We Enter a Time of Calamity:
Informed and 'Informated' Youth
Inside and Outside Young Adult Fiction

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Young people's interactions with new media and communication technologies are currently popular subjects of debate and analysis in academia, the media and young adult science fiction. But while academic research increasingly highlights the complexity and individuality of the relationships between young people and new media technologies, pop culture artefacts such as recent young adult science fiction and the news media often resort to oppositional portrayals, particularly of what I will call 'informed' versus 'informated' youth. In such binaries, the informed young person is one who uses information and technology for personal growth and social transformation. Its opposite is the 'informated' young person. Hardt and Negri (2000) use the term 'informatization' to refer to the post-industrial economic processes of the postmodern era (p. 280), but I am using the term here to evoke the sense of being inflated, bloated or overloaded with information. The informed young person may be depicted positively in young adult fiction and the media, but its nemesis has become a fearsome spectre, reflecting popular anxieties and fears about the Information Age. The informated young person has access to unlimited information but is not informed, can communicate effortlessly across time and space but has nothing to say, and is surrounded by an ambient network of peers but remains isolated, alone and adrift. In this paper, I aim to explore how recent science fiction and other pop culture artefacts have depicted the relationships between young people and ICTs (information and communication technologies), especially in light of relevant scholarly research in order to ascertain the relevance such portrayals might have for young people's lived experiences.

One of the most fundamental features of the Information Age is the exponential growth and rapid evolution of ICTs, a pace matched only by scholarly research into this field. In particular, many theorists are investigating how technology is impacting on social relations, identity formation and communities of GenTech, the 'always-wired teen generation' (McNamara 2006). Buckingham notes an essentialist divide between perceptions of computers as entertainment machines exerting a negative, destructive influence on young people's lives, and utopian views of the transformative potential of educational electronic media,

neither of which, he contends, takes into account the 'interplay of complex social, economic and political forces' that influence what sorts of technologies are developed in the first place (2000, pp.41-5). While these essentialist views of youth and technology are mainly evident in popular media and some recent science fiction, they also occasionally emerge in the scholarly research. For instance, the influence of violent game and media content on young people is a recurring and topical issue (see for example Gentile, Lynch et al. 2004; Uhlmann & Swanson 2004; Meyers 2002; Hogan 2005), even though some researchers are now suggesting that the relationship between, for example, young players and violent games requires more analysis to accurately gauge the medium's impact (Mierlo & Bulck 2004; Vastag 2004; Hourigan 2005).

In contrast to studies focusing on the negative effects of the 'entertainment media', much scholarly research has focused on the ways that new media are influencing young people's social and psychological development. For example, ICTs allow for new forms of identity work, a topic relevant to young people who are still forming their sense of themselves (see for example Calvert 2002; Filiciak 2003; Nakamura 2001; Turkle 1996). Young people are also extending and developing new literacies in technology-based environments: James Gee argues that video games can be an excellent learning tool in the Information Age (2003, p.7). Alvermann and Heron suggest that while young people's play-interactions with popular media may appear frivolous, such play 'actually involves multiple literacies embedded in complex communication practices' which can subsequently inform classroom pedagogy (2001, p.122). Similarly, Lewis and Fabos reveal that young users of instant messaging (IM) extended their schooled literacy practices to the online medium, and 'used language in complex ways in order to negotiate multiple messages and interweave these conversations into larger, overarching storylines' (2005, p.482). Finally, content creation and connectivity are now emerging as important new areas for research, reflecting the enormous growth of social networking and blog platforms like MySpace and YouTube (Lenhart & Madden 2005; Lenhart, Madden & Hitlin 2005).

The mainstream news has explored some of the same issues as the scholarly research, often drawing on these studies as the basis for news stories. Yet a review of articles from online news sources in the first half of 2006 reveals that while such articles often draw on scholarly research and may attempt to show multiple perspectives, their portrayals of young people's interactions with ICTs can be sensational, and usually contain implicit binary oppositions between the informed and informated teens of GenTech and between the more extreme positive and negative repercussions of technology use young people may experience. Negative portrayals of young people's interactions with technology focus on the issue of online predators and the perceived vulnerability of innocent or ignorant young people (Alfano 2006; 'Dark Side of the Web' 2006; Lagorio 2006; Lewis & Davis 2006), the physical repercussions of internet and SMS addiction (Clark 2006; 'Internet Addiction can Harm Lives' 2006; Edwards 2006; Yiacoumi 2006), and the ways that technology may be eroding the quality of interpersonal communication (Kissane 2006). At the same time, positive portrayals of GenTech pick up topics such as the educational advantages of being tech-savvy (Timson 2006), new ways that young people are using language in technology-based media (Yiacoumi 2006), the evolution of virtual communities (Alfano 2006; Hearn 2006), the evolving ethics of technology-assisted social interactions (Zeller Jr. 2006), and the ways that ICTs are allowing young people to perform new types of identity work (Williams 2006; Hearn 2006).

Young adult science fiction has been quick to explore and extrapolate the intersections between young people, ICTs and information; however, the generational politics involved in writing young adult stories about technology has meant that these portrayals have often been ambivalent. Elizabeth Pandolfo Briggs notes that 'although many [young adult] novels ostensibly portray cyberspace as exciting and full of possibilities, underneath a subtle current of unease and fear bleeds through, which reflects adults' concerns about cyberspace and computer technology' (2003, p.191). In a sense, adult writers of these texts are exploring issues relevant to young people, but such explorations are necessarily coloured by the writer's adult worldview. Both Elaine Ostry and Marla Harris have

noted this ideological framing: Ostry suggests that one of the purposes of recent young adult science fiction has been to 'mediate the posthuman age to a young audience' (2004, p.223), while Harris points out the way portrayals of supernatural elements of cyberspace dramatise 'the tension between the liberating possibilities of disembodiment and the desire for embodied relationships' (2005, p.111).

While the virtual reality game and the supernatural 'ghost in the machine' are popular cyberspace metaphors in young adult science fiction (Briggs 2003; Harris 2005), I concentrate here on texts which focus on the media streaming, information flow and communication aspects of cyberspace, as these are more overtly relevant to the online lived experiences of today's tech-savvy youth. Portrayals of these expressions of cyberspace may be traced back to the traditions of cyberpunk and post-cyberpunk science fiction. These subgenres usually portray informed, rather than informated young adults: young people who are comfortable with technology and can manipulate it at a whim, often to benefit their society or humanity generally. Sam in Pat Cadigan's *Synners* (1991) is one such informed young person: an excellent hacker and electronics engineer, she is instrumental in saving the AI (Artificial Intelligence) that benevolently guides the world's Internet-analogue. In Neal Stephenson's *The Diamond Age* (1995), Nell, a lower class child, finds a high-tech repository of vast informational riches, and uses it to better her lot in life and eventually influence the political structures of her society. Similarly, in William Gibson's *Idoru* (1996), the teenager, Chia, uses her virtual social networks and her skills with computer programming to outwit a gang of nanotech smugglers and eventually gain membership to the Walled City, an exclusive multiple user domain.

Since the early nineties, portrayals of cyberspace have reflected and extrapolated from the evolution of the Internet, with a growth in depictions of in-brain interfaces, instant messaging platforms, new forms of brain-based file transfer systems and multi-channel information and entertainment media. These changes have complicated the depictions of young people using such technology. Older texts envisaged a divide along lines of access and proficiency, where informed young people had the technology, skills and abilities to manipulate cyberspace – often through

hacking – for their own purposes; those without the access or proficiency were relegated to the margins of the story, plebs according to the hacker hierarchy. Since the late 1990s, however, the emphasis has shifted from economic and knowledge-based paradigms to social and political ones. In an age where technology is ubiquitous, hyperconnectivity is the norm and the information flow is constant, the perceived quality of the information available via ICTs is increasingly subject to critique. Texts are now more likely to consider the purposes of information and misinformation, the motivations of those controlling the information flow, and the effect of ICTs on average people, their societies and their culture. This development seems to be spelling the death of the hacker-as-hero – a popular construction from cyberpunk that harkened back to earlier twentieth century stereotypes of the 'rugged engineer' (Ross 1991, pp.122-5). Later generations of fictional informed young people rarely *create* code; instead, they are notable for their skills in *sorting* the pearls of information from the dross, while the informated are those who cannot trawl the cyberseas so effectively.

Three recent texts aimed at young adults, *Spare Parts* by Sally Rogers-Davidson (1999), *Sleepwalking* by Nicola Morgan (2004) and *Feed* by MT Anderson (2002) respond to these new informational paradigms. The first text, *Spare Parts*, depicts the ICT as an in-brain interface personified by an electronic cyber-helper. The young protagonist, Kelty, trades her body for a high-tech cyberform; this comes with a prototype CATI (Computerised Automatisation and Telecommunications Interface) which mediates and enables all her communications and interactions with other people and the Internet-analogue. Although only a set of computer protocols, Cati is strongly personified in the text, and Kelty's relationship with her is unambiguously positive. Early on, Kelty dubs Cati as her '*on-board pathetic friend*', soon after, Cati describes them as '*a very successful team*', and eventually, when Kelty realises the full informational potential of her Cati interface, she exclaims '*I'll never have to think for myself again!*' (pp.142, 150, 272; italics in original).

Despite the seemingly ominous tone in this statement, the text never depicts Kelty becoming informated by her dependency on Cati: this protagonist has innate heroic qualities, including strong moral fibre, and thus automatically seeks to use her interface and subsequent access to information to save the day. The idealism inherent in this construction extends to the text's treatment of the always-wired society: the benevolent makers of Kelty's cyberform make no attempt to exploit their access to her brain, despite their ability to do so. This is a much more utopian vision of informational privacy than exists in real life, where netizens are constantly abjured to be alert to the trail of 'digital breadcrumbs' they may be leaving (Zeller Jr. 2006, no pagination) and young people in particular are seen as vulnerable to child predators posing as other young people online ('Dark Side of the Web' 2006; Lagorio 2006). Yet although *Spare Parts* does not engage with many technology-related issues, the evolving symbiotic relationship between Kelty and her Cati does provide a good metaphor both for GenTech's ease of integration with ICTs and also for the identity work that young people are performing in online worlds.

Sleepwalking, by Nicola Morgan, presents a less utopian world of the future than *Spare Parts*, but nevertheless one in which the informated teen triumphs to transform her society. This text discusses informational flow in some depth, but demonstrates its uneasiness with technology by valuing the low-tech, concrete medium of story-telling over high-tech, virtual media: the former is transformative, while the latter exists mainly as informational dross. This oppositional stance is evident in the division between citizens and outsiders. Citizens live high-tech lives but have no access to stories and no ability to use creative language, while constant drug regimes make them passive and docile. In a symbolic sense, the citizens are informated: the drugs they take fill the brain with dross, while the ability to take in useful information (stories) is screened out by a neuro-surgical process of de-languaging. In contrast, Outsiders may have low-tech lives, but their culture centres on story-telling, which the text portrays as 'naturally' better than the shallow faux-culture of the citizens with all their futuristic ICTs. Specifically, the text uses the protagonist, Livia, as a focaliser to position readers to accept its ideological stance. As a privileged Outsider, Livia has access both to story and to citizen entertainment; because of this, she is more like contemporary youth than any of the other characters.

Yet even thouh she is an Outisider, she must make the choice to be informed rather than informated: initially, she finds the citizens' lifestyle appealing and does not value her education in stories, but once she sees the plight of citizens and normal outsiders for herself, she recognises the worthlessness of citizen dross, and is able to use her knowledge of stories to effect widespread social change. By focalising on this character, the text positions readers to come to a similar moral decision: to be suspicious of high-tech media content and of the apparently malign cultural influences of new media generally.

The final text, *Feed*, is more dystopian again, but investigates the kinds of social and political issues arising from hyperconnectivity and information saturation most directly. In Anderson's text, set in a near-future North America, more than seventy percent of Americans have their brains permanently connected to the feed, an extrapolation of the Internet. Anderson links the feed to the rise of oneiric culture (where communication takes place via thought and wish), replacing written and print cultures, but the text portrays oneiric culture as an unmitigated disaster – 'a time of calamity' (p.49) – not least because of its effect of informating feed users.

The reader experiences feed-life first-hand through the narrator, Titus, a strongly informated teen. However, far from empathising with Titus, the text's ironic narrative encourages readers to be extremely critical of Titus's informated existence, and, by inference, of new media technologies. Titus and his friends have had the feed from birth and rely on it utterly. Titus claims that the feed was originally marketed as an educational advantage,[1] allowing users to be 'supersmart without ever working' (p.59), but Titus's own narrative functions as the text's critique of this claim, by demonstrating his appalling ignorance and lack of basic general knowledge. Far from being a tool for education or social transformation, the text depicts the feed as an exploitative medium, controlled by corporations who prompt users' desires and then profit from their subsequent purchases. Titus's life of constant consumption makes sense to him, at least for most of the story, but as the text makes no attempt to rationalise the lifestyle to readers: they are positioned to question and reject the consumerist imperatives Titus, and especially

his friends, take for granted. Moreover, the similarities between feed and real-world advertising links the text's ideological message about the feed to the real-world context of ICTs and contemporary media content.

In *Feed*, as in *Sleepwalking*, informated teens have smaller vocabularies and noticeably less linguistic ability than their informed counterparts, and through this the texts imply a link between reliance on ICTs and the decline of language and literacy. In other words, these texts are warning readers that use of ICTs may well make them sound stupid, and perhaps even damage their brains. Whereas informed teens speak in standard English (or standard American English), informated teens in these books abbreviate many of their words, rely on the restricted codes of obscure, futuristic slang and employ meaningless syllables as verbalised ellipses within dialogue and narrative situations. Alex, an informated teen in *Sleepwalking*, speaks like he is both drugged and mentally retarded, which, thanks to technology, he is:

> *'Tell us about the funk, Alex,' said Tavius [an informed teen].*
>
> *'Funk? It's stuff. You put it in like a drink. Pends how you feel, like tense or things. You take the right stuff and you feel kay. You wanta try?'*
> (p.151)

Titus and his friends, who are neither drugged nor de-languaged, are just as incomprehensible: 'Marty would be all, "Unit! Just wait one—" and Link would be "Go for it. Try! Try it!" and Marty would be like, "Unit! You are so—!" And then they would be all big laughing' (p.16). Titus even dimly recognises the inadequacy of his friends' and his own language skills, although he makes no attempt to improve them: 'You know your break sucks when the most brag part of the night is you coming up with the word "caster"' (Anderson 2003). Such depictions are at odds with the scholarly research, which shows that in online situations, young people often use language extremely creatively (Lewis & Fabos 2005), but may work as a distancing tactic, preventing readers from understanding or empathising with the lived experiences of these characters.

The text portrays the feed, and, by implication, the Western, information-saturated mediascape, as a kind of drug. The feed erects a barrier between users and the real world by

creating appealing simulacra which blot out reality. Thus, Titus watches feed sitcoms and advertisements that feature pristine natural environments, happy people and widespread prosperity, and believes that the world is like this, even though some things don't always match up to the feed's image. The feed also creates dependencies in users, so, for example, when Titus and his friends are temporarily cut off from the feed, Titus feels like he is living in a small, quiet room: 'It was fucked…. We were frightened, and kept touching our heads. Suddenly, our heads felt real empty' (pp.55, 56, 58). In contrast, information overload creates a high: it is feed 'fugue', 'fugue-joy', or even 'going in mal' (pp.18, 45, 43).

The implications of the feed are summed up in the term itself. Titus and his friends feed off the feed, which supplies them with all their information and culture, but has no nourishment; moreover, even as the feed feeds Titus, readers are positioned to see that he himself is fodder for the feed, with the corporations that control the feed exploiting users in a spiralling consumerist cycle.

By portraying the feed as a uni-directional, rather than dialectical information flow, Anderson's text denies the possibility of agency or ownership in the characters' interactions with technology. The closest this text comes to offering an informed alternative is advocating resistance, and indeed, the story is dedicated 'to all those who resist the feed'. In the story itself, Titus's new girlfriend Violet represents the informed teen: she has the feed but resists being consumer profiled and actively searches for knowledge. And yet, this informed teen cannot triumph or transform: Violet may resist, but she cannot change the feed, and the price for her intellectual independence is high. When her feed malfunctions, it begins to shut down all her brain and motor systems, and as an unprofiled customer, she is rejected as a candidate for Feedtech assistance, and ends up in a vegetative state.

Anderson's text contains an inherent contradiction in what it wants from young readers. On the one hand, it is scathing of ICTs and the effect of corporate content on young netizens, and advocates resistance to the feed. At the same time, the text admits that the ubiquitous media immersion offered by ICTs is a Pandora's box, so that 'everything that goes on, goes on on the feed' (p.60), and Violet's ignominious end reinforces the point that resistance is futile. This idea recurs at the end of the story: thanks to Violet, Titus starts to become aware of the world outside his own head. But the text does not reassure that all will be well, or even that Titus will ever become an informed teen; instead, the feed itself has the final say, selling blue jeans with the recurring slogan, 'Everything must go' (p.314); a dire future in this time of calamity.

One of the problematic features of these texts is that while they claim to represent real-life issues of youth and technology at least metaphorically, these representations remain ideologically-laden fictional constructions designed to position readers to respond in certain ways. Thus, such texts may have varying degrees of relevance to the lives of young people, and this is constantly changing, not least because young people's interactions with new media technologies are evolving over time. For example, in some ways, older cyberpunk texts, with their emphasis on young hacker heroes creating code, respond more closely to the lived experiences of today's tech-savvy youth, particularly in light of the current wave of online content creation, than do texts like *Spare Parts*, *Sleepwalking* and *Feed*. The older texts reflect a time before cyberspace was domesticated for the everyperson, and hackers were literally still in the process of writing cyberspace into being. In contrast, the newer texts reflect a more recent period in cyberspace's history, when the web was well-evolved but content sharing and social networking had not yet become the phenomena they are today. Consequently, these texts are often based on views of the Internet as a repository of corporate content, and emphasise the importance of information sorting rather than creation. Yet I would argue that the current shift towards amateur content creation has the potential to change the balance of power in cyberspace, and as the research shows, young people are at the vanguard of this revolution, creating not only the content, but also the associated literacies and codes of behaviour that accompany it.

At the same time, corporatisation of the net is still a very relevant issue, and these later texts, especially *Feed*, do encourage young readers to critique the types of information available to them online. Idealistic views of informational security, especially of the kind depicted in *Spare Parts*,

have little to offer young readers, who are constantly reminded of the krakens that lurk in cyberseas. However, Morgan's and Anderson's negative attitudes towards ICTs and the information flow are arguably not very relevant for young people whose online and offline worlds are so closely interwoven. The landscape of cyberspace may be changing, but far from being a time of calamity, the scholarly research suggests that the anxieties about ICTs evident in recent young adult science fiction may be overstated: in the words of a recent headline from cbsnews.com, 'Teens are wired ... and yes, it's ok' (McNamara 2006).

NOTES

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2. This echoes marketing strategies employed by real-life internet service providers; for example, Bigpond (an Australian ISP) recently aired a television advertising blitz using educational advantage as a main selling point.

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