Reservoir Hill and Audiences for Online Interactive Drama

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Abstract
This paper analyses the interactive experiences constructed for users of the New Zealand online interactive drama *Reservoir Hill* (2009, 2010*)*, focusing both on the nature and levels of engagement which the series provided to users and the difficulties of audience research into this kind of media content. The series itself provided tightly prescribed forms of interactivity across multiple platforms, allowing forms of engagement that were greatly appreciated by its audience overall but actively explored only by a small proportion of users. The responses from members of the *Reservoir Hill* audience suggests that online users themselves are still learning the nature of, and constraints on, their engagements with various forms of online interactive media. This paper also engages with issue of how interactivity itself is defined, the difficulties of both connecting with audience members and securing timely access to online data, and the challenges of undertaking collaborative research with media producers in order to gain access to user data.

Keywords: online drama, interactivity, multiplatform, online user, online audience research.

Introduction
In this paper we present a case study of the New Zealand online interactive drama *Reservoir Hill* (2009, 2010*)*, focusing on the challenges, pleasures and pitfalls of interactivity from the perspective of producers, audiences, and our own as audience researchers. While the centre of our study is online survey research with audiences for the two series of *Reservoir Hill,* analysis of our results relies on locating this media product amongst the diverse and tentative theorizations in the emerging field of research into digital interactive media. The issue of how interactivity itself is defined, the difficulties of both connecting with audience members and securing timely access to online data, the challenges of undertaking collaborative research with media producers in order to gain access to user data, and the nature of, and constraints on, audience engagements with various forms of online content are among the major topics addressed here.

An online interactive drama such as *Reservoir Hill* is situated in a complex field of media change shaped primarily by the ongoing transition towards digital forms of production and internet-based forms of distribution. In the process, traditional generic and medium-based differentiations have blurred. This movement has been described by Jenkins (2006) as constituting a transition toward a "convergence culture":

> …a move from medium-specific content toward content that flows across multiple media channels, toward the increasing interdependence of communications systems, toward multiple ways of accessing media content, and toward ever more complex relations between top-down corporate media and bottom-up participatory culture. (p. 243)

Many aspects of mass media culture that have been relatively stable for the last half-century, including production practices, organisational systems, and funding models, are undergoing rapid and often experimental reconfiguration in the hope of securing relevance and profit in this new environment. In particular, producers and funders of online media are seeking to reconnect with audiences that are themselves also in a state of flux, breaking old habits of media use and engaging in a range of transitional, exploratory, behaviours. This need to find a supportive constituency for professional online production, plus the fact that digital technologies theoretically democratise the means of media production, have led to a renewed focus on 'audiences' as at the leading edge of online media development. As Jenkins (2006, p. 24) observes, "Audiences, empowered by these new technologies, occupying a space at the intersection between old and new media, are demanding the right to participate within the culture" through creative expression and distribution of user-generated content (van Dijk, 2009).

Participation by citizens in online media creation now takes place across a range of contexts and genres that have varying degrees of connection with commercial media organisations. Similarly, those contributing content operate on a continuum from amateur to professional. The singular term 'audience' therefore no longer seems an adequate descriptor for online participant activity in its many configurations. Current suggestions for new appellations appear to reflect subtle political considerations. Hermes (2009), for instance, interested in the socially-inclusive potential of online media, has both researched and collaborated with a community group associated with the Moroccan-Dutch website Marokko.nl as it developed a plan to make a telenovela. She calls the research aspect of the process 'civic research' and its creative aspect 'co-creation'; hence a preference for the term *co-creators.*

Another widely-used label is that of *produser*. As explained by Bruns (2008), this term highlights the activity of participants but, by incorporating the stem of 'producer', retains a stronger trace of a commercial model than the 'co-creator' term:

> In collaborative communities the creation of shared content takes place in a networked, participatory environment which breaks down the boundaries between producers and consumers and instead enables all participants to be users as well as producers of information and knowledge - frequently in a hybrid role of *produser* where usage is necessarily also productive. *Produsers* engage not in a traditional form of content production, but are instead involved in *produsage* - the collaborative and continuous building and extending of existing content in pursuit of further improvement. (Bruns, 2008, p. 21).

Produsage implies a variety of assumptions about the relationship between conventional producers (the designers of multimedia experiences) and 'users'. However, as we will illustrate, these assumptions are only partially borne out in the case of audiences for *Reservoir Hill*, only some of whom shifted their engagement from consumption of this text to active produsage of it, due to a number of textual and extra-textual factors.

Also of relevance here is van Dijk's (2009) research on YouTube, where uploaded material is typically 'user-generated' and peer-moderated. YouTube thus seems like the paradigmatic forum for non-professionally-generated content. However, van Dijk foregrounds the organisational protocols of rating and ranking that shape the accessibility of YouTube material, which are increasingly influenced by the commercial interest that Google now has in the site. She also cites research suggesting that as few as 10 percent of a 'user' cohort are likely to be active contributors to a site, with more than 50 percent being passive or inactive spectators or 'lurkers' (p. 47). Van Dijk reminds us that regardless of their level of active co-creation or lack thereof, all online participants are constantly generating data that may be useful to others. She therefore advocates the term 'user' for those who avail themselves of online content but proposes that this simple term be always underpinned by the knowledge that users are at once 'producer, consumer and data provider' (p. 55). We think this layered definition, which takes full account of the commercial environment for which *Reservoir Hill* was designed, is the best fit for our needs. Furthermore, we reiterate van Dijk's observation that user agency is complex, in that users may have 'multifarious' roles, depending on which context, or sub-context, of a larger environment they are operating within (p. 42).

A key question informing all of these perspectives is whether the emerging convergence culture empowers audiences for new media, or rather, the new media industries themselves (McMillan, 2002). How are media institutions strategically co-opting all of this audience 'activity' and productivity? (Sundet & Ytreberg, 2009). Is such productivity being harnessed to serve the needs of those institutions, effectively transforming (especially younger) audience members into web workers whose user generated content can be freely appropriated and exploited (Andrejevic, 2009)? Or is the contribution of content by fans, as Banks and Humphreys (2008) suggest, an activity that can be mutually beneficial for both

official and unofficial producers? And ultimately, is the active facilitation of interactive communities primarily aimed at reunifying a fragmented audience into a series of engaged communities organised around branded media experiences, a prospect likely to be highly attractive to advertisers seeking to target niche markets across multiple media formats? In what follows, we explore these and other questions in relation to the production and use of one such online interactive environment in the New Zealand context.

Reservoir Hill – Online Interactive Drama on the Leading Edge

Reservoir Hill is a New Zealand-made online interactive drama series for a youth audience, created by independent producers KHF. Two seasons of this series were broadcast weekly on the Television New Zealand website, TVNZ Ondemand (http://tvnz.co.nz/video), from 12th October - 30th November 2009, and again from 13th September - 1st November 2010. The first season was also available on the telecommunications company Telecom's 'T-World' mobile platform. Generically, the series was a mystery drama, incorporating strong elements of soap opera, with a *Twilight*-style aesthetic that imbued suburban locations with a glowering romanticism.

 Figure 1: A promotional image illustrating the production aesthetic of online drama series *Reservoir Hill*

The first series was aimed at a teen demographic (12-17 yrs)[1], expecting to attract in particular young females[2]. *Reservoir Hill* also exhibits some continuities with what Mann has termed the 'social series' (Mann, 2010, p.90), prominent examples of which include the *Lonelygirl15* franchise and *KateModern*, a British version made for the now defunct social

networking site Bebo by the same production team. Social series combine television's serial format and familiar genres with YouTube based user-generated content, drawing upon the capabilities of social networking sites like MySpace and Facebook to create a community around the text (Ibid.). Such texts thus constitute a form of branded entertainment offering advertisers or sponsors "multiple contacts between brand and consumer" (Jenkins, 2006, pp. 68-69).

In season one, we are introduced to 'Beth' (played by Beth Chote), a teenage girl moving into a new urban community who soon becomes troubled by allegations that she bears an uncanny resemblance to another girl, Tara, who had previously disappeared. Beth's quest to find out the truth about her identity was played out not just in weekly webisodes ranging in length from 6 to 10 minutes, but also on the dedicated *Reservoir Hill* website and across several forms of social media linked to the series. At the end of season one, we learn that Beth is, in fact, Tara, and that her original and widely disliked personality has been deliberately suppressed through psychological reprogramming. In season two, as Beth seeks to solve the mystery surrounding the death of her father, the brutal murder of her step-brother leads her to fear that the 'evil' Tara may be starting to re-emerge.

Although a small number of other interactive programmes have been attempted in New Zealand, *Reservoir Hill* is the first to have achieved success and significant public visibility through being linked to a mainstream broadcaster, the state broadcasting company Television New Zealand. TVNZ screened advertisements publicising the online series on its second channel, TV2, aimed at an 18-39 demographic, and hosted the series' social media links. The series itself was hosted on the archive/replay section of TVNZ's website, TVNZ Ondemand, and promoted actively in youth media.

Reservoir Hill was also a first in terms of the degree of interactivity it solicited from viewers. At the conclusion of every weekly webisode, viewers were invited to text-in suggestions and advice to the main protagonist, Beth. Text messages sent via the online messaging system (accessed through the programme's website), were immediately uploaded into an extra scene shown at the end of each webisode, so that each textor could see his or her name and message displayed onscreen as part of the programme. Furthermore, selected suggestions were then incorporated into the next episode, which was scripted, shot and aired within a week. In season one, webisodes were interspersed with video blogs featuring the protagonist and there were Bebo and Facebook pages to which users could sign up as friends of Beth. Season two adapted and extended these forms of interactivity, particularly through extensive Facebook profiles created for all six main characters, where members of the production team posted messages and video blogs and invited comments and suggestions from their new 'friends'[3]. Other innovations accompanying the second series included the creation of an interactive 'Dreamspace' on the official website with brief cryptic sequences which unlocked clues to the mystery in response to user prompts. Lastly,

there was a faux fan-generated conspiracy website appearing to follow the activities of a shadowy group called *The Few*, whose intentions toward Beth remained deliberately ambiguous throughout both series.

A strong characteristic of the programme's production and publicity was the attempt to position Beth as a real person and the author of her experience, and users as her 'friends' in real life. In season two, this pattern was extended to all the main characters. The vectors for building these 'personal' relationships were users' text messages (since Beth would send an automated response); the social networking pages, where responses to comments would be given from each of the characters; and (in season one only) the video blogs, where Beth would name-check many of those who had contacted her with suggestions and advice. In fact, all such responses from Beth and other characters were the work of production personnel behind the scenes. However, any meta-discourse about the series, such as expressed during the producers' occasional appearances on television and newspaper publicity about the show, was careful to downplay this behind-the-scenes activity and to push Beth to the foreground, in an effort to maintain the narrative premise that she was in fact a real individual as opposed to a fictional character played by the actor.

While audiences for this multi-platform drama experience were modest [4], the series itself was judged to be successful, with the first season winning an International Emmy for best programme of its type, as well as best Children's/Youth programme at the 2010 New Zealand Film and Television Awards. It was also nominated for the New York Film and Television Awards for 2011. On the back of these successes, the producers secured $449,400 in funding from New Zealand on Air for the production of the second series. While the bulk of the funding was obtained from NZ On Air's Digital Content Fund[5], which demands a high degree of technical innovation, there were also financial contributions from three sponsors: Telecom, and two quasi-governmental organisations with social marketing interests in teen sobriety: the Land Transport Safety Authority and the Alcoholic Liquor Advisory Council.

The amount of funding available, however, did not permit a lavish structure for the production of the series. The key creative team consisted of two director/producers and two writers, with a small production support team, including production management and editing. The filming crew itself worked for three days a week. There was some extra support for specific aspects of the interactivity: for instance the application that enabled viewers to text Beth and see their texts on screen was developed by the mobile marketing company, Run the Red[6], while, for the second series, the construction of the interactive Dreamspace was contracted to the digital development company Modica[7], while TVNZ Ondemand maintained the website, congregated user data and provided executive producer guidance. Nevertheless, in practice, the large task of analysing user interactions with the series - including replies to user texts, and messages posted to the Bebo and Facebook sites was

handled by the writing team. Despite having a very small production team, the production model used for *Reservoir Hill* may actually be less sustainable than conventional television production, since while the webisodes were only one-third of the length of a half-hour television drama episode, the complexity and rapidity of the production/ data-handling process made them just as expensive to produce.[8] The net effect was to compress the production practices - and related expenses - into a tighter timeframe.

Reservoir Hill and Notions of Interactivity

A key question explored in our audience research focused on identifying what kind and level of 'interactivity' *Reservoir Hill* offered audiences, and how the available opportunities for interactivity may have shaped the particular pleasures and forms of engagement audience members experienced. In investigating *Reservoir Hill* as an interactive text, we were mindful that there are various competing definitions of interactivity. Jensen (1998, p. 201), for example, defines interactivity as 'a measure of a media's potential ability to let the user exert an influence on the content and/or form of the mediated communication". In this sense audience members are given a voice, and may produce content that is incorporated in some way, rather than merely being receivers of the text. Similarly for Cover (2006, p. 147), "interactivity is deemed to make available an aspect of participation within text-creation or the ability to alter, transform or redistribute a text". Smuts (2009) finds it essential to differentiate between a user having control over the means of accessing a text or media product and actually interacting with its content. His definition is therefore two-fold: "…something is interactive for an individual if it responds in a way that is neither (1) radically random, nor (2) completely controllable" (p. 66).

But there are other ways of understanding interactivity that go beyond the immediate text-viewer inter-relation. Kiousis (2002, p. 379), for example, points to the facilitation of social communication *among* audience members as a defining aspect of interactivity:

> Interactivity can be defined as the degree to which a communication technology can create a mediated environment in which participants can communicate (one-to-one, one-to-many, and many-to-many) both synchronously and asynchronously and participate in reciprocal message exchanges (third-order dependency). With regard to human users, it additionally refers to the ability of users to *perceive* the experience to be a simulation of interpersonal communication and increase their awareness of telepresence.

Interactivity, then, needs to be defined in reference to a matrix of possibilities governed by factors such as the technological features of the text(s) in question and the actual experience they offer to users. It can be seen therefore that *Reservoir Hill* offers several types and levels of interactivity. First, there is a minor form of interactivity that is shared

with older media forms, including printed texts; that is, once the weekly webisodes, video blogs and other materials are uploaded to the site they remain available to be viewed and reviewed, in whatever order the user wishes, until the host-site removes them. While not a glamorous side of interactivity, the extended 'shelf-life' of the product offers opportunities for the organizations whose advertisements remain linked to the webisodes and hints at future income-streams once media companies have instituted a means of persuading users to pay for such access.

The activity of texting to the series was, as we shall demonstrate, much appreciated by users. It was an interactive experience in that it was neither radically random nor completely controllable, although there were two layers of active engagement available for users here. If a textor sent a text to a user-specific phone number he or she could count on seeing their text incorporated in an additional 'cut' scene; therefore, that part of the process was controllable and predictable. Those who simply texted the programme, however, without triggering a cut-scene insert, received a text in reply, but there was an added degree of randomness in this activity since one of a number of generic text-replies would be generated (a fact that was noticed and commented on unfavourably by several of our respondents). In terms of influencing the content of the next webisode however, active users had no control over whether their text would be acknowledged by Beth in a videoblog, or whether it would appear on her phone in a scene in the next webisode. A factor to consider here, however, is that while the cut-scene process was entirely computer-controlled, the others relied on human agency in that one or more members of the production team had to read all the texts and decide which would be incorporated in the next webisode. Indeed, it is difficult to imagine how the process could be anything other than human-influenced, since narrative construction relies on nuanced evaluations of cause-and-effect processes. This example also reminds us that digital processes and human agency remain intertwined at both ends of the process in discussions of interactivity.

So, to what degree did the interactivity solicited from users actually affect the production of *Reservoir Hill* - a process that had to unfold within strict resource constraints? Both series began with a short conventional production process in that the creative team convened two months before the start of filming season one and outlined both the narrative arc for the series and also the broad content of each episode. However, actual production of the second and subsequent episodes was influenced to some degree by viewer feedback, in that 48 hours after the screening of an episode, on a Wednesday, the production team would reconvene and decide the details of the next episode. The scriptwriters would then set to work and by Friday the team were ready to film and edit the episode in time for screening at 5 o'clock the next Monday. Thus, there was potential for individual and collective feedback to have some sway over the narrative direction. For example, in season two, the producers decided early on that Beth/Tara's internal struggle would be a major part of the story, as would her questioning whether she, as the 'evil' Tara, might have killed her step–brother.

However, no definite plot twists or story arcs were fixed in place and hence the mechanics of how the planned narrative resolution would be arrived at were not yet established: "how it would happen was all a bit of a mystery" (Hardy-Ward 28/1/11). Further insight can be gained from comments made in a transcript of an 'exclusive' TVNZ publicity interview with the producers midway through season two, which featured on the Reservoir Hill website:

> Thomas Robins: In the first series, we knew that there was going to be a point A to B - point B being the final episode - but Beth actually ended up at point C, because of how the viewers responded to her, which was really great. With series two though, we knew there was going to be one major incident, but we aren't yet sure how it will end.
>
> David Stubbs: It's amazing how one little change, inspired by a text to Beth or a message on Facebook, definitely throws things in a different direction. A little one-degree shift can mean that by the end of the series there's been quite a big turnaround in the story.
> (http://tvnz.co.nz/reservoir-hill/exclusive-interview-creators-3803291)

Reservoir Hill thus appears to exhibit some elements of ShapeShifting TV (Ursu, Kegel & Williams et al., 2008), in that the narrative was able to respond and shift shape, to some extent, depending on the suggestions of individuals or communities of viewers whose feedback did change the shape and outcome of the narrative – within certain predetermined constraints. While true ShapeShifting TV involves the construction of huge databases of story material which are then compiled in real-time into customized products by individual viewer activity (Ibid.), *Reservoir Hill* has similarities in that it was clearly an interactive production able to change shape 'on the fly' in response to feedback from an actively engaged audience of multiplatform users. Multiple possible narrative developments were allowed for, and a range of different scenarios were possible, since while producers had in mind a particular outcome, they were not completely committed to this. Hence, there was some giving up of authorial control over the narrative to allow exploration of ideas suggested by viewers, and an ability to change directions to keep the audience guessing and disrupt their expectations.

This production process suggests *Reservoir Hill* permitted what Ursu et al. (2008) term 'deep interaction' at the level of the collective or aggregated response. However, for individual viewers, the series may have been perceived as encouraging the pretence of interactive engagement and the ability for individuals to alter the outcome when in reality, the producers still ultimately determined the narrative's direction. At the level of the *individual*, then, this series could be said to have offered shallow or pseudo interactivity (Ursu et al., 2008). It made a gesture in the direction of interactivity, offering viewers the (rather remote) possibility that their suggestions might be taken on board and actually sway the
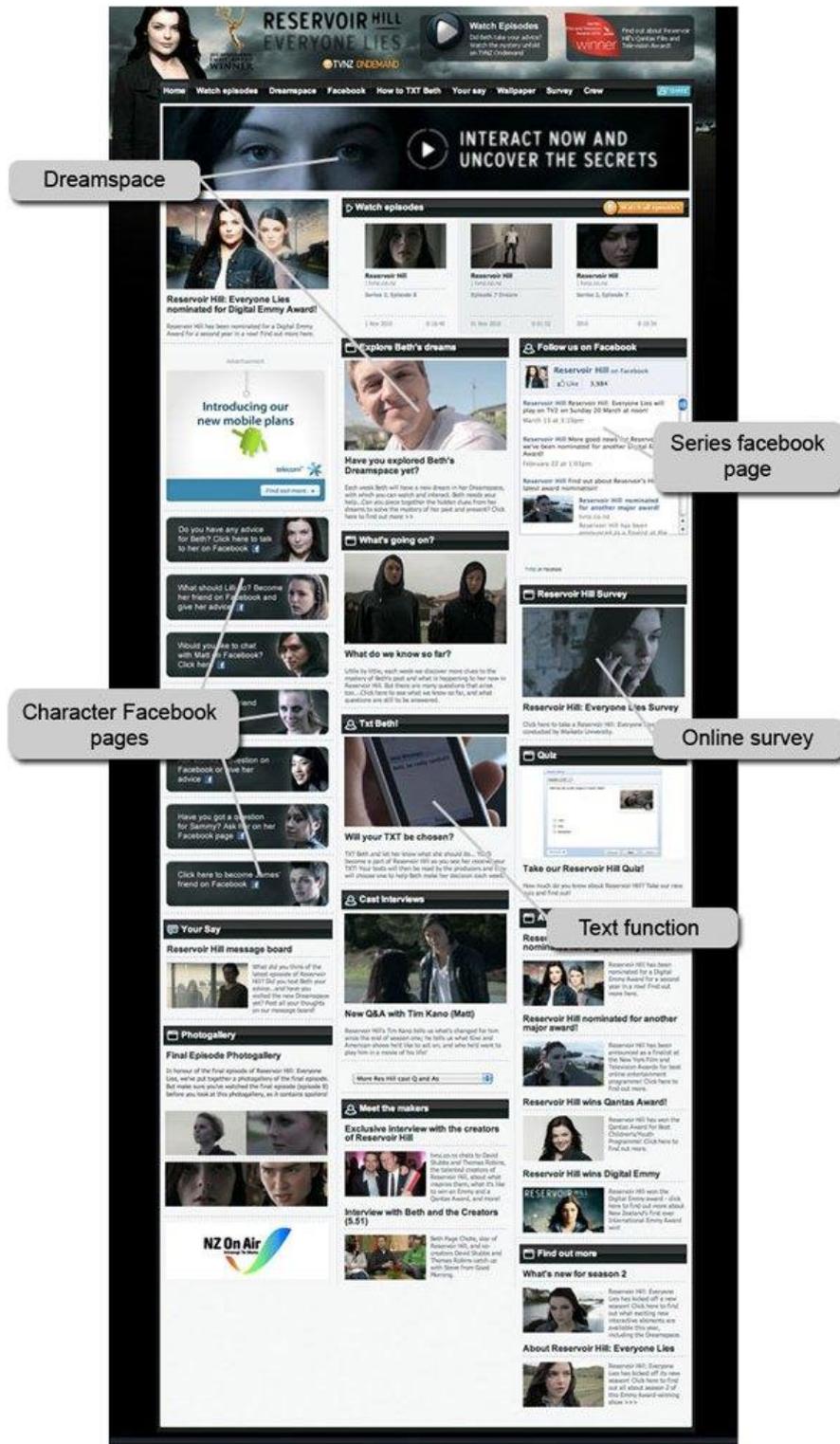
Figure 2: Access to multiple forms of interaction were collated on the main *Reservoir Hill* website, hosted by TVNZ Ondemand. This is from March 2011, some time after the second series (note the link to the University of Waikato online survey in the far right column).

story, when in fact individuals had little real power to change the narrative outcomes because the producers retained authorial control. As several of our survey respondents noted, the interactivity offered by this series thus appeared to be quite limited and lacked authenticity.

To further illustrate the complexities of this issue, we discovered that the production team would at times utilise collective viewer feedback to *subvert* the expectations of their audience by going in new and unexpected directions:

> Viewer input affected the storyline majorly – but not necessarily in the way that they might expect. An advantage of having an interactive drama, written week by week, was that we effectively had an ongoing audience poll telling us (via text and [Facebook]) which characters the audience trusted (or suspected) and what they thought was going to happen next. This meant that we could stay ahead of the game and twist the storyline whenever we thought the audience were 'on to us' or getting bored of a particular storyline. It also told us if the audience was confused about certain aspects of the plot – and we would try and clarify these aspects in the next episode. (Hardy-Ward 28/1/11)

With the social networking activities however, especially with the Facebook pages of the second series, the process that Kiousis (2002) writes of in terms of social communication *among* users also came into play. Once again, the ability of the characters 'Beth', 'Sammy', 'Matt' and others to respond to users' comments on their pages was constrained by the limited human resources assigned to the programme's production (the same person authored all six pages). Hence, there was an energy-efficient generic quality to many of the replies to Facebook users. Nevertheless, the users themselves were not similarly constrained and many expended considerable effort communicating with each other about narrative developments and the personality quirks of the characters.

Although there were creative contributions such as the posting of photographs and artworks on the Facebook pages, the series did not take on the characteristics of what Jenkins et al. (2009) have termed 'spreadable media', where parts of the original text are available for copying and recontextualisation by users. In this process, producers effectively have to give up control over their content in order to gain wider cultural distribution (and profile) for reworked versions of the first-generation texts. In contrast, in the case of *Reservoir Hill* the encoding of the webisodes was strengthened partway through the first series when the production team noticed that pirated segments were appearing on YouTube. As a consequence, series material could not be obtained for remixing, which actively constrained the possibilities for the growth of a more spontaneously generated fan-culture and consolidated power in the interactive realm on the institutional, commercial side of the user-text relation. Subsequently, the material was re-edited by the producers

into a single narrative text that was screened on TVNZ's TV2 channel as a traditional, non-interactive drama experience.

As this discussion suggests, therefore, it is necessary to unpack a unified descriptor such as 'online interactive drama' in order to discover how interactivity is specifically configured in each case across different formats; how it is rationed and distributed unevenly across the digital mediascape. In the case of *Reservoir Hill,* the interactive design of the user experience was significantly constrained, not merely by the limited human and financial resources to facilitate such interactivity, but also by calculations about the commercial value of the intellectual property associated with the series.

The Challenges of Researching Online Interactive Narratives

While our information about the production environment was gained through traditional means via interviews with production personnel, key stakeholders and the collection of secondary materials, we were immediately presented with a set of challenges related to the logistical difficulties of gathering information from *Reservoir Hill*'s more dispersed audience, who were active (in some cases) across a variety of platforms. Other researchers have encountered similar difficulties in studying audiences for online texts that, like the web itself, are "multimodal, hypertextual and ephemeral" (Livingstone, 2004, p. 7). How does one go about studying modes of engagement and interaction that occur in private spaces, and often alone? Given that users were able to send unlimited text messages and post multiple comments across multiple sites, and presuming that one has access to these collective contributions, what does one do with the "overwhelming volume of material, temporary existence of material, and its 'virtuality'"? (Livingstone, 2004, p. 8).

Hermes (2009) has observed that audience research has developed into an approach that is primarily ethnographic and relies on the 'face-to-face' interview. However, since online users precisely do not have 'faces', and since *Reservoir Hill* users were spread thinly across the general population, we tried to locate them in their private spaces by seeking their voluntary participation in an online survey. This request and the subsequent survey, developed using the Survey Monkey tool, were hosted on the *Reservoir Hill* page of the TVNZ Ondemand website for a period of two months. We received 225 responses to our first survey. We later followed up with some of the survey respondents who had indicated willingness to be contacted by the research team, but were able to conduct just 13 online (email-based) interviews out of the 60 respondents approached. This low response is possibly due to timing, which clashed with New Zealand's summer holiday period.

Our choice of research method was also made in the light of the collaborative research relationship we were able to establish early on with the producers of *Reservoir Hill*, which was instrumental in facilitating our research. The small size and intense workload of the production team have already been remarked upon above. Given that context, our intrusion

into this environment was, most likely, initially regarded as an unnecessary and unwanted distraction. Yet, in order to undertake this research effectively, we needed access to the *datasphere* of the production, which was not easily accessible from the outside (for instance the data generated by users' engagement with the TVNZ Ondemand website, *Reservoir Hill* discussion groups, and characters' Facebook profiles, and the records of SMS text messages sent by users) in order to access participants across the full range of platforms. To gain access it was necessary that we offered something that was of potential benefit to both the KMF producers and the Digital Media unit at TVNZ. Since neither party had the resources to research their audience, nor to further analyze the user data they were collecting, we could offer them insight into users' experiences of *Reservoir Hill*. The research was thus collaborative to a degree that was unusual in terms of our previous research experience, but not unprecedented within the existing research on television production more generally.

The basic things the producers wanted to know were the same things we wanted to know: Who were the users? How old were they? How and when did they access the online environment of *Reservoir Hill*? How many of the interactive possibilities did they engage with, and what were the satisfactions and frustrations of those experiences? There were points at which our interests diverged, however: we wanted to understand the levels and types of engagement with, and possible scepticism about, a product which worked so hard to present itself as the directly authored experience of the main character, whereas the producers and broadcaster were more interested in how to maximize their audience. They wanted to know by what means users 'found' the programme and whether they were engaged in informally marketing it to their peers. In one particular instance, however, the producers' preference added value to our research: we consulted with them about issues they might want included in the survey and they came up with a query about the efficacy of the social marketing messages (the consequences of excessive drinking and drug-taking for example) that their sponsors had sought to have included in two of the webisodes. The answers to this question turned out to provide extensive data on the general issue of engagement that was one of our interests. In return, the data informed the producers that the programme was attracting a significant number of users who were older than the 12-17 year-old female demographic they had targeted, and that many users were frustrated by technical difficulties in accessing the webisodes. We understand that these and other findings were incorporated into the planning for the second series.

The pre-production, production and online streaming periods for the two series were compressed into approximately four months each, which introduced problems for our research as the period of most active engagement with the online environment was relatively brief. These problems were further compounded as we only found out about the creation of the first series during its pre-production phase, and only because one of our team had a personal contact on the production team. By the time we had our research plan in place, the last webisode had already streamed online. One specific issue that delayed the

progress of our research was obtaining timely approval from our institution's human research ethics committee. Institutional procedures for gaining ethics approval typically assume reasonably static research tools, participants, and objects with which those participants might interact. In this research, none of these things were fixed and clearly definable, which caused some confusion among members of the committee considering our application, who also expressed concerns about the feasibility of gaining informed consent and protecting the privacy of (potentially very young) research participants in the online environment. By the time we came to research the second series, many of these issues were better understood and the approval process was rather more straightforward.

Other factors which constrained the conduct of our research were practical difficulties in sourcing and securing data. When TVNZ decided to enhance its encoding of the webisodes to stop them being downloaded, not only could some users no longer view the first series on their computers, but the streaming also ran foul of our University's firewall system, so that we had difficulty viewing the remaining webisodes ourselves and had to source a DVD of the series from the producers some weeks later. Eighteen months later this problem still has not been resolved, highlighting the specific needs of media researchers in situations where technical barriers to information ingress have been set high to protect other facets of an institution's communication systems. Similarly, the privacy policies that exist to protect individual Facebook users also function to make it a particularly arduous task to archive 'commercial' Facebook pages for later analysis (it is not possible to download or print a Facebook wall - we had to laboriously copy the content of each character's Facebook pages in sections). Moreover, once access to online data is secured, managing the sheer volume of information is itself a challenge. We obtained hundreds of pages of text records and social networking interactions; analysis of this data is being undertaken using NVivo software and is not able to be reported on here.

Needless to say, most of these challenges were, to some extent at least, eventually overcome. In our first survey, which was not a representative sample of the population of *Reservoir Hill* users since participation was self-selecting and voluntary, the largest segment of respondents was female and 17 or under, consistent with the producers' demographic target. However, a surprising 45% of our respondents were over that age, with 31 aged between 22 and 40 and 3 over the age of 40. Seventeen percent of respondents were male. For season two, we repeated a similar survey and while we were able to get it online before the series concluded we were unable to secure the same degree of visibility on the official *Reservoir Hill* website that had been granted by TVNZ in the previous year. Despite efforts to encourage involvement – including invitations posted on the main characters' Facebook pages, our participation rate was significantly diminished, with only 70 responses to date. In the following analysis of user engagements with this online interactive text, we draw on the data obtained through the two surveys and email interviews. These provide a (partial)

snapshot of the nature of *Reservoir Hill* as an interactive text, and the particular challenges and pleasures involved in its co-creation and consumption.

Audience Engagements: the Pleasures and Pitfalls of Interactive Narratives

There is very little published research on audience responses to interactive narratives, and none that we know of specifically relating to online interactive drama. However, some insight can be gleaned from work on interactive television narratives, which, studies suggest, viewers find more pleasurable than linear narratives (Hand & Varan, 2007). Younger audiences in particular appear to prefer more interactive forms of communication, finding them more exciting and pleasurable (Sperring & Strandvall, 2006, as cited in Lee et al., 2010). Rockwell and Bryant (1999) found that "children who had more chances to interact within the programme also reported liking the characters more compared to the low-interactivity condition" (cited in Hand & Varan 2009, p.4). Vorderer (2003, p. 177) suggests interactive stories "solicit audience participation in the story and thus help them to more intensely internalise the material". And Hand and Varan (2009), argue that interactive narratives are seen as potentially offering more immersive, engaging, personalised and pleasurable experiences for audiences because they allow for active agency rather than passive reception. Their research argues that interactivity consistently and significantly increases audience empathy. Vorderer (2001) also noted that for audiences with "higher cognitive capacities", interactivity enhances suspense and entertainment, and makes a narrative more enjoyable (as cited in Hand & Varan 2007, p. 59). Likewise, as Green, Brock and Kaufman (2004) suggest:

> Interactive media may be particularly transporting, and thus particularly enjoyable, forms of entertainment because they allow users to easily leave their physical and psychological realities behind and become fully immersed as an active participant in the narrative of an alternative, 'virtual' reality. (p.323)

Murray (1997) theorizes that interactivity deepens the transformative experience of audiences as they can enact rather than merely witness the narrative, which leads to greater internalisation and personalisation of story events (cited in Hand & Varan 2009). Hand and Varan (2007, 2009) compared audience reactions to linear versus partially interactive drama content and found that those who watched interactive versions reported significantly higher levels of entertainment, immersion, empathy, and appetite to see more, but discerned no significant difference in the level of perceived narrative difficulty. Lee et al. (2010) found that the experience of watching an interactive text was more enjoyable than watching a linear version of the same text, and this enjoyment was maximised when individuals were able to made decisions on story direction on their own, rather than as a group. Solitary viewing of an interactive text was associated with greater connection and involvement with content, plot and characters than when viewing with a group (Lee et al., 2010).

A key point to make here, however, is that these researchers are all primarily addressing forms of interactivity that involve nodal or branching plot structures (also known as 'yo-yo' narratives) where viewers can choose to follow a particular narrative path which returns to a main story. *Reservoir Hill* did not allow this kind of interactivity, but the research overall offers support for the conclusion that the potential to have an impact on narrative progression (even in limited ways such as texting comments and suggestions to Beth) offers sites of pleasure and agency for audiences. Our research indicates that this was indeed the case among those of our survey respondents who participated in the interactive elements associated with this text.

However, it is interesting to note that not all of our respondents availed themselves of the possibilities for interacting with this series. In our first survey, in response to a question about how many of the possible channels of communication with *Reservoir Hill* they had used, just over half (55%) of the respondents had texted Beth or engaged in some other interactive activity. Only thirty percent had become friends on Beth's Bebo page, while 21% had friended her on Facebook (some respondents may have used both networking sites). Only 7% messaged the *Reservoir Hill* message board. Face-to-face communication was still an important activity in relation to the series, with 42% of our respondents saying that they had talked with others, offline, about the show. In the second survey, the rate of interactive participation appeared to have increased: 80% of respondents had interacted with the Dreamspace, 74% had texted Beth, and 64% became a friend of Beth on Facebook, with other characters attracting lower levels of interest - between 33-38% of respondents reported friending them. However, since we mainly recruited participants via invitations posted on the Facebook profiles, it is likely our sample is biased toward respondents who were more active engagers with the series (the second series also attracted a smaller audience, presumably including those attracted to the interactive elements of the first series).

The vast majority of those who did participate interactively reported greatly enjoying the opportunities it afforded them. Many respondents described the concept of *Reservoir Hill* as 'cool', 'fun', and 'interesting', and said the opportunity to interact made them feel 'involved' and 'connected' with the series. Respondents particularly loved the experience of sending and receiving messages to Beth, seeing their name and advice onscreen, or being cited by Beth in the video blogs, and wanted more of such interaction.
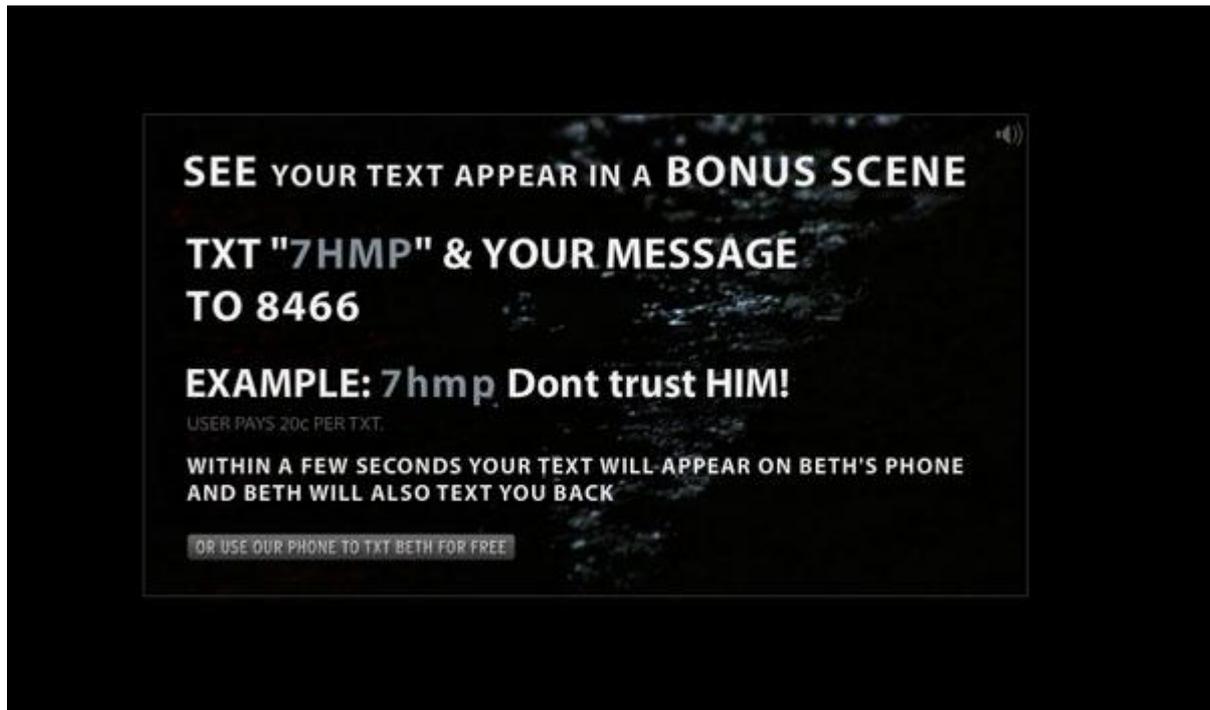
Figure 3: The user-specific message displayed in the browser window when the interactive text function was activated. The text number was generated automatically for each unique viewing.

Figure 4: An example of a user's text message displayed onscreen during the streaming of a *Reservoir Hill* episode.

These aspects of the series were a highly-valued component of engaging with *Reservoir Hill*, and many respondents considered them invaluable in terms of enhancing their involvement in the series, and heightening a sense of realism:

> "Being able to text Beth, it really gets you involved in the program more, making it even more addicting [sic], also being able to actually talk to her like a friend, is really cool."

> "[I liked] the fact that when u txted [sic] Beth, you got to see an extra scene and see your message on Beth's phone which looked so real and cool!"

> "I liked how you could text Beth and post her comments on her bebo and facebook pages like she was a real person."

Viewer empathy and sense of personal connection with characters also appears to have been enhanced through the use of video diaries posted on Facebook and the ability to interact with characters and other viewers online:

> "I love that because you feel like you are a part of Beth's life and not just a viewer."

> "Texting beth and messaging her online was important...because I want to help her and tell her to keep away from her ex friends."

> "I felt included in Beth's world, it made my day when she mentioned me in a vlog."

> "I love Facebook, trying to figure it out with other people and interact with Beth coz she often posts stuff there. I can't get enough of it and just want more!!!"

> "it was cool how you could talk to the characters, find out what they are thinking and give them advice at the same time. It was also cool how you could discuss people who you didn't know but they also had their ideas / theories on what was happening there."

Many respondents spoke positively of being able to feel a 'part of the show' and of the pleasure of engaging directly with Beth and giving advice to her. Others specifically mentioned the opportunity to 'influence' or 'change' the programme by means of the advice they gave to Beth, which could potentially be taken up by the producers:

"You mould the story, and change the storyline and decide what Beth does."

"... you could help the story unravel. See what we wanted to see, not what only the producers and script writers thought was interesting."

"You have to [sic] chance to change the story, you can't get that anywhere else."

"I thought it was interesting to see whether Beth would follow my advice and whether other people were giving the same advice as I had. I enjoyed the fact that I could contribute to the storyline."

"I liked reading what other people thought was going to happen and liked the fact that what people posted may have swayed the directors' storylines. I loved the fact that we could text Beth and actually influence which way the story went on."

The densely enigmatic *Dreamspace*, in particular, where users were invited to unlock cryptic video 'clues' in order to help them solve the mystery, was an intriguing but also troubling addition for some in season two; while 11 of the 70 respondents to the second survey said they 'most liked' the *Dreamspace*, others merely found it confusing.

The Limits of Interactivity

However, it is clear that there are constraints and difficulties for producers in handling even this level of interactivity effectively. For instance, the series was necessarily reliant on standardised and automated responses to users' text messages, given the sheer volume of correspondence and shortage of personnel. Also, there was an element of rather arbitrary selection involved in the inclusion of as many users' names as possible in Beth's video blogs in season one. It was also impossible to incorporate or follow all of the (no doubt conflicting) story suggestions offered by highly engaged users. As a result, and perhaps inevitably, some respondents expressed dissatisfaction at the lack of more genuine opportunities for interaction, as the following comments reflect:

"[They're] generic answers [to the texts], you can tell it's not really from Beth it's just automatic."

"Every time Beth did a video blog, it was really annoying how she kept saying 'and you're right...' and then would say a name, and it was always a different name... She should of [sic] used just 3 or 4, so you believed she had close friends. Otherwise it was like she was just saying [names] because she should, and it sounded really fake..."

> "I knew that the texts would be rigged…. TVNZ would just pick the one which fitted best…"

> "I found it to be a little bit cheesy having the messages and names be included during the episodes. It didn't seem natural."

> "…I wasn't sure how much the viewers input affected the storyline. It didn't look like the input affected the storyline much, like the directors had already decided the whole plot."

Thus, a small number of respondents perceived the interactivity offered by *Reservoir Hill* to be contrived or 'fake', and some were cynical about the extent to which their interactions provided meaningful opportunities to shape the series' outcome. In some cases, this appears to have interrupted their enjoyment of the series. For others, however, awareness of the inevitable limitations and constraints on interactivity from a production perspective did not detract from pleasurable engagement:

> "…I had a feeling they would just choose texts that fit with the storyline anyway, but at the end getting to see your text come up on the screen was pretty wicked! It was something really clever…"

> "[I most liked] not knowing exactly where the series was going to go, you could have your own idea but they could take anyone's advice and put their own twist on it. I liked thinking I had figured the series out but the twists would send it in the opposite direction. It 'kept ya on your toes'."

While many respondents clearly appreciated the interactive elements of *Reservoir Hill*, it is significant to note that viewing of the episodes was still the primary and *preferred* activity for a significant group. In the second survey, 21 of the 70 respondents 'most liked' watching the episodes, because "I was interested in how the story grew each week", "the story line was very intriguing and dramatic", "they were the most entertaining", and "it's when we found out answers". When asked to identify the most enjoyable aspect of the series, many respondents reported that it was the mystery narrative and suspense of *Reservoir Hill*, rather than its potential for interactive engagement, that they found most pleasurable. Others emphasised how much they valued seeing a local story aimed directly at their own age group.

It is also important to note the degree to which the experience with technology had not been an easy one. Media producers often tend to articulate a 'techno-utopian discourse' and project this onto key audience segments, in particular young people, who are seen as

'digital natives' (Sundet & Ytreberg, 2009, p. 387). As perceived early adopters, these youngsters are tasked with leading the market into the new, convergent, digital media age; producers attribute them with a desire to be 'active' and 'creative' (Ibid.). Facilitating and harnessing such activity is seen as key to the ability of traditional media institutions to expand into the digital realm and establish an online presence, with the intention of dominating the production of online content (Ibid.). However, while the producers in this case clearly assumed their audience was tech-savvy and fully conversant with a multi-platform media environment, there were various constraints in the New Zealand context that limited the degree to which potentially interactive viewers could engage fully with this kind of environment. Many respondents reported constraints including the cost of texting and receiving broadband, the slow speed and difficulty of online access and download for those using dialup, and various other technical problems. Some were frustrated by unavailability and interruption of service, and said they were angry when TVNZ enhanced its encoding of the videos part way through the first series.

Alongside these technical problems and constraints, it is clear that some viewers were not highly motivated to interact with the text or contribute to the social networking sites, and in some cases did not have access to them:

> "I'm not really into Facebook and Bebo, so I didn't participate in that stuff."

> "I don't really do bebo and facebook much. The bebo page was cool, but it was kind of pointless information."

> "Not a fan of bebo, read all the facebook posts but didn't post on the site myself"

> "I just dont [sic] have a bebo/facebook account."

There was also a small group of respondents who alluded to parental controls on their viewing or social networking memberships.

The number of comments reporting problems with accessing opportunities for interaction suggests to us that, even for so-called 'digital natives', online participation is not as effortless and uncomplicated as it is often assumed to be. Additional constraints arise from the demands associated with interactivity itself, which is clearly more labour intensive than viewing. Even just sending text messages regularly and making suggestions requires a commitment of time and energy, as does moving between various websites and social networking sites online. The amount of time investment required to interact with *Reservoir Hill* was clearly a factor for some of our respondents:

"Didn't really have the time to muck around on websites."

"I had a short amount of time so I watched the episodes, because they were the most exciting."

"[the series] should have been on one site only, would have made it less time consuming."

"…I am a busy wife and mother so there is no time to participate in the activities. The story intrigued me – that's the only reason I went out of my way to watch it with TVNZ Ondemand."

"I had no time as I am always busy. The only time I'm online is when I have time to watch Reservoir Hill."

From the responses to the email questionnaire, it was evident that online entertainment made up only one component of respondents' total media use and was the predominant form in only a few cases. Furthermore, some respondents were clearly nostalgic for aspects of the traditional television viewing experience, particularly in terms of its technological accessibility and the increased opportunities for absorption provided by the longer length of episodes. Many respondents stated that they wanted the webisodes to be longer - preferably "30 minutes, like television" - and to be re-broadcast on television, suggesting that a significant group among this audience continue to draw upon television as the base model to which online narrative experiences are compared. The favoured narrative format is, for some online users at least, that which is usually offered by broadcast television.

Discussion

In many respects, *Reservoir Hill* is worthy of investigation not so much in itself as a narrative product, but as part of a global drive by media industries to appeal to, attract and cultivate online audiences and to generate sustainable business models for 'televisual' production. The growth of interactive new media forms also reflects a new impetus within the industry to re-aggregate a commercially attractive 'audience' by responding to a perceived demand from users to be able to participate, voice opinions, be emotionally engaged, interact socially with others, be part of a community, and experiment with new technologies and platforms (Sundet & Ytreberg, 2009, p. 387). As Livingstone (2004) notes, in a digital age, mainstream broadcasters are forced to reconsider their relation to the audience and seek new ways to connect, and connect with, "communities of interest" (p. 2) who are increasingly encouraged to generate and circulate user-generated content amongst their peers:

Audiences and users of new media are increasingly active – selective, self-directed, producers as well as receivers of texts. And they are increasingly plural, whether this is conceptualised as multiple, diverse, fragmented or individualised. (Livingstone, 2004, p. 4).Our research, however, highlights some of the contextual factors that inform the paradoxes confronting mainstream producers as they seek to establish a presence within the online environment via interactive or multi-platform narrative. The 'audience' (or at least the assumed demographic of early adopters of digital technologies) is clearly but not uniformly migrating to online and other platforms. They are also fragmenting and establishing unstable and changeable preferences for some platforms over others. User engagements with new media consequently call into question many of the assumptions underlying the economic model that has traditionally dominated television production. Conventional television broadcasting, for example, relies on a set of assumptions about audience behaviour that rely on some levels of predictability, for example in terms of a 'mass' audience watching the same text during a specific timeslot. This predictability has always been overstated in order to reinforce revenue streams based on advertising (Ang, 1991). Indeed, this notion has been under stress for decades, from a variety of quarters, not least time-shift devices such as video and digital recorders. Advertising-driven models for online content are emerging but effectively still in their infancy, and essentially unproven in the New Zealand broadcasting context. Television institutions such as broadcasters TVNZ and funders NZonAir are compelled to experiment with series such as *Reservoir Hill* in order to anticipate where more large-scale and committed investment might be made. But our research suggests that, at least for the targeted demographic in the New Zealand context, users are not necessarily forming into easily identifiable and predictable patterns of behaviour.

On the other hand, however, it appears that new media audiences are still judging the *quality* of online drama with reference to expectations and benchmarks established by conventional television drama. Thus, several respondents expressed disappointment with certain aesthetic and technical aspects of *Reservoir Hill* that are directly reflective of the resource constraints placed on this kind of media practice. Similarly, the clear boundaries placed around the levels and types of interactivity associated with this series, across multiple platforms, were due in large part to the economic context of the *Reservoir Hill* project. The audience was clearly attracted by, and greatly appreciated, the opportunities for interactivity and the promise of co-creation, but to increase the level of interactivity in future similar series would inevitably also increase costs (Stubbs, 2009). Assuming an 'ideal' audience that is collectively engaged across multiple platforms and with expectations of interactive media experiences, the conventional production model for television perhaps becomes untenable.

The production of *Reservoir Hill*, however, does not push interactive engagement too far in these directions. The dispersed and essentially shallow forms of interactivity for the series

could be said to be aimed primarily at creating what Brooker (2002) refers to as 'an overflow'. Brooker identifies "the tendency for media producers to construct a lifestyle experience around a core text, using the Internet to extend audience engagement and encourage a two-way interaction" (as cited in Holmes, 2004, p. 323). This 'overflow' is then deliberately channelled to 'trickle back' into the hands of the producers. In the case of *Reservoir Hill*, the forum and email links were precisely set up so that the products (or 'labour' of user interactivity) could be exploited in the service of an ongoing narrative for conventional forms of consumption.

Consequently, there was less emphasis on interaction *among* users, reflecting the meaning of interactivity as defined by Kiousis (2002), and few if any opportunities for user-generated content to be generated or included in the main text. While users were tempted with the (in practice, remote) possibility that their suggestions might impact on the narrative direction, there were no authentic opportunities for co-creation of the core narrative itself. There was also little to encourage forms of user productivity that might have fostered an online fan base external to the official website; no support for and acknowledgement of possibilities for user groups to develop their own fansites, for example. And while the faux conspiracy website may have been an effort to help generate this kind of activity, it seems to have served as little more than a prompt for more discussion on characters' Facebook pages. Ultimately, all such 'free-ranging' creative labour would have been 'unproductive' in terms of the economic model that underpins this kind of series, and hence viewers were only *produsers* (in Bruns' terms) in a relatively limited sense. By contrast, Banks and Humphrey's study (2008) of the fan-production environment around the online railroad simulator game *Trainz* suggests that, by developing and publishing their own add-on content, users can develop skills that may lead to income-generation or employment, as well as less tangible social benefits in terms of status and networking. It is possible there may have been social benefits for users from participating in the online environment of *Reservoir Hill* but the environment would need to be more long-lived, well-resourced and open, for them to develop transferable skills in online production.

Of course, from the perspective of the producers, there are other compelling reasons to limit the scope of audience interactivity in these ways, which are not necessarily related to economic considerations. Previous research on audience responses to interactive narrative, as well as our own research, strongly indicates that in order to be pleasurable and convey a sense of agency, interactivity must be meaningful in terms of the narrative and be acknowledged by the narrative. However, this does not necessarily mean such interactivity has to affect a changed outcome at the level of the plot (Murray, 2004, p. 10) Indeed, there is a competing demand to retain a strong drama/intrigue narrative, since in the case of *Reservoir Hill*, a significant group of users primarily watched the webisodes and most enjoyed this aspect of the production. A strong core narrative cannot be sacrificed in order to facilitate greater interactivity without potentially losing those viewers who seek the more

conventional pleasures of media reception. There is a fine balance, then, that needs to be struck in offering opportunities for interaction that do not disrupt the core narrative, but still enhance users' sense of involvement and personal connection.

In that sense, the producers of *Reservoir Hill* appear to have struck a somewhat delicate balance between their need to retain authorial control over the narrative and providing users with vehicles for a pleasurable degree of interactivity, particularly with the incorporation of users' text messages on screen, and the ability to interact with characters via Facebook. And then there was always the *promise* that the producers might just choose to follow a user's own advice – sufficient, perhaps, for individuals to feel at least some sense of control over, or potential input into, the narrative. Furthermore, the fact that *Reservoir Hill* did not allow individual viewers to alter the plot or narrative structure directly is not necessarily a problem from the perspective of even fully engaged interactive users. As Vorderer et al. (2001) suggest, this kind of interaction may actually have disrupted the creation of empathic stress or suspense, which in turn would have made this kind of story, a mystery drama, less entertaining and ultimately less effective.

There are also some interesting and unexpected complications that arise in these kinds of experiments in interactive participatory drama. One of these relates to the need for producers to manage the nature and content of online interactions. As Sam Doust notes in the case of *Bluebird AR* (2010), an Australian ABC production:

> One of the more interesting things to happen to narrative when you open it up to multiplayer participation is that its mood becomes dependent upon the quality and constancy of the audience….. Whilst there is the possibility for anarchy and disintegration and the opposite of a good story, what we've found is the converse - an impeccably behaved community of bright, wistful, funny authors, as they deal with the multimedia elements of the story.

In the case of *Reservoir Hill*, a potential area of concern related to the preservation of the narrative premise that Beth was a real individual, which relied on users playing along in the co-construction of a fictional reality. How then, did they deal with those few who were determined to spoil the fun of others by pointing out the series' rather obvious fictionality? According to our informant,

> Most inappropriate/aggressive behaviour tended to be stamped out pretty quickly by the other FB [Facebook] users. For instance, if someone left a comment saying that that the show was fake and that everyone was stupid for believing it – other people would respond saying that they are aware it was fiction and that the person should either play along or go away. This self-correction seemed to be very effective. The majority of people interacting with

> the site were doing so according to some self-subscribed [sic] rules as to what
> was appropriate and inappropriate to do and say. (Hardy-Ward, 28/1/11)

Finally, user interaction with multiple characters can create additional and unexpected complications for the producers of this series. In season two, all major characters had their own Facebook profiles where users could communicate directly with those individuals, ask questions, post suggestions and, potentially, also share information with characters about events that they had not witnessed in the ongoing drama. For example, some viewers left messages on Sammy's page saying "Matt told Beth that she killed her step-dad"; from a production perspective, this kind of interactivity complicated the storyline and meant that writers could not rely on some characters being kept in the dark, in turn constraining opportunities for future narrative development. Our research, then, suggests that both producers and audiences of interactive online content are still learning to productively utilize the potential of the emerging digital environment.

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Notes

[1] Personal communication with Simon Elder and Kate Saunders, TVNZ Digital Media Unit, Ann Hardy, 27/11/09.

[2] ibid.

[3] There was also a seventh Facebook page for the character James but it became redundant after his death at the end of episode one in the second series.

[4] The first series attracted a total of 144,000 web views over its 8-week run - and on its best weeks had an audience of 20,000. Season Two attracted just 38,000 web views. Anna Gowan. TVNZ Ondemand 22/3/11

[5] NZ On Air is a state agency that provides contestable funding for local television, radio, music and new media content production.

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