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Sheltering the Dream and Protecting the Dreamer:

The Role of Place and Space in the Online Interactions of Fiction Authors and Reader

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ABSTRACT

Fiction authors and readers have traditionally interacted through the mediation of a 3rd party (e.g. a publisher or agent), at events such as book signings or author readings. Held in physical spaces (e.g. bookshops or libraries), these events enable authors to discuss their book, and readers to ask them questions. In recent years, online social networking sites have introduced a new environment for direct, two-way interactions without this traditional mediation. Our understanding of how this change impacts authors and readers, and the role technology now plays as mediator, is currently limited. This paper describes a qualitative interview study held with six authors and six readers of Genre Fiction. The study revealed that neither party sees great benefit to interacting directly online - a finding partially explainable by the differences in how physical places and online spaces are structured to support their interactions. We drew on space and place research to develop an HCI perspective of the impact of this change. This paper contributes an enriched understanding of fiction author and reader interactions; in particular why they do not often interact directly - or wish to. We also demonstrate the usefulness of space and place theory in understanding the boundaries which divide author and reader.

CCS CONCEPTS

- Human-centered computing \to Empirical studies in HCI - Human-centered computing \to Social network

KEYWORDS

Place, Space, HCI, Fiction, Author, Reader, Space Syntax, Information Communication, Situated Practices

1 Introduction

Literary events such as book signings and panel talks, held in physical venues, are a well-established practice. Attending these events helps to enrich readers' understanding of, and engagement with the book, by enabling them to connect with the author. In turn, they inform the author's understanding of their reader demographic, and how their book is being received.

An expansion to this practice has been seen in recent years, as a range of specialist (e.g. social publishing platforms; GoodReads) and non-specialist (e.g. social media; forums) social networking sites now enable a direct, two-way exchange between authors and readers in online spaces, in addition to physical places. Although this technology has been available for several years, there is currently little understanding of how it serves to mediates the interactions of authors and readers, or indeed how it may influence or change their interaction behaviour. Without this understanding, it is not possible to design an online environment to support their interactions in a meaningful manner. As part of an ongoing study with The British Library a large national Library - we sought to better understand this change, with the dual aim of better understanding how technology impacts behaviour around reading and writing, and to determine how HCI design could help support the interactions of authors and readers.

This paper introduces key findings from a qualitative interview study with authors and readers of Genre Fiction about the role of this new technology. Genre Fiction is an important and buoyant literary domain, attracting a broad demographic audience; with many of its authors highly active online. Its universal popularity makes it an ideal domain to learn from to understand the implications for design. Our findings revealed that, in the main, authors and readers do not view directly interacting with each other as greatly beneficial - despite all participants self-selecting to interview based on the premise that they did so abundantly. Their accounts of why, how, and even whether they interacted together were often self-contradictory. This was particularly evident in the accounts of authors, whose initial descriptions of how they interacted with readers gradually turned to how, in reality, they do not. They also expressed that they did not desire greater ease to interact in the future, based on current and past experience. To find out why this was so, we investigated how authors and readers interacted prior to the internet, and some of the wider contextual factors which impacted their relationship. To our surprise, however, we found that there was scant prior research around their relationship from which to draw comparison.

Interview accounts suggested that the origin of their reluctance to interact was two-fold. First, there was a conceptual boundary dividing author and reader, which had historically limited any direct interaction between them. This necessitated mediation the structure of which had, in some ways, served to heighten the divide. Secondly, the structures in place to support their mediation in physical places differed to the structure of online spaces. This impacted their interaction behaviour. To explore this further, we drew on research around the impact of place and space on the mediation of human relationships. Harrison & Dourish's work [1] in the area presented place as a physical locale, shaped for, and by, a particular set of social actions which in turn, are influenced by how a place is physically structured. The notion of space, in turn, was positioned as a more abstract territory, similarly in a bi-directional relationship with a different set of social actions. Into a space, places can be built. This definition has been widely interpreted as place being 'layered' onto space [2]- a blank canvas - by introducing physical boundaries. Dourish [3] tackled this interpretation by proposing that in many ways, place, rather than space, comes first - as people learn from the connotations of the places they inhabit, and take with them this understanding into other spaces.

We use Dourish's interpretation to posit that authors and readers have previously interacted in physical, strategically designed locations such as bookshops and libraries - i.e. Places. How they interact is therefore shaped by the physical, social and systemic boundaries that operate in these places. Our study evidenced that interaction practices are informed by these physically-situated constraints, and that the constraints; structure; and social actions in online spaces differ to the physical places they have known. This results in problems as they now try to interact online using the same practices as before. We found that this change presents as a 'contextual collapse' [4], whereby the structure of the online spaces in which they now interact in some ways serves to heighten, rather than bridge, the boundary between them.

The importance of spatial arrangement is well recognised in HCI and Library and Information Sciences research, for how it supports access and social interaction around books. However, this concept has not been applied to the context of how the influence of place and space on author and reader interactions.

Commonly, HCI research seeks to bridge gaps between users, with a view that improving connectivity is ultimately positive. However, the boundary separating author and reader is enmeshed in a complex history, and without better understanding this history, and its influence on their interactions, any attempts to bridge the boundary between them may prove insensitive to their needs, and, ultimately, ineffective. This paper contributes an enriched understanding of how fiction authors and readers interact, and in particular why they rarely do so directly. We also demonstrate the implications of space and place in understanding the boundaries between author and reader, toward informing the design of future online social networking environments that sensitively aim to respect, rather than remove these boundaries. The structure of our paper proceeds as follows: first, we will discuss relevant literature about the history of author and reader interactions, and the boundary between them. We then present our research methods, detailing the construction of a conceptual framework to help analyse our findings. We then describe key findings from our interview data in relation to the impact of place and space, before discussing these findings in relation to broader literature. We conclude with an explanation of our contribution, and the implications of this work for potential future HCI design.

2 Previous Work

The concept of 'Author' as creator, as we understand it today, did not exist prior to the development of the printing press. As books became increasingly mass produced, commercial products, the contemporary conception was developed to enable appropriate direction of profit [5], and later copyright [8]. Prior to this, the delineation between author and reader was somewhat more blurred, as texts, e.g. social manuscripts, were often co-produced, in collaboration between author and reader [6]. As the book became a commercial artefact and the 'Author' concept was developed, a boundary line was effectively constructed, serving to separate author and reader by role and status [5,6]. This changed their relationship from one of social collaboration to one of social distance. As this happened, a focus on the book - as the central product of the publishing industry, and the primary means of communication between author and reader - directed attention away from their relationship.

Recent developments in online social networking sites provide opportunity for authors and readers to communicate directly. This has drawn renewed attention to their relationship. The adoption of this technology, however, has brought further disruption and resultant change to their relationship, centuries after the development of print technology served to divide them.

This now presents as an HCI problem, as technology is influencing how authors and readers interact. However, to

understand how this technology mediates their interactions, it is important to first understand the nature of the boundary between them, and its influence on their interactions prior to this new technology. We therefore examined existing literature around how their relationship has previously been understood.

2.1 History of Author & Reader Interactions

There is a strong history of research into how authors and readers communicate via the book, rather than directly with each other. The book has been viewed as 'information container' [7], to which meaning is attributed. Initially, the author was understood as sole creator of that meaning, but later, the role of readers in shaping this meaning was revealed [8]. An example of this was in Shillingburg's Script Act Theory [9], which asserted that readers apply their own experiences and thoughts to interpreting a book - an interpretation which cannot easily be validated by a living author, due to their inaccessibility, rendered by the boundary between them [9].

Although the importance of both parties in the construction of a books meaning is acknowledged, little is known about how authors and readers relate to each other, outside of the book. Indeed most studies have concentrated only on the readers and how they seek to understand the book - e.g. through interacting with other readers around books [10], or working collaboratively whilst using books [11]. Where the relationship has been addressed, it has been form the perspective of author as celebrity [36].

A recent change in focus toward understanding the contemporary interactions of author and reader has been seen in studies into online social authorship tools such as Wattpad or fan fiction forums [12,13], where serialised works are published directly online, and reader comments are made in-line with the text - visible to the author. Again, the opportunity for author and reader to interact in these spaces has been viewed in the light of how it can promote engagement around the written work. Furthermore, focusing on writing platforms such as Wattpad improves understanding of interactions around new types of born-digital writing formats, but sheds little light on the online interactions of traditionally published authors and their readers.

Despite its incumbent position as the 'gold standard' of publishing methods, we found there is surprisingly little knowledge of how traditionally published authors interact with their readers, in either physical or online spaces, making it difficult to draw on the literature to understand their current position. This led us to consider why this may be the case, and to incorporate a separate literature review into our study methodology, to help generate a theoretical framework against which we could benchmark our analysis.

3 Methodology and Approach

To investigate how authors and readers interact online, and how technology mediates this, we conducted semi-structured interviews. To protect the identity of our participants, we have used pseudonyms throughout this paper. We recruited a theoretical sample of twelve adult participants through a mix of referrals, and advertisement on social networking tools. The participants included:

- Six genre fiction authors: three male (Steve; John and Adam) and three female (Helen, Sue and Jess)
- **Six genre fiction readers:** five female (Debbie; Gemma; Anne; Sarah; Lauren) and one male (Karl)

With little existing knowledge of how authors and readers interact online, our approach was formative. We used a Grounded Theory approach to collect and analyse data, using constant comparisons towards evolving an explanatory theory of the data. We wanted to find out specifically about how they interacted with each other online (i.e. readers with authors, and vice versa), and the impact of technology on these interactions. However, although this goal formed sensitizing topics, the structure of interviews remained loose, to allow participants to lead discussion through their own personal accounts. This approach resulted in a shift in focus across the study from uncovering how authors and readers interact together, to understanding why they do not.

As a resistance of both parties towards interacting became apparent, we also realised that their accounts often alluded to their current online interactions as being in contrast to how they interacted in physical places, before the internet. This further focused our investigation. We responded by conducting a further literature review in parallel to - and guided by - the collection of the data, to supplement our own data for analysis.

Continuing with our line of enquiry, we analysed our data, coding categories and concepts, whilst gradually building a theoretical framework to understand the changes being described, in relation to how things used to be. Data gathering and analysis was thus cyclical: i.e. as we collected data, we also reviewed literature - testing the literature against our findings, and findings against literature, to internally validate our analysis. As little prior research has been done around how interactions used to be mediated, we tested out our ideas in a theoretically 'playful' way [14], to see where they led, without fear of abandoning them if they were found to misrepresent the data. To synthesise the collected data with the literature, we produced integrative diagrams. This helped to conceptualise, through illustration, how the interactions of authors and readers in physical places contrasted with mediation online. Producing diagrams during the analysis and collection process also helped to test the theoretical plausibility [14,15] of our conceptualisations of the present and past.

Although this process was cyclical, for the purpose of this paper, we present our approach as linear. Firstly, we introduce how we developed our theoretical framework. Then we follow with our results, and end with a discussion around how our results reveal the current circumstance influencing author and reader interaction. In this discussion section, we introduce some of our integrative diagrams to illustrate the analysis.

4 Framework for Understanding Author and Reader Interactions in Online Space

Author and reader interactions around traditionally published books have been overlooked in the past. If we are to understand how they now interact online, this means that we have little basis for comparison to perceive how things have changed. We argue that there are two key factors behind this oversight. The first is a product of the publishing system, and the second, a product of the main approach to prior research.

Firstly, the publishing industry introduced the boundary between authors and readers. While the industry mediates this boundary, it often serves to strengthen the divides, by the very nature of acting as a 'middle man' between them. This boundary means that they are not considered as peers, despite their closely connected practices. As Brown & Duguid noted, different backgrounds, attitudes and dispositions shaped by practice and identity divide people, and act as a barrier to reciprocity [7] suggesting that this division has made two-way interaction both problematic and unlikely. Secondly, researchers have often drawn on informational logic [7] to assess the role of the book. This places the book at the centre of not only the publishing system, but also at the centre of research analysis - portraying books as "information containers" [7]. The focus of this research approach has been on how access to the book is supported, and on analysing the comprehension by the reader of the author's intent. This views authors and readers in terms of their contribution to the book - creating and consuming the information it holds. However, this problematically decouples both authors and readers from their social, human context [7,16]. The separation of reader and author, through both the physical book itself, and by communication through an intermediary, makes the formation of a full understanding of their relationship to each other difficult - as is necessary from an HCI perspective. The physical book does not directly inform the researcher of the interactions between readers or authors, and the third parties involved complicate the practicalities of gathering of data about it. In addition, a theoretical approach that focuses on the book as an information container can only provide a limited understanding of human interactions.

However, there are key moments where we can hope to capture the interaction between authors and readers: when they meet at the same physical space, in a reading or talk by the author about the book, or their life as a writer. By looking at how authors and readers have interacted in physical place, we can develop an HCI understanding around the boundary between them. Through understanding the existing social dynamics between the two, we can then arrive at implications for supporting interactions in online space.

4.1 Spatial Structure of Interactions Around Books in Physical Places

If we are to examine the interactions between authors and readers in physical space, we need to understand the physical contexts involved. Fortunately, the importance of spatial affordances in libraries has long been recognised in HCI and Library and Information Sciences, due to its impact on how readers access and use books. The library is one place where readers have frequently engaged with books, and each other.

Much of what is known about the impact of physical library space stems from the Carnegie model of library layout [17], in which reading occurs in silent areas, and physical books are accessed via open or closed stack. Recently, physical layouts have moved away from the Carnegie model, e.g. with new social study areas being created in university libraries [18]. Bookshops have long incorporated more socially oriented spaces [22,24], and their recent incorporation of explicitly social features (e.g. cafes) has also drawn research attention to reading behaviour [19]. Findings from observations of contemporary social reading spaces have indicated that what people learned from the Carnegie model is often re-enacted, despite the difference in spatial structure, e.g. readers seen blocking out noise with headphones; creating barriers with stacked books around their workspace for privacy; or exhibiting annoyance at people chatting around them [18,19]. This suggests that mental models and assumptions around acceptable behaviour in a space link to how those behaviours are supported by spatial structure.

By concentrating on the impact of space on readers, the author has, again, been largely overlooked. Exceptions to this are found in recent studies by Fuller & Rehberg Sedo [16] and Murray & Weber [20], which each observed large scale reading events where the author could respond to reader questions, and talk about their work in person. The primary focus of each was on how socially situated events impacted the reader. However, each alluded to the conceptual boundary between author and reader as partially observable through the physical, spatial rendering of these events. Both studies observed, for example, that readers were seated in audience-style rows, with the author at a distance on the stage. Fuller & Rehberg Sedo noted that this physical arrangement acted as a type of barrier, which left little room for readers to communicate or establish common ground with the author. Murray & Weber commented that the silence and organised seating minimised disruption to the readers' viewing experience. Both of these observations highlight the importance of physical structure in mediating - and restricting - author and reader interactions in physical places.

Collectively, this research has confirmed that spatial structure influences behaviour, and in turn, people's expectations of what is appropriate to the space (e.g. by sitting in rows, it was observed that readers conformed with expectations by sitting silently as the author spoke [16]). Although there has been little work around the interactions of authors and readers, Fuller and Rehberg Sedo's study showed that the spatial structure used to mediate their interactions has also played a role in creating further distance between them - effectively affirming a sense of 'us' and 'them' as the authoritative status of author, as creator of the book, is inferred by their positioning on a stage, before a silent audience of readers awaiting the signal to ask questions. To further develop our understanding of how spatial structure

influences interactions - in terms of how they support or inhibit access between authors and readers - we next examined theories of space and place which shed light on the relationship between spatiality and human behaviour.

4.2 Space, Place, and Human Interactions

HCI theory underlines the importance of spatial arrangements in enabling people to interact with technology, and, through it, with each other. This has been seen in, for example, the layout of affordances such as buttons on websites or devices and in technological interventions in architectural spaces, e.g. mobile technologies to enhance engagement with gallery collections [21]. To help understand the impact of spatial structures on how people interact, we turned to the complementary theory of Space Syntax from architectural design. Space Syntax describes how spatial architectural arrangements (e.g. cities, or building interiors) facilitate and inhibit flow of movement, positing that there is a bi-directional relationship between spatial arrangements and social relationships and needs [23,25,26], just as Harrison & Dourish had observed [1]. Bafna [23] argued that spatial structures have a strong impact on hierarchical relationships in particular, as they guide the level of access people have to each other. Using the example of office design, she explained that if a manager's office was designed to be accessed direct from the corridor, they would be more likely to encounter their staff in the corridor, and staff would feel more able to approach their office. If, however, their office was only accessible via a secretary's room, this would conversely make interactions less likely [23]. Spatial arrangements, then, encourage either social approach behaviour, or social distance [27,28]. This aligns with the evidence presented in Fuller & Rehberg Sedo's [16] observations of behaviour at reading events, where positioning readers in rows of seating in front of a stage served as a barrier to direct access to the author.

4.3 System Boundaries in Space and Place

The concepts we have described assert that there is a bidirectional relationship between human interactions and the social and physical boundaries which govern the structure of a place. However one further boundary type plays an important role, that we feel is particularly relevant to authors and readers. We refer here to systemic boundaries, which McArthur [27] described as symbolic features that 'create a culture of impenetrability', e.g. policy, rule and regulation which govern access in a space. This type of boundary is rendered in bookshops and libraries through features such as signage and procedure (e.g. queuing systems), and is also partially observable in the typical behaviours that people conform to (e.g. reading in silence) within that place. McArthur explained that Systemic, Social and Physical boundaries are tightly coupled with each other, and if any of the three are changed or withdrawn, the other boundaries are also disrupted in turn [27].

We argue, then, that by moving author and readers interactions from physical place to online space presents as a change to physical boundary. This change disrupts the systemic and social boundaries that previously contributed to how their interactions were situated in designated places.

The practices of authors and readers are tightly coupled with the institutions and organisations that control production of, and access to, the book, as they also mediate their interactions. This makes the interactions of authors and readers a particularly fruitful case study to understand the impact on these three boundary types, as interactions are moved from physical place to online space.

4.4 Summary

Authors and readers have traditionally interacted in highly structured, designated places, in which physical, social and systemic boundaries served to direct their access to each other. By looking at this broader set of literature relating to space and place, we were able to synthesise knowledge about the impact of physical structure on interactions, with knowledge about the relationship between author and reader, and the boundary between them. As interview participants discussed their current interaction behaviours as changes from what they did prior to the internet, we were able to draw on this theoretical framework to help test the internal validity of our data analysis.

5 Results and Analysis

In this section, we present key findings from our interview data which reveal incongruences between place and space. We describe the key motivations of authors and readers for interacting online; how they do so; and how traditional publishing practices influence their behaviour.

5.1 Explicit Information: Promoting Books

The key motivation for authors to interact online was to share information promoting their book. This practice was not new, as publisher funding had always been limited - particularly around paperback releases, as "all the publicity budget goes on the hardback release" (Steve). Self-promotion to bolster limited marketing funds was always necessary. There was an expectation that authors now do this online, and refusing to do so could have a negative impact on their career, as publishers use an author's number of Twitter followers as a statistic to determine their commercial viability, before offering them a new book deal ("even if you've (...) become quite successful [your editor] will go to [an] acquisitions meeting (...) and they will all look at that book as a possible commercial enterprise" (Adam)).

This new requirement to be online had brought about change to their practices. Self-promotion practices online largely focused on communicating explicit information (e.g. release dates) - often previously shared by the mediating organisation (e.g. publisher, bookshop, or library, through posters or newsletters) on their behalf. In addition to their own books, there was now also an expectation to promote other authors or publisher initiatives: "you are asked to do things like (...) 'can you tweet once a day about this special edition book', 'can you share this competition'." (Helen).

In physical places, marketing materials and author events are aimed at promoting physical book sales, with the book made available to readers on-site. Online, the authors used generic social media tools, where the book was not directly accessible. Reader comments suggested that this adds a layer of complication, as if they want the book, they must locate, or follow a link to, a further website to find out how to purchase or borrow it. This led them to "just google them, their proper website" (Debbie) to attempt to minimise the steps to get to the book.

Moving online has therefore increased authors' workload, and diminished the effectiveness of their practices by decoupling their information from the physical book. This makes it difficult for readers to locate the book, in response to the promotional information authors share. However, the risk of negative impact on their career binds authors to following these practices, regardless of their inefficiency as they are distorted to fit the online environment.

5.2 Accessing the Explicit Information

In the physical world, readers can find out about books in easily locatable, designated places (e.g. libraries and bookshops). These places are fairly uniform in design and service offerings. Online, things were less predictable. Some organisations e.g. publishers had created websites which offer a range of rich information to readers ("My favourite publisher website [has] really good features, and they (...) introduce new books [and have] interviews with the authors" (Lauren)), but not all have done the same.

With no clearly defined space to share information, most authors used popular social media sites - Twitter, Facebook and Instagram. Readers were interested in finding out about new releases from authors they had read and already liked, and used a range of sources (e.g. bookshops; mailing lists; publisher websites; author's official website), to find out about them. They were aware that the authors were accessible on social media, but many found this unhelpful - largely due to the inaccessibility of these spaces. Firstly, not all readers had social media accounts. Secondly, those who did would often follow their favoured authors, but regardless would often miss their announcements. Key reasons cited for this were that their announcements could get lost amidst the 'noise' of other information ("your feed just gets flooded by other things" (Debbie)); or that algorithms prioritised other information types, thus hiding author announcements from view ("[Facebook is] very selective in what it lets you see, so (...) they don't always feature in your timeline (...) so therefore you miss things" (Anne)). Conversely, the authors described spending less time on maintaining their own websites, assuming that social media was easier for the readers to access ("a lot of people get their information from Facebook, and it's the easiest way to tell people when books are coming out" (Steve)).

Without clearly defined location; consistency of tool functionality; or appropriate algorithmic support, it was difficult for readers to make use of information being shared at the point of its announcement. Authors were also impacted by having no designated physical boundary within which to self-promote, and

so used social media tools as a workaround, to try and reach the readers.

5.3 Timing of Explicit Information

Prior to the internet, authors were typically only publicly visible around a book release, at designated events or interviews. Often there were long breaks from the public eye in-between releases, as writing takes time, as does getting the physical book published ("I sold in the February of the previous year and then suddenly it was announced it was coming out a year later" (Helen)). Key information has usually been communicated in line with the physical book release. Reader accounts revealed that this was generally incongruent with their needs, as reading, too, takes time. How often they read fluctuated, but in general, brand new books were not read at point of release, as they had other commitments, or other books to read before it. Often, readers would add a new book to a list, or purchase it in advance, to help remember it when later deciding what to read next.

In contrast, online, authors described a new fear of becoming "completely invisible" (Adam) if they were not actively online throughout the writing process - concerned that readers would "(...) forget who [they] are" (Adam). They combatted this by creating new types of information to communicate online: e.g. sharing articles relating to their domain; giving updates on work in progress, or writing blog posts connected to their genre.

Contrary to their fear, readers appreciated that writing "does take time" (Debbie), and so would look for news of their favoured authors intermittently - using their past experience of how long it usually takes a particular author to release a book as a guide to how frequently they did so. As they were not usually ready to read book at the point of release, this search would generally be done manually, when they had free time. The supplementary information authors shared in-between releases was largely of little interest to the readers, who primarily only wanted to find out about new books. The extra information made it harder to discriminate what was useful, in a constant flow of information. This, again, made it "less effort to just go to their website" (Debbie), than to look at an author's social media. Some readers, however, noted that an author's social media presence helped them better remember the author when looking in a book shop. Some also enjoyed hearing updates about them working on a new book ("you [feel] that you are writing the book with them, because you're always awaiting [this] new announcement" (Gemma)).

In online spaces, authors follow practices situated by the timing of physical book releases, just as they have always done in the designated physical places. However, timing constraints differ in an online environment. As a result, authors felt compelled to be constantly visible, and would share information continuously to achieve this visibility. This transpired to be unhelpful to the reader, who required focused information to direct them to books. The timing of information has never well-suited readers, as they are rarely ready to read a book as it is released. Whilst online space could better serve to connect them to information about books at the time they want it, the situated practices of

authors continue to work against their needs - constrained by systemic boundaries. Furthermore, new practices developed as a workaround for online space, such as sharing extra information to maintain visibility, exacerbate problems.

5.4 Tacit Information: Discussing the Book

In addition to sharing explicit information, authors also attended online events e.g. Q&A's and AMA's (or 'Ask Me Anything's interactive online public interviews, held on Reddit), or gave formally broadcast online interviews (e.g. on YouTube or publisher websites), to share more tacit information about the book. Unlike a physical event, where questions are mediated one at a time, threaded comments were used online. Whether these comments were formally mediated; answered within a particular time frame; or answered at all by the author, varied widely. Therefore, readers often came back to threads periodically to search for updates, and interesting information often finding hundreds of messages to filter through. Karl explained that this could be a difficult task, unless looking for a specific term (e.g. the name of a character) using the search facility, as "there might be lots of ways of asking a question". To find relevant information, he needed "scroll up and down" or filter results, e.g. by "most voted on, or the most viewed".

Where authors did not respond to questions, readers would often try to help each other. Author John noted that this impacted his likelihood of responding, assuming that readers will "tell each other what something is" without his input. The authors expressed that did not believe readers sought any richer dialogue with them than was already possible. Reasons for this assumption included that they did not appear to interact with their social media content; rarely contacted them; and generally asked the same "standard questions" (Sue) at both physical events and online: e.g. "how did you get your idea for your book" (Sue). They also did not all desire feedback from the readers, as the time between writing a book and having it published meant that comments came too late to make a change. Furthermore, negative feedback could result in stress and self-doubt.

Reader Gemma explained that because events were generally held around releases, she would not have read the book yet in advance of attending - whether online or offline. This meant that she "just [didn't] know what to ask", thus turning to stock questions - like those author Sue had described - because she was "under pressure to ask a question when you can't think of anything". As they were not yet ready to read the book they also feared spoilers that would damage their experience of the book, revealed through responses to other readers' questions. They found it more helpful to ask questions after reading the book, as it allowed them time to formulate "very specific" (Karl) content-related questions. The author's response could then prove valuable to their understanding of concepts within the narrative.

The use of threaded discussion in online spaces changes the structure of Q&A events, making it harder for readers to find useful information, and for authors to respond due to the volume of questions received. The systemic timing built around physical

book releases impacts readers ability to ask insightful questions, which in turn drives authors to assume that they have little to discuss. As a result, neither fully benefit from the increased opportunity to interact online, as it is not on their own terms.

5.5 Verifying Audience

The obligation for authors to be online stems from an assumption by the industry that gaining followership increases readership, and as such, sales. However, the authors believed that in general, their readers were not actually the people who followed them online. Efforts to gather reader demographics are flawed in traditional publishing, as outside of the systemic boundaries of the designated places, it is near impossible to track reader activity e.g. as books are shared with peers. Therefore, authors built assumptions about who their readers were around those they met at physical events. This was problematic, as those who engaged with them online generally did not fit the character profile they had thus constructed: "I'm not saying [they aren't] out there on the internet even as we speak! But I suspect they're not following me" (Steve). The assumption followed that online, their audience must therefore be people other than readers. This assumption did not always seem to hold, however. Steve, for example, knew that he had a "diffuse" reader demographic, as his publisher had recently commissioned a marketing company to investigate his readership. However, although this meant that a wide range of people read his books, he did not feel this corresponded with his high number of diffuse followers: "I have sold over one and a half million books... in English [alone] (...) the point is they're not the readership"

When interacting in physical places, it could be assumed that those present shared an interest in reading. Authors learned about their readership by observing and engaging with attendees, whose purpose for attending was verifiable. In generic social media, a broader range of people can observe them, for a range of different reasons. This makes it difficult for the author to judge their intent, or gauge the scope of their active audience.

5.6 Controlling Personal Boundaries

Authors perceived their online following as a mix of real-world peers; a select few fans; and many strangers following them for unknown reasons. Where they could not verify a follower's identity or intent, they resolved to "tar everyone with the same brush that some of them really are a bit mad! Or a bit weird or obsessive" (Helen)), and avoid engagement - for fear that engaging would be a drain on their time, or potentially damaging to their career if the interaction became negative.

Author Helen explained that some people online did not "see the boundaries" - sometimes crossing the line, and making her uncomfortable, e.g. by "[liking] every single picture (...) and tag[ing her] over and over again". Authors did not feel empowered to stop unwelcome interactions as, e.g. tool privacy did not always enable it ("I've tried to block him, but [he] still comes through" (Sue)); or the platform did not afford it ("on Twitter you can kind of post 'hey guys, don't do this' (...) whereas

Instagram, your feed is just your feed" (Helen)). Ultimately, they resigned to accepting unwanted attention as part of the job. However sometimes (verifiable) readers contacted them with positive comments, and it was clear that this was enjoyed and welcomed.

Readers also expressed discomfort with unwanted contact online, but could protect themselves, e.g. by using a pseudonym, or avoiding identifying information, e.g. photographs. This was not possible for authors, who had to be public facing. Authors therefore followed strategies to minimise unwanted contact, e.g. limiting their followers by not reciprocating with requests to connect; by disabling private message receipt from strangers; and by limiting connections to people they already knew, where possible. Some suggested that meeting readers at physical events encouraged a better relationship than 'meeting' followers online ("People who have met you, you know, they're the best ones" (Jess)), suggesting the importance of physical, visual cues when forming a connection. This was echoed by reader Karl, who explained that meeting authors in person helped to judge their character: "[It] can be difficult [to get] a guide [online] (...) if a person's funny in person it can give you some sort of understanding of what, really, they're trying to get across (...) online".

Without the protection of system rules to regulate public access to authors, there is a greater onus on them to protect their own personal boundaries- either through use of privacy settings, or negotiating what level of intrusion they are willing to accept. In physically situated events, physical and systemic boundaries manage this boundary regulation on their behalf, along with broader social boundaries which govern how people manage or approach - personal space. This is more difficult to manage online, where the cues of physical place are not available. How authors protect their personal boundaries online in social media tools is not uniform- with different functions and privacy settings in each, thus further complexifying the task.

5.6 Summary

We know from the literature that there is a symbiotic relationship between the systemic, physical and social boundaries that operate in a physical place. In keeping with McArthur's argument [27], our findings revealed that by moving interactions developed for a physical environment to an online environment has also disrupted the social boundary and systemic boundaries that mediated how authors and readers interact. Through the use of 3rd party social media tools, where all users are given the same access rights to each other, the social boundary between author and reader is compromised - with positive and negative consequences. This put the onus on authors to manage their own personal boundaries through, e.g. tool specific privacy settings, to establish control and safety. In online spaces, a confluence of audience meant that it was no longer certain who is in the space; how one should behave; or what content to expect. With no guidelines, and with difficulties in rebutting unacceptable behaviour, this caused problems for both parties - authors in particular. Furthermore, the expectation that authors self-promote online is incongruent with the social norms of the online space, causing potential disruptions to their relationships with personal connections.

We also saw two key problems with timing of interactions originally structured around the printed book - which reflected in online behaviour. Online, timing is typically more fluid than publishing practice. Stripped from its physical context and purpose, the chronology [29] of timing around book releases makes little sense online, where users are accustomed to locating information as and when they need it. The timing of the publishing cycle was revealed to already be poorly aligned with reader needs, as they were rarely ready to read a new book at the point of its release. Whilst online tools could potentially make it easier for readers to find out about releases at a time that suits them, a combination of unsuitable functionality (which make it difficult to locate information) and incongruent author practices (as they post extraneous information between releases) in fact, makes it more difficult. This has led readers to abandon seeking authors on social media for this information, in favour of visiting their official website, where possible. By using 3rd party online tools, the interactions of authors and readers are stripped of the systemic structure they both previously relied on, and also decoupled interactions from the book - their primary shared focus - as this can no longer be accessed in the same space as the information that serves to promote it.

6 Discussion

The boundary line dividing author and reader is a social construct - a perception, rather than a physical, real-world barrier (illustrated in Fig. 1.)

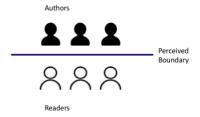


Figure 1: Boundary perception separates authors (top) and readers (bottom)

Although this conceptual boundary was conceived - even if indirectly - by the publishing industry to facilitate the printed book, the industry also mediates their interactions across this boundary - primarily through the book itself. Viewed through a lens of informational logic, we understand that the author embeds meaningful information into the book, which the reader reads and interprets. We use this knowledge to position the system as one of input and output - the author writes a book, which is then produced by the networked organisations involved in producing and marketing it, to deliver it to the reader. The organisations involved were coined as 'the Reading Industry' (RI) by Fuller & Rehberg Sedo [16] - a network of organisations and institutions (which we will call 'agents') involved in the book industry for reasons such as commerce (e.g. publishers; bookshops), or education (e.g. libraries; academia).

Entering the RI's system, the book is produced and printed (e.g. by publishers; printers; designers), and published and distributed to designated physical places (e.g. by bookshops, libraries) to make it accessible by readers (see fig 2.). In these designated physical places, readers can access the book, and information about them. When applicable, the authors are also accessible in these places, as they are used by RI agents to host events such as panel talks or book readings. These practices were created during a period where print culture was dominant [31], and so were designed with the physical book at their core.

The designated places in the RI system have been relatively uniform in their structural and systemic design (e.g. content; layout; service offerings; expected behaviours). They now also have online spaces (e.g. publisher and bookshop websites) where books (physical or digital) are sold, and information is made accessible to readers (see fig 2.). These remain within the RI system. In some online RI spaces, the author may be accessible, e.g. through mediated interviews. In contrast with physical RI places, the online RI spaces are not designed uniformly, and content can vary widely. This lack of uniformity can make information less accessible to readers, putting the onus on them to know what is available to them, and where they can find it.

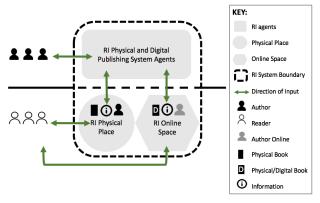


Figure 2: Mediation by the Reading Industry

This diminishing structural support has become particularly problematic now that authors are required to use online social media tools, belonging to 3rd parties, as our interviews revealed. Fig. 3 illustrates our new model of current author and reader interactions - updated to include their online interactions. Books and information continue to be processed through the RI system, and authors continue to use physical and online RI venues to interact. However, they are now required to use 3rd party social media tools (e.g. Twitter, Facebook) in parallel to these existing practices. These online spaces sit outside the boundaries of the RI system. However, their use by authors and readers can inform (and are influenced by) decisions within the system - e.g. authors are required to use the tools by publishers, and publishers judge authors employability at acquisition meetings according to their success in using the tools, and their number of followers.

Authors attempt to mirror their physically situated practices in these new spaces - e.g. answering questions at reader Q&A sessions, and promoting their book. However, these practices are somewhat distorted online, due to the different affordances of the spaces. Whilst it could previously be assumed that their audience in an RI place was one of readers, their online audience demographic is unverifiable, raising questions about the viability of these practices in terms of reaching and catering for their readership. In physical places, RI organisations shared explicit information about the book (e.g. release dates) on their behalf, but online, authors must do this for themselves - and for other authors - thus increasing their workload. Furthermore, by using 3rd party spaces, the book is no longer collocated with the information shared by the authors about it, creating further work for the reader to access it (e.g. through an external link).

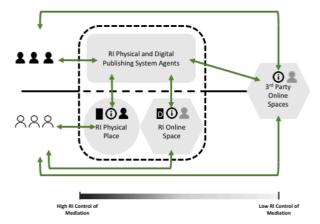


Figure 3: Traditional-Contemporary Publishing Model

By extending existing practice into online space, reader access to the author has increased. However, simultaneously, it has become more difficult to access useful information, due to the limited and inappropriate support of social media tools. It is also more difficult to access the book in response to the information shared about it, as they are no longer shared together.

Although our findings highlighted limitations in how interactions have traditionally been mediated in physical places (e.g. incongruence with readers' reading cycles), the structure of the RI system has, overall, effectively connected authors and readers in a mutually beneficial manner. Drawing on Bachelard's observation about the purpose of a house [30] these physical RI places have served to provide a "shelter" for readers and authors to meet; "protect[ed]" them by making that place safe, predictable and controlled; and "allow[ed them] to dream in peace" by enabling them to perform their roles with minimal disruption.

In order to function in a space, Hillier [32] explained that people need two forms of knowledge - firstly, practical knowledge, e.g. of where to find things to get what they need; and secondly a social knowledge, to understand the rules that link different groups of people together. In the physical RI places, authors and readers have had both types of knowledge, due to the controlled, uniform structure. However, online, the knowledge they bring with them no longer holds within the boundaries of the space.

Through using 3rd party tools, where specific structures are absent, there is a greater onus on authors, in particular, to decide

for themselves what behaviour is acceptable in the space, and find ways of managing it. Where this is not possible, they are resigned to tolerate problematic interactions - something they were previously protected from in physical places, where expectations of behaviour were clear and consistent.

When technology changes, it is common for companies to "sediment" [33] their systemic practices onto existing technology, rather than assess the impact of change on the people involved in their system, to design sensitively around their needs. The speed with which technology has evolved means that we are currently experiencing transformations, as old and new practices are fused [34] in attempt to stay up to date with technology. As such, it can be argued that the current author reader interactions we have observed represents a stage in evolution, and we are likely to see further changes as technology, and needs, gradually develop.

As Skains noted, it took almost 300 years for Europe to transition fully to printed books once the printing press had been developed [35], as building and adopting new structure takes time. When the printing press was introduced, the relationship between author and reader was fundamentally, changed - but this change was gradual, as new constraints (e.g. technological changes; physical storage limitations; copyright) evolved practices and needs. Where digital online technology originally served as a supplement to traditional mediation, the logics of the online spaces have brought about changes to the whole system [36]. With the introduction of technology and the resultant changes - as seen with print - we cannot expect its adoption to be rapid, or frictionless. Although authors and readers can now interact directly, it comes as little surprise that a reticence toward embracing this fully has been expressed, as their past experience has been one of structured control, and separation now disrupted by the online spaces they are expected to use. However, despite this reticence, it was evident that meaningful, well timed interactions could be beneficial to both parties.

7 Conclusions

In this paper we have applied theories of space and place to develop an understanding of how fiction authors and readers interact, and how a perennial boundary influences their relationship. This contribution helps to understand how a large demographic of readers and authors are impacted by technological change; intended to improve their experience, yet often working to their detriment.

A clear limitation to our study was the absence of prior research around the interactions of authors and readers, which prompted us to draw on alternate literature to conceptualise our own understanding. Furthermore, our reader participants all self-identified as avid readers, with university-level education. As such they may not have been wholly representative of the average genre fiction reader, who may potentially face even greater difficulties in navigating information about books.

It is easy to assume that technology may help to bridge the boundary between author and reader, thus fixing a perceived problem - particularly with the knowledge that their historic relationship used to be more collaborative. However, their circumstances are complex, and the structure they have been accustomed to is deeply embedded in their current practices. How that structure served to mediate the boundary between them in physical places has resulted in a relationship of predominantly one-way information communication - from author to reader - rather than one of true, two-way interaction. Without better understanding their needs, this also raises the question of whether it is information communication - or interaction behaviour - that HCI design may better support. Future work must seek to better understand the specific nature of the needs of both authors and readers. One fruitful avenue may be to investigate how technology has impacted other similar relationships, e.g. musicians and their audience.

To develop future digital environments, it is necessary to be sensitive to their current needs, and to the history behind their relationship. To support them, it seems clear that such an environment must observe their need for distance, just as much as their need for interaction. It is therefore likely that a highly structured environment would initially be beneficial, to help them feel supported and safe. Only then may the structure be relaxed, to breakdown the boundary between them gradually, and encourage two-way interaction in a manner that both parties may view as beneficial.

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