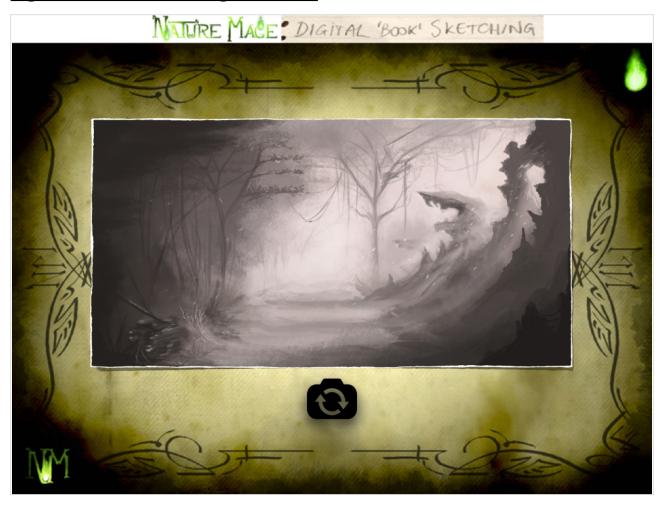
Some pages in the *Nature Mage* digital book would contain illustrations (see Fig. 14), of settings, characters, weapons, beasts and artefacts.

Figure 14: Story and illustrations



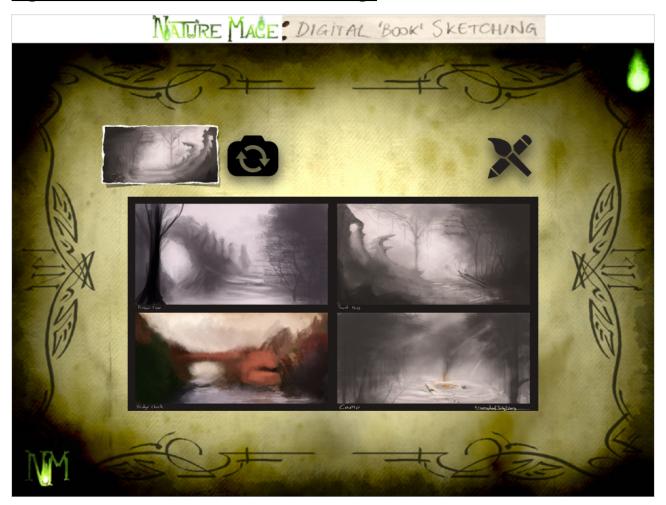
Clicking on an illustration would zoom in on it (see Fig. 15).

Figure 15: Detail of setting illustration



It would be possible to click on an icon to see alternative versions of the same landscape, weapon or character (see Fig. 16). Many of these would be images created by readers (users of the online community who contributed with user-generated content), and could also include videos or images using any materials and techniques (similarly to the *Star Wars Uncut* mix of amateur styles), and possibly any derivative writing somehow related to the illustration in question. The affordances of the digital medium would allow a series of hyperlinks to be established across and between different kinds of content and parts of the story.

Figure 16: Alternative illustrations of settings



When discussing this design feature the author raised some concerns about the exhibition of alternative versions, in different styles and with varying degrees of quality. This revisits a challenge approached before in this thesis. The problem was that ideally there would be some kind of brand style, and brand consistency, even if eventually made up by slightly varying styles from different artists, but nonetheless somehow consistent and with a good level of quality. The question here was that obviously not every reader and every community user would be able to create derivative works of a high standard of quality. The readers involved in the survey and face-to-face workshops, however, did not seemed to mind at all. In fact, the ability to see other people's creations, the ability to comment and improve in a group setting were valued, at least on paper. But this was in the online community, which was there precisely for that purpose, and reactions to such diversity and differing levels of quality could be different if seen on a published text. Besides, as we have seen, Duncan Pile wanted to defend his story, his brand, and preferred a level of consistency and quality throughout.

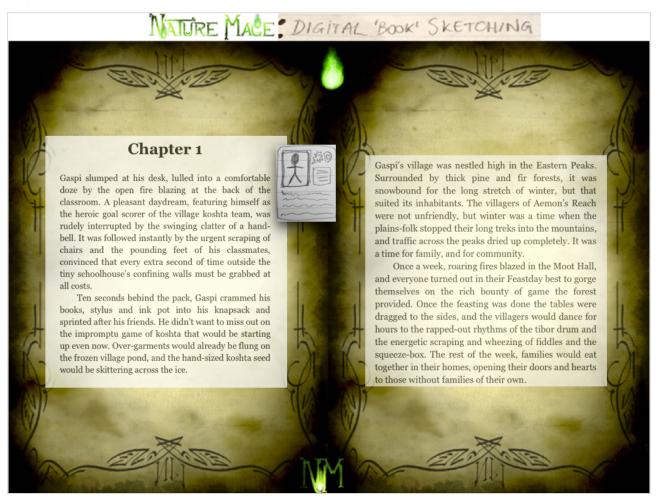
A solution that I proposed was to opt for presenting two layers of content: one, visible in the book straight away, to all users; other layers involving steps such as clicking to see and navigate through, for example, alternative versions of an illustration — or video, or derivative writing, or any other piece of user-generated content. This means there could be two levels of derivative works, of artist and reader interpretations: selected works and alternative works; the first foregrounded, the latter accessible through further exploration of content. I later proposed that there could even be three levels of content: primary content: the most visible (e.g. first image in a gallery with multiple drawings of Gaspi); secondary content: alternative creative works by readers; and thirdly linked content: hyperlinks to the online community (e.g. to see a page with all the interpretations of Gaspi), where readers could also become contributor, thus allowing for the continuous evolution of both the community — and eventually the digital book, which could absorb new content. Users of the digital book would be able to click on an image, or any other piece of content, to add comments or to share it. This would be done via the online community, which would be embedded in, or accessible from, the digital book (see Fig. 17), via the use of a widget or hyperlinks. Clicking on the create icon (crossed pencil and brush) next to any image or gallery would also bring users onto the community page where they could create or upload their very own fan works.

Figure 17: Embedded online community



Next to the text users would also find several icons. Fig. 18 shows such an icon, in this case a 'character card' icon.

Figure 18: Character card icon



Character card icons would indicate a new character card, when a character first featured in the plot, or additions to a card as the story progressed. Gaspi's card, for example, could change when he learned he had some kind of power; and again when he became known as the Nature Mage. As characters progressed in their magical training, as they grew and established new relations with other characters, and so on, their cards would also evolve. Fig. 19 shows a card sketch for the character Jonn.

Figure 19: Character card example



Character cards could include an image (again with extra alternative interpretations sitting behind it); backstory; personality traits; skills and powers; and other relevant information.

Other icons would be shown as the plot unravelled and new existents (kinds of magic, weapons, events) emerged in the story, allowing users to access different kinds of extra content, such as backstories from the original material in the books or added by the author or readers. A large proportion of it would probably be extra information about existent (weapons, magical artefacts, beasts, demons), the kinds of narrative elements readers were most keen to explore further. This kind of extra content could link back to the community too; we would ask users to produce the content that goes onto character cards, specifically new content, such as expanded backstories, or alternative art interpretations of existents. This would fit with our latest ideas to create a 'mission corner' on the online community, a section to request more specific pieces of contribution from users, for example a backstory for a weapon card that already contained artwork but no writing. This kind of process would also make the production collaborative in the sense that different materials belonging to different modes, and originating from different contributors, would come

together in collective 'multimodal design ensembles' (Kress, 2010). This model of providing fans with more specific (as opposed to more or totally open) requests for contribution was used in the *Star Wars Uncut* project, where fans bid to produce a version of pre-determined 15-second chunks of the original film.

The cards for different kinds of existents would be added to growing *glossaries* for that kind of existent. See Fig. 20 for an example, which shows a gallery of different weapons. Clicking in a weapon would open its individual weapon card.

Figure 20: Weaponology, the glossary of weapon cards



All the cards for a specific kind of existent would be collated (and develop) inside a dedicated glossary See Fig. 21 for a sketch of the page for a glossary for demons, showing two demon cards.

Figure 21: Demonology, the glossary for demon cards

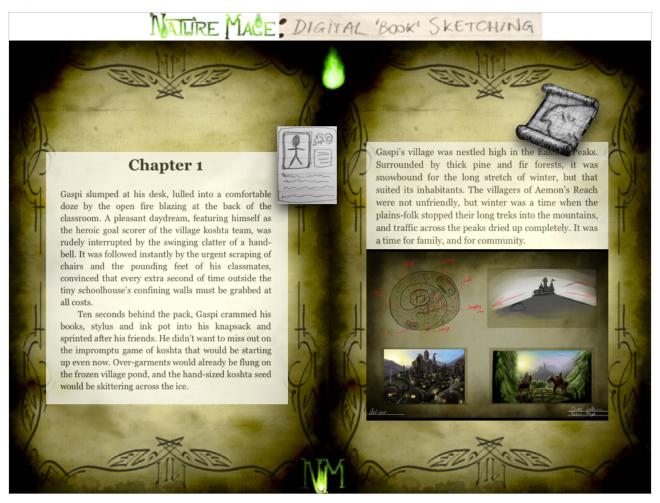


Together these cards inside glossaries would make up a kind of *encyclopaedia* of all-things-Nature-Mage, a collection of the 'mythos', 'topos' and 'ethos' (Klastrup and Tosca, 2014) of the world. The digital medium is very well-suited to this thanks to its 'encyclopedic affordance'. To Janet Murray the computer is '...a culturally encyclopedic medium [that] inherits age-old traditions of human culture [...] Homer's epics, for example, include encyclopedic set pieces, such as a lengthy catalog of ships, similar to lists in other bardic works of preliterate orature.' (2012:66) Or in the more recent fantasy genre the works of Tolkien, who dedicated a lot of space and energy to describing the story universe in detail. In Japan, the *otaku* culture reveals behaviours that are similar (Azuma, 2009). Some of the most dedicated fans of Japanese manga spend their time deconstructing the narratives onto its smallest possible constituents, which are presented back on spaces such as websites, fan forums and others. There is what Azuma (2009) describes as a shift from a narrative to a 'database logic', where the dismantling, cataloguing and sometimes reassembling into new forms of the existent of a narrative (especially characters) are seen as a pleasurable activity. Klastrup and Tosca suggest that the large amount of information and meaning in 'complex

transmedial storyworlds illustrates the creators' 'encyclopedic ambitions' (Jenkins, 2007)' but also triggers an encyclopedic drive in fans.' (2014:322) In the *Nature Mage* project this kind of 'encyclopedic drive' was patent in the desire expressed by groups of readers to get access to more information, and to see glossaries, cards, backstories and other such elements.

Back to the *Nature* Mage digital book, we also envisaged adding a map icon (see Fig. 22), which would initially signal the ability to access the map, and later would signal every time a new area or piece of information were added to the growing map.

Figure 22: Map icon



Clicking on the icon would open the map, which would highlight or pan into the newly found area, or the newly added piece of information.

The Nature Mage game

David Buckingham points out how 'games are deeply enmeshed in the 'convergence' that characterises modern media: books are made into films which are made into games (and vice

versa), which in turn generate a myriad of other texts and commodities.' (2006, p.4) Some of the more innovative digital forms of the book draw on game conventions to create new ways of telling stories in texts that mix representation with ludic elements. Looking at game adaptations as 'new media forms' that 'define the outer borders of the book system' (Weedon et al., 2014, p.108) shows its ongoing significance for transmedia worlds and creative industries beyond publishing, whilst demonstrating ways in which the affordances of the digital medium can be explored in bold ways that mix more modes, conventions and pleasures than other forms of storytelling, which remediate other media and borrow their conventions, but also add medium-specific ways of telling — or rather playing (Franco, 2015) — stories. However, in the translation into game, there are both gains and losses.

The idea to develop a game was further aided by the fact that at the time the project started I was working on cross-media adaptation projects for a game studio. Besides, the source material — a fantasy narrative, very well aligned with a hero's journey structure (see Propp, 1968; Campbell, 2008) — made it very suitable for a game adaptation. This does not mean the process of design of a *Nature Mage* was without its challenges — if they are to be good adaptations, all games require time and effort, rather than simply replicating any existing game and *re-skinning* it with new characters and settings. Initial thoughts captured in the project diary and game design ideas document pointed towards some of the more obvious elements such as battling, training and magic classes, tournaments, magician duels, the ability to choose a 'class' (warrior or mage, as in most MMORPGs). But there were also doubts: should the focus be solely on magic and battles? What about the *feelings*? The more human side of the story? Could this somehow be built in as a game mechanic? Could themes such as 'trust' and 'self-confidence' become resources, like the 'energy' bar in many games?

Some of the tensions typical of adapting a text across media were clearly patent in these and other thoughts jotted down in the project diary. Should the game focus on the more game-like features of the source text? Or should it also attempt to integrate elements such as feelings and relations, related to the human side of the story? And how could the story be unfolded in the game? In a medium with specific affordances, more tuned to ludic pleasures than just narrative, how could the story be told? At the time I was beginning to think of narrative devices for the game, including illustrated text and comic strips for initial backstories and cut scenes. As the project progressed, these ideas were developed further, turning increasingly to conventions and

mechanics that were more specific of the game medium as opposed to being mostly remediated forms and borrowed conventions (cut scenes, from films; strips from comics).

Game adaptation: re-skinning vs. bespoke consistency

As I have explained elsewhere the adaptation from book into game requires a medium translation, entailing a fit with specific affordances. It involves the transposition of narrative resources from an established literary genre to a more recent hybrid form, influenced both by literary and gaming genres. (Franco, 2016) An easy solution for an adaptation of Nature Mage would have been to start by choosing a game genre, then find in the books suitable scenes or passages, pick settings, characters and relevant parts of the plot, and transpose them into a game logic. There are several scenes in the Nature Mage trilogy that could serve as apt candidates for such a purpose. In the first book there is an attack on the magicians' city of Helioport by waves of demons; Gaspi and his friends have to spread around the city and use their various powers to combat the invading, ever stronger, waves of attackers. It sounds very familiar to an existing game genre; Nature Mage could easily inspire a tower defence game⁴⁷. A more complex game adaptation could be based on the epic tournament, The Measure, an important event in the plot of the second book in the series, Nature's Servant (Pile, 2013) where pairs of warriors and magicians from all corners of the continent took part in a 'sword-and-sorcery' competition. Taking 'The Measure' as inspiration it would be possible to create a battle game, or battle arena48, similar to the game League of Legends, where players pick their 'champions' to fight other players in duels and tournaments. The Nature Mage game could have character cards featuring warriors and magicians (similar to trump cards, Pokemon or Magic the Gathering cards) revealing their backstory and showing their powers and skills with detailed stats.

The two ideas presented above — a tower defence and a battle arena game — could possibly turn out to be enjoyable games, but they would be little else than replicas or re-skinned versions of existing games. They would probably feel a little like playing a version of Monopoly linked to a film franchise, something like *Frozen Monopoly* or *Star Wars Monopoly* — where a story (or rather the existents of a story) are directly transposed, or *superimposed*, onto an existing game structure.

⁴⁷ See examples of the genre here: http://www.miniclip.com/games/genre-1145/tower-defense/en.

⁴⁸ Real-time strategy sub-genre in which a player controls a single character in one of two teams engaging in battle.

But both I and the book author wanted to try something different, and ideally come up with a game design more in touch with the *essence* of the *Nature Mage* stories, with the feelings and thoughts readers may experience when they read the books, in line with its themes and contexts, not simply deriving from the more evident action of the fantasy genre (which would nonetheless play an important role). Thus the more human and emotional elements of the story, the human side explained in a previous section, ought to form an important thread in a *Nature Mage* game. Our challenge was to sketch the design of a game that could draw both on the rich heritage of hero's journeys and great fantasy video games and on a deeply human story where relations, conflict and emotions also take centre stage.

Playing Nature Mage⁴⁹

The Nature Mage game would be a story-led online role-playing game playable across devices, but designed particularly with laptops and tablet computers in mind. There would be a free-to-play *light* version, as well as a more extensive paid version. The core target audience would be the young reader demographic, aiming to attract a mix of fantasy fans and players of fantasy games and MMORPGs. The game design was thus strongly influenced by both the books and by gaming conventions.

At the start of the game players would be shown images of different places in the continent of Antropel, in a trailer-style montage, including a map of the lands, through which the player is taken to the village where the heroes come from, then the ruined city of Elmea (where evil resides), and finally the mage city of Helioport (where most of the story takes place). In Hephistole's library they would be introduced to the story by reading the few pages left from an old book telling the story of a group of warriors and mages who were chosen to fight the dark forces arising throughout the lands. This use of a book, in fact a remediation of sorts of the source text is present in texts such as *The Lord of the Rings* films. Besides being an aesthetic, stylistic choice, it arguably connects the adaptation with its source text.

All players would start in the College of Collective Magicks or the guards' grounds, in the city of Helioport. The college in particular is a central place in the stories and in the game would act as a kind of headquarters, where players could access key characters, quests and other features.

⁴⁹ The ideas in this section are derived chiefly from a previously published chapter (Franco, 2016).

Players would be able to design their own character from a series of options and templates, based on the categories of characters (multiple mages and warriors) found in the books. Players would be able to name their characters, and also optionally create a backstory for them. It would be possible to see and rate the characters and backstories created by other players in a kind of gallery. Players would also be able to craft (design and make) weapons, magical artefacts and enchanted objects (also present in the story) and swap created artefacts. One of the goals of the overall Nature Mage project had been to encourage creativity (both visual and in writing), and these features tie in with that vision; they are based on ideas brought forward by readers, clearly influenced by the offers of a range of existing games, such as RuneScape and Minecraft, where crafting plays an important role. This exploration of the digital affordances of the medium to offer tools that enable user-generated content are clearly influenced by current practices of digital culture too. User-generated content, to different degrees, is growing and evident in a large number of digital spaces used by young adults nowadays, visible for instance in video uploading on YouTube, the creation of personal profiles across social media, the rating features of numerous recommendations websites, and the ability of virtual spaces and large role-playing games to create not just characters but whole worlds.

The beginning of the game would also include a tutorial where players would be explained key navigational and game-playing elements. This would be a single-player space, but players would be able to visit other classrooms and areas in the warrior training grounds, to practice their skills together in multiplayer areas. As players progressed through the game they would be shown an expanding map, initially with most lands blurred, but becoming clear (or unlocked) as they progressed. Similarly to the ideas discussed for the *Nature Mage* digital book, the map would be dotted with icons to refer to races, key characters and plot events as the player unveils them; players would be able to use these to read information and see visual representations. Most journeying would be done on foot or horseback, as in the story, but there would also be some magic transportation objects as those used by the mages in the books. The use of magical teleportation devices is also common in fantasy RPGs.

As players would meet NPCs (non-player characters) and find new places they would become involved in the main plot of the game, which would be based on the overarching narrative of the books: players would have to evolve their skills, collaborate with other characters and players, find

new allies and overcome obstacles and challenges (such as demon attacks) to face the greatest threat of all, Shirukai Sestin, the once-good healer turned master of dark magic.

Single player and multiple (collaborative) player modes would intersect at different stages. Players would be able to switch characters and assume control of other protagonists at kernel events in the (original) story where their actions are key to the success of the group. Multiplayer mode would include pair and group practice, duels and dungeons (special quests where team work is required by bringing together complementary player types, for example warriors, healer, and warrior mages – a typical convention of both fantasy stories and MMORPGs). Single player instances will revolve around training, levelling-up and other activities less related to action and adventure, and more aligned with the emotional elements of the story.

The game narrative would be told — and *discovered* — through a mix of questing, character dialogue, book-like screens and eventually cut scenes. These would mix remediated forms of storytelling (reading and watching) with the more recent practice of *story-playing*, playing to progress and uncover a story (Franco, 2015; 2016). There would also be aspects of spatial narrative, exploration and finding of objects, symbols and clues that would help tell or deepen the story, and which could form the basis of puzzle-like challenges more typical of the game medium.

Questing would be the main way of delivering the game's story and it is envisaged that the narrative would consist of a pattern of both branching and convergence. It would branch at some points, to return to a common point for all players at key points (kernel events in the story). The author — with the input of readers and researcher — would create new strands to the narrative, which would thus offer quests and adventures that go beyond the original story. Interestingly, the last book in the series had not been fully written yet, which meant the story was in fact still open, and Shirukai Sestin and his minions were still to be defeated. This could have been explored in the game, thus allowing the author to try alternative routes.

The use of quests as a narrative device in games is fairly common. As I explained elsewhere, 'questing intersects storytelling with game playing – in order to develop the plot and disclose the next part of the story the player has to engage in ludic activities.' (Franco, 2015, p.46-47) Besides unravelling the story – mainly through quests, dialogue and a few cut scenes (or scenes with images and text, to stay closer to the reading mode of the books) – players would be free to explore some areas of the game world, such as the college library and the magical artefacts chamber. The library would contain several books that told backstories about key protagonists,

about kinds of magic, about demons and beasts, weapons, kinds of magic, other lands and so on, in developing *glossaries* that would grow as the game story unraveled. By looking for and reading about these kinds of elements players would unlock new quests through which they could gain access to the very objects and weapons they read about.

Player quests would be recorded – as is conventional in RPGs – in a player quest *journal*. In this game this would look and feel like a book (a remediation of – and homage to – the source text), and would gradually fill in the missing pages of the book shown to players at the start with an introductory backstory. Players would be able to read their very own story, the narrative they unravelled so far, of their path through the game. It would be possible to read on-screen, add to or tweak the text in the quest stories, and also download the book (as a PDF and maybe e-book formats), which would include text and images from the game. From book, we would turn to game, and back to book again, allowing players to read and explore their writing if they so wished.

All the stories could be shared online via an online community, and players-readers would be able to rate each other's (possibly tweaked or embellished) tales. The community would continue to have creative areas for further contributions from the audience, and would work as a space for consultation with users to inform subsequent stages of game development.

Challenges of cross-media game adaptation⁵⁰

Games are rules-systems and simulations, and are heavily *ludic* and *structural* (Pearce, 2002; Salen and Zimmerman, 2003), but they are also based on narrative elements and cultural traditions, which will not only be visible in-game (cut scenes, introductory stories, in-game characters visual design), but will also influence the very way the game engine or *simulator* is designed (i.e. which rules apply, which ludic resources are involved, how can a player progress and succeed). Games that adapt exiting stories from other media are strongly influenced by their source texts. These influence not just representational elements in the game, but also aspects such as the very choice of game genre, the related choice of (an eventual) game engine, or the design of game economies and mechanics, which (in good adaptations) are inspired by themes from the source text. (Carr, 2005, 2006; Franco, 2015; Krzywinska, 2003)

⁵⁰ Several ideas in this section were first presented in Franco, 2011, with further developments in Franco, 2015.

Adapting across media involves the use of narrative resources from a source text, and a translation onto a new medium with some remediated but also specific conventions, and offering different pleasures. Games that are adapted from existing films, books or other media manage their source materials in very different ways. Representational elements from existing stories – especially existents such as settings and characters, and parts of the plot – are the obvious elements to integrate in a game adaptation, but the ways in which this is done varies considerably.

The remediation of the source material is often important. For example, Tanya Krzywinska proposes that the Buffy game's reliance on a modern high-tech console platform – which provided high quality image and sound – facilitated a smoother 'remediation' of the show by lowering 'some of the media-specific distinctions between the game and its television counterpart' (2003, p.2). This lessening of the gap between the two texts was further supported by the use of 'locations, music, characters, voices and themes present in the TV show and by the involvement of its scriptwriters, thereby ensuring that the game carries the type of language and storyline that characterizes the show' (2003, p. 3). This set of measures allowed the game to guard itself 'against failing to live up to expectations set by the show' (2003, p.4) and effectively connect to the Buffyverse (the Buffy metaverse). Some games integrate events or whole plots from the source narrative. Sometimes, however, the desire to stay close to the source material has drawbacks for the playability of the game due to a lack of surprise and plot disclosure (Wallin, 2007, p.17). In other cases, it is the game conventions that win at the expense of the source narrative (Wallin, 2007, p.19; Carr, 2005).

Some game producers build on the source narrative and try adding to the existing storyworld through telling new stories, drawing on the possibilities of the source text (and genre) and taking into account rules of consistency to produce new material that suits the source. The story elements of a source text – for example events, themes or character traits – can inspire the development of ludic features in a game, such as mechanics, challenges or resources. Diane Carr (2006) demonstrates this in her production research of *The Thing* game, an adaptation of John Carpenter's film (1982). Games that draw on the source text material and integrate it with the affordances of the destination medium without losing sight of the source texts manage to integrate representational and ludic aspects achieving a balance between the presence of source narrative material and the ludic elements that actually make a game.

Hero's journeys and games: affinities and 'obvious' adaptation choices⁵¹

For Duncan Pile and the readers of *Nature Mage* involved in the process it was important that the game kept a good level of consistency with the story, not simply at a more superficial level (simpler visual representation of existents), but also at a deeper level, which I may describe as the level of style, tone and effect. The game-as-adaptation ought to keep a good level of consistency with the very features that make the book series loved by readers. In other words, it should make players feel – to a certain extent – the same kind of feelings they had when reading the books. The game needed to draw on some notion of the *spirit* or *essence* of the books. A way to deal with this subjectivity of the notion of *essence* is to say it is the essence of the story as defined by these producers and these members of its audience; it is thus *an* essence, out of many possibilities — which at their core would nonetheless be likely to share common points.

Translating the effects of a story, feelings, emotions, and other more subjective aspects that form the essence of the story – is not an easy task. 'Thanks to the emphasis of games on action, setting and imaginary creatures' some genres (including medieval fantasy, the general theme of Nature Mage) are 'much more adaptable to the interactive and fundamentally visual nature of games than 'high' literature focused on existential concerns, psychological issues' Ryan (2006, p. 195) The latter would include themes close to what I have here termed the 'human side' of the Nature Mage story. Lebowitz (2011, p. 43) similarly suggests that "here's the simple and undeniable fact that some types of stories just don't work well in games – at least not without a lot of extra planning and effort.' Genres that are popular in other media - such as romance - are rarely found in games. Lebowitz's argument is that, because games need gameplay they tend to focus on stories that supply 'ideal' material, such as fighting, strategy, exploration and puzzle solving. He goes on to claim that 'these types of external conflict are far easier to portray in a game than the more internal emotional conflicts that are often the focus of things like romance novels and sitcoms; therefore, a 'proper' game story needs to support a large amount of external conflict' (2011, p. 44). However, Lebowitz then provides examples of games - exceptions, he makes clear - that do tackle such internal themes, or as he puts it 'nonideal story types'. He resolves the apparent contradiction by saying that using these kinds of stories 'is difficult and

⁵¹ Some of the ideas presented here are drawn on initial drafts for a published book chapter (Franco, 2016).

requires a lot of creativity and careful planning in order to ensure that the story and gameplay make sense and work well together' (2011, p. 45).

But maybe the explanation is more complex than this. Of course video games are based on games — analogue games — and as such they are based on their ludic nature (goals, rules, and so on). But the representational elements of games are also shaped — they are historically and culturally situated — by cultures of production and the wider media consumed by players (and producers, who are typically players). The fact that action is more often made into game than romance is not simply, I think, related so obviously to the fact that games equal action, not romance, but that games evolved in that direction — partly in tandem with the media and story preferences of players and game makers.

For Lebowitz, the hero's journey is the prime example of an 'ideal story' for a game, as 'following tried-and-true narrative structures such as the hero's journey [...] can make writing for games much easier' (2011, p. 68). Indeed. But here I add a note of caution and suggest that game producers find it easy to adapt hero's journeys not because it is the perfect story for games, but because this is the way that games have evolved – most often in working environments dominated by young males; this is significant. The first popular video games were text-based role-playing games in the fantasy genre. If we had started with romance-themed games their history would probably have been very different.

The *Nature Mage* books include narrative elements that offered a fairly obvious route to typical game adaptations: journeying; learning new skills and progressing (levelling up); the discovery of multiple magical powers; the fighting of minions and bosses; the reference to an ultimate super boss. *Nature Mage* can be seen, from a structural angle, as a hero's journey. The hero's journey of Nature Mage makes it relatively easy to envisage a game where the player levels up through magical training, though acquiring artefacts and magical objects. This effectively happens in the source story, and could be fairly easily adapted. There are many kinds of magic to learn, different classes and professions, different kinds of mages, warriors and tribes (which the player could choose from, in a similar fashion to the options of *race* and *class* present in MMORPGs). It is also fairly straightforward to envisage a tutorial stage, or level, where the player enters the School of Magicks in the city of Heliport, and starts learning spells. Other activities from the book that could be easily translated include learning how to enchant objects, practicing fights in an arena, and crafting your own artefacts and weapons. All of these are common features in existing

MMORPGs). Another essential part of the game — again based on the book — would be the ability to play as a number of characters, as well as being able to play with other characters in teams when the complementary skills and powers of different warriors and mages are required. This is akin to raiding and playing dungeons in MMORPGs. For readers, the ties of friendship were one of the most important components of the story, and this means that in the game it would be important to draw on collaboration and co-playing. After all, *Nature Mage* an epic hero's journey where travel companions complement each other.

Harder-to-gamify Elements

There are other themes of the Nature Mage story that would not seem so clearly translatable onto the language of the game medium. Incorporating these elements meant that we could remain as close as possible to the essence of the story, and would not simply use a selection of story existents and more obvious action parts of the plot as the basis for a game that would look, and even more importantly feel, similar to a hundred other fantasy games. These harder-to-adapt themes relate to the more human side of the story, and include inner (individual) and interpersonal conflicts, such as the relational challenges between boyfriend and girlfriend; the emotional challenges of growing up; several moments where the hero Gaspi loses control; periods of low self-confidence; amongst others, as described in more detail in the section dedicated to the *Nature Mage* stories.

Duncan's books present the reader with choices, and with the often excruciating pains of making decisions that affect others. Choices have consequences, and affect the way others relate to whoever is choosing a path at the detriment of another. Video games, however, place an 'emphasis on doing rather than talking, lending themselves to the action format rather than personal interaction' (Krzywinska, 2003, p. 5). But for the readers of *Nature Mage* these kinds of elements were important and one of its key pleasures. As the survey and workshop revealed, *Nature Mage* readers thought the books were different for 'the warmth and humanity of the characters', who faced problems that 'could happen in real life'. Readers could 'connect with the real-life challenges that protagonists face' and thought the human side of the story was important and a distinguishing factor when compared to other stories. Among the ideas suggested by readers for a digital book (the other strand of the project) was the introduction of 'links to real stories of real people dealing with problems similar to those experienced by the protagonists'.

Another idea suggested by readers – the possibility of accessing another character's view on key parts of the story – formed the basis for a game feature. At some stages in the game plot, players would need the help of companions, for example to go on a quest, or to gain more power (eventually by increasing self-esteem or confidence, as suggested further down). In order to do this they would need to engage in dialogue. Since one of the key issues in the story is that characters do not always say what they are thinking, or indeed know what they should say but say something else, the idea was to add an element of uncertainty and variability in dialogues between the player and key characters, for example between boyfriend and girlfriend, or between rivals. The game Escape from Monkey Island provides a device that inspired a design feature. In that game, selecting a line of dialogue will sometimes result in the player actually saying - or mumbling something slightly or entirely different to the words shown on screen and selected by the player. This would leave players somewhat out of control, and potentially make them reflect on the differences between thoughts and utterances within relationships and conflict solving. Another idea would be to allow players to select what they think the other character was thinking, which in turn would determine different speech options for both the player and that character. Both features aimed to translate the complex nature of relationships, thoughts and real-life dialogue. Imagine that you, as the player, had spent a long time practicing and battling on your own, and to a certain extent neglected your friends. When you met them and asked them to go on a quest with you they could be hard to convince. If you selected that you think they are a little hurt, your dialogue options would include lines to talk about this; if not, and you kept talking as if nothing was wrong, they could react differently, possibly in a less positive way.

Other themes and contexts could be used as inspiration for game mechanics and resources. A player's level of self-confidence could be a kind of economic resource, similar to energy in other games. The player could lose confidence after defeats or conflict situations with his peers. Then, through dialogue and meditation, in a setting similar to that from the book (a hidden garden with a running stream, where the player meditates), the player could recover his level of composure and self-confidence. Another option could be inviting other characters to the local tavern for a meal and a chat, something that occurs recurrently in the books. There could also be a kind of internal dialogue process, whereby the player questioned himself on his actions, to try to come to terms with decisions by being able to select from a number of options, thus leading to resolution (or not) of his emotional dilemmas. These kinds of game features – partly because they are less game-like,

partly because historically they are not present in popular titles in the genre — would present a harder challenge, but they would bring the game closer to the essence of the books, where battles, magic and demons stand shoulder-to-shoulder with growing up, relationships and feelings.

Conclusions

In this chapter I analysed recent changes in media technologies and in the media behaviours of the *Nature Mage* readership demographic. We also saw how some platforms are transforming areas of publishing, and facilitating amateur writing, fan fiction and other forms of user-generated content by exploring the participatory affordances of digital media. This was the background context to the approach taken for the *Nature Mage* project, which relied heavily on audience engagement, through both research (online and face-to-face) and through the tapping of the affordances of digital media to facilitate and invite participation via an online community. The key outputs of the reader community were the user-generated content and derived works to use in the design of the digital adaptations, and also the conversations, comments and interactions that contributed important insights for the project and the element of reflection on practice.

The design process for the Nature Mage adaptations was shown to bring together several complementary strands and influencing forces: a detailed analysis of the narrative to extract existents and themes; inspiration from existing digital artefacts; author expectations, canon and consistent definitions; and needs, expectations and ideas from readers. All of these influenced the design ideas to shape texts that would aim to keep a strong connection to the source books whilst exploring the affordances of the digital medium to push boundaries and present the story in new ways. The processes of design were not always straightforward; the reflection on practice — pointing to challenges, solutions and practical tools — is useful for producers and academics aiming to embark in similar projects.

The Nature Mage digital book and game design concepts were portrayed as the result of a number of processes of approaches that bring together the source text, intertextual influences from the digital medium, the views and expectations of readers and the direction provided by the author. The artefacts partly remediate the source books, partly translate and transform the narrative material by mixing it with the specific affordances of the digital medium and the conventions and aesthetic devices of the destination digital genres, and explicitly drawing inspiration from specific works, from a wide range of genres and forms. Together, they demonstrate the ways in which the

affordances of digital media can be tapped to create new forms of the book and new forms of storytelling that *do the work* of the books and mix them with other dimensions, motivations and pleasures. This discussion is expanded in the next chapter, where the core research questions are revisited and re-analysed based on the findings — and practical recommendations — emerging from this research.

6. Discussion

This chapter revisits the research questions by bringing together key insights and recommendations presented thus far and extending their application. I will start by looking at the ways in which digital affordances have been used in the industry; this will include a discussion of production *cultures* and how these condition a range of attitudes to the exploration of digital affordances and result in a range of digital artefacts. Then I will look more closely at questions around consumers, use value and user needs as a driving force of design, demonstrating how digital forms of the book do the work of books, but also of other media; then the focus will be on participation and media-specific analysis of narrative by drawing on the practice-led *Nature Mage* research; and finally, to wrap up the section, some concluding thoughts on use value and the future of digital books.

The exploration of digital affordances in industry

This section tackles research questions related to producers, to the range of artefacts they make and how these reflect different approaches to the tapping of digital affordances, to their curation strategies, business models and the conditions that facilitate or hinder innovation in the creation of digital forms of the book.

A range of approaches

The main thesis of this study is that the affordances of the digital medium provide opportunities to expand the book to create new forms that, by tapping affordances specific of digital media, reinvent the book, offering new kinds of fruitful and pleasurable experiences to readers (and *users*) and opening up new avenues for digital production and innovation. The opportunities provided by the digital medium have been approached in a multitude of ways by different kinds of producers, from those towards the core of publishing who principally remediate print onto ebooks, to those towards the periphery who make new kinds of digital artefacts that stretch and evolve the notion of book. Producers who are coming from the book industries, and are more attached to the book in its print form are trying to carry books (as they know them) onto digital media; essentially they are using digital media to remediate books, making little use of affordances that are specific to digital media, that use the characteristics of the computer in any novel ways. This kind of approach is typical of

when a new medium emerges (Bolter and Grusin, 2000; Manovich, 2001) and facilitated by the conceptualisation of *content* as something separate from its embodiment on a medium.

Starting in the 1990s as CD-ROMs and the Internet became widespread, those seeking to develop products for the new digital platforms started to talk about "content providers" and "content" as separate from the "technology". The problem with this way of thinking is that there is no such thing as content without form. Everything we put onto the digital medium has to be explicitly shaped for it. Otherwise we are just using the computer as a fat telephone wire for shipping old-fashioned media artefacts around the world. (Murray, 2012, p.11)

This kind of approach stifles innovation and the exploration of digital affordances. Murray continues and adds an example: in the early twentieth century filmmakers were not trying to get better at photographing plays, but rather wanted to figure out how to explore the affordances of the camera and the plasticity of film to invent movies. 'Attempts in our era to use computers to imitate books or television sets are equally shortsighted.' (p.12) This is a very strong call out to producers to rethink their use of the digital medium. Habits and culture, however, often change slower than technology. Convergence makes it increasingly difficult to define a medium as technology, but cultures of production are more persistent; in spite of an erosion of the borderlines between media there is still to a large degree a continuity of cultures of production from older media (Smith and Pearson, 2015). The conventions derived from legacy media reflect the affordances of analogue technologies, 'and the social and economic arrangements that support them' (Murray, 2012, p.12), which some have not wanted to, or found difficult to overcome.

Daniel M. Goodbrey's (2015) analysis of changes in comics brought about by the use of digital media provides a very relevant illustration. Whilst smaller independent webcomics publishers experimented with new narrative conventions that tap the affordances of the digital medium, established comics publishers have been slow to explore them, remaining fixated on the narrative conventions of comics as they exist in the print medium. Whilst smaller producers were ready to push boundaries and reinvent comics, unbinding them from their paper support, the more traditional publishers remained stuck to a conservative definition of what comics are, and what is allowed in them.

Changes in media industries are often gradual and meet resistance. For Gunther Kress 'modes are the product jointly of the potentials inherent in the material and of a culture's selection form the

bundle of aspects of these potentials and the shaping over time by (members of) a society of the features selected.' (2010, p.80)

The exploration of affordances is thus dependent on social, cultural and economic factors. The bigger players towards the core of publishing have tended to use digital books in a conservative way, closer to print, to what they already know how to do. The focus on digital media has often been to engage in activities and ancillary practices around books, for example marketing through social media, and seldom in reinventing the book. Furthermore, innovation at the core of book publishing has been stifled by the use of inconsistent classifications and curation criteria has been causing issues around discoverability, whose effect is worsened by the fragmentation of digital distribution channels (there is no single central distribution point as Amazon was for ebooks) for the range of digital forms of the book.

For Manovich, as new media open up older culture forms and languages for redefinition, 'cultural possibilities that were previously in the background, on the periphery, come into the center.' (2001, p.333) He provides some examples: 'spatial montage comes to challenge temporal montage; database comes to challenge narrative; the search engine comes to challenge the encyclopaedia...' (Ibid.) Manovich draws on games as an example that resonates with the coreperiphery approaches in book publishing: with developments in technology many traditional games were simulated on computers, whilst simultaneously 'new genres of computer games such as the first-person shooter came into existence.' which shows that 'computer games both mimic already existing games and create new game genres.' (2001, p.224) The same currently applies to digital books. Interestingly some of the more innovative digital publishers have used the alignment with books to borrow from it as a cultural object with high status and cultural capital, but in a flexible manner, to — as Touch Press stated it — 'bring the book into the 21st century'. As the analysis in chapter 4 has shown, by choosing to start by adapting well known literary and highbrow culture works onto the space of the enhanced digital book Touch Press aimed to maintain a strong level of connection with the book, with a kind of *quality* and status culture.

Affordances, or rather the *identification* of affordances, is not universal or simply *just there*. As we have seen in chapter 2, Gibson (1986) argues that an affordance is independent of the individual's ability to recognise it or even take advantage of it. To be explored it has to be perceived. More traditional publishers who look at tablets and see a platform to publish ebooks, or to promote and sell print books. A digital producer with a background in games is more likely to see

it as a platform where stories can be told in new ways. Context and background experiences are fundamental, as well as cultural acceptance, professional know-how, and other elements typically analysed by political economy scholars such as budgets, timelines, access to technologies, and editorial guidelines.

The question of know-how and access to the right skills is very important. Indeed the skills required to work in multimodal texts that mix offers and conventions is an endeavour very different from writing, editing or marketing a book. Hayles explains that in electronic literature authors have more choices to make than print authors. 'The electronic author who types the same sentence then goes on to consider what behaviours and animations should attach to the words, in what font and colour they should appear, [...] to what other text or structures they should be linked, and so forth.' (2004:81) As we saw in the analysis of the Nature Mage artefacts even in adaptation of a book there are processes of modal transposition that require an understanding of the mechanics, the language and conventions of the destination digital medium. Working in digital publishing increasingly overlaps with working in other creative industries, with the use and need for similar technologies and skills⁵². Within the last five to ten years we have seen strong movements from publishers in trying to become more 'digital'. Writing in the Guardian's Careers Blog in 2011 Jane Tappuni looked at the changes in the recruitment needs of publishers and concluded that 'making the transition from the traditional to the digital world requires publishers to recruit and retain talent with skills that are largely unfamiliar to them'. This included strategies such as hiring staff with digital experience, creating roles such as 'digital publisher' or 'digital editor' and embarking in partnerships with digital production companies (Hall, 2014). For publishers to face a changed mediascape and expand their stories and brands across media, 'collaboration is key, and publishers now incubate teams whose sole purpose is to generate brands that the publisher will wholly own, then grow them beyond the book with partners in other media sectors' (Huang, 2014, p.ix) The increasing popularity of videogames within the last decade has probably made it harder for book publishers to recruit digital storytellers. Thanks to huge advances in numbers of titles available and an expanded reach (which means more of us play games), videogames have attracted talent that could help producers who are trying to explore the affordances of the digital medium to create new forms of the book, and new ways of doing the work of books. For instance, 'games writer' has gained official recognition as a profession by the Writers Guild of America and

⁵² For more on this see the work of Frania Hall (2014).

its British equivalent the Writers' Guild of Great Britain, and in 2008 the International Game Developers Association (IGDA) created an annual award dedicated exclusively to recognising the best writing for games.

The conditions more propitious to innovation

Traditional publishers and digital start-ups are formed by individuals from distinct backgrounds (or combinations of experiences and skills) and are culturally different, drawing on cultural and economic influences from some of the same but also, clearly, from distinct industry sectors and experiences. The kind of more innovative producers that I have come across (such as Inkle or Touch Press) see the digital medium as a support where things can be done differently, where new ways of telling (or playing) stories can be designed (Inkle), or where knowledge and culture can be represented in new ways (Touch Press).

The exploration of new affordances happens gradually as the limits of what a media or device can do are gradually pushed.

Over time, the introduction of a new technology, with its specific and at times sharp-edged affordances/facilities, into a life-world generates newly shaped needs and new purposes. Initially the device is used according to the purposes brought from the most immediate past; yet using the device brings a change in the habituations of the user. It is a reiterative process: drawing on experiences of devices known and on previous purposes one comes to learn (some of) the potentials of the new device; thinking of what it may be made to do, it is used for newly shaped purposes; its functionalities are shaped to the needs of the user whose uses [are] reshaped in that process. (Kress, 2010, p.195)

Typically smaller digital publishers at the periphery of publishing have — yet again⁵³ — been leading the path of innovation in exploring the affordances of digital media to produce new forms of the book and new kinds of digital artefacts. Innovation also happens when publishers commission technology firms—some operating across sectors, others specialising on digital books alone—to produce new digital formats. There are a number of partnerships (e.g. revenue-share models), and new ventures that mix publishers with digital media experts. Touch Press's (2014) description of what they do is illustrative: 'Making possible the Touch Press vision are a team with diverse talents

⁵³ As happened with CD-ROMs.

that include backgrounds in TV production, software development, print publishing and interactive design. Partnership with other organisations is at the heart of Touch Press's publishing strategy.' They exemplify both the coming together of staff with experience from across different media, and the use of partnership models.

Another important difference is the fact that in larger organisations designers tend to work to order. In smaller start-ups there is generally more freedom, and more of a desire, to innovate. Coser, Kadushin and Powell (1985) suggest that small firms work in areas with relatively cheap entry costs, and sell in risky and competitive markets. Smaller innovators, which are producer (rather than distributor) orientated, foster experimentation. The big book publishers at the core of the industry, within established vertical, distributor-orientated frameworks, move slower and tend to cater for large audiences with more formulaic fare.

Often innovation happens in small groups, in virtually 'closed-circuit' niche spaces. Coser, Kadushin and Powell have shown that the more innovative 'Off-Off Broadway theatres serve small audiences, have a close artist-audience relation, and reward originality and the breaking of molds and traditions. Indeed, the audience often consists of people who are themselves involved with the theater.' This is often the case too for digital forms of the book such as electronic literature, which happens in a *small world* where various books, conferences, events and the consumption of digital formats is driven by a relatively small group of practitioners and academics.

New breeds of digital authors and small producers working on the more innovative forms of the book do not seem to need the big publishers. In most cases they cannot help; their value as editors and marketeers of works is greatly reduced in the digital space as they know little about curation of innovative formats in digital world. It seems that currently traditional publishers have not got much to offer to digital producers of new forms of the book. The digital stores of the majority of traditional publishers do not actively or clearly promote the more innovative digital forms of the book beyond ebooks and more rarely enhanced ebooks. Fragmentation, inconsistency in curation practices, and gaps in the distinction of the more innovative digital forms from print or ebook formats and versions (a problem already identified by Alexis Weedon in 2007 and still prevalent) cause discoverability issues that need tackling. Digital producers often have to rely on the digital distribution channels supplied by large technology giants such as Google and especially Apple, whose AI and human curators can greatly aid in the promotion of digital artefacts (Bhaskar, 2016), but where more bookish artefacts compete with thousands of other products. Small producers have also to come

up with alternative strategies, such as creating their own shop windows and entering digital book awards.

A wide range of digital forms of the book

As the analysis of genres and formats more commonly explored by traditional publishers and technology giants has shown, some genres are more likely to be produced in digital formats. The kinds of texts that tap affordances more specific of the digital medium are often associated with specific purposes, for specific audiences, and exploring specific, and somewhat limited affordances to offer features that a certain audience is seen as likely to use or benefit from. For example, students are used to multimodal textbooks even in analogue formats, and they are more used to using tablets and apps than most older generations. Apple, for example, have seen them as an audience more open to the use of their 'multi-touch' books, in the form of digital textbooks made with iBooks Author. The analysis of titles available from the App Store, Google Play and publishers' websites in chapter 4 shows that experiments beyond simple ebooks but nonetheless close to the book (enhanced ebooks, book apps) seem to be happening mainly in the generic areas of reference and educational (the realm of knowledge, information)⁵⁴, and in the children's fiction market (the realm of storytelling)—but less so in adult fiction⁵⁵. Fantasy and adult fiction in general have lagged behind in these formats, whereas non-fiction reference and children segments are more commonly found. Partly, I would argue, because it is easier to see the ways in which digital affordances increase the use value of reference texts; and for the children segment largely because the audience group is perceived as the 'digital natives', prone to consuming digital texts, and because the practice of reading a storybook (with images, and sometimes sounds and moving parts) finds in the digital space of apps a suitable home. Fantasy has seen experimentation across media, but not typically as digital forms of the book. The biggest franchises in the genre — such as Harry Potter, Lord of the Rings, Twilight — commonly travel across media onto film and game, but

⁵⁴ And including the emergence of new 'genres' linked to TV personalities, such as 'the celebrity chef' in the bookstore for cookery books and in the app world Dan Snow's history apps made by his company Ballista, and for whom 'Clearly an app is better than a book for history' (Dredge, 2014).

⁵⁵ This requires further investigation, which will be methodologically challenging without any central location for data on digital forms of books published/launched each year (across numerous devices, diverse formats, and scattered publishing platforms). However, it is certainly the case that between 2010 and 2017 adult fiction in digital format is most successful in ebook format.

'bypass' digital forms closer to the book and to *writing*. One of the difficulties for fiction could be related, Jay David Bolter suggests, to our attachment to linear stories:

Like earlier printed fiction, hypertexts must contend with our desire for the linear. Although this desire may be more or less powerful in various cultures and at various times, it is certainly still powerful here in North America in the late age of print, where true popular fiction, the bestsellers, are plot driven and often quite linear. (Bolter, 2001, p.139)

As more works that do things differently — like *Steve Jackson's Sorcery!*, *80 Days, Steampunk Holmes, Floppy, Inanimate Alice* and Iain Pears' *Arcadia* (Poole, 2015) — gain more recognition, and as generations of game players used to branching and multi-linearity grow up and take more jobs in media and book publishing, more people will get used to the idea of making and using innovative digital forms of the book. Daniel Merlin Goodbrey shares a similar view for the acceptance of innovation in comics: 'The more comfortable comic reader become with the concept of tablets and smartphones as media distinct from that of the printed page, the more accepting they will be of new, screen-based tropes.' (2015, p.66)

Meeting the needs of users: user experience in the design of digital forms of the book

This section tackles research questions related to consumers, to usability and to the adoption of user-centred design approaches.

We have seen examples where particularly artists and technologists are experimenting and pushing boundaries. And we have also seen examples where the tapping of digital affordances is done in gimmicky ways that detract from the experience of using the artefact. A good design does not need all the *bells and whistles*. Good digital books do not necessarily need to be designed on the back of groundbreaking technology or design conventions. Advancing the medium does not mean choosing the newest platform to implement a project or adding in the coolest new bells and whistles. [...] Even if the new technology is stable, it is not helpful to use it if it distracts from the task served or meaning expressed by the artifact. (Murray, 2012, p.42) Tapping the affordances of the digital medium in ways that add little to, or even detract from, the experience of users is counter-productive. For example, 'Early hypertext fiction and educational applications included so

much associational linking that interactors found them confusing and lost interest in engaging with them.' (Murray, 2012:88)

Affordances can only be actually successfully tapped into if the resulting features, if the resulting designed texts can indeed be used by its intended audiences. Not only they need to be able to use the texts, they also have to want to use them, otherwise producers fail.

A convention is a cultural constraint, one that has evolved over time. Conventions are not arbitrary: they evolve, they require a community of practice. They are slow to be adopted, and once adopted, slow to go away. So although the word implies voluntary choice, the reality is that they are real constraints upon our behavior. Use them with respect. Violate them only with great risk. (Norman, 1999, p.42)

Lev Manovich's view is that '...the language of cultural interfaces is largely made up from elements of other, already familiar cultural forms. (2001:71). In what we have seen, most designers tend to create multimodal design ensembles (Kress, 2010) in ways that are recognised, in patterns often redefined from older media, forms and genres developed over long periods of time. Murray in turn explains that in mature media '... we rely on familiar formats and genres to guide us in making sense of complex media artefacts.'; we know what to expect, and how to read (or watch or use) them. In other words, we '...recognise the kind of communication we are receiving because it has common elements with similar communications [...] we recognise the format and genre that provide the conventions of interaction.' (2012:37) Giuseppe Castellano, art Director of the Penguin Group USA, thinks it is important to 'push the boundaries of what a book could be, but not at the expense of the story. The bells and whistles should be part of the music, not a distraction from it.' (BookMachine, 2014, p.14)

The main point here, then, is that rather than relying on a radical departure from previous forms and conventions, many good digital books are built on a solid understanding of user needs and on how to provide use value with new artefacts that tap existing social and cultural practices but reinvent them in ways that improve the experience. All this means that doing something new is always an act of balance between the new and the familiar; if a designer pushes it too far away from familiar forms users cannot understand it. This is why a user experience and usability angle is important for more innovative forms that try to push the boundaries and do things differently.

Computer technologies have changed very rapidly within the last thirty years with 'technical innovation outstripping design.' (Murray, 2012:2) It is important to carefully think about how to design unfamiliar forms. As we have seen in chapter 4 when looking at the practices of *Noble Beast* with *Steampunk Homes*, and with the text *Codex: Space Marines*—and later the design of the *Nature Mage* digital book—it is important to reflect on the design, signalling clearly the meaning of new icons and features, avoiding distractions, allowing for choice by the user, and testing products with users as much as possible to find out how they use and react to them.

User needs and reinventing the medium

For some theorists the use of the affordances of the new medium becomes nearly a question of duty for producers and designers as the only way to advance the medium. As Janet Murray so well expressed 'We should not be focused on making an electronic version of a book [...]; we should be focused on serving the information, entertainment or community needs that these particular books [...] are addressed to, by rethinking those needs in terms of the affordances of digital media.' (2012, p.40) Furthermore focusing on users, on their tasks and needs, 'can protect us against both the seduction of new technologies and the fetishism of older media.' (Murray, 2012:44). The concept of *user needs* is crucial.

To design something new that transcends the expressive limitations of legacy media and existing formats and genres, the designer should think about the core human needs served by the new artefact, survey the ways those needs have been met across multiple media platforms, and then attempt to reimagine them as they might be served by the affordances of the emerging digital medium. (Murray, 2012, p.23)

The more innovative producers are making digital texts that may or may not easily be associated to, or classified as *books* as we know them from print. There is a wide range of texts being produced, many of which contain large amounts of written text (the core mode of print), and which may serve the same or similar functions to books (for example, storybooks and storybook apps). But digital forms of the book are not just alternative forms *of* the book, but also alternatives to the book: texts that *do the work* of books, however bookish they may be. If we imagine a spectrum, as we move away from the aesthetics and design patterns from the print and the codex, we find other kinds of texts that are typically more multimodal, further removed from what we call

and recognise as a 'book', and which tap into the affordances more characteristic of the digital medium, texts that merge and converge with other forms of media, often melting onto hard-to-describe hybrids and mongrels. As the mapping exercise in chapter 4 has shown these digital forms stretch the notion of the *book*, and are more fruitfully analysed as *hybrids* that exist at the intersection of media, of industries, of genres, practices and conventions. As hybrids that draw both on their print ancestry and also on a range of digital genres they are not just *books*, but also partly games, partly social networks, partly fan spaces.

Digital forms of the book remediate not just content, but the *use* of the content, and some of the social practices around the uses of books. For example, storybook apps mediate (and remediate) the ways parents and children read together, or how parents read to their kids. Storybook apps do the work of storytelling, not just of the book. The different modes allow the user to do something that resembles more the experience of picking a print book and reading it to a child, including not just the reading of the story, but interactions such as making characters move, imitating their voices, making sounds as things happen, and so on — the kinds of things many parents do when telling a bedtime story.

Ebooks are seen here as the 'minimal approach' to using the affordances of digital media, the one that mostly remediates and resembles the print book — or rather, the experience of an individual reading a book, probably a novel, on his own (because if we think about the enormous diversity of analogue books, and of book reading and book *using* experiences, we can see that our experiences with books vary enormously). Works such as TouchPress's *The Waste Land*, with its hyperlinks to comments and videos and readings and original scripts, simulates not just the work itself, the Wasteland, but the very journeys of a scholar or a researcher or simply someone interested in learning more about it, exploring the materials. Of course the choice is there to simply read the work, or to engage in more or less complex analysis of it. Likewise, *SocialBook* simulates not just the book, an electronic book displayed online, on a web browser, but also simulates the act of writing on the margins, and reading what others wrote, with the possibility of replying asynchronously, in a way simulating the kinds of activities that take place through participation on a book club or debating society. The digital medium is efficient not just at remediating texts and reproducing illustrations or other kinds of content. With its multimodal and hyperlinking characteristics, and thanks to its participatory and encyclopedic affordances, it facilitates the

simulation and aggregation of activities around books, of interactions with books — with the text, its margins, paratexts, even other people experiencing the same text.

Examples of innovation shown here are tapping the affordances of digital media in ways that are informed by user needs, by use value of a text, and by trying to reinvent the kinds of uses and pleasures provided by a genre (for example the adventure exploration of the 80 Days source material) in a new medium, tapping its affordances to produce new kinds of texts that stretch the notion of book, of storytelling, and mix it with other pleasures and motivations. These texts can be said to not only do the work of books, but also tap onto ludic offers, social motivations and current social and cultural trends. The Nature Mage digital book does not simply try to tell a story; at the same time it is also documenting the story, and creating a database of information about and around the story, highlighting elements of its storyworld such as characters and weapons, adding other ways of experiencing the story (e.g. the developing map), and facilitating the expansion of the story by readers who want to be contributors, thus tapping the kinds of activities and motivations related to fan participation.

Audience involvement in cross-media adaptation projects

This section tackles questions regarding the exploration of digital affordances for audience involvement.

In the *Nature Mage* project we used a digital platform for the very processes, the very *work* of designing and producing digital artefacts, particularly with the creation of an online space for interaction and collaboration between author, readers and others. This was done partly because we thought the audience was prone to such approaches. Chapter 5 demonstrated important changes in behaviours and attitudes of recent audiences, generally along generational lines, to notions such as *canon*, *original* and *author*. We also heard that some online platforms (such as *Wattpad*) are transforming areas of publishing, and facilitating amateur writing, fan fiction and other forms of user-generated content by exploring the participatory affordances of digital media. This was the background context to the approach taken for the *Nature Mage* project, which relied heavily on audience engagement, through both research (online and face-to-face) and through the tapping of the affordances of digital media to facilitate and invite participation via an online community.

Challenges of participation

It seems irrefutable that our media and culture in general are increasingly visual and multimodal. And that younger generations are growing up immersed in digital media. They are curating their own content online in spaces like Instagram and Facebook; they are mixing and mashing content, and are increasingly producing and uploading content. However, participation and user-generated content also raises many issues and challenges for producers.

One of the biggest criticisms of the more optimistic positions is that participation and user-generated can be seen as free labour controlled mostly by large media corporations (Andrejevic et al., 2014). In the *Nature Mage* project we tried to contravene this by rewarding users who added content via the community. We thought of two kinds of rewards: in kind and through recognition; and also financial rewards. The initial ideas for financial rewards evolved around offering users whose creative works were used in the digital book a kind of stake in any profits made. However, it became apparent that this can be quite challenging to structure and to organise: how would you decide how much to give back to users? Should it depend on how many of their stories and drawings end up in the digital book? And what would happen if the digital book only sold a few copies? These were challenges that we would have to tackle if and when we were to actually publish a digital adaptation of *Nature Mage*.

Other kinds of rewards seemed more straightforward, and were explained in the online community; they included: free copies of the digital book; a mention in the book; a day with the author for the best story contribution; and the chance to have a character named after them — or a name of their choice — in the next ebook in the series.

Another issue with participation has to do with access to creative tools, and having the knowledge and the skills to use them. Not all users — even young people, the so-called digital generation — know how to draw, or use image editing tools or video tools. Our plans for a future version of the online community included adding links to free tools and to video tutorials that teach how to use them; and if possible embed (or alternatively provide hyperlinks to) creative tools, such as image or video editing, within the very digital book.

The third issue I want to cover has to do with structure, and with deciding how much guidance to provide to audiences involved in co-creation and crowdsourcing communities. Jenkins, Ford and Green, drawing on interview with the filmmakers of a crowd-sourced project, the *Lost Zombies*,

explain the difficulties of balancing the amount of direction provided to participants. At the start of the project the producers 'fluctuated between requesting too precise contributions [...] so stifling their creativity, and offering too open-ended a structure, resulting in contributions that would never have added up to a compelling film.' (2013, p.269)The *Nature Mage* online community asked for contributions in a very general way: 'You can upload anything you like, such as drawings, images, videos, alternative stories, inspired by the story'. Examples of user involvement such as *Star Wars Uncut* (Jenkins, Ford and Green, 2013) suggest that structured approaches facilitate participation. In the case of *Lost Zombies*, the filmmakers ended up combining a more free invitation to create parts of the film based simply in a description of kernel events in the plot with more explicit requests (such as 'we need a photo of a zombie fight') placed on a grid with 128 squares, each containing a specific request.

Plans for future iteration of the community involved keeping a level of open-ended requests and combine these with a more structured approach, with precise requests for contributions, for example 'We need a drawing of Sabu's weapon', or 'Can anyone write a backstory for Voltan, the warrior mage?' These kinds of pre-determined requests would be labelled as *tasks*, or *missions* in a section that I would probably call 'Mission corner'. We would need to try and test it and do further research with users to find whether it would effectively work for our particular project and audience.

Authorship: changing notions, control and power

In the context of analysing changes to authorship 'as a category of cultural authority' brought about by the presence of authors on digital media, on book-dedicated or generalist platforms such as Twitter, Matthew Kirschenbaum (2015, n.p.) proposes that we now face 'a landscape of authorship and reading that is no longer confined to simple geometries and lines of influence', and where 'one of the most important such vectors are the lines of interaction between literary and fan culture', particularly for adaptations and expansions of existing stories.

[...] sequels raise precisely the kinds of conundrums about storyworlds, continuity, and canon that often loom large in fan circles, where vast storytelling universes (Star Wars say, or the Harry Potter series) spawn hundreds or thousands of derivative works, some licensed, some not, all of whose relationship to the original franchise must be adjudicated for internal self-consistency. [...] Here the existence of a controlling authority over a given creative property is

both a legally binding fact and the ultimate arbiter of arguments on forum threads. Even for more prosaic literary fiction, where transmedia franchises and fan fiction are unlikely to develop, I predict that the conventions and expectations from fan communities will cross over and mediate (literally) the authority of authors on a variety of critical questions. (Ibid.)

In the case of Nature Mage, where engagement with 'fans' (readers) was at a small scale and within an engineered environment (as opposed to having been started by fans), on the one hand there was more alignment and more control by the author than in larger-scale, fan-led contexts. On the other hand, and although the author could block representation or request tweaks, he was not controlling the drawing hand, the chosen style, the colour palettes used by artists and other contributors. At the onset the author did send examples of the kind of artwork he envisaged for a visual representation his Nature Mage stories, but he also granted the invited artists a good deal of flexibility. Readers got involved in conversations around canon, for example by discussing the appropriateness of the visual transposition for the character Jonn, but the scale of involvement was small and its nature closer to curiosity rather than questioning and debating. In other contexts, for mass consumed stories where thousands of fans engage in fan forums, there are often deeper discussions, a great deal more divergence of opinions, at times antagonistic, and at times scrutinising and pushing against the vision and opinions of authors and producers of the original works. Gunther Kress proposes that meaning making is always social and 'characterised by (differences in) power.' (2010:13-14). In the case of *Nature Mage*, the author clearly had more power than readers and artists involved, and also more power than I had; Duncan Pile was seen as the brand gatekeeper, and this was a role (at least in the open) accepted by those involved.

The work of Melanie Ramdarshan Bold on *Wattpad* suggests that 'one of the outcomes of digital reading and writing is that writing is now becoming more democratic: traditional publishers are no longer the sole gatekeepers of culture.' and that 'there is a demand for authorship without the intervention from publishers.' However 'traditional notions of authorship, ownership and control prevalent in contemporary publishing are hindering the true potential of creativity.' (Ramdarshan Bold, 2016)

For Simone Murray 'the challenges facing the contemporary book industries call into question [...] the gatekeeper authority of publishers', among other changes, and 'prompt the more fundamental question of how our very conception of the author – itself a comparatively recent

construct of the post-Gutenberg age – might be productively rethought and recast in tandem with developing 21st-century communication technologies.' (2010, p.24) The author believes there is a desire of readers to shift positions, but she also defends this is not new or unique to digital media.

The foregoing survey of digital innovations in the book industry – particularly the phenomenon of self-publishing – indicates popular enthusiasm for grafting the interactive capabilities of digital communication onto the traditionally read-only form of the analogue book. Of course, this restive desire on the part of readers to throw off the passive role of mere consumers of literature and to step into the creative limelight of authorship is far from new. It represents merely the latest shift along a centuries-old continuum away from the Author-as-God figure that print culture has functioned to enshrine, towards seeing literature as an intertextual space of communicative exchange between writers and readers as well as – crucially – a zone for reconstituting readers as writers. (Ibid., pp.28-29)

Several digital platforms do this well, as we have seen in chapter 4 and here, but the participation of audiences, especially in producer-driven and small-scale projects is not straightforward and carries challenges to overcome.

The cross-media journey of the *Nature Mage* story and *collective intertextuality*

This section looks at the questions around the ability of digital media affordances to adapt a fantasy book, focusing especially on what happens to the narrative as it travels across media. The *Nature Mage* digital adaptations texts are located at the intersection of print traditions and the affordances and conventions of digital media and its genres. The game draws on the story, on key themes, events and existents, but also adds activities more akin to MMORPGs and other kinds of games. The digital book combines narrative with reference and database features, and with participation. Both digital adaptations combine diverse conventions and storytelling strategies. The designs were the result of several complementary strands and influencing forces: a detailed analysis of the narrative to extract story existents and themes; inspiration from existing digital artefacts; author ideas, canon and consistent definitions; and needs, expectations and ideas from readers. All of these influenced the design of texts that both keep a strong connection to the source books and explore the affordances of the digital medium to present and expand the story in new

ways; they demonstrate the ways in which the affordances of digital media can be tapped to create new forms of storytelling that mix narrative with other dimensions, motivations and pleasures.

The design ideas for both the game and the digital book were to a large degree shaped by consultation and participation. Reader involvement meant that the adaptation work was not simply based on the ideas, views and intertextual repertoires of the producers (author and researcher), but also on the needs, views and expectations of readers and their ideas. Often, participation involved debating the worthiness or adequateness of art contributions or book design ideas, leading to processes of intersection and negotiation of ideas and intertextual references between and across readers and producers — thus involving processes of *collective intertextuality56*, the joint weaving of a new text based on intertexts and ideas brought into the mix by several collaborators and ultimately shaped by the direction provided by the author. This meant that the resulting new ways of telling and expanding the story were influenced not only by a multitude of intertexts and intermedial conventions, but at another level by the meeting of the intertexts and ideas brought to the mix by different individuals, and the resulting group dynamics.

The intermedial mix of the Nature Mage digital artefacts

The *Nature Mage* digital adaptations combine conventions and storytelling strategies from across media and genres, but also go well beyond narrative to provide other offers and measures that meet social, ludic and other kinds of motivations.

As the analysis of chapter 4 demonstrates often fiction digital forms of the book are not simply artefacts for narratological world building. Importantly, when a narrative reaches a new medium, particularly a medium that is not just concerned with narrative, something important happens, something which is at the same time obvious but at the same time often overlooked by analyses that highlight narrative so strongly: effectively, many of these instantiations in genres and platforms such as videogames, social media networks or fan sites are not simply yet another site for narratological world building — they serve other functions, meet other needs and motivations, offer other pleasures.

A game *is* a game, not a story; it may tell a story, but it offers ludic pleasures, socialising opportunities, mental challenges, and so on. Likewise a fan community may serve many purposes beyond the building of a world. Seeing these as parts of storyworld building is fruitful, but limited to

⁵⁶ See more about this term that I coined in a recent book chapter (Franco, 2016).

one standpoint that originates from a narratological focus and links to literature and books. This focus on narrative should not overshadow the experiences of the real people who make and use these artefacts, the lived cultures (Johnson, 1986) around a storyworld or brand. This includes activities such as playing games based on the stories, exploring new sides and places in virtual versions of the storyworld, drawing fan art, writing fan fiction, parodying stories, cutting and pasting symbols of the story, getting together in conventions and meeting like-minded fans.

The *Nature Mage* digital artefacts not only retell and expand a story, they do it in different ways that mix narrative with ludic, creative and social pleasures and motivations. They do not simply try to do the work of the book in presenting a narrative, but bring together a myriad practices that surround the book. This is explained below in more detail.

The digital book

The Nature Mage digital book text combines modes and invites activities from a combination of different media, including reading, watching, hearing, rating, commenting, uploading, and so on. If we were to locate it in the wheel of intermediality discussed in chapter 4 (Fig. 5), it would sit inbetween print fiction and reference, and multiple forms of digital genres and formats, such as blogs, forums, wikis and social media. The book no longer just tells a story; it became multimodal, paratextual, referential, and like Bob Stein suggests a kind of *place*, which users can explore, a social space where users can participate through commenting, rating, and uploading their own content. Perhaps the text is no longer a book, but a kind of *container* for different features: multimodal and multi-authored content, social features, debate, creativity — and ever-growing, organic, fed by user-generated content.

The more immediate intertexts of the book have for the most been identified in the description of its design presented further up. The design was clearly inspired by the ways in which other designers explored the affordances of the digital medium, with several individual titles referred throughout chapter 4. The digital book design makes use of digital affordances to both tell the story in different ways from the source book, and bearing in mind the needs, views and expectations of readers. The digital book does the work of the ebook, in telling the story, albeit in a different way; but it also mixes the narrative logic and pleasures with offers, activities and motivations of a different nature, namely the encyclopaedic referencing of story existents, and where the digital affordances are explored to add design elements that enable participation and ratings, reviews and

conversations. Thus the digital book would appeal to motivations related to the pleasures of consuming a story, but also to referencing, creativity and to social interaction with other readers and the author.

The digital game⁵⁷

The Nature Mage game can be classed as a 'narrative game' (i.e. a game with narrative) rather than a 'playable story' (Ryan, 2003). It intersects story elements with a ludic logic, with game structures. The story elements are mainly drawn from the source text, whilst the ludic components are mainly inspired by existing games. The two, however, are intertwined: the source story intersects with ludic aspects when its elements (existents and themes) are used as source of inspiration for game mechanics, and when game playing would unveil narrative. The Nature Mage game concept is clearly framed, more generally, by the current affordances of the game medium, and the conventions and devices used by MMORPGs. More specifically, the game is influenced by the source *Nature Mage* books, but also by individual game titles such as *World of Warcraft*, *RuneScape* and *The Thing*. These two — the Nature Mage books as part of an established family of fantasy genre books and role-playing games — are intertextually closely related; they share very similar structures and a common ancestry in the traditions of hero's journeys found across myths of origins, rituals, oral traditions, folklore, and later books, films and digital games.

Opting for an online RPG seemed to a certain extent obvious. It is a game genre that not only fits with – but also shares – a genealogy with the very source text and more widely the fantasy genre. They can be seen as part of a wider series of hero's journey texts. More specifically, RPGs are based on, and influenced by: a) more recently, MUDs (multi-user dungeons, the first text-based role-playing / fantasy video games); dungeons & dragons books and board games, and analogue RPGs; b) further back, by hero's journeys in general, fantasy literature, epic stories (like those mentioned by Bakhtin and Holquist, 1981; and Kristeva, 1980), folk heroes and fairy tales, oral traditions of storytelling and ancient myths of origin present in virtually every human society, as explored in the work of anthropologist Claude Levi-Strauss (1990). The way the game is able to tell a story is nonetheless distinct and specific to the ways in which digital games present narrative. Marie-Laure Ryan proposes that 'narrative in games moves the notion several steps on'.

⁵⁷ Some ideas in this section were first presented in Franco, 2016.

She argues that narrative is not tied to any specific media or form such as the novel, it is a mental representation 'of a world (setting) situated in time, populated by individuals (characters), who participate in actions and happenings (events, plot) and undergo change' (Ryan 2001). Game play is one such mental representation which creates different narratives within a structured and delimited space. (Weedon, 2007, p. 124; citing Ryan, 2001)

Many of the *Nature Mage* game concept ideas were inspired by genre conventions, by specific features of specific game titles, which in turn have been greatly influenced by the long heritage of fantasy and hero's journeys across epochs, media and modes. The more challenging, and probably most rewarding features, those linked to the human side of the story, were more challenging precisely because they fall outside the conventions (not just technical, but social, linked to the expectations of game players) of the game medium. Nonetheless, designing a Nature Mage game without this human thread would have seemed a missed opportunity to design an artefact that would better meet the essence of the books, the needs and expectations of readers, and generally how they see the relevance of the story in their own lives and experiences.

Use value, pleasures and the enduring book

Creating good digital artefacts requires designing for use value, taking users and their needs into consideration. Janet Murray illustrates this idea: 'if we were making a new music player we might start [...] thinking not of specific music-playing appliances but of the general activity of listening to music and asking how [...] existing digital formats and genres might support that activity.' (2012: 92) Furthermore, for Murray, it is important not to be limited by 'functions that already exist or that we already know how to create.' Rather, designers ought to reframe tasks beyond familiar conventions of legacy (and existing digital) media that might limit what can be achieved. (Ibid.)

Digital forms of the book do the work of print books. The tendency for digital forms to 'do the work' of books is more obvious in the non-fiction segment. Take travel guides, for example: from paper versions many have now travelled across to the digital medium, and are available as apps that can be carried in mobile devices, still with maps, points of interest, monument plants and so on. The digital version is now doing the work of the printed book, which meantime has not disappeared, and in some cases has evolved influenced by the ways digital media have treated the

subject (Hartmann, 2014). Some tourists will prefer the print version, others will download the apps, yet others may have both versions. But probably for an increasing proportion of consumers will opt for digital media, whether a travel guide app, Google Maps, TripAdvisor or a combination of these and others. They arguably do their job better: they are more easily searchable, generally more portable, (arguably) more efficient at certain tasks such as finding your way around, and offer more features (e.g. augmented reality content, videos, suggestions based on location). Other genres that found in digital books and other digital media a suitable environment are cookbooks, dictionaries, encyclopaedia, language courses, *how to* guides, textbooks, amongst others. Yet some consumers will still much rather pick a 'real' map, or open a heavy, beautifully illustrated recipe book.

Nonetheless it is clearly the case that 'the value system [...] which underpins the status of the book is changing. The book's social function as the high-status vehicle for communicating new ideas and cultural expressions is being challenged by sophisticated systems of conveying meaning in other media.' (Weedon et al., 2014, p.109) The use value of the book is changing, but at the same time it persists as an enduring cultural form.

[A]n individual book changes value during its existence in terms of price, inherent or cultural value, exchange value and use value (with global positioning system (GPS) navigation and satellite views of the earth, for example, the use value and inherent value of a map and an atlas have changed) and yet gains cultural and economic value through its different adaptations and media forms (e.g. the longevity and many adaptations of Sherlock Holmes). (Ibid.)

Thus the map and the atlas can be seen as having a lower *use value* in its printed paper version (although not necessarily all kinds of users would agree with this assertion — that is where choice makes sense). They have been very successfully 're-shaped', remediated onto digital media, which proved to be a suitable environment for their intended use. The book can be seen as enduring in that sense of having been transposed onto a new medium, whilst still keeping an affinity with the book, with the genres that have been defined by the book and its systems. And then the fiction book reappears once again, this time across media, in multiple shapes, as a film, a cartoon, merchandise, as a movie tie-in digital book, and often back to print books (about the film adaptations, re-editions of the original or new adapted versions of the story).

Publishers until recently only launched stories and brands that would then be picked up by companies in other media sectors. They have recently started taking 'an active role in the development of stories when they leave the pages of [their] books'; they 'now acquire rights beyond book formats in order to control rights in other media sectors and merchandise...' (Huang, 2014, p.viii)

By shifting the focus from *content* (as defined for books and transposed onto ebooks) to *user needs* and *use value*, producers ought to engage with their audiences (their target consumers) in order to understand how best to tap the affordances of digital media and offer artefacts that offer use value and/or extend the pleasures that consumers experience with the stories they first encountered in books. The final chapter, Conclusion, recommends some approaches for the future development of the digital book.

7. Conclusion

Reinventing the book?

This thesis departed from the core research question: how can the affordances of the digital medium be explored to produce new kinds of book-inspired artefacts? The question relates to the value of digital media to create new kinds of books; to whether there is indeed any value for the industry in using digital media to create new kinds of books.

This research mapped a changing landscape over the period of study, documenting important changes in the ways a range of producers — from the larger publishers and technology giants, to small start-ups and independent artists — explored digital affordances, and reacted to changes in technology and the new behaviours and expectations of contemporary audiences.

Authors, publishers and other kinds of producers have been using digital media to make new kinds of books, new kinds of texts influenced by analogue/print books, and by other media forms. Digital media - in a range of digital technologies, devices and platforms - provide a wide set of affordances that can be explored to produce new kinds of books. This thesis has shown several examples that demonstrate value for both the industry and consumers, both in terms of commercial success and critical acclaim for producers, and the pleasures offered to consumers, evident in comments, ratings and reviews, and on direct experience of trying many of these artefacts. The affordances of digital media can be explored to effectively create new digital forms of the book.

However, diverse kinds of producers see different affordances in the same set of digital media, in a similar fashion to the ways in which different animals look at the same environment in quite different ways to take advantage of different affordances (Gibson, 1986). But why does this happen? Different producers are influenced by practice; their views are shaped by what they know and by what they are able to perceive as possible (or desirable) in the digital medium. Affordances have to be perceived to be explored. Furthermore, even when perceived, there is also the question of having access to the right set of skills and experience, of being able to actually tap those affordances.

In order to investigate this range of attitudes, the primary research question was further split onto a set of secondary questions: How have the affordances of the digital medium been used? What do they offer to producers and consumers? How close to, or how far from, the central

concept of the book as a paper codex or its ebook remediation are these texts? How have certain affordances changed the use value, the pleasures and the suitability of these texts for their intended functions?

The analysis of a selection of digital artefacts sought to answer a series of related secondary questions that contributed to interpreting the wide range of attitudes, and to providing recommendations for the industry; for each artefact I asked: What are the affordances of this digital text? How does it remediate older forms and conventions but also use medium-specific affordances? How is it using (or not using) the digital medium affordances in new ways? Why or why not?

The tapping of affordances to create new kinds of digital books was shown to be led yet again by the periphery. The problem with the core is that many producers have been conservative, hesitant and at times confusing. There are opportunities and potential to further explore the affordances of digital media, however there also a range of challenges and current attitudes and strategies that stifle wider or faster development in experimentation of new forms of the book.

The research further asked, for each of the artefacts analysed: What does it offer the producer? What can publishers and other digital producers take from it as a example of practice — both in terms of business models and aesthetic and design choices? What production cultures, business models and views of the book and of the digital medium lead to different approaches by producers, from those who simply want to remediate the book as closely as possible to print, to those who are innovating and creating new kinds of artefacts?

The take up of the opportunities provided by the rise in digital devices and platforms and the general pervasiveness of digital media has been approached very differently by producers from different production cultures and industrial contexts. From the pure remediation of print in ebooks (closest to the codex) at the core of the industry; to the slightly deeper exploration of affordances specific to digital media, but still very close to print formats, genres and conventions (in ebooks or apps enhanced with images and sounds); to texts more towards the periphery that mix the heritage of the book with deeper influences from digital media and the tapping of their affordances - to produce more unique kinds of texts.

At the core the potential of digital media is more commonly perceived as suitable for some kinds of (pre-convergence, book-prone) content for specific 'ready' audiences. The affordances of the

digital medium are more easily identified as useful for certain more objective tasks typically related to reference and non-fiction, or adequate for audiences who have grown with digital technologies

Smaller producers at the periphery of publishing are leading once more, and experimenting with new conventions and new ways of doing the work of books, whilst often keeping a strong level of attachment to books, to established genres and to popular stories that reappear in multiple shapes across media. Towards the outer edges of publishing one finds artists, technologists and mixed teams trying to innovate more deeply and more widely across segments, genres and target audiences.

When it comes to production cultures and the conditions more propitious to innovation, industry background and previous experience of digital production and commercialisation seems to be key to success. The analysis shows that the more innovative producers (such as Inkle or Touch Press) see the digital medium as a support where things can be done differently, where new ways of telling (or playing) stories can be designed, and where knowledge and culture can be represented in new ways. The exploration of new affordances happens gradually as the limits of what a media or device can do are gradually pushed as producers become more familiarised with a certain technology, whose introduction 'with its specific and at times sharp-edged affordances/facilities, [...] generates newly shaped needs and new purposes. Initially the device is used according to the purposes brought from the most immediate past; yet using the device brings a change in the habituations of the user.' (Kress, 2010, p.195) As familiarisation and experimentation occur, and as producers start 'thinking of what it may be made to do, it is used for newly shaped purposes; its functionalities are shaped to the needs of the user whose uses [are] reshaped in that process'. (Ibid.)

The research shows that smaller digital publishers at the periphery have been leading the path of innovation. But innovation also happens when publishers commission technology firms, with a number of models used for partnerships (e.g. revenue-share models between book publisher and digital developers; investment in kind, in this case knowledge), and new ventures that mix publishers with digital media experts. Touch Press's (2014) description of what they do is illustrative: 'Making possible the Touch Press vision are a team with diverse talents that include backgrounds in TV production, software development, print publishing and interactive design. Partnership with other organisations is at the heart of Touch Press's publishing strategy.' They

exemplify both the coming together of staff with experience from across different media, and the use of partnership models.

As the core and periphery model suggests, big book publishers at the core of the industry, within established vertical, distributor-orientated frameworks, typically move slower and tend to cater for large audiences with more formulaic fare. Innovation often happens in small groups, in virtually 'closed-circuit' niche spaces.

In terms of business models, and namely funding for production, the research has uncovered small companies using a mix of own investment mixed with crowd-funding (Noble Beast). As many of these new kinds of digital books are sold in the online stores where apps, games and other kinds of texts are sold, they have to a certain extent also adopted some of their marketing practices. In this respect we see the use of free samples (like game demos), freemium models (such as free apps with in-app purchases, again a model used extensively by game publishers), and the packaging of book apps into 'bundles' (for example, by Touch Press). Nonetheless — and perhaps in a bid to avoid the devaluation of books by the initial lower costing of ebooks — many producers of digital book forms sell them outright, sometimes at a cost that is quite high when compared to other kinds of apps. Here publishers such as Touch Press, who sold the app The Waste Land (Touch Press, 2011) for £9.99, seem to be relying on the image of a high-end digital product, perhaps for a relatively small target group, worth paying for. Classification and marketing are two related aspects that also influence the success or failure of new products. Towards the core of the book publishing industry innovation is often stifled by inconsistent classification and defective curation practices that raise discoverability issues.

The emergence of new forms entails changes — often slower than the rate of creation of new forms — in the ways that producers classify, select and present works to potential consumers, to address issues around discoverability: How do producers frame, describe and present them? Do they align them with books? Why?

The research has shown the ways in which the majority of traditional publishers do not actively or clearly promote in their digital stores the more innovative digital forms of the book beyond ebooks and more rarely enhanced ebooks. Fragmentation, inconsistencies in classification, and gaps in the distinction of the more innovative digital forms cause discoverability issues. Digital producers often have to rely on the digital distribution channels supplied by large technology giants where in spite of some helpful human and AI curation more bookish artefacts nonetheless compete

with thousands of other products. Other alternative strategies by innovating smaller producers include the creation of their own shop windows (websites); entering digital book awards; and creating crowd-funding and/or crowd-sourcing campaigns that seek not just funding and ideas for their products, but also fulfil marketing aims by raising awareness of their products.

Very importantly, the market for innovative digital forms of the book (of game-books, narrative games, interactive fiction, electronic literature, storybook apps and so on) is different to the market of printed books or e-books. Overall the larger publishers at the core are losing their power in selecting what works reach consumers. This, allied to a hesitation in tapping the affordances of the digital medium in significant ways, means that the future of the digital book will continue to expand by smaller producers, in a disperse way with niche groups and formats where hybridity and diversity rules, and where digital forms of the book often live side-by-side with other texts.

The thesis importantly highlighted problems in current uses of classification of digital books. Without providing final alternatives (impossible when change is so fast), it points to main drawbacks and inconsistencies, setting directions that can better serve producers and consumers. The lack of attention given to this area of classification means that the industry would very likely benefit from research and design studies that can test the efficacy of different forms of classification. The research could benefit from using a user-centred design approach, which means involving users extensively in research and testing of several methods of classification, in order to iterate and improve the user experience.

The thesis raised too a number of questions relating to the novelty of some of the artefacts analysed and user experiences with these. Creating new forms of media, often hybrid genres and unfamiliar artefacts that do things differently raises a series of challenges. Because of their novelty or unfamiliarity new kinds of texts, new formats and genres pose challenges in terms of usability and user experience (UX): How have producers tackled challenges around design and user experience? Have they taken into consideration user needs? And from a related consumer and usage perspective: What does the new kind of artefact offer the user/reader? Does it fulfil other functions? Does it offer any other pleasures or meet other motivations? How familiar and easy to navigate is the text? And how easy is it to find?

The research analysed examples of design where the tapping of digital affordances is done in gimmicky ways that detract from a positive user experience. Good design does not need *bells and whistles*, with affordances used without distracting from the task served or meaning expressed by

the artefact. Thus, rather than relying on radical departure from previous practices, digital books ought to be built on a robust understanding of user needs. The goal should always be to ultimately provide use value. The new artefacts tap existing social and cultural practices, grasp them and build on them, often reinventing practices in ways that improve the experience and end results. Because of the novelty factor involved in some of the new artefacts it is important to consider usability when pushing boundaries. Users ought to be involved in research and testing of new products, to ensure that they are designed in ways that are user-friendly, intuitive, pleasurable to use and effective (especially when the product meets a functional need).

The scope of the research question — how can the affordances of the digital medium be explored to produce new kinds of book-inspired artefacts? — was further framed with a main focus on fiction and adaptation, namely on the suitability of new digital forms of the book for the '(re)telling of stories and expansion of storyworlds' in the fantasy genre. A number of artefacts analysed here demonstrate that the affordances of digital media can be used to experiment with new forms of storytelling, either to retell stories and expand storyworlds, or to create whole new fictions.

The strategies used by producers of fantasy-themed digital forms of the book vary. Some tap the affordances of the digital medium for documentary and encyclopedic purposes, to gather and present information about existing worlds in ways that make it easier for fans to explore characters, backstories, catalogues of objects and so on. Animation, sounds and more interactive features based on game mechanics are also used in examples at the outer edges of the digital book, where artefacts are part book, part game. The *Nature Mage* project has further shown — through the conceptual ideas and sketches for an enhanced digital book and a videogame adaptations of the series — that the kinds of themes typically perceived as the most engaging for fans of fantasy (such as the cataloguing of weapons, magic powers and character bios) could be combined with the more human side of the story (relations, conflict, decision-making, the addition of alternative perspectives) to create a text that also taps the pleasures of a less stereotypical audience of a fantasy series in the young adult market segment.

In the realm of fantasy new forms of the book draw heavily on the structures and cultural memes of other forms of expression beyond digital media. Digital forms of the book in the fantasy genre and more innovative forms such as narrative games are part of a wide genealogical tree of intertexts, across media, that continuously define fantasy, be it in books, in film or more recently in

interactive fiction and MMORPGs, where narrative is mixed with other offers and motivations. *Word of Warcraft*, for example, boasts 12 million people around the world engaging in this fantasy world, completing 'dungeons', forming guilds, completing quests and learning the lore, which together with backstories are written and read in numerous *wikis*, fan player websites and over a dozen novels. The book 'goes native' in the fantasy world.

Key recommendations for the industry for the future development of the digital book

Audiences and user needs

Producers should know their audiences very well. Ideally audiences ought to be involved in the production of every digital form: to research audience needs, goals and expectations, and what pleasures audiences take from the stories to be produced and/or adapted; to use audience research insights to help choose what to produce, what is likely to be successful, often drawing on existing stories, characters and themes to expand or adapt; and at later stages to inform improvements in the design of artefacts by testing them with potential users.

Publishers ought to engage in projects that aim to involve readers and other target audiences in research and co-creation activities that can help them understand their audiences better, including the ways they see the books, stories and topics publishers wish to work on in the digital space.

In order to achieve a good level of brand consistency with the source material, and thus design a new text that extends its style, pleasures and effects, it is important to avoid a mere re-skinning of existing patterns (such as game engines), and to engage in a detailed process of extracting possible themes that will inspire mechanics, aesthetic devices and conventions in the new medium. Understanding the views of target audiences is also useful in this regard, in order to avoid producer bias and expand the pool of ideas. The views of audiences — especially the kind of young audiences targeted by *Nature Mage*, used to consuming (and mashing) their favourite stories across media — should be analysed both in relation to the book and also other media. Their views and usage are less 'channeled' than in the past, for example when children treat illustrated books like tablets and attempt to pinch and swipe them. Often readers are also cinema goers and game players, and can more easily reimagine the characters they enjoy across media. Andrew Burn (2004) talks of a 'cross-media literacy' and shows the ways in which attitudes to the

several embodiments of Harry Potter across media intertwine and influence the evaluation and consumption of the texts.

The affordances of digital media can be explored not just to create new formats of the book but also to change the very way they are designed and produced. Digital platforms facilitate the engagement with audiences and encourage their involvement in the planning and sometimes execution of adaptations. A number of readers, website users, film viewers and game players are willing to engage in what is generally labelled as fandom or fan activities. They find the social and creative aspects of participation rewarding, but their involvement is also sometimes equated with the exploitation of free labour. When fans do come together and engage with authors and other producers in processes of discussing and creating adaptation materials we see in action collective intertextuality. The views of the source story and the intertextual repertoires of different actors come together in discussions around the shapes the adaptation should take, often influenced by different levels of experience with texts in the source and destination media. In small-scale online fora such as the Nature Mage community, authors can exert a high level of control and guiding direction for the adaptation, establishing canon and (more or less flexible) consistency rules on the fly. This worked well for an author like Duncan Pile, who wanted to keep a good level of consistency for his brand. The attitudes of producers to the "multiplicity' of interpretations by fans vary greatly, not necessarily aligning with size of the brand or of the producers, or whether it is a commercial or a fan-led project. However, for those working with popular brands, it is useful to be aware that — if such control is desired — in larger projects with larger fan groups who spontaneously engage in the production of derived works, control and canon are more challenging. Ultimately, different producers and different fan groups will have diverging views. A piece of advice for producers would be to listen to the views of fans too, even if this means having to come up with solutions that are harder to implement, such as the idea of including multiple layers of content in the Nature Mage digital book, with the more 'consistent' (selected or authorised by the author) at the top and other interpretations accessible with a click; and the design of game mechanics inspired by 'harder-to-gamify' elements of the narrative. Increasingly, in digital media genres such as games, producers allow creative input in terms of play: there is co-creation, as in the emerging societies in World of Warcraft, or open building of areas and whole worlds in other multiplayer games. Procedurally-generated games offer fantasy worlds based on rules without authorial control, and there are also experiences aimed at generating stories in this way.

When designing websites for crowdsourcing, producers should offer a mix of open-ended creative possibilities and more structured guided requests for participation. They should also aim to provide access to tools that can aid creativity and promote collaboration between participating fans, for example by setting tasks that require someone who is good at writing to team up with someone who likes to draw to create a comic strip.

Formats and genres

Producers should explore formats more suitable for their intended audience, taking into consideration their contexts, behaviours and expectations. Device ownership and usage ought to be considered, as well as looking at currently successful digital texts. Sometimes the use of existing platforms with stable formats is productive: less risky and the constraints in terms of aspects such as narrower design choices and the use of templates mean that designers can focus more on the ways the affordances can serve the story well.

Some people may argue that the *vanilla* ebook is the most successful format in genre fiction, so why do anything else? The research has shown that there is a market for other kinds of digital books, and that the market for ebooks is somewhat saturated. Of course people will continue to read good print or ebooks, but increasingly audiences will take pleasure with new forms of digital books and other kinds of texts that do the work of books.

Another, related, question may arise in the minds of my readers: why did I not attempt a more innovative form of digital book in the practical side of the *Nature Mage* project? The answer is simple: I did not have the technical capacity to do it, or the necessary funding, or managed to establish a partnership for the effect; with a story that sells 12,000 books it is very hard to entice partners or investors. Nonetheless, the story was very pleasurable and prone to the kinds of adaptation work envisaged: the use of existing formats, relying on iBooks Author as a possible platform for the production of the enhanced digital book, meant the team had to focus more on adding value with existing affordances and features, rather than invent new ones. However, this not meant it was not a worthwhile creative effort — as Janet Murray defended often constraints can make designers think more deeply on the needs of users, and think of ways in which what readers see and feel with the books could be expanded and enhanced in a digital artefact, often in ways that had not been tried or combined (for example, mixing the encyclopedic cataloging of story existents with creativity and participation in an online community).

Marketing and business models

The digital book needs more digital skills in traditional publishing, and more partnerships and collaborative projects such as those studied by Frania Hall (2014). Often book publishers are able to offer brands (stories, characters) already with a captive audience, with a world that can be expanded, whilst other partners may bring digital production skills and experience of digital marketing.

Producers may wish to experiment with contemporary ways of funding their products, for example via profit-sharing projects whereby independent collaborators get together to work on a project and receive a small share of any profits (a model used at one time by Noble Beast).

Crowd-sourcing of ideas and crowd-funding are also being used in the sector. Besides helping to generate or test ideas, these also contribute to discoverability by allowing the creation of a captive audience.

Models of monetisation taken particularly from the games industry include freemium products (free to start, paid to twelve deeper or further), demos and samples. Episodic gaming and serialisation of smaller chunks of content seem to work well in some contexts.

Classification and discoverability

Curation practices, including the classification typologies of digital books (and how these are clearly separated from ebooks and print) need to be improved in order to increase discoverability. The digital stores of many publishers ought to be reviewed, with special attention paid to the redesign of search criteria and browsing sections that permit users to hear about, find and look for newer kinds of digital forms of the book. Assumptions ought to be tested with real users, and for this techniques such as tree or card sorting may prove useful to help build more logical, user-friendly categorisations of products.

Other strategies, already mentioned, that may help discoverability, include entering digital awards competitions, producers creating their own websites to function as shop windows, and promoting their work via crowd-sourcing platforms.

A model for digital adaptation practice

Digital adaptations of existing books (or of a storyworld, a character, or even a theme for which there is a raft of previous texts and references) are very common in the industry; they are attractive for ready-made audiences who know and love certain stories, and for many producers will represent their first steps onto the use of digital media. The design of such digital adaptations ought to consider three main areas: story, audience and the destination medium (the technology). There is no specific order in which these ought to be approached; they are often and nearly always indeed approached simultaneously, in ongoing chunks of effort that bring together the necessary factors to produce something new. I would however recommend that story and audience should generally be approached before the destination medium, the technology — otherwise there is a danger of producing something simply to show off the affordances of a medium.

Analysing the story results in framing what could or should — and what should not — be carried onto the adaptation. Producers ought to define the storyworld, its ethos, existents and events; to produce guiding rules and principles, to geminate ideas and to structure adapting and expanding plots. The analysis can also produce themes that may serve as inspiration for features such as ludic mechanics in a hybrid digital text. The narrative mapping undertaken for the *Nature Mage* project provides a useful template.

The understanding of the story should not be attempted in isolation from the audience. It is the views of the audience that have also to be grasped. Whilst engaging with audiences and potential target groups to understand their views, producers can also learn the ways in which they use and engage with digital artefacts somehow related or potentially relevant for what they are trying to design. Finally, audiences can be testers of ideas, and in their own right be generators of ideas. The *Nature Mage* online community — and the reflection on practice explored in this thesis — provide a blueprint for producers wishing to engage with their audiences.

Looking at the destination medium, and choosing a format and genre, as well as platforms and devices, is closely linked to understanding the audience and their behaviours and expectations. It also involves considering which forms would result in a good fit with the storyworld and its themes (for example, the interactive fiction *80 Days* ties in very well with the spirit of the original story by Jules Verne). When considering what affordances to explore, it is important to check existing texts, in order to understand how these are structured, what conventions are used, and so on. The

mapping of kinds of digital books presented in this thesis, complemented by an analysis of a selection of works, provides a good starting point for producers wondering where to start looking for examples of digital forms of the book. The resources presented in Appendix 5, namely online publications that showcase and analyse digital forms of the book, can be used to look for further and up-to-date examples.

Designers then need to think about ways of fitting certain themes to existing conventions, and whether they can invent new representational devices. The specific affordances of the new medium, and the expectations of its current audiences (for example, game conventions and gamer cultures for a book to game adaption) ought to be considered too.

The new artefact is ultimately influenced by its source material (the book, the storyworld); by its audience's views, ideas and feedback; by the destination medium, its conventions and affordances; and by specific intertexts that often serve as inspiration. The biggest challenge is to achieve a good connection the source text, whilst simultaneously creating a new artefact that significantly expands the storyworld that is satisfying both to captive and new audiences.

Reinventing the book requires good design practices, based on an understanding of current practices and conventions in the digital medium of destination, but also the keeping of an open mind for the ways in which the affordances of the digital medium can be 'stretched' to create new ways of doing things. The essential point of reference is to think of users, their contexts, what they are trying to achieve, or the ways in which they get pleasure from a certain story — to then reinvent ways in which those needs, tasks, pleasures and expectations can be better served with a (better) digital artefact. Within this context usability is very important; familiarity with existing conventions has to be balanced with newly invented patterns, which should be clearly laid out to users of the new texts. Bells and whistles can often distract from good design; focusing on users, their current practices and their needs to imagine new designs is more important than showcasing all the new features of a technology. I believe there are a number of areas where publishers and digital producers can explore the affordances of digital platforms to come up with innovative processes and ways of working to create digital forms of the book. One of these would be to develop a process for working with new authors to co-create and use online affordances to develop and market as they write. For example, via the organisation of workshops with writers and designers in the narrative codes arising from -- or which can arise from -- the affordances of digital books and develop these together. And by launching platforms or online spaces to bring together amateur

creatives — from fans who want to participate to graduate or self-taught artists, writers and anyone else wanting to take part to develop their creative skills — with authors and publishers who need help producing content for digital media. Importantly, financial rewards and other kinds of rewards 'in kind', as well as copyright rules, ought to be defined from the onset.

Eric Huang calls on fellow publishers to 'not obsess on the book as the end result of [their] creative and business efforts' and 'think of [themselves] as storytellers first' (2014, p.ix). As we have seen innovating often also requires access to the rights skills, and experience of (the getting used to) the conventions and affordances of newer forms of media. But accessing these is not always easy. For example, where can a publisher find a game writer? Where can one find examples of innovative digital forms of the book? Where can aspiring producers of digital forms of the book look for inspiration? Are there any free tools available to produce digital books? In 'Appendix 5' I have listed a series of resources that meet these kinds of needs: websites dedicated to showcasing digital books, organisations and conferences dedicated to digital books, and digital production tools and platforms that allow producers to experiment with branching narratives, lean publishing, reader engagement, and other kinds of approaches.

But... is it a book?

The core thesis of my work is that digital media indeed provide opportunities for the creation of new kinds of books that can be valuable for both producers and consumers. But some will argue: are these even *books*? Are these artefacts that publishers should even bother with? A common remark from the core, from the more traditional corners and views is that many of the texts analysed here are not books - they are games, or apps, or something else, but definitely not books. But with media convergence, it is hard to tell. With convergence and the increasing pervasiveness of digital media, the separation between media and creative artefacts and industries has become a lot blurrier. Contemporary media, especially in digital media, is characterised by very high levels of hybridity. The alignment with *book*, *game*, *app* or another label is often a marketing decision that seeks to locate the product in the best store, or align it with the status of a more established form.

The digital medium is a meta-medium too, where modes are more important than media borderlines. Modes are combined and shared similarly across different kinds of artefacts, from different industries. Industry-specific conventions and practices surely shape digital artefacts, but borrowing and influencing transmedially is more often the norm rather than the exception. Another

argument is that, as with books, many of these artefacts also use the mode of writing extensively, which some print books hardly use at all. But with the novel as a yardstick, the comparison tends to include whether writing is used in ways similar to that which books reveal — in turn linked to the very goal of the book (tell a story, inform, teach, etc.).

One could argue that if some publishers and authors are making these kinds of new forms of digital books, it does not really matter whether they ought to be called *books* or something else.

Finally, these artefacts often *do the work* of books; in a way they replace books, for example when a travel guide app is chosen over a printed guide of a foreign city, or when a story such as that of Phileas Fogg's travels around the world is both read *and played* rather than simply read on the pages of a book.

Recommendations for academia and future research

The research raised a number of questions linked to the ways in which digital forms of the book, and particularly the more innovative kinds of artefacts, are being approached — or indeed at times ignored — by academia. How are different fields of academic study reacting to these more recent forms of media? Why are some fields largely ignoring them and others appropriating them? What multi-disciplinary skills, methods and tools are required to study them?

We are seeing converging formats and evolving genres in unstable, shifting digital landscapes characterised by rapid technological change. Academia should try to move beyond 'fixed categories and boundaries in attempting to respond to the ever shifting and evolving practice and affordances facilitated by new technologies' (Smith and Pearson, 2015, p.2; citing Page and Thomas, 2011, p.7). A focus on 'transmedial perspectives' rather than 'traditional disciplinary divides'⁵⁸ will be more productive in a media landscape characterised by convergence (Ibid., pp. 2-3). Academic fields that study the book have tended to remain attached to print and to uses of digital media that revolve mostly around established practices (such as the use of social media to promote print books). The study of newer digital forms of the book requires the use of multidisciplinary approaches that tap both history of the book and publishing studies and media and cultural studies (and sub-fields such as game studies and participation and fan theories). The methods needed for this also originate from across fields, from historical and textual analysis to

⁵⁸ The authors are referring to film, television and video games, but this can also apply to the relations between books and other media.

production studies (with the analysis of production documents, statistics and interviews) and more ethnographic approaches for tackling user-generated content, fan participation and the use of games, apps and other kinds of digital media artefacts.

The digital forms of the book that we have seen in my research are hybrid forms, in-between media and intermedial conventions, and typically shaped by numerous intertexts across genres. Importantly, when narrative reaches a new medium — particularly a medium such as game, which is not just concerned with narrative — the resulting texts are not simply new instances of the source story or sites for transmedial storyworld expansion. Media, platforms and genres such as videogames, social media networks and fan websites also serve other functions, offer other pleasures and meet other needs, motivations and aspirations: ludic, creative, social, to do with cultural capital and with the lives and experiences of consumers and participants.

In this research I have mixed methods and theoretical approaches from new media and applied them to the study of the publishing industry and transformations of the book. Very few studies have done this, but in an increasingly multimodal, converged mediascape, book researchers ought to draw on tools and methods that can help understand its digital transformations and the ways in which the book is merging with other media, formats and genres. Given the ongoing importance of stories originating from books even in new media texts, adaptation theory is also relevant. For projects that involve readers and other consumers, fan theory provides valuable insights. Both of these theoretical areas were applied to a study of publishing and new forms of the book.

The research applied a very wide range of methods in complementary ways: research with readers, ethnographic analysis of the online community participation, textual analysis of numerous websites and artefacts, an exhaustive scanning of industry news, interviews with key producers, and reflection on practice drawing on the hands-on experiences of building and managing an online community and creating design concepts for two digital adaptations of the *Nature Mage* books. Attention was paid to avoiding bias, to ground findings on the views of research participants, and to provide a balanced view of different producers and approaches to the digital book. Importantly the research and the hands-on project have not steered away from tackling more challenging topics and aspects of practice, for example the difficulties with attracting and rewarding participation, questions around free labour, and the design of harder-to-adapt pleasures of the books. By drawing on intertextuality theory for a visual mapping and location of the *Nature Mage* adaptations the research advocates transparency in the discussion of the intertexts that influence a

new digital artefact. Transparency was also the principle adopted in the analysis of the final designs as ultimately the outcome of negotiation and debate between producers and consumers (and sometimes of control by producers) in processes of collective intertextuality.

Crucially the research provides academics with a hybrid toolbox of theories and methods to analyse digital forms of the book, and equips producers with a series of useful reflections, concepts and applicable methods that can help them identify affordances in digital media, involve readers, and design artefacts that better serve the needs and expectations of their consumers.

Drawing on my practice-led experience in the Nature Mage project and on previous professional projects that incorporated audience involvement and narrative analysis approaches, I would next like to embark on another hands-on project, aimed at production and research, that looks at creating and testing a new kind of production tool for cross-media narrative adaptation. The plan is to create what I have for now called 'Cross-Media Adaptation Cards' to help generate conversations, design workshops and research around the stories of source texts and the best ways of adapting them onto digital media by tapping its specific affordances. This practical tool in the form of a series of printed card decks — would aid producers in the design of cross-media adaptations of story-based source texts, for example a team working on the adaptation of a fantasy book into a game. As I and other researchers have shown, a good knowledge of the narrative (and how it is experienced by consumers⁵⁹) and an understanding of the conventions and affordances of the destination medium are both essential to produce a good adaptation, so as to define a good fit with existing conventions, and the invention of new ones. The cards would help in structuring and managing conversations around the narrative of the source material, and on the conventions, aesthetic devices, design patterns of the destination medium (including relevant devices, genres and formats). They would include written cards with categories for the narrative analysis and discussion (for example, with the constituent parts of narrative, i.e. existents, events, themes, ethos, and so on) and blank ones for producers and audiences involved to write down their views, to bring their own feelings and intertextual repertoires into the collective mix.

By playing with the cards, by moving and sorting narrative elements, producers will be able to generate conversations around the story, its key moments, the features of characters, possible backstories, gaps to fill, and so on. The definition of key aspects of the narrative, of possible themes and areas to explore in an adaptation (say a game) and any early ideas would be followed

⁵⁹ Whether readers, TV or film watchers, theatre goers, and so on.

by a discussion guided by 'destination medium cards', which would include general affordances, conventions and design patterns of the medium, to be complemented with writing in blank cards specific ideas taken from specific intertexts (e.g. existing games).

The cross-media adaptation cards distill many of the findings and key theories covered in this work. They could be used in a real production context, and aid in the definition and study of processes of transmedial narrative adaptation, whilst contributing to an understanding of the ways in which producers manage the identification and exploration of specific affordances of digital media in specific contexts.

The future(s) of the book

The *book* is seen in this study as an enduring cultural form whose influence is felt beyond paper pages. Both where stories, functions and genres travel from the book across media to inspire a myriad other texts, and in the ways in which its conventions influence newer kinds of books and media texts, the book is a mutant, a shapeshifter that can sneak into new areas. 'It is necessary to continuously review the definition of the book moving from one bound by its material form to one determined by its function as a means of communication.' (Weedon et al., 2014, p.108). The new media forms analysed in my research 'define the outer borders of the book system', which increasingly overlaps with other forms of media in hybrid texts characterised by convergent genres and conventions. 'As our social interactions are changing with new communication technologies, so is the book, and we should view this as a positive change.' (Ibid.)

Espen Arseth believes that 'the media serve the messages, rather than dominate them completely. We choose the media that serve us.' (Dichtung Digital, 1999). This is extremely important and aligns with the views of Gunther Kress (2010) on the appropriateness or suitability of multimodal design ensembles, by different people, for different purposes. Matthew Kirschenbaum believes that 'there is no one ideal form for the book to assume in electronic space; models of the book will instead need to be implemented to serve the needs of different users and constituencies.' In other words, 'the extent to which [...] affordances are reflected in [electronic books] can help provide more thoughtful and appropriate solutions for different user communities.' (2008, n.p.)

The book could only evolve in myriad digital forms because some producers attempted to explore the affordances of the medium in novel ways. Not all will lead the way, of course, but producers (publishers, designers, and others) have a 'duty' to innovate. Lev Manovich says that we

do not know what radically new cultural forms will look like but cries out to artists and critics to 'point out the radically new nature of new media by staging — as opposed to hiding — its new properties.' (2001, p.330) It is important to explore the new, more specific affordances of the digital medium. Simpler forms of remediation hide them by using a new medium to simulate an older medium and its ways of doing things. Digital media both strengthen existing cultural forms and languages and it also open them up to redefinition. This opening up is important 'to see the word and the human being anew...' (Manovich, 2001, p.333) Murray has a similar view. For her designing any artefact using the digital medium should be seen as 'part of the broader collective effort of making meaning through the invention and refinement of digital media conventions' and important because 'when we expand the meaning-making conventions that make up human culture, we expand our ability to understand the world and to connect with one another.' (2012, p.2) Like Katherine Hayles, I do not wish to 'argue for the superiority of electronic media' but to point towards the potential of the characteristics of the digital medium to create new kinds of books, to see the affordances of the digital medium 'as resources in creating electronic literature and responding to it in sophisticated, playful ways.' (2004, p.87)

I predict that in the next five to ten years new kinds of producers-publishers will continue to emerge and lead the innovation with new forms of digital books, many of which will remain *niche* artefacts. Both industry and academia will become more open and flexible with regards to the ways they classify actors and publishers, and to the things they think they can or ought to make. Quality will be a crucial factor for the success of digital forms; some digital publishers will continue with a reputation for 'digital quality', which will be more widely recognised in book-related forums but increasingly more widely in other industry and merged-industries fora. Discourses around threat will not disappear entirely, but both industry and academia will pay more attention to hybrid forms and to accompanying multi-literacies of audiences (and of producers, who will need to be knowledgeable across a wider set of formats and genres). The labelling and alignment to a single medium or industry will lose relevance. Producers and audiences will focus more on *storyworld* (across media and formats) and on *genre*. Discoverability will continue to be problematic as hybridity and convergence increase; tapping onto existing groups such as fans of certain worlds or themes will form an important part of marketing strategies.

The affordances of digital media (in their multitude of devices, platforms and genres) offer real potential for the transformation of the book and for the creation of new kinds of artefacts that do the

work of books and mix its functions and pleasures with those of other media forms. Trying to simply replicate older forms fails to tap this potential and stifles innovation and creativity. By 'letting go' of the book (as a rigid form) and looking instead at the affordances of digital, and at users, their contexts and needs, producers will be able to employ good, purposeful design to create new forms of the book that are cherished by readers (and *users* and *players*). This is already happening, and we can see great innovation in the area. As ebooks reach a moment of crisis and publishers look to reframe their focus in digital media, print books have experienced a great revival in recent years. Publishers should stop worrying about the book's survival, the future of the book will be plural, in a multitude of formats, with digital forms ranging from those closer to print to others that do the work of books but also converge with other media, genres and formats in hybrid texts that mix modes, uses and pleasures.

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Appendices

Appendix 1: The *Nature Mage* **story (a synopsis)**

Below is a synopsis for the first book, which provides a good introduction to the story.

Gaspi is an ordinary fourteen-year-old boy growing up in the mountain village of Aemon's Reach. His life revolves around his two best friends, Taurnil and Emea, and his reclusive guardian, Jonn. He is picked on by the village bully, Jakko, who is jealous of Gaspi's friendship with Emea. Gaspi has started to have confusing feelings for Emea, and at the village dance they kiss, sparking a confrontation with Jakko. Later that night Jakko's drunken father attacks Jonn on the way home from the dance, and in angry defence of his guardian, magical power erupts in Gaspi. He discovers that he has the ability to command natural forces and creatures, but his power spins out of control and he nearly kills Jakko and his father before collapsing, so drained by the magic that he is left at the brink of death. The village healer restores Gaspi to health but tells him that his magic is rare and dangerous, and that he will have to travel to the city of Helioport to study at the College of Collective Magicks. The healer's wife has a prophetic dream, revealing that Taurnil is destined to be Gaspi's protector and that Emea has a latent healing gift, and so when Gaspi leaves for Helioport, he is accompanied by Jonn and both of his best friends. On the journey they meet Lydia, a gypsy girl also travelling to Helioport to study magic. At her camp they are attacked by a terrifying creature that Gaspi uses his powers to defeat, but again he is left unconscious, and Jonn rushes him to Helioport, riding through the night and arriving just in time to save his life. Jonn meets the charismatic chancellor of the college, Hephistole, and tells him about the attack on the road. Hephistole identifies the attacker as demonic, and begins to suspect that an old adversary, Shirukai Sestin, who had long been thought dead, is behind it. As other similar attacks happen in the surrounding countryside, always targeting magic users, he begins to prepare for what looks like it might be an attack on the college itself, though the reasons behind it remain a mystery. Gaspi, Emea and Lydia begin their studies, and though Gaspi overcomes his difficulties and learns to control his powers, Emea struggles with her confidence and fears expulsion from the college. Meanwhile, Taurnil enrols as a city guards and starts training in earnest, determined to be ready to protect Gaspi when the prophesied

time comes. When Taurnil is mortally wounded in combat, Emea discovers unknown depths to her magical talent and performs a miraculous healing.

Gaspi's experience as a student is plagued by the attentions of the most popular boy in the college - a privileged magician called Everand who is jealous of Gaspi's superior arcane strength. The conflict between the two boys escalates, and when Gaspi finally stands up for himself and fights back, Emea is upset and they nearly break up. Their relationship survives the crisis, however, and when tensions break out between Everand and Gaspi once more, Emea discovers that the conflict has been stoked and manipulated by Everand's scrawny side- kick, Ferast. When she publicly confronts Ferast about it, Everand rejects his former friend and apologises to Gaspi for how he has treated him. Gaspi enchants a staff for Taurnil's Nameday gift, imbuing it with several magical properties, including the power to harm demons. In the weeks that follow, the demonic attacks increase and Hephistole decides to bring the local populace into the city. At long last, the dreaded attack happens; a force of demons and magically warped wolf-like creatures called wargs enter the city at night. Gaspi is forced to fight four demons at once, killing two of them before being overwhelmed by the others. Taurnil rushes to his aid, destroying the remaining demons with his enchanted staff and saving Gaspi's life. A secondary force of wargs erupts from an unknown portal in Shirukai Sestin's abandoned pyramid deep within the college, and they face a battle on two fronts. Hephistole and Gaspi become trapped in the chancellor's office, blocked from using magic. After making a daring escape, Gaspi brings help and they corner the last of the attackers. It uses an enchanted device to escape but fails in its mission, which was to capture Hephistole and take him with it when it transported out of the college. The battle has been won but Hephistole thinks it is only the beginning of what is to come. Gaspi and his friends travel back to Aemon's Reach for the summer, wondering what dangers await them on their return. (Pile, 2013, Kindle version, section 'Synopsis of Nature Mage')

Appendix 2: Online survey selection

Here I present the answers to the most interesting open-ended questions to the online survey of readers and online community users, which have influenced the design of the digital adaptation concepts⁶⁰.

⁶⁰ Note that images, rather than actual tables, are shown because the survey is no longer available andI had to use screenshots that were saved at the time the initial analysis was carried out. This was not an attempt to circumvent word count regulations.

Q12 Is there anything unique about Nature Mage? Is there anything that makes it different from other books you've read?

Answered: 22 Skipped: 44

Responses		
Yeah. It's just really go such as gypsies and D	ood how other types of magical beings are incorporated in the story lines ruids	
	r to most books, I have read. But I thought it was unique because it contained s, such as love and adventure.	
the warmth and huma	nity of the characters	
Its a different style to t	nt style to the other ones different parts from other books in it	
it has many different p		
Yes one of the things	is the different kinds of mages and the elementals	
includes a bit of horro LOVE adventure! Also	bit of romantic stuff in it that doesnt include vampires or werewolves. It r in bits about Shirukai Sestin. But its mostly adventure and i absolutely what surprised me was that most books that include mages are set in modem hat it set in like Victorian times but they have some pretty awesome gadgets.	
its quite a magical bo	ok	
Yes, this is the only bo	ok that has a boy that has powers of the earth it is very unique!	
N/a		
not really		
not really		
Don't know really, just	that there awsome	
its all based around na	ature	
Not really		
I find it hard to get far	tasy books so I liked how it was all magical	
That its not called Na	ture Mage	
Not really		
It was more serious		
I like how there is a ma	ade up sport!	
n/a		
It's just different		

Q13 What were the best parts of the story / stories in the book(s) that you've read?

Answered: 22 Skipped: 44

Responses	
All of it	
l liked the part	where Gaspi met Lydia and the other gypsies.
the openings of both books	the first 2 books, the tournament at the end of the 2nd book, the battle scenes in
All of it	
i liked the bit where gaspi took the test at helioport I enjoyed the part with the dragon or when Gaspi send time with Heath.	
ilike all of it	
When he first di	scovers he has special powers
can't remembe	•
When they were	playing ice hockey
When they are	playing ice hockey, because i could imagine it in my head
The bit where 0	Saspi leams how to use his powers
when the boy d	scovers his powers
I haven't read n	nuch to know
llike it when G	aspi go to the college and starts to learn how to learn how to control his powers
Don't know	
cant remember	it was a long time a go but probably the begining
When Gaspi was playing ice hockey with the bully	
I'm not sure.	
the beginning a	and the build up
Its all good	

Q14 Is there any part of the story that stood out to you, and that you remember particularly well? What was it, and why do you think it stuck in your mind?

Answered: 22 Skipped: 44

Responses
In the first book. When he finds out he has powers and at the college when he is taught magic
I remember the bit where Gaspi accidentally attacked the boy after the dance because it was shocking and surprising.
the story about slavery as it's a problem that still exists today
The battle at Heloport
i remembr the bit most when gaspi stood up to the bully but i don't know whhy that part in particustood out
I think the fact that Taumil honored Lydia so much that he would have sex with her before marriage.
The fight during the competition near the end of Nature's Servant really stuck in my mind as I ha to think about all the action taking place. Also whenever I had to put it down I would try to predict what would happen next-if Gaspi and his friends would make it out alive, would the elementals be alright. I was so devasted when the fire elemental was killed though. :'(
all of it really its all great
The part when John says he will look after him better. its stuck in my mind because it was very touching
the beginning
not really
not really
Everything
when it mentions that his parents die
when they are playing ice hockey, because i could build up an image in my head.
The Battle at Heloport it was very fast moving and realistic in a way
I don't
Not really
The uncle was at the towns disco and started to feel happy
No there isn't any part of the story that stood out to me.
can't remember read nature mage quite some time ago
The training in the first book for gaspi and his magic

Q22 What do you think of the idea of being able to upload your own writing, art and other stuff based on the stories?

Answered: 29 Skipped: 37

Responses
It's good
i think this is a really good idea and it a good way of gettng you story out there.
it's a bit like writing fan-fictions
I really like this because it feels good to have your work read/seen by a published author.
it's a great idea
I think it is good
I like that we can share our stories with others and I especially like the fact that a published author looks at the work.
it's a good idea, but if you don't like the books it's dull and hard to relate to
i think its a really good idea
I think it is good
I think it is good as you can talk and interact with other who also like writing. They can also comment on your work which means you can improcve your writing.
i think its really good
I love to write but am very busy right now.
I think its pretty awesome as we (the fans) can share ideas on what can happen next and discuss parts of the books we enjoyed and didn't enjoy.
Really good idea, it promoted all aspects of creativeness.
I think that be amazing since you can give people your own ideas for the books
i think it is good because you can share you ideas with others
good
good
good
That is a good idea
I think it's very good
i think it is really good as you can comment and interact with other like you who also like writing and you can get feedback from an author.
I think it is a great idea as it gives you the chance to get involved and see other people work who have the same interest in writing as you. You can also get feedback from a real author which is great as then you know if there is anything that you need to improve on.
I think it is a great idea as it gives you the chance to get involved and see other people work who have the same interest in writing as you. You can also get feedback from a real author which is great as then you know if there is anything that you need to improve on.
I think this is a great idea as you can share your writing with other people, and get feedback of your fellow class mates and a professional writer.
alright

Appendix 3: School workshop discussion guide

This was used in the workshop conducted with secondary school pupils.

Discussion Notes - PART 1: THE BOOKS

READERS

- 1. What were the best parts in the books?
- 2. Was there anything unique / special?
- 3. Is there anything you'd like to read more of / know more about?

NON-READERS

- 1. What kinds of books do you enjoy?
- 2. Who are your favourite authors? Why?
- 3. What do you enjoy most, and least, about fantasy / adventure books?

Discussion Notes - PART 2: THE WEBSITE

USERS

- 1. How can we improve the website?
- 2. How can we encourage users to comment / upload more art or writings?

NON-USERS

- 1. First reactions to the NM website?
- 2. Have you ever used any website forums or blogs?
- 3. Have you ever uploaded your own stuff (like videos, artwork, stories, photos)?

Discussion Notes - PART 3: iBook IDEAS

- 1. Opinions about iBooks
- 2. Your ideas for Nature Mage iBook
- 3. Reactions to our ideas (shown on screen)
- 4. Reactions to new website section 'iBook Mission Corner'
- 5. Other comments

Appendix 4: The Nature Mage online community

Design of the community and tools used

The online community was built using the Ning⁶¹ platform and was live online between July 2013 and July 2014. Readers and art students were invited to discuss the books, provide feedback on our ideas, propose their very own ideas, and create and upload derivative works - drawings, stories and any other materials based on the books - with the intention of using these as inspiration in the production of digital adaptations, including an enhanced digital book and a video game. English and Arts teachers used it to encourage creative work (writing and/or art) based on excerpts of the books and framed by curriculum needs. The illustration students created visual representations of settings, characters, weapons and so on, which in turn generated discussions among users, the researcher and the author, for example about whether a certain drawing of a character constituted a suitable representation. At this point it is important to note that the online community also ended up serving other secondary purposes such as promoting the brand and the books and the collaborators involved (the author, the artists and the researcher).

The design of the community was thought to aid and encourage participation by making it as simple as possible to observe and upload derivative works and leave feedback, ratings and ideas. The design involved a good amount of thinking about the different parts, about the whole structure, and how the parts would connect; the sketches in Fig. 23 demonstrate some of the work involved.

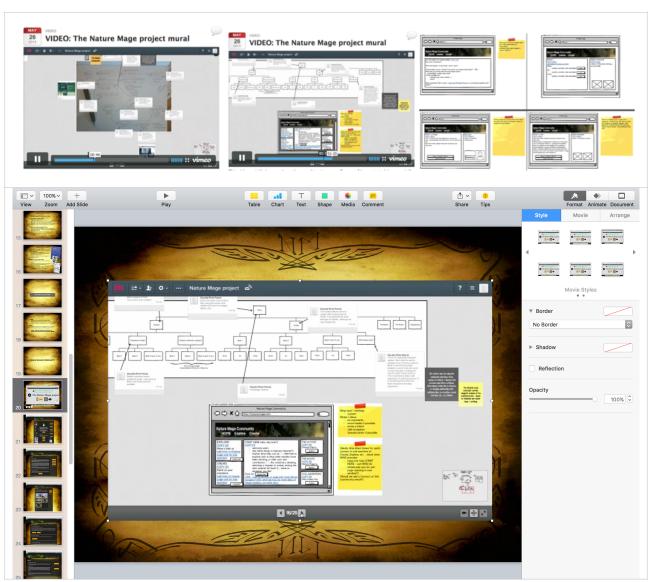
Gunther Kress (2010, pp.142-143) thinks that contemporary social conditions that stress choice and the appeal to "interest" (by consumers, or for example students) means an emphasis on agency in participation. Design also designs (defines) social relations, and in contemporary texts (such as multimodal textbooks and websites) there is less of a "command" relationship, and more of an invitation to take part, to choose from a number of possible ways of navigating the text. This was precisely the goal in the *Nature Mage* project. Now, when texts are less linear, when there are more options for users, it is also important to give direction and set the ground for engagement and participation (Kress, 2010, pp.169-170). Artefacts that are too open or complicated and with poor user interfaces and aids to new users run the danger of quickly losing their users as drop-outs.

The design ought to include a consideration of the audience, of how familiar they are with similar texts and actions, in order to maximise engagement. Kress exemplifies this by inviting

⁶¹ http://www.ning.com.

readers to look at two websites aimed at audiences in different generations: the BBC and the CBBC homepages. "The more orderly arrangement of the BBC homepage is meant to appeal to a generation which might still be used to more traditional pages and their layout, which still had - in potential - a reading path." (2010, pp.171-172) This also helps explain why older readers may prefer readers and ebooks to game-books and story apps that are more free, open to choice and exploration, and characteristically more multimodal. Older readers are familiarised with a text-on-a-page way of making meaning.

Figure 23: Design sketches for the online community



The design process involved a series of meetings to discuss objectives and options in detail, focused mainly on its structure (the sections and what was on offer to users). All meetings were documented, with developments informing a series of initial hand-drawn diagrams, leading to

website wireframes and finally a working prototype⁶² made with *Balsamiq*⁶³, a piece of software design to make mock-ups and wireframes. The prototype was shared with the author, who drafted the copy with some editing and proof-reading support from me. As the sections and content grew, the different pages were reviewed and revisited with tweaks several times. Before opening the community to the public I also set up web metrics as provided by *Google Analytics*⁶⁴ to collate metrics on usage of the website, and quickly identify any potential problems with navigation and functionality, as well as with the "stickiness" of the website. By analysing statistics on time spent on each page, pages where users were leaving the website and the navigational paths through the website it was possible to understand how the website was being used, and make any tweaks to improve it.

It was envisaged from the start that there would be different kinds of users. From previous experience and from statistics relating to co-creation and participation on websites, I predicted that most visitors to the website would not be contributing with derivative works. However, they could still rate an image by simply clicking on the star rating icon, share something using a social media widget, add a written comment, or simply observe. Essentially, the design of the community took into consideration the needs and motivations of different types of users, and the digital behaviours and knowledge of the target audience.

Gunther Kress (2010, pp.43-46) explores how rhetors (the producers and the designers of communicational artefacts) always have at least an imagined audience in mind when designing a multimodal text such as a website. And they (ought to) ask themselves questions around the "characteristics" of their audience, what resources will be more appropriate, what relations of power will be defined, and so on. The questions we ended up asking ourselves and discussing were indeed very similar. The main goal was to encourage participation, particularly of the type that could add user-generated content, but other kinds of less intensive participation were also considered as this excerpt from my research diary shows:

We discussed changes in the headings / names of the main sections on the community, namely "create" and "comment" - the idea, from Duncan, was that by only asking for contributions we risked alienating a kind of user - the consumer / voyeur who enjoys looking

⁶² This video provides a more detailed overview of the process. http://vimeo.com/66992881

⁶³ https://balsamiq.com/

⁶⁴ https://analytics.google.com

and reading but not necessarily adding anything - my thought is that as we aren"t expecting thousands of potential users to flock to the website, we want to make sure we maximise the few, by converting as many as possible into users (whichever their level of contribution). interesting from multimodality perspective - community actually asking users to do something - it positions them as contributors. - instead of "comment", Explore (thinking commenting is a kind of given that users are accustomed to.

This shows the importance given at the time to ways to structure the website, and how to frame participation, with evident tensions between an expectation for participation and the realisation that not al users - in fact a minority - typically participate in (arguably) meaningful ways. Hurdles to usage and registration were reduced by allowing free access for browsing but asking users to register to leave comments or upload any materials. The website copy was fine-tuned with a young adult target audience in mind. One of the main insights for the audience was that it generally made extensive use of social media to share information and experiences, which meant that it was essential to integrate social media sharing; this included the ability to sign up using Facebook, Google and Twitter accounts, and tools to rate and share content: Facebook Likes, Twitter feeds and Google+.

Fig. 24 shows the final structure of the website through the use of the wireframe derived from its design prototype.

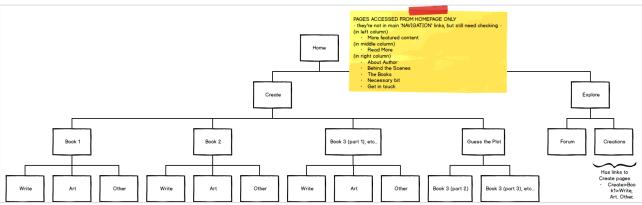


Figure 24: Final community wireframe

The structure was intended to be simple and easy to grasp, highlighting a quick explanation to users of what they could do in there. From the homepage users could easily access all areas, which could also be done via the navigation bar. Buttons – rather than hyperlinked text – were

used to facilitate use on tablets and mobiles. The design was responsive, with the several panels being displayed differently across screens of different sizes.

There were three main areas in the website:

The "Explore" area, where users could simply see what others uploaded, comment, rate and share through social media;

The "Create" area, where users could upload numerous types of media, organised by different books, kinds of content, and themes;

And the "Forum" area, where users could engage in discussions started by the community administrators (author and researcher), or start their own.

This is how users were welcomed by the author in the Homepage (see Figure 25):

Welcome to the Nature Mage community! Recently, people have been telling me they"d like to have a go at re-writing their favourite scenes from the Nature Mage series, or drawing some of their favourite characters. It struck me as such a great idea I've been working hard to make it happen ever since. And here it is – a fan based site where you can post pretty much anything that takes your fancy about the series.

From the Homepage users could access several pages with static and dynamic information about the author, the books, "behind the scenes" (about the people involved in building the website) and "The necessary bit" (on community rules). There was also a "get in touch" button (which revealed an email), a community activity feed (showing latest additions), featured content pages (selected by myself to highlight content), and member profiles.

Figure 25. The Nature Mage community homepage



One of the invited artists worked on the creation of a background and a logo for *Nature Mage* and the online community based on a series of images sent by Duncan. The logo and backgrounds created by the artist (see Figure 26) pleased the author greatly as, in his opinions, they captured the essence of *Nature Mage* in a very beautiful and original manner.

Figure 26: Nature Mage logos and website background



The green globe symbolised the magic of the Nature Mage, who controlled the forces of nature. The logo letters were infused in this kind of magical, fluid green, whilst the website background was clearly associated with ancient texts, as a kind of old parchment bearing the stylised initials of the Nature Mage. It was important to the author - and for me - that the online community achieved a good level of consistency with the spirit of the story. Therefore, a good amount of effort was dedicated - framed by the possibilities of the digital platform and the ability of invited artists - to the choice of colours, fonts and graphics used.

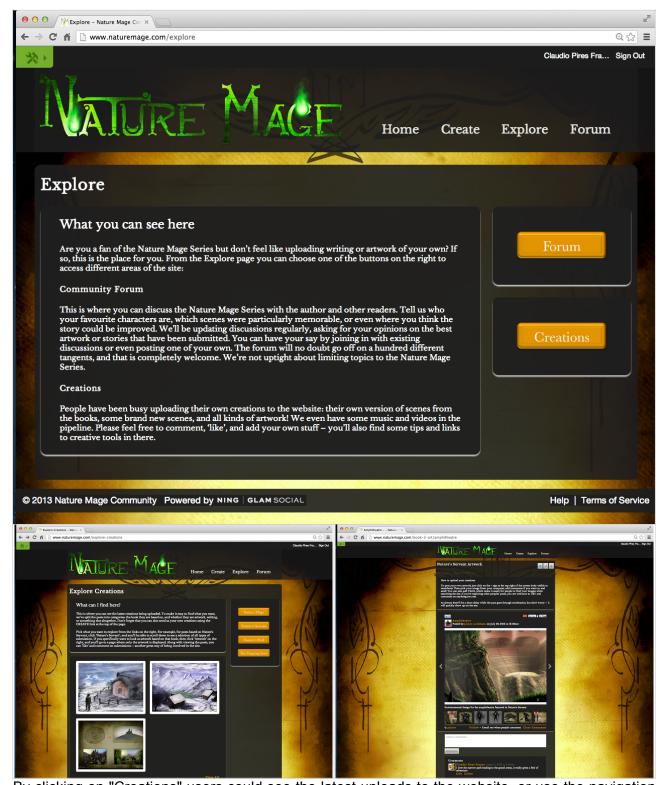
Returning to the website structure, the "Forum" section (Figure 27) included discussions initiated by the author and I about certain characters and plot events, about what was to happen next in *Nature's Peril* (the third volume, which was being released in parts at the time of launching the community), and other themes related to the stories.

Figure 27: Online community - "Forum"



The "Explore" area (Figure 28) directed users to either the Forum or to see the "Creations" (all the content uploaded by users).

Figure 28: Online community - "Explore"



By clicking on "Creations" users could see the latest uploads to the website, or use the navigation buttons on the right to see uploads ("creations") for each of the three books (there was a separate button leading to a separate page for each) and for what we called "The ongoing story". In the latter users were invited to send their own ideas or predictions about how they thought the story would unravel in the next part of *Nature's Peril*. Under each of the three books users could explore

- and eventually add - the latest creations for that specific book, or look under more specific headings ("Art", "Writing" or "Other"). Art and writing are self-explanatory — they encouraged derived stories, or any other kind of writing, or visual representations — and "Other" included anything other than artwork and creative writing; As Duncan explained it as follows on the final version of the website copy:

If you like to think outside the box, and want to send us something completely different, this is where to do it. I'm imagining animations and videos at this point, but you may have another idea altogether. Anything is welcome! To upload your madcap creations, click on the + sign at the top right of the screen. Give your post a title that makes it clear what your post is about (for example "Animated Battle with a Snatcher" or "Photos of places that remind me of Nature Mage").

Clicking on "Create" from the homepage button or the ever-present navigation link at the top of the page would show users an explanation about the *Nature Mage* project, as follows:

What can I do here?

This is the bit I'm really excited about. Writing brings me such satisfaction. It brings the best out in me, stimulates my creativity and has become a lifelong passion. I firmly believe creativity does this for everyone, whatever form it takes, and one of the most enjoyable things about being a writer is engaging with other creative people. In the "Create" section of the website, you can upload your own works based on the Nature Mage Series. You can post anything you like in any style, whether it's creative writing, artwork, music, an animation, or even a video.

If you're a writer, perhaps one of the characters from the series could do with a back-story? Or maybe you'd like to write an alternative ending, or a scene you wish had been written, or even something that is yet to come. What's the history of Bonebreaker (Baard's enchanted axe), or Sabu's scimitars? There are no limits. There's some awesome artwork already posted on the site, but please don't be intimidated by the quality of it. Some of the drawings have been done by art students on the brink of their careers and they are naturally very impressive, but every last scribble is welcome on this site. I am awful at drawing, so I can promise you that whatever you post here will be better than anything I can produce. I'd love

to see characters, demons, weapons, maps, places, or anything else that takes your fancy!

This is all about creative passion, not creative perfection.

Users who wanted to upload their own derivative works could then choose to either look forward to what may happen next in *Nature's Peril*, or produce and send works related to any of the volumes published thus far, and in any of the three categories mentioned above: Art, Writing, Other. User uploads and content were moderated to avoid any inadequate content. All uploaded content was pre-approved, whilst comments on content uploaded were moderated after publication.

Copyright challenges in co-creation

Anyone wanting to upload content on the website would be asked to register. On registration we collated an email address, a nickname, a date of birth (to ensure we asked whether the participant was at least 16 years-old) and a few details about them, such as Nature Mage books read and favourite books of all time65. The last step on the registration asked users to read s series of rules (that were also accessible on the website) that we called "The necessary bit". The very name is revealing of how challenging this was as, from the onset, it was a piece of content, of written copy that had to be there but did not seem to add to the enjoyment of the website; if anything it was a hurdle, a hinderance on the very objectives: allowing users to have some fun by creating, observing and discussing the Nature Mage stories and derivative works. Here is the first draft:

The necessary bit. This is a teenager-friendly site, so Claudio and I will moderate the posts to make sure being here is a positive experience for all concerned. That doesn't mean that posts will be removed just because they are critical of my writing. Any comment, positive or negative is welcome, as long as it is done respectfully and constructively. We will not publish any abusive content, random comments, and of course spam. If you want to get in, you must respect everyone else in order to be respected. We don't anticipate any real issues with this, but it's important to be clear from the outset.

⁶⁵ We also created an online survey at a later date, to collate even more data about our users; the results are discussed later.

This site is operating under a creative commons license. This means that every submission, including anything I post, can be used commercially. I want to be up front about this from the start. Claudio and I are thinking about creating an interactive book (I-book), with all kinds of extra features such as 3D maps, artwork, alternative story lines etc. If we particularly like some of the posts or artwork on this site, we may well use them in the I-Book. Imagine a book full of different types of illustrations of weapons, characters and demons. You click on it, it pops up, you can turn it round, looking at it from all angles. I would love to see this come to pass. If your submission ends up being used in this way, we will always do our best to let you know in advance, and you will be acknowledged for your work.

The content above is divided into two clearly distinct areas: the first is about how users are expected to behave on the website, assuring it will be safe to use; the second part relates to copyright, one of the hardest areas for us when we were discussing the website copy, and how to deal with co-created content. Part one was fairly straightforward, but for the second part we ended up producing at least three content revisions before we were happy enough to publish it. On a subsequent version, the "creative commons" bit was dropped, and the description of eventual content for a digital book (an "iBook" as the author came to call them⁶⁶) was slightly changed to become less explicit about the ways content would be used. You can read below the main parts:

[A]nything submitted to this site can be used for commercial purposes by myself and Claudio. If we particularly like some of the posts or artwork on this site, we may well use them in the iBook, or in some other project in the future. If your submission ends up being used in this way, we will always do our best to let you know in advance, and you will always be acknowledged for your work.

Essentially, this notice told users "we can do whatever we want with your work", even make money with it. We would however inform and acknowledge the contributors whose works were selected. My opinion at the time was that a Creative Commons license would be fairer as it also gave contributors the right to use their works whichever way pleased them; the author, however, preferred to keep exclusive rights to the use of any derivative works. Or at the very least not even

⁶⁶ The use of "iBook" but he author is linked to the fact that at the time we were considering using the iBooks Author tool — mentioned in the chapter New Media Forms of the Book — to produce an initial prototype of the enhanced digital book.

raise the issue, or point to the possibility that works could eventually be given other uses by their creators. Again it felt to me a little like we were taking away but not giving much in return. It was an ethical question, and somehow I felt contributors ought to get more out of their participation.

Soon after Duncan requested the copy to be tweaked again. The most relevant bits shown below were taken from the latest and final version used on the website until we closed it in July 2014.

We want to be upfront with you and say that anything submitted to this site can be used for commercial purposes by myself and Claudio. If we particularly like some of the posts or artwork on this site, we may well use them in the I-Book, or in some other project in the future. If your submission ends up being used in this way, we will always do our best to let you know in advance, and you will always be acknowledged for your work. No-one else will be able to use your work commercially, so you can rest assured that anything you submit to this site will only ever be used in connection with the Nature Mage Series.

If you want to embellish someone else's writing or artwork, please always ask for permission first and ensure that you cite them as the original writer or artist. If you want to ask for someone's permission to use their work, just post a comment under the artwork or writing you want to use asking if it's okay to do so. If they respond and give you permission, then by all means go ahead.

We sincerely hope you collaborate with each other, as working with other creative people can be inspiring, but it's important things are done the right way. We also ask that you don't upload or embellish artwork or writing found elsewhere on the internet, as that would be a breach of the artist's or writer's rights. It's a mistake that can be made innocently, so best to mention it upfront.

You grant us an irrevocable, non-exclusive, royalty-free, worldwide and transferable license to use, edit, modify, truncate, aggregate, reproduce, distribute, prepare derivative works of, display, perform, and otherwise fully exploit the content you upload, including the right to sublicense use of the content, in any medium or method, whether now known or hereafter devised.

Using our website does not give you ownership of any intellectual property rights in our Services or the content you access. You may not use content from our website unless you obtain permission from its owner or are otherwise permitted by law.

The differences between these "terms" and the previous version came in three parts:

The last sentence of the first paragraph adds that "anything you submit to this site will only ever be used in connection with the Nature Mage Series." This delimited the possible usage of any works contributed, and assured participants that their works would not be used for any other commercial purposes.

The following two paragraphs accommodated - and in a way suggested - the possible reuse of works by other users of the website; a user may like a drawing, or a piece of writing, and reuse them or combine them in a new derivative work; we thought that this would not only be possible, but acceptable, but only if the original contributors were acknowledged and authorised such usage of their own work.

The last two paragraphs added a new level of complexity to the kind of legal, copyright language used thus far, which was not only harder to grasp but also sounded a lot like the kind of language used by large corporations in their terms and conditions — those that hardly anyone reads, or understands.

It is understandable that the author would want to defend his stories, his brand, and his efforts in collating contributions for a possible digital adaptation by introducing such terms. For users this was probably off-putting. From the author's perspective, though, it was the safest way to guarantee that there would not be any issues arising from using any of the materials produced by users within the community. With regards to the reuse or combination of works posted by others in order to produce new works, this was a kind of process that I had planned to encourage and make the most of, as the following note from the project diary shows:

In terms of structure, and interlinking of different contributions, we could, for example, pick the drawing of BoneBreaker, and post it on the "write" section (or whatever we"re calling it), asking those into writing to send backstories.

The challenges of rewarding participation

At the time it seemed hard to attract writers and illustrators. Why would they do it? We would have to convince them that it would be worth potentially without being paid. An important question asked at the time concerned "who's watching?" the community. If we had a good professional audience, for example of publishers and media producers, interested in our project, the level of exposure would be a lot more desirable. To that effect, I promoted the project at conferences and within his professional network, but this had limited effect for such a small-scale book and project with zero budget. My attention was then turned towards the issue of rewards, of rewarding participation, a matter which became even more relevant as we though of involving more "professional" participants.

Even though "[t]he participatory affordances of current media technologies blur former distinctions of production and consumption, of writing and reading" (Kress, 2010:144), participation is not something that just happens in every website that aims to engage with users in this way. Ethically, it felt right to reward any contributors to the website, especially if their derivative works were chosen at any point to be included in an eventual digital adaptation. What follows is an analysis of our thoughts and doubts at the time, including the consideration of different options for kinds and levels of rewards for different contributors and kinds of contributions.

With some input from the author I came up with the following "list of possible rewards" for participants:

List of possible rewards

- 1. acknowledgement in iBook
- 2. name of character in next book
- 3. digital copies of ebook
- 4. receive "exclusive" excerpt of next book before it gets published
- 5. critique of own writing
- 6. new idea: participation letter for CV? (a sort of NM certificate) too childish? I could make it with James" background "old paper" and NM logo!

⁶⁷ These, and subsequent considerations around rewards, were recorded in a dedicated "Rewards" file, whose analysis is discussed here.

7. new idea: digital copy of iBook (not sure whether free, think can be given for free, but person needs Apple device)

This list of rewards, listed in no special order, and which itself morphed slightly over time, was later associated to different "levels" of participation, split between participation through contributions to the online community (in the table below under "NM Community", or through taking part in research activities - which at the time was seen as a different kind of participation, but still one that seemed to deserve some form of reward. Table 1 lists a series of activities, of ways of participating, on the column to the left, and possible rewards on the right.

Table 1: Reward levels for participation in the Nature Mage project

Who needs rewarding for	
what	Possible rewards
NM COMMUNITY	
register	4. receive "exclusive" excerpt of next book before it gets published (good that everyone gets this, even at this "low" level of contributing to the community - promotion)
simple feedback (like, comment)	4. receive "exclusive" excerpt of next book before it gets published
uploads any content (except schools via derived creations) in "general area"	the above, name mention in next ebook and NM "certificate"
uploads any content in yet- to-be-created special iBook content "missions"	same as above
contribution selected for iBook	the above and choose two from 4 alternatives, plus financial rewards if iBook achieves certain milestones
	3. digital copy of ebook
	7. new idea: digital copy of iBook (not sure whether free, think can be given for free, but person needs Apple device)
	LinkedIn / written recommendation for work done (thinking about students / professionals)
	5. critique of own writing
	plus tiered financial rewards - e.g. £5 Amazon voucher per contribution if we reach 1,000 copies sold; increasing if more levels reached
out of contributors, the very best 3 (?)	the above and name of character in next ebook
RESEARCH ACTIVITIES	
Completes survey	name mention in ebook; exclusive excerpt of next ebook
Takes part in interview or focus group	free ebook, NM certificate

The activities on the left column were listed in order of perceived complexity, measured somewhat abstractly in terms of the amount of time, or in order of "success" or "quality", expressed by the selection of works for a digital book adaptation, and some way to reward the very best selected contributors. At the time I explained to the author that we could think of these as having two tiers - this is what I sent on an email with the table and further considerations:

We can think about rewards as having two levels:

- 1. everyone gets a reward for contributing with anything to site this could be something free like
- 1, 4 or 6 above
- 2. Selected contributions get a better reward. they all get one of the above (tier 1 rewards), and also:
- all get 3 or 7 (ebook or iBook copy they choose, may not have Apple device, can pick ebook or iBook copy)
- very best contributors (chosen by you) also choose from: 2 or 5 (for writers only; it"d be
 great to get a friend who's an artist to critique Art do you have any?)

Most rewards involved giving back in kind, for example by giving out a digital copy of a book, giving out a participation certificate or adding a name to a list of acknowledged participants. These did not require a budget, and were relatively easy to provide. Other rewards "in kind", but which would probably involve more time and energy spent by the author and I included "recommendation" and "critique of own writing" (which we thought could be also offered as a "critique of own artwork" if we managed to involve artists).

I felt there was a need for he addition of this higher tier of rewards, which was partly linked to the fact that at that stage we were considering involving not only readers, but also potentially higher education students and "wannabe writers and artists", who would probably need different kinds of motivations to take part. At the time I wrote on an email to the author:

For readers / fans / kids, it may feel fair / enough to give them one of the "simpler" rewards we talked about, but If we"re going to ask contributions from students / semi-professionals, even illustrators and other "artists" looking for work / projects / exposure, we may need to consider "higher" rewards? I think we should reward everyone who uploads anything (art,

write, other) with simpler, "free" rewards, and have higher rewards for selected works (those that eventually go into iBook).

Having a "contribution selected for iBook" (the digital book), added yet another kind of reward that had not been considered before (in the list above): "financial rewards". At the time I thought about possible levels, shown on Table 2, and called them "financial tiered rewards":

Table 2: Financial rewards for content selected for the digital book

Add more tiers?	
e.g.	
1k to 5k	£5 voucher for every 1k
above 5k	£10 voucher for every 1k
above 10k	£20 voucher bonus

On email correspondence with the author I outlined my thoughts about these financial rewards in more detail:

Although I feel the people looking for exposure / real projects, the semi-professionals, etc. may still want more... what I'm thinking is... bear with me...

If we're selling iBooks, and we're making money, contributors may feel explored.

If it were non-commercial, giving away iBooks as a way to promote Nature Mage series, perhaps people would feel differently, as they may not get money, but the book iBook can spread out more widely thanks to being free. But I know you don't want to give books for free. And not really sure how far they would spread and whether it"d improve your sales of other books - guess so, if people liked the story they"d find more, but could also be disappointed by starting with an iBook and then go to ebooks...

So if we"re selling an iBook based on what artists produced, how can we reward them? The difficulties are that we don't know how many artists we"d "select", no idea how many books we"d sell, how much for, etc... Perhaps fairest way would be a share of profit to all contributors, but that's hard if you have tens of them! And if some contribute more - and better - than others!

Perhaps we could define targets? If we sell 1,000 copies, all contributors get £5 per contribution... (something like this). Perhaps in book or electronic Amazon vouchers (very easy to distribute).

If we have, let's say, 100 contributions in there, we"d give away £500 - but if we sell 1,000 @ £5 each, that's £5,000... still worth it, no? Even if we sell for lower, and need to take Apple's 30% cut.

We need to be clear and upfront when adding a "revised" iBook mission on the site, and then promote it more widely, etc...

There were multiple factors at play here. Important distinctions were made between different kinds of contributors, and different uses of user-generated content. If the digital book adaptation were to be se sold, I thought it would be fair to share profits; if it were to be distributed for free, it was seen as less of an issue as no money would be (directly) made. This was not see kind of underhand trick - we genuinely thought it would not be as problematic, although in hindsight it could be argued that although there was a possibility that the resulting digital book could be distributed for free, the author could benefit commercially from added ebook / print sales.

The other distinction was between different kinds of contributors. Theoretically these could overlap, but in practice, given the limited readership of the books (c. 12,000 to 15,000 at the time), we would either involve readers / fans, or invited artists / writers (higher education students and/or other aspiring creatives). Although we were considering offering rewards to all contributors whose works were selected, we thought readers would be more likely to be satisfied just with taking part.

The conversation also reveals different angles on the ultimate goals of producing an enhanced, multimodal digital book. It could be used for "marketing" purposes, probably quite abridged and distributed for free, to increase the visibility of the original books; or it could be sold and generate some revenue. At the time the author was reluctant in offering books for free in this way as he seems to think doing so could somehow diminish the vale of his stories, of his brand.

The plan then was that new content for the digital book would be produced by both fans, art students and invited artists, although the involvement of the latter may be dependent on the use of alternative production agreements such as revenue sharing. Rewarding and encouraging participation was surely one of the main challenges, especially as we were relying on crowd-sourcing, on volunteer participation; this was an aspect that the author and I spent long and hard expanses of time debating. At the time we also thought we would try and raise funds for a production budget, and there was talk of a possible use of crowd-funding platforms such as Kickstarter but due to work commitments this was not pursued.

An unexpected shift: educational uses of the Nature Mage community

A "second stage" in the evolution of the online community started October 2013 when the Nature Mage community came to the attention of teachers at a school in Nottingham, the city where the author lived and wrote. Here is how a local website dedicated to writing reported this at the time:

Local schools have begun to take an interest in Duncan's work – Ockbrook School in Derbyshire in particular have built a relationship with him, and have him in for regular author visits. The Nature Mage Series is linked to an online, community fan-site where people can submit artwork and creative writing based on the series, and it is this facility in particular that has interested local schools. www.naturemage.com can be used to teach creative writing, artwork, ITC skills and social media awareness; a multi-disciplinary tool that is exciting everyone who hears about it. Ockbrook have made involvement in the community part of their curriculum for year nine, and recommend its use to any other school.⁶⁸

Both the author and I had from day one seen the community as a space where informal learning through creativity and collaboration could take place. As a media researcher with links to educational projects and the Institute of Education, where I had previously studied for a MSc in Media, Culture and Education, I was well aware that good digital design can encourage creativity, which contributes to the cognitive, linguistic and social development of children and young people (Bruner, 1986⁶⁹; Vygotsky, 1978⁷⁰). However we had not envisaged schools could take an interest in using the community.

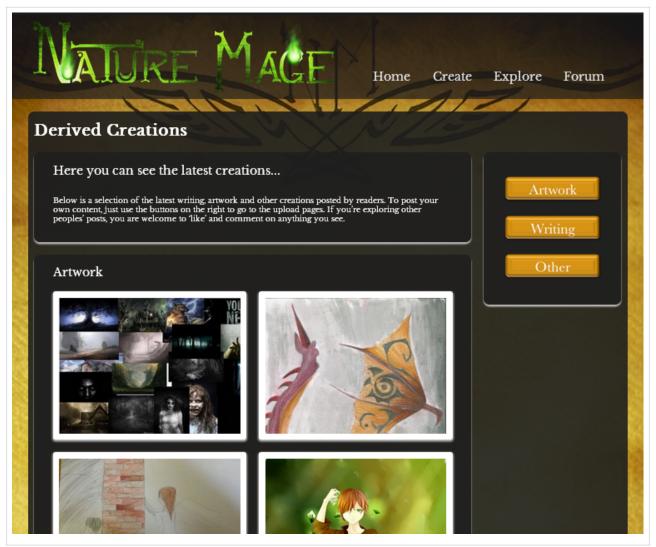
At some point I thought this could change the focus of the research: could creativity and learning and be an angle? It could indeed, but I continued to focus on the use of digital media to create new media forms of the book and on audience participation from the angle of adaptation, multimodal translation and intertextuality. But it did, however, shift the engagement strategy for the online community. We started to think about ways to attract more schools to the website, and meantime created a simplified version of the Create section, which the author coined "Derived Creations" (see Figure 29).

⁶⁸ http://www.writingeastmidlands.co.uk/writers-directory/duncan-pile/

⁶⁹ Bruner, J. S. and Austin, G. A. (1986) *A study of thinking*. Transaction publishers.

⁷⁰ Vygotsky, L. (1978) 'Interaction between learning and development', *Readings on the development of children*, 23(3). (pp.34-41).

Figure 29: Derived Creations section



This section was not linked to any book in particular, but still split contributions onto three different kinds, based on a split between writing (written language mode), artwork (visual mode) and "other" (the miscellaneous) sub-sections. Users could also rate and comment on works. The rationale for adding a simplified structure, not linked to any specific book, was that not all students had read the Nature Mage books in their entirety. Extracts were available on the website as simpler textual base to stimulate analysis, discussion and derived creations based on a reduced knowledge of the Nature Mage stories.

The involvement of Ockbrook School in the project seemed to mean a great deal to the author, as is patent from his Acknowledgements in the third book in the series, *Nature's Peril* (2014):

[W]hen they told me my books were to be included as part of the curriculum from 2013, I have to admit that they took me by surprise. Year 7s (11-12 year olds) will read Nature Mage, year 8s (12-13 year olds) will read Nature's Servant, and Year 9s (13-14 year olds) will get

involved with The Nature Mage Community, submitting their own creative writing and artwork, based on the content of the books. I can"t tell you how happy this has made me, and want to thank Ockbrook School for having the boldness to give this opportunity to a self-published author and allowing me to inspire young people as they find their own creative outlets.

I used the online survey to ask students who took part in the project what they thought of the potential of the website to teach them something new. The precise question asked was: "By using the Nature Mage website do you feel you've learned anything, or developed any specific skills?"

About half responded some for of "yes", another half did not think so, but even many of these still saw the experience as a positive one:

- No I dont think i have developed any skills using it but I think it is good
- not really. I spend a lot of time on internet anyway but I really liked the fact that the fans can share all the fan art and fan fic they made so they can share their hard work and it would be appreciated by likeminded people.
- i think getting feedback from duncan on my story has encouraged me to write
- I learned that when you get others opinions you better grow an idea.

An important aspect raised by the second statement above is the fact that the community allowed like-minded people to come together, which for some seemed to create an environment more propitious to creativity, without fear of criticism, with comments left about each other's works in the spirit of collaboration and improvement. The role of the author in leaving feedback was also valued and seen as a form of encouragement. A possible problem with using the community, expressed by a reader, was that "it's a good idea, but if you don't like the books it's dull and hard to relate to".

Between November 2013 and February 2014, movements towards a "third stage" in the evolution of the community were well under way. I had collated a series of ideas to promote the community, to facilitate its uses for more or less formal educational purposes and to further tweak its structure to make it easier to use, more appealing and more conducive to user participation.

In terms of website structure I incorporated ideas aimed at general users and at "educational" users (teachers and students). For general users I thought that the level of direction was too reduced for the majority of readers, who seemed to hesitate in contributing.

The idea at the time was to create what I termed "the iBook missions corner". Essentially, rather than simply asking for any kind of (more flexible, freeform) contributions on the Create sections for Writing, Artwork or Other related to any one of the published books, the rationale was that we could ask for more specific contributions. The Create section of the community essentially was there for any kind of derivative work, and the idea was that some of these could be used (or used as inspiration) for content of the eventual enhanced digital book - or even serve as embryonic content or idea for a Nature Mage game. But with the "mission corner" the idea was to think of what the author and I may want to have on the digital book and then explicitly request users of the community to produce that content. for example a backstory for a character, sketches of a certain demon or weapon, or maybe extend a dialogue between the hero and his girlfriend that was just referred to in passing in the book.

Reactions of readers, collated during workshops, indicated a positive response to the idea of having a structured "mission corner", but were not overly enthusiastic.

The author included some migratory cues (intended gaps with the potential of being explored later) in the story, for example the mention of ancient kinds of magic and some kind of Arcane Wars. I saw these as prime material to be used in a "mission corner", to be picked up by fans and form part of an effort of world expansion via user-generated content.

Star Wars Uncut, a similar attempt at crowd-sourcing, used a more organised and explicit structure than the Nature Mage community, with users asked to contribute with a user-generated scene, made whichever way they wanted, for a specific 30-second passage of the original film. For users this probably made it easier to devise of a possible contribution than if they just had a call to action that said something along the lines of "here's film you know, send us a video based on it", which is virtually what we did in our online community.

Readers engaged with through the workshops seemed open to the idea, but the only way to know whether it would work better than having fewer guidance would be to trial it. However, at the time a combination of work commitments leaving little time to dedicate to the community redesign and the view from the author that less was more in terms of guidance meant the "mission corner" never happened. It is nonetheless still fruitful to analyse how we looked at it, and how we

envisaged this more structured form of collaboration would fit within a wider production process for a Nature Mage digital book. Figure 30 shows a screenshot of a design document produced in March 2014.

Figure 30: Mission corner within wider production process of book

Suggested process for content production & reader involvement

(Not necessarily in exact order; some stages will overlap)

- 1. Decide what content we want to have on iBook
 - a. Between us
 - b. Show to students / community members in 1-2 focus groups
- 2. Produce what we can (e.g. author videos)
- 3. Commission James & Kyle
 - a. Potentially try a Kickstarter campaign to raise funds; we could offer various packages for different levels of support see example of a campaign for an iBook (there are 100s of campaigns under Publishing, have a look if you can)
- 4. Add what we want as 'missions' to Mission Corner (maybe pick another name?) regularly not all in one go (keeps engagement if ongoing)
 - a. Add different types of challenges each time (e.g. 1 art, 1 writing, etc.—engages different people)
 - b. Possibly link to some sort of competition with winners for every 'wave' of missions

James Ledsham and Kyle Crompton were two invited illustration students who contributed with plenty of content to the community; here we could see some thoughts - which will be explored later in more detail - around possible rewarding and financial incentive of contributors. The figure also shows that there was some careful thinking around ways to engage readers/users, for example by including different kinds of challenges to attract users with different skills and preferences ("art", "writing", etc.), and again some thinking around ways to reward users for their user-generated content with some sort of "competition".

Another thought at the time around encouraging participation was centred on the matter of skills, and of capacity or access to tools by users. An idea was to add a "Creative Tools" section to the community, which would include links to (free) tools that allowed users to create multimodal works. These included, for example, a link to Inkle's branching narrative story creator *Inklewriter*

(Inkle, 2012). The idea was that users could bring Nature Mage material, creations from other users, and of course any of their very own materials to create derivative works mashing up text and images onto new forms and textual combinations. for example, a comic using character sketches and bits of text both from the original books and user-written.

The idea of adding links of creative tools, seen at the time as a possible improvement to the community that could enhance participation, was related to the informed assumption that not all readers had access to, or know how to use, creativity tools to create derived media works. A note from my project diary expands on this:

[A]Iso link to my idea of adding tips / links to tools to facilitate creation - can"t assume users are web/UGC-literate - online is an extension of what they can do, harder work is in producing stuff

Besides not considering technical ability and access to required tools - or even to computers - discourse of participation often seem to overlook that the Internet and the array of platforms now available online are mostly just another channel - if someone has no motivation, or no knowledge or confidence to participate, the advent of digital tools may help very little.

Another restructuring of the Nature Mage community, and one that effectively took place, involved the addition of a section adapted to the us of the community by teachers and students involved via schools in more formal-educational uses of the platform. This addition followed on from the usage of the community by Ockbrook School in Nottingham, and was aligned with efforts to involve more schools.

The Educators' Toolkit (see Figure 31), was a website section designed to help teachers use the community for classroom activities.

Figure 31: The Educators' Toolkit



In essence this webpage explained briefly the community and highlighted its potential for the teaching / learning of writing, art, ICT and other subjects. The author Duncan explained other schools were using it and made available a scheme work developed at Ockbrook upon request. The author also promoted his availability to visit schools and explain how the community could be

used. Duncan ended up visiting a few schools in the region to talk about writing and the community; this was seen as a work stream that could potentially aid the (full-time employed) self-published author to become more self-sufficient with his Nature Mage efforts, and thus able to dedicate more of his time to his creative passion, writing.

The "Educators" Toolkit" paved the way to further promotion of the community with schools. A postcard was produced to this effect (see Figure 32), with copies sent to tens of schools in Nottingham and Bedfordshire.

Figure 32: Postcard to promote community with schools



There were also conversations around inviting secondary school students in the US, and also colleges, especially any dedicated to the arts, creative writing, illustration and other relevant art-related courses.

Besides the formal educational use, involvement in the community was also framed as an opportunity for students who wanted to develop their artistic or writing skills, for those aspiring to become writers, or illustrators. One associated idea was to invite artists to act as "reviewers" or "mentors".

For more mature students, at college and university levels, involvement was framed as an opportunity for exposure, as a CV-enhancing exercise (we envisaged producing some kind of letter of recommendation or simply a kind of participation certificate) and a chance to get some kind of reward in exchange for contributions.

This involvement would partly solve problems around lack of budget, and also meet the issue of reduced levels of content generated by readers. In one of the documents used to record the evolution of the project and my thoughts, it is possible to read:

I now realise only way to get enough material is probably by involving students, semi professionals, etc... Define! Is there any point promoting also - or just - to wannabe writers, illustrators, etc.? how? where?

At the time of thinking about these possible ways of reframing the online community and its target audience, I also wrote that the situation "creates a tension... Or several...". Some of the questions I was asking myself included: "Who am I addressing? How different must it be?". The thoughts at the time were that some kind of "wider creative platform idea could have both readers and students", but deciding on how to progress was a concern.

One of the main difficulties concerned the efforts to involve more "professional" participants. I wanted to solve problems over the quality of contributions. The author Duncan Pile had revealed some concerns with producing a digital book based on contributions that were a little amateurish and very diverse in terms of style and quality. The involvement of students and/or wannabe artists and writers aimed to alleviate these concerns. The author of course still valued the contributions of all readers, regardless of level of quality of their derivative works, but it was clear that they may not be suitable for a Nature Mage text — some were too derivative, moving away from the source and too diverse in terms of style, which meant a lack of consistency for the Nature Mage brand. This was not what the author envisaged for his stories.

The following note, taken from my project diary, shows some of the thinking behind these two ways of looking at quality and contributions:

- Quality is not important for the community, but will be more selective for the iBook likely
 art students and any good fan artwork or also ask students to improve on any concepts
 sent by fans
- Perhaps mix 80% prescription for art student with 20% giving them some freedom to create own ideas

"Fan" (or readers") ideas could in fact make their way to the digital book selection, but we did envisage most contributions would not achieve a standard of quality high enough to for the author to want to show them on a new work bearing his brand. The note also shows how at the time we were thinking about being more prescriptive with invited artists, which indeed happened; the right level of prescription for readers (for "amateur" fans of the books) was also discussed at the time and is explored elsewhere in this study.

Appendix 5: References for digital producers

Websites showcasing digital forms of the book

Digital Book World. www.digitalbookworld.com/

Futurebook. https://www.thebookseller.com/futurebook

The Writing Platform - Digital Knowledge for Writers. thewritingplatform.com

The Interactive Fiction Database - IF and Text Adventures. ifdb.tads.org/

Conferences

Digital Book World Conference. http://www.digitalbookworldconference.com/

DigiPub Conference. www.digipubconference.com

FutureBook Conference. https://www.thebookseller.com/futurebook-conference

Frankfurt Book Fair (Digital Innovation Hall). https://www.buchmesse.de/en/fbf/registration/hot-spots/digital-innovation/

Quantum, Publishing for Digital Minds Conference - London Book Fair. http://quantum.londonbookfair.co.uk/

Future of Storytelling ("festival") https://futureofstorytelling.org/

MIPCOM (international entertainment conference). http://www.mipcom.com/

Writers and skills/training

Writers Guild of America West. http://www.wga.org/the-guild/going-guild/get-involved/digital-new-media

Writers' Guild of Great Britain ("Find a writer" tool). https://writersguild.org.uk/find-a-writer/

Digital Writers Union. http://www.digitalwritersunion.org/

Byte the Book. ("A Global Community for Publishing in the Digital Age"). http://www.bytethebook.com/

Power to the Pixel Cross-media Forum. http://www.powertothepixel.com/#cross-media-forum-area

Tools to produce or aid in production of digital books and digital publishing

iBooks Author (Apple). https://www.apple.com/uk/ibooks-author/

Inklewriter (multilinear branching stories tool). https://www.inklestudios.com/inklewriter/

Twine (open-source tool for telling interactive, nonlinear stories). https://twinery.org/

Inform (design system for interactive fiction based on natural language). http://inform7.com/

SocialBook (publishing platform where readers can write on the margins). http://

www.livemargin.com/socialbook/client/help.html

LeanPub (lean approach publishing platform). https://leanpub.com/

Academic groups and projects

The Book Unbound. www.bookunbound.stir.ac.uk/

Playing Beowulf: gaming the library. https://darecollaborative.net/2015/03/11/playing-beowulf-

gaming-the-library/

Electronic Literature Organisation. http://eliterature.org/

Conferences

By the Book: the book and the study of its digital transformation. Conference website (next edition):

https://publishing.brookes.ac.uk/conference/by the book5 - june 2018

Mix Digital. Conference website: http://mixconference.org/

International Conference on Interactive Digital Storytelling. http://www.icids.org/

Media Mutations. http://www.mediamutations.org/

Future Everything. http://futureeverything.org/about/

Electronic Literature Organisation conference. https://conference.eliterature.org/