

Pastiche scenarios: fiction as a resource for experience centred design

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Abstract

Pastiche scenarios draw on fiction as a resource to explore the interior “felt-life” aspects of user experience and the complex social and cultural issues raised by technological innovations. This paper sets out an approach for their use, outlining techniques for the location of source material and presenting three case studies of pastiche scenario use. The first case study is an evaluation of the Apple iPod that explores the socio-cultural meanings of the technology. The second case study focuses on the participatory design of Net Neighbours, an online shopping system where volunteers shop as intermediaries for older people who do not have access to computers. The third is an in depth consideration of a conceptual design, the “cambadge” a wearable lightweight web cam which, upon activation broadcasts to police or public websites intended to reduce older people’s fear of crime. This design concept is explored in depth in pastiche scenarios of the Miss Marple stories, *A Clockwork Orange* and *Nineteen Eighty-four* that reflect on how the device might be experienced not only by users but by those it is used against. It is argued that pastiche scenarios are a useful complementary method for designers to reason about user experience as well as the broad social and cultural impacts of new technologies.

Keywords

Scenario Based Design, Pastiche Scenarios, User Experience, Experience Centred Design

1 Exploring User Experience for Design

The concept of user experience has become influential in the design and analysis of interactive systems. For example, Preece, Rogers and Sharp (2002) argue that interaction designers should concern themselves with setting not only usability goals for their products but also user experience goals to assess whether the product is enjoyable, satisfying and motivating. A number of theories and models of user experience have recently been developed in Human Computer Interaction (HCI) (e.g. Forlizzi and Ford 2000; Davis 2003, McCarthy and Wright 2004; Forlizzi and Battarbee 2004). While these are quite diverse in their provenance, a number of common threads can be discerned. In particular they seek to complement a purely functional analysis of user interaction with an account of the sensual, emotional, social and cultural aspects of peoples’ relationships with technology.

For example, McCarthy and Wright (2004, 2005) refer to the “felt-life” of people’s experiences with technology. The emphasis here is on the

concerned, feeling person engaged with technology and making sense of themselves and their interactions with and through technology. This “felt-life” approach takes as its starting point a consideration of people’s sensory and physical engagement with technology. For humans, sensory or sensual engagement is intimately tied up with language and also the interior aspects of intentions and desires. Once labelled, feelings become a form of knowledge that help us make sense of our relations with the world both as individuals and as part of a society or culture. Such sensory engagement, McCarthy and Wright argue, is constitutive of the emotional-volitional nature of human action.

According to their view (see also Nussbaum 2001), goals, needs, desires and values are the means by which an individual connects with a world of objects and people outside of that person’s control. Emotions are not just interior qualities of experience but are always directed at someone or something, disappointment for example, does not exist separate from the world; it is always disappointment at something - a friend, an election, a movie, a website, an interaction and is framed in terms of needs, desires and expectations which themselves emerge from our interactions with others. We do not just use technology, we live with it, it is a part of our “felt-life” and can create magical moments that would not be possible without it (McCarthy and Wright 2004). For example, a father is at work and receives a call from his daughter who is sitting on top of the London eye; for a moment the world is a smaller and more intimately connected place due to this unexpected call (McCarthy and Wright p.27). The sensual and emotional threads of experience do not sit apart from the more cognitive psychological concerns of thought, knowledge and belief. Thought, knowledge and belief are shot through with emotional-volitional tones. We may believe, for example, that the mobile phone is a positive technological development because of the intimate connections it provides despite being annoyed by other people using them on trains. Experience then, is irreducibly sensual, emotional, intellectual and culturally embedded (McCarthy and Wright 2005).

This emphasis on “felt-life” raises interesting challenges for analytical tools and techniques in HCI. It has long been recognised in the field that analysing the rich context of interaction is vital to successful design e.g. Winograd and Flores (1986) but contextually-orientated techniques have often focused on exterior aspects of context such as: information resources, physical situation and setting, work as practiced, users’ personal goals, concerns and how these relate to community or social norms e.g. Lave (1988), Suchman (1987), Wenger (1998). The “felt-life” aspects of human experience have been left relatively under-analysed. McCarthy and Wright (2004) have suggested that part of the difficulty of analysing the “felt-life” aspects of experience is that the traditional cognitive orientation of interaction analysis inevitably focuses on functional, rational and behavioural criteria. They argue that complementary analytical approaches to analysis based on literary and artistic orientations may offer deeper insights. In particular, they claim that narrative and especially novelistic approaches to analysing experience may prove to be fruitful design tools (Wright and McCarthy 2005). Novels are multi-

perspectival, multi-vocal and dialogical (Morson and Emerson, 1990; Holquist, 1990). They can therefore reflect a range of experiences, competing interests and conflicts and are thus particularly valuable for thinking about the more subtle and complex social and cultural issues that arise with some technological innovations. This paper attempts to recruit fiction to consider the “felt-life”, interior aspects of user experience.

1.2 Narrative approaches to analysis

Narrative approaches to analysis have of, course, always been central to HCI design. In workplace studies, narrative vignettes - short pen pictures of people in a setting have been used to capture the felt experience of working in a particular place or setting e.g. Hutchins (1995), Orr (1996),. Through the vignette, ethnographers attempt to give the reader a first-hand feel of what it is like in the work place they are studying. Scenario-based design is another HCI analysis method that adopts a narrative approach. It tries to capture ‘the user and their activity as a story, with which designers and users can envision possible design innovations (Bödker, 1998; Carroll, 2000). Good scenarios describe not only what the user does but also their goals and purposes, the setting and other actors. Nielsen (2002) points out that while the kind of scenarios typically created for scenario-based design are narrative, they tend to emphasise what happens over and above what the character feels about the situation and how they make sense of it. The emphasis tends again to be on the exterior rather than the interior aspects of experience. Nielsen argues that characters in HCI scenarios are often stereotypes, mere functionaries that illustrate the workings of the product being described. Using a narrative theory distinction, she contrasts the plot-driven approach of scenario-based design with the character-driven approach of film script writing. She concludes that to analyse user experience we need richer character portrayals in our scenarios.

Cooper (1999) argues strongly for design based on ‘personae’ rather than ‘users’. In Cooper’s approach there is an attempt to portray unique characters with individual histories, thoughts and feelings. Personae are often based on interviews with several users that are used to create synthesised characters. When a personae based approach is used there is an attempt to consider the user as a specific individual but such personae often remain unconvincing because they are composites. McQuaid et al (2003), for example, constructed personae to ‘walk a mile’ in the users’ shoes in order to generate insights for the re-design of a library information system. The personae they created were given attributes like age, gender, hobbies and even characteristics like attitudes to help. Naomi, for example, is a first time customer looking for a Stephen King novel. She sees a sign for the bestsellers but she can’t figure out how they are organised;

“She’s mildly frustrated and decides to swallow her pride by asking for help. She looks around and is not sure where she should go for help. Eventually she sees a man sitting at a desk. Cautiously she approaches him. He appears to be working on the computer. Naomi wonders whether she should interrupt him and whether he’s even the right person to ask.”

(McQuaid et al 2003: 123).

This type of description allows the designer to construct a set of associations around the persona and to some extent identify and empathise with them. But this kind of persona lacks the depth, personality, history and cultural context that characters in novels seem to possess. It would be possible to substitute “Naomi” in the scenario described above with “the user” without losing much of what the scenario reveals. This may simply reflect something of the skill of novel writers compared to those who write design scenarios, but perhaps more significantly, it may be because personas are often little more than a rather static list of attributes that do not suggest a sense of personal history, growth or experience.

Rather than attempt to write strong character-based scenarios from scratch, we have looked to re-use characters from existing fictions. Characters such as Ebenezer Scrooge and Bertie Wooster (Blythe and Monk 2005) Bridget Jones and Renton from *Trainspotting* (Blythe and Wright 2005). This has the advantage of drawing on readers’ shared knowledge of already familiar characters thereby recruiting a pre-existing rich understanding of the character-users and the use context. If you have read Dickens’ *Christmas Carol* or Bridget Jones’s diary you will have an understanding of these characters and be able to envision how they would respond to new and novel situations. This is so because giving the reader such an understanding is precisely the point of a well-written novel. If you have not read these novels there are so many other cultural representations of the characters in film and television that they will still resonate. And if you have never seen any of them they are strong enough on the page to make an impression at first reading.

Pastiche scenarios can be used as rhetorical devices for design - to convince and persuade and to make apparent assumptions and values around the design and use of technology. They can also be used to explore emotional, social and political contexts of use. Characters in fiction can occasionally surprise their own authors. Pushkin once remarked of one of his characters that she had refused her suitor, and that he had “never expected it of her”. Tolstoy quoted this with approval agreeing that his own character, Anna Karenina did not behave as he expected her to (Pevear 2001). When characters with as much depth and richness as these are recruited to scenarios they might also surprise and inform designers. The use of complex, rounded characters may also create ambiguity which, as Gaver et al (2003) note, can lead to new design challenges and insights. The next section relates pastiche scenarios to the more general scenario-based design life-cycle and describes a number of methods of selecting source material for pastiche.

2 Using Pastiche Scenarios

Pastiche scenarios are a specialised form of scenario which provide designers with access to the ‘interior’ aspects of user experience. Because their construction requires a certain aptitude for imitating literary styles not everyone will be able to produce them easily. Members of a design team that enjoy this kind of writing would be better suited to making them than those that would find the prospect intimidating. Like any scenario they can be used

in various phases of the design process (Carroll 1995). Rizzo and Bacigalupo (2004) identify four common uses of scenarios in the design process:

- As a means of encapsulating data from fieldwork studies
- As a tool for envisioning new design concepts or future systems
- As a mechanism for structuring mock-ups
- As part of prototype evaluation

Pastiche scenarios may have limited value in encapsulating data from fieldwork studies but they can be used for generating discussion and insights in the field as will be seen in later sections. They are also valuable as a tool for envisioning new systems, for structuring mock-ups and analysing existing systems or prototypes.

However, the reasons for constructing a pastiche scenario are not to understand “representative” users. The typical user is often a convenient fiction and so too is typical use, no-one has 2.5 children (Cooper 1999). Djajadiningrat et al found “extreme users” to be helpful in generating design insights (2000). Further, atypical characters may help designers to position themselves reflexively: to be continually aware that they can only ever create fictitious users and possible uses for their technologies when they are constructing scenarios. Designers shape but cannot determine the use of their products.

In this paper we offer three case studies. The first is concerned with analysing existing technology the Apple iPod and the pastiche scenarios are used to explore “felt-life” issues. The second case study, offers an example of how pastiche scenarios can be used as tool in participatory design. Here the engaging and amusing quality of pastiche is used to engage stakeholders in envisioning design solutions around appropriate financial models for Net Neighbours, a web-based shopping service. Pastiche scenarios are particularly valuable in participatory design situations, since they engage users in the way that characters in novels might. Rizzo and Bacigalupo (op. cit.) point out that scenarios are themselves designed artefacts and categorise their scenarios in terms of whether their features are defined prior to the design session or during a design session. The Net Neighbours pastiche scenarios were written prior to the design session but they drew reactions from designers and stakeholders alike. It is possible however to create pastiche scenarios with users as will be seen in later sections. The third case study shows how pastiche scenarios can be used to explore social and cultural issues with imagined technology. In this case, wearable always-on wireless cameras used as crime prevention and reduction measures. Because it is a novelistic form, pastiche naturally lends itself to considering imagined futures. For the same reason, and unlike most scenario forms, it takes the reader into the “felt-life” worlds of characters and enables designers and stakeholders to engage with emotional, cultural and ethical issues.

Morten Hertzum's recent longitudinal field study of how scenarios are actually used by practising software engineers demonstrated that the use of scenarios

is opportunistic rather than systematic (Hertzum 2003). The development of scenarios, like that of other design artefacts, is likely to cease when other activities will yield more immediate results (Ibid). The applicability of a scenario genre will vary then, depending not only on the stage of the design process but also the work that the scenario must do. If, for example, scenarios are being developed for a new door entry system for an older person, the character of Dumbledore in Harry Potter may be unsuitable. If he could not open a door manually then he would cast a simple spell rather than resort to any crude “muggle” technology. If however, a designer is trying to brainstorm new technologies for assistive technology to help older people live independently longer, then Dumbledore might be useful. The character could be used to imagine functionalities beyond any kind of restraint. Indeed, occupational therapists often use ‘genie in a bottle’ scenarios to elicit requirements from older people who might not know what technologies are available to help them e.g. “If you had a genie to serve you what would you ask him to do?” It is important then to consider the work that the scenario is to do and to choose the source material and characters carefully. The next section sets out how this can be approached.

2.1 The selection of source material

Clearly different insights will arise from pastiche scenarios depending on the source material recruited. This is also true of the vignettes based on ethnographic observations. The participants recruited for ethnographic studies have profound effects on the insights generated. Just as it is important to pay attention to recruitment even in small-scale qualitative studies, so the selection of source material is an important concern in the generation of pastiche scenarios. In HCI most ethnographic studies rely on respondents that can be described as a cluster group or a “convenience sample” constructed by their availability and willingness to participate. Participants sometimes recommend other people for the study and this is described as a “snowball sample” (e.g. Cohen and Manion, 1994). Where particular characteristics are important qualitative research relies on “quota” or “purposive” sampling. In “quota sampling” the researcher ensures that there are enough participants with particular characteristics effecting the study (e.g. Shao, 1999). Similarly, “purposive sampling” involves the researcher’s judgement as to the typicality or interest of the respondent (e.g. Robson 2002). These techniques are sometimes used to represent minority groups and minority areas. This allows responses to be indicative of potential needs though findings are not generalisable.

It is possible to consider certain kinds of source selection for pastiche scenarios as analogous to quota or purposive sampling; the researcher may for example, be particularly interested in older users – this characteristic considerably narrows the number of suitable characters; it may be narrowed further if certain attitudes are to be explored (e.g. dishonesty or criminality). It may be stretching the analogy too far to suggest that one character can suggest another in the manner of a snowball sample, but a character in one story (Scrooge for example) might lead to another (Bob Cratchit) and certain texts are associated with others if only by genre (*A Clockwork Orange* and *Nineteen Eighty-four*). Where pastiche scenarios are being used in a

participatory design process it may be important for the stakeholders to have a good knowledge of the character discussed. Dearden et al (submitted) asked stakeholders to discuss the likely behaviour of characters well known to them with an imagined technology. These discussions were scribed and turned into scenarios which would be analysed later. One group was made up of older people; they focussed on a well known soap opera character. Another group was made up of younger people and they focussed on a character from the game *Halo* which the researcher had not heard but was well known to them (Ibid). Choosing characters that are part of the stakeholders' "common ground" (Clarke 1993) could again be thought of as analogous to convenience sampling. This might be difficult with international groups but in an increasingly global culture there is a large pool of widely known fictions to draw on.

Pastiche scenarios ask how particular characters would behave in new situations; this requires an imaginative leap. It is, perhaps, easier to make this kind of leap when considering vivid characters that we know well, rather than relatively two-dimensional personae. Characters created by other authors will have their own agendas that will not fit with the goals of the designer or researcher. Personae based on pastiche then produce particular constraints. If a pastiche scenario presented characters behaving atypically in order to illustrate product functionality this would be immediately apparent and unconvincing. The use of pastiche then, rather than the assembly of demographic characteristics like age, occupation and so on, introduces chance elements associated with individuality, much like ethnographic research with real people. It is not representative, nor scientific. Nevertheless we will argue throughout this paper that it can be a useful evaluation, development and envisioning tool.

3 Three Case Studies

In the following sections we present three case studies in the use of pastiche scenarios. Pastiche is used as a device for recruiting shared cultural resources to provide rich understandings of possible users and use contexts.

3.1 Case study 1: Exploring the experience of the Apple iPod

In this case study, we were keen to represent user experience as reflected in recent accounts based on phenomenological and pragmatist literature. John Dewey is perhaps the single most frequently cited author in the literature on the experience of technology. His book *Art as Experience* has been particularly influential. Here he argued that the experience of an art work is co-constructed by the artist, the viewer and the art object, the viewer bringing to the work their own sets of values and meaning (Dewey 1934). Bridget Jones' diary (Fielding 1999) was pastiched to explore this theoretical orientation. Bridget Jones was chosen as the source material by the first author because he felt that she fitted the iPod customer demographic in that she is not only a successful young professional with enough disposable income to be able to afford one but also style and fashion conscious enough

to find one appealing. But she brings more to the scenario than her age, occupation and gender:

Gah! Almost missed train. Got on in nick of time but had no choice of seat. Just one left next to one quite nice bloke but opposite nasty looking youth in baseball cap. Said youth plugged in v. loud headphones almost immediately so had no choice but to play iPod. Took this out below table with some care. Wanted nice chap to see it (advertise self as successful young professional) but not youth in cap (must not see self as very much worth mugging.)

(Bridget Jones pastiche in Blythe and Wright 2005)

The distinctive narrative voice that eschews definite and indefinite articles is borrowed from Helen Fielding's books and creates a vivid impression of a particular individual. It may be argued that Bridget is a stereotype rather than a character but the books would not have resonated to the extent they did if Bridget were no more than a stereotype. While she may be a caricature rather than a fully rounded character she is still three dimensional enough to convey a sense of a distinct personality. The character's deep concerns with the ways that she is perceived illustrates the role of the iPod as a status symbol but also as an anxiety inducing object, she does not want the young man sitting opposite her to see it. Bridget listens to the Beatles song *Dear Prudence* and reflects on what an old boyfriend had told her about its origins in India. She also reflects on the hippie ideals that the Beatles symbolise for her (for details see Blythe and Wright 2005). This illustrates the ways in which experiences of technology are deeply intertwined not only with our own social conditions but also with our personal biographies.

"Look around, around, around around round" Beatles suggest. I do and the landscape doesn't seem so bleak. For a moment I feel all sixties. Yes, everything is beautiful, even youth in front of me. And of course he's not a mugger just because he likes baseball caps. Peace, love, yes. Then abrupt stop. Forgot to charge wretched iPod.

(Ibid op cit.)

Bridget Jones is not a particularly well-organised character and the abrupt loss of power suggested itself during a second or third draft of the scenario. The character resisted the depiction of normal (or idealised) use, would Bridget have remembered to charge the iPod for her journey? Probably not. Not only does the use of pastiche lend memorable and distinctive voices to the scenario it also suggests character foibles that would not be so likely to emerge with more generic types.

The youth sitting opposite Bridget is Renton from Irvine Welsh's (1996) novel *Trainspotting*. Another pastiche scenario was created to reflect his very different experience of the situation. For Renton the iPod is more than a music playing machine, it is a means for generating cash for "one more hit". Ironically, just as Bridget is debating the morality of copying music (or stealing

music if the recording industries' construal is accepted) Renton steals her iPod. Patrick Jordan recently suggested that Method Acting is a useful means of gathering data on people, like criminals, when it is not possible to interview or observe (Jordan 2004). Pastiche also allows the designer to reason about such groups.

When this train meets its destination Mark Renton arrives a new man, a man on a diet high in moral fibre. Aye, maybe just one more hit though eh? And that woman has in her possession one skag voucher of the highest order, an iPod. White earphones, dead giveaway. Worth about three hundred quid retail, more than enough for one last hit.
(Ibid op cit)

The proliferation of small, cheap and powerful computing devices has been accompanied by the development of a set of terms and discursive practices to describe and account for them. These terms are often evocative and metaphoric, highlighting certain functions and interpretations while downplaying others. The term "portable" or "wearable computing" for instance, is metonymic, using one characteristic to identify a complex set of devices. Such devices can also be characterised as "losable", "forgettable" and "stealable" (Reed 2005). Indeed the police refer to them as CRAVED: concealable, removable, available, valuable, enjoyable or disposable items (Curtis 2005). It is important for designers and producers then, to understand that individuals might experience technologies in ways that do not correspond to the dominant metaphors or metonyms which describe them. As technology becomes more pervasive affecting every aspect of our working, private, social and political lives, it is increasingly important to question taken for granted representations and metaphors for technologies, pastiche is one way of doing this.

These scenarios illustrate concerns which may be addressed by design. For example one design implication is that while the distinctive iPod design is valued as a status symbol it may be useful if that appearance could be modified at times in order to relieve the fear of crime if not prevent actual crime itself. More importantly, in terms of evaluation, the scenarios represent not how generic users experience technology but how particular encultured individuals experience technology.

This example of pastiche scenario use was concerned with the evaluation of an existing technology. The next case study used pastiche in the design and development of a new service.

3.2 Case study 2: Using pastiche scenarios in the design of Net Neighbours

Net Neighbours is a scheme devised by the first author and co-developed with Andrew Monk and the local branch of the charity Age Concern. The scheme widens access to computer-based facilities like online shopping through

volunteer telephone intermediaries. Volunteers are registered at Age Concern and undertake training on the charity's principles and the Net Neighbours procedure. Age Concern pair them with an older person. Volunteers then set up online shopping accounts for the older person, take shopping orders over the phone and have a chat. There were a number of possible methods for arranging the finances and at an early stage of the project a number of scenarios were prepared for discussion with Age Concern staff. Little discussion was generated perhaps because they were very boring and dull to read. George, for example, phones Mrs Jones and takes her order, he places the order online and pays with his credit card; after the delivery Mrs Jones writes a check and Brenda the administrator at Age Concern credits George's account (Blythe and Monk 2005). The lack of colour and detail made the scenarios difficult to follow and generated almost no discussion. The first author was charged with writing more scenarios for further meetings and, partly to motivate himself to do the job, he wrote them as pastiche. The example below is based on Laurie Taylor's satirical newspaper column on the antics of academic staff at the fictional university of Poppleton. It was written to explore some of the problems that a host institution like a university might have in supporting the scheme.

May we now turn to item eight on the agenda. Endorsing the Net Neighbours scheme, I believe Dr Quintock has prepared some remarks.

Thank you Vice Chancellor. As you're all aware this University employs a very large number of computer literate staff, most of whom have unlimited access to always on high bandwidth internet facilities. Many of these staff are at their desks for much of the day and the net neighbours scheme draws on a small part of this massive human and technological resource. As everyone knows and countless studies have demonstrated, nobody actually works all of the hours that their supervisor sends. This is particularly true when your workstation doubles up as an entertainment complex and your duties are, from a distance, more or less indistinguishable from surfing. Occasionally we all take a break from our many onerous duties and, as it were, catch a wave. Dr Rawlings over there is well known in the department for supplementing his income through online gambling-

I say, just a moment -

Dr Odgers there spends half of her morning reading online newspapers-

In my work it's very important to keep abreast of -

Ms Dibling is addicted to online backgammon, Mr Paltry spends a large part of each working day updating his blues blog -

What about you, you c -

A recent survey also found that the vast majority of people who shop online do so at work. Now, some of you may have heard of projects like SETI, the Search for Extra Terrestrial Intelligence. This uses the power of networked computers to analyse radio telescope data when the machines would otherwise be idle. The net neighbours project will use the power of otherwise idle brains.

Volunteers either nominate their own older person or have one assigned by Age Concern. They then phone their older person, take their orders and place them online.

That's all very well in theory Dr Quintock but we are all aware of the rather regrettable instances that occurred during the pilot.

Yes, Professor Lapping's rather heavy-handed debt collection - *Nothing was proven!*

And Professor Dingbat's dispute with Maureen.

All a complete misunderstanding as I have explained on numerous occasions isn't that right Maure-

So we have decided that the volunteer shouldn't have to take money from the older person at all, instead Age Concern will act as a middle man, or perhaps I should say middlewoman –

Oh do get on with it Quintock.

The older person sends a cheque to Age Concern or alternatively they set up a standing order, whatever suits them best. The volunteers send the retailer's confirmation email to Age Concern and claims the cost back from them. Age Concern then reimburses the volunteer by crediting their bank account. It works like an expenses claim, which I think we are all, more or less, familiar with. Any questions?

Where do I find these gambling sites?

A number of other Poppleton scenarios were written, one charts conflict between a Professor and a departmental secretary, another sketched a disciplinary hearing resulting from a member of staff bringing the university into disrepute by attempting to collect money from the older person themselves (Blythe and Monk 2004). The references to "regrettable instances that occurred in the pilot" are to other scenarios exploring various financial configurations. The scenarios made visible, through comic exaggeration, some of the difficulties universities might have in endorsing the use of work facilities for voluntary purposes. In the scenario above the enthusiastic but tactless Quintock presents the scheme in the hope of gaining official endorsement from the Vice Chancellor. He does so with exaggerated bluntness and treads on a number of toes, revealing colleagues unofficial office based non-work practices in order to justify support for the scheme. It could easily be imagined from this scene that such an approach would not find favour and that the scheme might indeed be rejected. Care was then taken throughout the project to stress the aspects of the scheme that were good for the university's public image.

The Net Neighbours scheme has proved successful and attracted interest from members of other institutions wishing to set it up in their organisation. The scheme continues to run at the University of York and it has also been endorsed by the local branch of an insurance company. However, there has been some hesitation on the part of management in one institution where the scheme was proposed and official endorsement sought. Indeed the Poppleton scenarios proved somewhat prophetic as this anonymised memo indicates:

the [organisation] has been asked whether it will allow staff who are acting as volunteers the contractual right to use [organisation] facilities (such as telephones and the internet) in furtherance of these activities. After due consideration, the conclusion is that this would not be appropriate. Where, however, a [line manager] considers that very occasional use of such facilities in a member of staff's own time during the working day would not adversely affect the work of the[organisation], s/he may exceptionally grant permission.

While the memo does give line managers permission to support the scheme there are sufficient provisos to indicate reservations and potential difficulties for the institution. There is a concern that it does not interfering in the business of the department of the kind reflected (albeit in an exaggerated way) in the Taylor pastiche. With the increasing availability of home broadband services which include local calls the scheme now encourages people to volunteer from home. Laurie Taylor was selected as the source material because he is acutely aware of the idiosyncrasies of UK universities and their institutional politics. Although UK universities are in the main funded through taxation and therefore a part of the public sector the trend in management in recent years has been to adopt the language and practices of the private sector. Taylor satirises this aping of corporate culture, sadly his representations of university life are sometimes fairly accurate.

A number of other pastiche scenarios were developed to explore the scheme from Age Concern and the older peoples' point of view. These scenarios proved highly effective discussion documents. Although they were considerably longer than conventional scenarios they were effective tools of communication, Age Concern staff read them in their lunch break because they found them amusing (Blythe and Monk 2005). In one scenario Scrooge defrauds the scheme leading to the design implication that clients should have to pay a deposit to join the scheme. This in turn suggested another Scrooge scenario focussing on Bob Cratchit who could not afford to pay the deposit (Ibid). The designers, programmers and stakeholders then used the pastiche as the starting point for identifying solutions resolving problems and mitigating concerns.

The final case study offers another use of pastiche scenarios in the detailed consideration of a design concept: the 'Cambadge'. This conceptual design is a wearable wireless webcam broadcasting video and audio data to police or community websites. Previous work has situated this concept in relation to similar emerging surveillance technologies and asked whether such a device could and should be used to reduce older people's fear of crime (Blythe, et al 2004). The following detailed sets of pastiche scenarios consider the technology from both utopian and dystopian perspectives in pastiches of the Miss Marple stories, *A Clockwork Orange* and *Nineteen Eighty-four*. These scenarios were constructed entirely as think pieces for the researchers involved at the very earliest stages of the conceptual design.

3.3 Case study 3: Envisioning design concepts of personal surveillance technology

Lightweight portable surveillance cameras have been commercially available for some time. They are generally wired to a portable recording device worn on a belt. There has been a great deal of work on surveillance cameras in the field of personal and ubiquitous computing. Steve Mann has invented and tested a series of portable recording devices to engage in what he calls "sousveillance" where individuals look back at and record those that usually watch and record them, e.g. customers recording security staff in a store (Mann et al 2003). The internet has already been utilised to harness the power of multiple online watchers. The US Homeguard scheme (www.ushomeguard.org) broadcasts webcam recordings of industrial and military complexes to "lookers" who examine them on line (O' Hagan 2003). The ubiquitous wireless broadcast of such data is not yet possible but it is not such a distant possibility. It is possible, then, to imagine a wearable web cam streaming audio and video data to a website monitored either by police or community members (Blythe et al 2004). The 'Cambadge' is imagined as a brooch or other piece of personal jewellery that contains a small video camera that can stream a continuous images wirelessly to a network server. It almost already exists, but not quite (e.g <http://www.smartfone.net/69/375.html>). Our primary concern in this study was to explore how such novel technologies might help reduce older people's fear for crime (Blythe et al 2004). Older people are most likely to fear crime although they are least likely to be victims (Brogden and Nijhar 2000).

There is a wealth of fiction that takes surveillance as its theme and different sources would yield differing insights in pastiche scenarios. For example, David Lyon has pointed out that the Handmaid's Tale could offer important gender related insights into the rapidly developing field of surveillance studies (Lyon 2003:5). Science fiction is an obvious source for narratives that resonate with the theme of surveillance. David Brin's (1990) novel Earth, for example, would make for a more utopian pastiche than J.G. Ballard's (1977) High Rise. Source selection here then must be determined by the work the scenario is to do; a utopian vision might be useful for exploring functionality while a dystopia might be more useful for illustrating potential abuses of the imagined technology.

In seeking to explore some of the social and political issues that we envisage might impact the introduction of personal surveillance technology, we went to three sources for inspiration, Agatha Christie's Miss Marple detective stories (1997), Anthony Burgess' Clockwork Orange (1998) and, perhaps inevitably, George Orwell's *Nineteen Eighty-four* (1954).

3.3.1 Miss Marple and the Body in the Bungalow

The world of Agatha Christie, like that of PG Wodehouse, is a self-contained and comforting one. Her detectives are on the whole infallible and the work of the fiction is to answer the questions posed by the murder or mystery. The Miss Marple stories were then chosen to envisage an idealised use of the "Cambadge" in reducing fear and preventing crime. There are few elderly

women in English Literature; where older women are depicted they are usually victims or witches, Agatha Christie's Miss Marple, is one of the few instances of the elderly woman as heroine. Miss Marple is thin, with a wrinkled pink face and snowy white hair. Critics have remarked that the descriptions of Christie's detectives could almost have been copied from one book to another. However they remain characters rather than stereotypes. Indeed Miss Marple's power lies in using the stereotype of the dithering old maid to her advantage. Like most fictional detectives she knows everything and is always right, but because she is old her adversaries assume she is harmless.

The scenario below is one of three that were written to take the form of a short detective story in order to playfully consider how the user of a "Cambadge" might feel wearing such a recording device. Three different modes of activation were explored: always on, visible on / off controls and hidden on / off controls, in three scenes. Space does not permit inclusion of the earlier scenes illustrating each of these modes. In the scene below Miss Marple uses the hidden on/off configuration, after less than satisfactory experiences with the always on version. Here Miss Marple is relating the end of her adventure to her nephew.

I went back to the house; there was one vital piece of evidence that I had to get before the murderer beat me to it. I let myself in with the Police key I had been given. The light coming from the kitchen confirmed that this was not to be a solitary visit.

"Ah Sarah" I said absently "I thought I might find you here."

"Oh, Miss Marple, I was just collecting a few personal things."

"Of course my dear, you'll want your pans back I expect."

"Yes, I was just about to get them from the dishwasher."

"Oh I'm afraid that the Police already have them." I put my hands into the pocket of my overcoat and switched the camera badge on.

"That clever dishwashing machine had not quite removed all of the beef bourguignon you made and you know as well as I do that they will find traces of poison in it."

"I don't know what you're talking about"

"Oh I think you do my dear. I didn't notice the fungi you'd been growing at first. But I've been trying out a funny little gadget for Professor Billshod. When I examined my recordings I saw the deadly mushrooms as plain as day. A very clever plan I must say: dropping one of the Colonel's own lighted cigars into his bedroom waste paper basket after he'd gone to bed. No bodily remains to speak of after the fire and no evidence of theft. The Colonel didn't believe in banks, did he?"

"He kept so much money under his mattress; I couldn't help but find it!" She cried out "And he always smoked those wretched cigars! It was perfect. How would anyone know if his money had been stolen or if it had all been burned away? How could poison be detected if the corpse was nothing more than ashes? How would they know he slept through the smoke because he was drugged and not drunk when the pan was cleaned?" To my dismay she opened the

charred dishwasher in desperation and saw that I was bluffing. She pulled out the clean pan triumphantly.

"So nobody knows but you?" the Colonel's gardener was standing behind me with a hammer in his hands.

"Ah" I turned to greet him "The accomplice who dragged the Colonel from the dining room to his bed, without taking his shoes off" I suppose I might have been nervous if I hadn't been wearing the camera badge.

"The car's running and I've got our tickets love." he raised the hammer with obvious ill intent.

"We can't kill her as well Harold!"

"There would be very little point." I said calmly ""You see I'm not the only one who knows, I am still wearing my funny little broadcasting device and the police are on their way." I pointed at the camera badge

"You're bluffing again!" said Harold

"I'm afraid not!" Professor Billshod had taken the hammer from the gardener's hand and a young policeman was already putting the handcuffs on. The Professor had set out by way of the police station as soon as I had turned the camera on. So you could say that the experiment was a very great success if you consider saving the life of aged Aunts important!

The scenarios based on Miss Marple are idealised. What could the Cambadge be but a success in this genre? But using such a well-known format underscores the fact that it is a species of genre writing as indeed all scenarios are. The Miss Marple scenario above highlights the fact that we are in the world of make believe.

In the first scene (not included here) Miss Marple's Cambadge was always on and one character overheard another one being rude about them; Miss Marple was mortified that she had been the agent of such eavesdropping: the period's overt concern with manners and good form highlight some of the privacy issues that such devices raise. The scenario also highlighted the problem that the always on condition would cause in terms of monitoring the data. In the second scene (again not included) the Cambadge has a visible on and off control. The gardener who Miss Marple visits as a suspect sees her activate the badge and is immediately put on his guard. The Cambadge is analogous to a mobile phone in terms of security. Few muggers would wait politely while their victims rang the police, nor would they wait for them to turn on their surveillance equipment. The design implication was that activation would have to be discreet. In this scenario we also saw Miss Marple reviewing her recording, focusing in on unnoticed details to arrive at clues, like mud on the carpets and poisonous mushrooms in the garden. The design implication here was not that this technology should be useful for solving crimes. It was rather to suggest, as Hewlett Packard and other camera technology researchers have done, that the ability to select and review the images experienced in the day would open up new ways of seeing ourselves and our lives.

While the Miss Marple Pastiche paints a utopian vision of how this surveillance technology might be used, the next two pastiches, explore the more troubling side of this kind of technology.

3.3.2 The Digital Orange

Anthony Burgess' novel *The Clockwork Orange* is perhaps better known as the film by Stanley Kubrick of the same name. This novel is apt because its premise is, in some respects, intergenerational warfare. The Clockwork Orange describes a society in meltdown where nihilistic youths stalk and torture the elderly and the weak.

Burgess invented a language for the narrator of the novel, Alex, and his friends to speak. It conveys a Joycean love of wordplay but it also indicates the importance of language in the making of sub-cultural identities. The language is harsh, disorientating and sometimes disturbing. For these reasons it is entirely appropriate to the construction of scenarios dealing with the fear of crime. These pastiche scenarios then, do not address solely technological issues, they address issues of culture and identity. The meanings of the Clockwork Orange neologisms are sometimes easy to guess from their context but others are not so readily discernible. The following glossary may be helpful in reading the scenario that follows.

Baboochka - old woman; **bolshy** - big; **chelloveck** – person; **creech** - to scream; **devotchka** – girl; **droog** – friend; **groody** – breast; **horrorshow** - good, great; **malenky** - little, tiny; **millicent** – policeman; **rassodock** – mind; **shlapa** - hat; **starry** – old; **tolchock** - to hit or beat; **viddy** - to see or look
(From <http://www.clockworkorange.com/nadsat.shtml>)

O my brothers. There was me and my droogies, that is Len, Rick and Bully, We were standing outside the Nightshop making up our rassodocks what to do with the evening, a flip dark chill winter bastard, though dry. Somehow my brothers, I felt very bored and a bit hopeless, and I had been feeling that a lot these days. When out of the Nightshop there came a most sweet and fulsome devotchka with bolshy great groodies. Well my brothers we scampered around her real horrorshow and asked if we could interest her in some of the old in out, in out. Picking up her pace she viddies the floor and says nothing, very impolitic like. Well of course, we all follow having a right good guffaw. Just as we were about to start a bit of the old ultra-violence we viddy this very old babushka coming toward us. She was all pink lines and wrinkles with hair snowy white but she wore the Cambadge of the Millicents. She was broadcasting all to vidscreens from the front and back. I felt the cutter in my pocket with a great and terrible longing but all in vain like. The starry baboochka said: 'A very good evening to you all my dears,' and she takes the young devotchka by the arm and leads her way from us. Well my brothers this was not the first time that this baboochka had thwarted our jollies. And once, her very own Cambadge had been the one that fingered our dear droog Harold to the Millicents. So we

smiled and we shrank back but o my brothers we lingered and we lurked in the dark. And we viddied well when the baboochka was on her own. And we pulled low our shlapas, right over our eyes so her Cambadge could not vid us as we came up behind and we caught her my brothers, we caught her. A malenky toclchock on the back of the head and down she went to the floor. We ripped off the Cambadge front and back then we stamped it underfoot before doing the same honour to her. And she creeched my brothers, oh how she creeched!

Here the older person is a mobile surveillance device broadcasting from the front and back. The gang is deterred from their criminal activities by the Cambadge, a visible sign that the old woman is acting as a kind of community warden. However, the gang ultimately target her and the sign leads to victimisation. The atmosphere of unremitting hostility in these scenarios illustrated the potentially counterproductive results of such technology. Conflict is heightened and intensified rather than diffused, a potentially lethal attack is launched on the old woman because her Cambadge had previously identified one of the gang's friends to the police.

The preceding pastiche scenario differs so radically from most scenarios and even Nielsen's "character driven" scenarios that it will perhaps appear unrecognisable as a scenario at all. Firstly, it does not represent the experience of the user of the technology, rather it represents the experience of those who the technology is used against. Secondly, the pastiche renders the prose difficult and obscure, the text is neither clear nor easy to read. Burgess' argot dislocates and keeps the reader at a distance. Although the narrator is conspiratorial and assumes perfect understanding (o my brothers) the reader is always aware that they are far removed from this character and his world. This emphasises the diametrically opposed interests of those who might use the Cambadge and those who it might be used against.

A second Burgess scenario was written where the Cambadge was disguised, worn as a hat or brooch, in this scenario anyone and everyone is a possible police informant. The gang come to realise that anyone may be alerting the police as to their activities at any time. Cambadges are activated when the user is nervous and the images are assessed by police who send or do not send a response as appropriate. When the gang is spotted by an old man returning from a news kiosk the Cambadge is activated and the images are sent straight through to a police monitor where they are recognised as persistent offenders. The police response is almost immediate, the gang are brutalised and arrested. This is the fantasy of the police state: constant and detailed surveillance as a condition of being outside. The violence of the police response in the scenario illustrates the violence of the technological intervention.

A third Burgess scenario was written where the Cambadge is linked not to the police but to an open website where anyone can log on and track their friends, neighbours and relatives to form a community network. The information is not limited to the police, anyone has access. Older people can check the site to

see if it's safe to go out. Younger people can check the site to see if their neighbours and relatives are safe. As in Mann's (2003) vision of "sousveillance" technology, the Cambadge has become a fashion accessory worn by young and old alike. When someone misbehaves in the milk bar those around him trigger their Cambadges and the security response is targeted and immediate. The now reformed narrator himself logs on to the community network and would, he says, go out to help if he saw an older person being attacked. It is easy to imagine however, that he might just go out to join in a bit of the old ultra-violence. The Cambadge then might be appropriated for criminal-to-criminal activity. As previously noted, it is possible for designers to shape how technology is used but not to determine it.

In Burgess' novel, the narrator, Alex, undergoes a process of Skinnerian stimulus-response torture until he is so conditioned that the very idea of violence literally sickens him. In this respect he no longer has a choice about how to behave and in this sense he is no longer human. Alex is the clockwork orange. Although Burgess and his wife were themselves the victims of a horrific assault in their own home (the event which reportedly inspired the writing of *A Clockwork Orange*) the moral of this, his most famous book is that even if we could eradicate and totally control violent offenders it would be morally wrong to do so.

There are then complex moral, ethical and political questions to consider in the development of such technologies. It is possible to imagine not just potential victims of crime wearing a Cambadge but convicted criminals as well. There are already electronic tagging systems for offenders in existence in the UK. Requiring criminals on probation to wear a Cambadge is not so very far from requiring them to be electronically tagged. Of course it would be a gross invasion of their privacy and infringe on their human rights, but this does not mean that such a scheme would not have supporters. A society that would tolerate this would be a totalitarian police state in practice if not in name, what better novel to explore this scenario then, than *Nineteen Eighty-four*?

3.3.3 Nineteen Eighty Five (After 84)

Nineteen Eighty-four describes a society where everyone is constantly monitored by telescreens. Big Brother, Orwell's satire of Stalin, is always watching you. It is the most potent vision of a totalitarian state in English literature and it is difficult to avoid in any discussion of surveillance technology. Orwell's name has become an adjective; when CCTV was first introduced into our cities, the language had no better term for this new development than "Orwellian". What else would a reality television show featuring contestants living in a house monitored constantly by cameras be called but Big Brother? The following scenario is based on the last chapter of the novel, Winston has been tortured in room 101 and he has betrayed his lover, Julia. Here, there is another occupant of the Chestnut Tree café, Harold.

The Chestnut Tree was almost empty. A ray of sunlight slanting through a window fell on dusty table-tops. It was the lonely hour of fifteen. Harold sat in his usual corner, gazing into an empty glass. Now and again he glanced up at a vast face which eyed him from the opposite wall. BIG BROTHER IS WATCHING YOU, the caption said. Harold knew that big brother was not only watching him, Big brother was with him and in him. Harold's table was underneath a telescreen that was pouring out news of the war. The transmissions from the telescreens were limited to the field of vision which the metal plaque commanded. In the past it had been possible to step outside of their range if only for a moment, but now Big Brother was on the move: he walked among the citizens of Oceania, he was everywhere. Once, long ago, Harold had committed a crime, he could no longer remember what it was. But it meant that he now wore on his blue dungarees the yellow triangle of the Cambadge.

Winston Smith walked into the cafe and joined him. Most people politely shunned Harold, seeing the Cambadge they would nod and smile, but they would never speak to him of their own free will. If Harold made an effort to talk to them they would enthusiastically discuss the latest triumph of the coalition forces, or the latest atrocity committed by the axis of evil, but always at the corner of their eyes Harold could detect a nervous anxiety. Winston did not mind the Cambadge in the least. The voice from the telescreen paused. A trumpet call, clear and beautiful, floated into the stagnant air. The voice continued raspingly:

'Attention! Your attention, please! A newflash has this moment arrived from the Persian front -'

There was nothing but joy in Winston's eyes. Sometimes Winston would talk straight into Harold's Cambadge and earnestly confess to the minor faults he had committed that day. Once he had apologised for his thought crimes of the past. How could he have thought that two and two made four, when they made whatever the party said they made.

"Two and two make five" he murmured at the yellow triangle

"Two and two make five" an iron voice came from the Cambadge.

"Yes!" there were tears of gratitude in Winston's eyes "Yes! Five! Yes!"

In this scenario the Cambadge is worn not by potential victims of crime but by convicted criminals. Big Brother no longer watches the citizens of Oceania from static monitors fixed to walls, he also watches from mobile Cambadges like the one Harold wears. The Cambadge serves to monitor not only Harold but those that he sees and speaks to. The Cambadge speaks to Winston indicating that the transmission is two way. This was a possibility that suggested itself when skimming Orwell's novel in order to make the scenario. One of the most shocking moments in Nineteen Eighty-four occurs when Winston is exercising in front of his telescreen and the instructor on the screen directly admonishes him for not trying hard enough. The literary device

of the incongruous voice is used again when the thought police address Winston and Julia from behind a picture. These voices of authority are disturbing and disorienting because they are so unexpected. One could imagine the voice of a police officer emerging from a pensioner's Cambadge to issue youths bothering her with a caution.

One of the advantages of pastiche in this context is that it opens up not just the novel as a resource for thinking through implications but also a large body of literary criticism. There is a wealth of critical analysis on *Nineteen Eighty-four* which is also relevant. Thomas Pynchon (2003) recently pointed out that although the novel ends with Winston totally destroyed and loving Big Brother, this is not the end of the book. *Nineteen Eighty-four* ends with an appendix on the history of Newspeak. This is written in the past tense, from some future vantage point, suggesting that the society that the novel described is no more. Big Brother was somehow overthrown. Sociologists and anthropologists have observed that where there is power there is always also resistance of some kind (Scott 1985). Although Orwell was uncompromising about the certainty of Winston's defeat there is a message of hope at the end of the book. The total surveillance society depicted in the novel would ultimately be overthrown, it would not be tolerated, it could not survive. Even for those then, that have no moral objection to total surveillance systems Orwell's vision highlights practical concerns that should mar their enthusiasm.

The global fear of terrorism may make such technologies attractive to both governments and individuals despite concerns about the loss of civil liberties and privacy. The use of *Nineteen Eighty-four* in a pastiche scenario evokes some of the terrifying ramifications of such developments. Indeed the use of pastiche scenarios for the Cambadge ended with an outright rejection of the design concept. The pastiche format then, is open to criticism. If the imagery and potency of the sources serve only to close down potential developments then it is not doing its job as a design scenario. However, it focuses attention in a totally uncompromising way, on the very real dangers of this kind of technology. It could be argued that this merely illustrates that these are political rather than design problems. However, the scenarios indicate that the design problems are themselves inherently political. Although designers may pay lip service to the dangers to civil liberties of increasing the powers of the state through surveillance technologies, even personae or character based scenarios could not convey with such power, the consequences of doing that.

4 Discussion

If experience design is to achieve its full potential it must engage with the "felt-life" that is human experience (McCarthy and Wright 2004). Designers must engage with the sensual, emotional, interpersonal and political meanings of technology and use. Within HCI research, attempts have been made to provide this broader perspective on user experience. Scenario and persona-based design are good examples. What these approaches have in common is an orientation towards narrative and shifting perspectives. But these representations can lack the depth required for a "felt-life" approach. Pastiche scenarios aim to overcome these limitations and at the same time bring more of a cultural perspective by drawing on already known literary

characters and works. By drawing on readers' own personal and culturally shared readings of these works as a resource, pastiche can bring "felt-life" into view. Readers or watchers of *Bridget Jones's Diary* can respond meaningfully and make sense of a questions like, "How would Bridget feel about owning an iPod" in a way that they could not if presented with McQuaid et al's Naomi.

Of course there are alternative ways of engaging with "felt-life". Spending extended periods of time in ethnographic observation of real people living real lives is perhaps the most thorough method available. But there are limits to ethnographic engagement, particularly the kinds of "quick and dirty" ethnographies commonly used to inform interaction design. Extended periods of study and the kind of participant observation where researchers become part of the target community is not practical in many studies. Even where large longitudinal studies are possible there are fundamental limits in what ethnography can reveal. Criminals are an obvious illustration of a group that would be unlikely to reveal in interview or observation their working practices and future plans. Now that HCI is concerned with the home as a design space it can be difficult to conduct research which is not intrusive of participants privacy. Even where participants wish to disclose intimate behaviours and concerns they might find this difficult to do. An example here would be the difficulty that participants might experience discussing their use of adult material on the Internet. Bell et al (2005) cite a discussion of this that was recorded in field notes. Field notes were cited because none of the participants would allow recordings to be made of conversations relating to their use of adult internet material, even though the researcher was well known to them and had assured them of their anonymity. These are not the only intimate domestic interactions difficult to explore in interview or observation. But these kind of intimate practices are frequently represented in fiction. Pastiche allows us to envision technology as culturally situated in ways that studying real world contexts sometimes cannot.

There are potential problems with the use of pastiche scenarios. One obvious problem is how easy or difficult it might be to produce a pastiche. While this is a legitimate concern, generating pastiche can be as simple as cutting and pasting lines of source text and then modifying the story line to allow for the introduction of the technology in question. Many of the creations of popular fiction are characterised with great economy with devices such as the repetition of a catchphrase, a mannerism or a particular recurring image and they can be appropriated with relative ease. More subtle characterisations and complex literary styles may be more difficult to capture and the writing of these is perhaps better left to people who have an aptitude for it. The making of a pastiche requires some degree of skill and aptitude but it may be easier than some might at first imagine. The legions of fan fiction sites are testimony to the fact that making a pastiche can, for some, be an enjoyable rather than an arduous task. The pastiche scenarios in this paper were all written by the first author who enjoys doing that kind of thing. Similarly if a visual storyboard is required in a design process it is probably best to ask someone who can draw a little. Though clearly some would find pastiche easier than others, the writing process can be engaging and indeed stimulate creativity.

A second more misplaced objection is how generalisable the analysis of a pastiche scenario is. As previously noted this is not what pastiche scenarios are for. Rather pastiche scenarios aim to give design insights into potential use contexts and hence potential meanings-in-use that open up possibilities. The aim is to see the technology with a fresh eye, in this sense, pastiche is similar to the process of defamiliarisation, a literary technique, where something familiar is described in an unusual way in order to make it strange and remove it from the “automism of perception” (Shlovsky 1917). This process can of itself be useful in stimulating design ideas (Bell et al 2005). Pastiche literally compels the designer to see the device with someone else’s eyes.

A third and more compelling objection is that this kind of approach takes the designer away from real users. However well imagined a fictional character may be there can be no substitution for living people. For the last twenty years HCI has tried to promote user centred design, participatory design and user studies, methods that take the focus away from real users are a backwards step. This is a salutary point and we would of course agree, that where possible and practical studying users would be preferable. But when this is not possible and in the early stages of a design we believe that pastiche scenarios can be a valuable complimentary tool. Further, pastiche may be part of a participatory design process as it was in the development of Net Neighbours. Indeed Dearden et al (submitted) make talking to users integral to the creation of pastiche scenarios as will be seen in the final section.

5 Conclusions

This paper has argued that literary and popular fiction can be used as a resource for design. The literature that is of most obvious relevance to HCI is, perhaps, science fiction: its relevance has occasionally even manifested itself as direct prediction. Isaac Asimov described smart homes fifty years before Bill Gates started living in them; satellite communication became a reality twenty years after Arthur C Clarke proposed it; David Brin predicted the development of the World Wide Web and William Gibson invented the term cyberspace. Donald Norman has noted that some science fiction can itself be considered as a form of scenario development (Norman 2004). It could be argued that science fiction lends itself almost inevitably to the discussion of wide social issues, especially with regard to new technologies. A Kurt Vonnegut character, addresses a convention of science fiction writers with these words:

"I love you sons of bitches [...] You're the only ones with guts enough to really care about the future, who really notice what machines do to us, what wars do to us, what cities do to us "

(Vonnegut 1986: 21)

Another eminent science fiction writer JG Ballard described this accolade as overgenerous to “one of the most mentally shuttered and mutually loathing groups in existence” (Ballard 1991). Critics of science fiction point out that characterisation is frequently weak and argue that sci-fi characters exist

merely to advance the plot or showcase an idea, as previously noted, the same has been said of users in scenarios. The best science fiction is rich in characterisation as well as ideas, *Nineteen Eighty-four* is a good example of this, however it is indubitable that other genres have produced richer representations of people. The pastiche scenarios outlined in this paper draw on a range of genres including the 19th century realist novel, situation comedy, satiric journalism, detective fiction as well as the science fiction of Burgess and Orwell. Pastiche scenarios not discussed here have been developed for other projects and drawn on still wider sources e.g. Alan Bleasdale's bleak realist drama of *The Boys From The Blackstuff*, Sue Townsend's comic novel *Adrian Mole* and Matt Groening's *Simpsons* family. It is not just science fiction that is useful for thinking about what machines do to us, what cities do to us, what wars do to us. Other genres can offer far richer insights into users, or rather, people.

HCI is currently developing rich theoretical conceptions of user experience that recognise our relationships with technology as socially, culturally and autobiographically situated. The evaluation of a new technology is always dependent upon power positions: what is a positive safety development for some is a technology of discipline and oppression for others. The meanings of technology are multiple and complex, the question for those concerned with designing for user experience then, is what are the best ways of understanding the complexity of human experience?

It has been argued that the most sophisticated tool for seeing, valuing, and expressing human experience, is the novel (Morson and Emerson 1990). Novels seem to take us into other people's heads to experience what they experience. Literary critics dislike the term "omniscient narrator" and prefer "free indirect style" to describe the narrative technique where a character's thoughts are briefly inhabited and articulated by a narrator. This technique takes the reader into a character's interior monologue but also holds that character at a distance. It allows us to empathise with others as closely as perhaps it is possible to do as a human being, but at the same time leaves a space for more detached reflection. As one critic notes, it frames subjects in:

"the dialectic of seeing and being seen, of hearing and being heard (or misheard) one of the sometimes awkward, but unavoidable, conditions of being in a world with other people"
(Tandon cited by Wood 2005).

The social sciences have long struggled to reconcile macro and micro accounts of human behaviour. The person in the sight of sociology is often overlooked (Fletcher 1975). Macro theories do not make adequate account of individuals; micro theories do not make adequate account of broader social structures. Bakhtin argued that the only form capable of accounting for human experience in the twentieth century was the novel (Morson and Emerson 1990). Pastiche scenarios borrow from this and other rich forms in order to produce texts which can focus in on the minutiae of human experience as well as take broader views of general trends and structures. The novel has a rich interior as well as exterior life. We feel what is happening in a novel, we

identify and empathise with the characters but we also bring ideas to the novel and take new ideas away. In this sense the novel takes a multifaceted or dialogical approach to experience, it encompasses a plurality of voices and resists reductive interpretations.

For this reason different stakeholders in a design team may have widely divergent readings of a particular character. It is for example, debatable whether Bridget Jones would indeed own an iPod or not, some readers might not think so and it will be interesting to see whether Helen Fielding gives her character this device in the upcoming sequel. Far from being a hurdle to overcome this kind of divergent reading is an opportunity for designers to think beyond demographics. If stakeholders in a design process understand characters in different ways then this may lead not only to richer discussions but also make explicit the assumptions and preconceptions of those involved. It is of course possible that a particular group of stakeholders might not only have different interpretations of the character but absolutely no knowledge of the character whatever. A student from Hong Kong doing some follow up work on the Net Neighbours project for example had not heard of Scrooge or any of the other characters in the pastiche scenarios. Although we live in an increasingly global culture and certain cultural exports, like the Simpsons, can be used as an almost universal common ground, it is clear that sometimes stakeholders will have no previous knowledge of the character or the source material. This might influence the choice of source material, depending on the work that a scenario is to do one constraint may be that all of the stakeholders know the source. However, a well written pastiche will reproduce the salient characteristics and personality traits of the characters in the original and therefore carry over some of the richness, depth and power of the source. The staff at Age Concern were unfamiliar with the Laurie Taylor satires of academic staff but they still found the characters amusing. Similarly, the Scrooge pastiche makes it clear that the character is parsimonious and untrustworthy. One criterion for judging the quality of a pastiche scenario may be; does it effectively convey the richness and depth of the source from which it is drawn? In other words does it retain the multi-faceted dialogical power of fiction? This would suggest that the person making the scenario would need a strong understanding of the character chosen and some aptitude for creative writing.

However, it is possible to use the technique as part of a participatory design activity with stakeholders who create through discussion a scenario which is scribed and written by someone else. Dearden et al (submitted) recently used pastiche scenarios as a part of a participatory design process on a project developing e-local government services for people who had experienced social exclusion. A group of older people were asked to imagine Dot Cotton, a character in a popular UK soap opera, using a credit card with a picture-based pin. The older people discussed what might happen, focussing on the problem of Dot's criminal son Nick and a number of issues were raised which the authors felt would have been missed without a knowledge of this particular character and her fictional history. None of the older people were engaged in writing the scenario, rather, they took part in a discussion which a member of the research team scribed into a scenario that was analysed by other

members of the design team (Dearden et al submitted). This is a particularly interesting use of pastiche scenarios as it integrates the method fully with participatory design methods. Rather than using the pastiche as discussion documents as with Net Neighbours, stakeholders were involved in the actual construction of the scenario. This is a welcome development in the use of pastiche and one that will be pursued in further work. As previously noted Dearden et al also used the method to talk to groups of younger people using Bart Simpson and one of the characters from the video game *Halo*. The scenarios were then generated with users and later drawn upon as a resource by other members of the project. Dearden et al note, that not only did the use of pastiche generate issues that would not otherwise have arisen, it also engaged the participants because the exercise was fun.

There are then a number of ways in which pastiche scenarios can be used. The technique is flexible and adaptable. This paper has argued that they can be used to consider interior aspects of user experience largely absent from other personae based approaches. It has reported the authors' and others use of pastiche as part of a participatory design process. It has also made a case that fiction can be used as a resource that designers can use to engage with the increasingly important social and cultural implications of information and communication technology innovations. Pastiche scenarios are not advocated as a means of reflecting user requirements although they can be used as an elicitation exercise. Rather they are concerned with inspiring design and in this sense they have much in common with Gaver et al's cultural probes (1999), Buchenau and Suri's (2000) experience prototypes and Anderson et al's (2003) surrealist games. It can be thought of as building on Cooper's personae and offering an alternative to them. In recent years the scope of HCI has widened to include concerns with fun (Blythe et al 2003), emotion (Norman 2004), beauty (Hassenzahl 2004), aesthetics (Bertelsen and Pold 2004) and values (Petersen 2004). There is then an increasing emphasis on holistic approaches to user experience and literary approaches have become relevant (Wright and Finlay 2003). Pastiche scenarios draw on fiction as a resource to explore the richness of human experience for design.

References

- Anderson M., Jacobs M., and Plazzi, L. (2003) Playing Games in the Emotional Space. In Blythe, M., Overbeeke, K., Monk, A.F. and Wright, P.C. (2003) *Funology: From usability to enjoyment*. Dordrecht: Kluwer.
- Ballard, J.G. (1977) *High Rise*. London, Flamingo Modern Classics
- Ballard, J.G. (1991) Sermons from the mount. Times Newspaper Limited. November 10. Available at http://www.vonnegutweb.com/collections/fwtd_sundaytimes.html accessed 8.7.2005.
- Bell, G., Blythe, M. and Sengers, P. (2005) Making by making strange: Defamiliarisation and the design of domestic technologies. In *ACM Transactions on Computer-Human Interaction (TOCHI) Volume 12.2 (June 2005)* pp. 149-173.

- Bertelsen, O. and Pold, S. (2004) Criticism as an Approach to Interface Aesthetics. *In proceedings of NordiCHI04, October 23-27*. Tampere Finland.
- Blythe, M., Overbeeke, K., Monk, A.F. and Wright, P.C. (2003) *Funology: From usability to enjoyment*. Dordrecht: Kluwer.
- Blythe, M. and Monk, A.F. (2005) Net Neighbours: Adapting HCI methods to cross the digital divide. *Interacting with Computers* Vol. 17, pp. 35-56.
- Blythe, M., Wright, P. and Monk A. (2004) Little brother: Could and should wearable computing technologies be applied to reducing older people's fear of crime? *Journal of Personal and Ubiquitous Computing*. Vol 8.6 pp. 402-415.
- Blythe, M. and Wright, P. (2005) Bridget Jones' iPod: Relating Macro and Micro theories of user experience through pastiche scenarios. *In proceedings from Home-oriented information technologies (HOIT 2005)*. pp. 291-302.
- Bödker, S. (1998). Understanding representation in design. *Human-Computer Interaction* Vol. 13, pp. 107-125.
- Brin, D. (1990) *Earth*. Spectra Books.
- Brogden, M. and Nijhar, P. (2000) *Crime, Abuse and the Elderly*. Willan Publishing.
- Buchenau, M. and Suri, J. (2000) Experience Prototyping In Proceedings of Designing Interactive Systems, DIS 2000. NY: ACM. pp.424-433
- Burgess, A. (1998) *A Clockwork Orange*. London:Penguin.
- Carroll, J. (Ed.) (1995) *Scenario-Based Design: Envisioning Work and Technology in System Development*. J. Wiley and Sons.
- Carroll, J. M. (2000) *Making use: Scenario based design of human - computer interactions*. Cambridge Mass: MIT Press.
- Christie, A. (1997) *Miss Marple: The complete short stories*. Harper Collins.
- Clarke, H.H. (1993) *Arenas of Language Use*. University of Chicago Press.
- Cohen, L. & Manion, L. (1994) *Research Methods in Education*. Routledge, London,
- Cooper, A. L. (1999) *The inmates are running the asylum: Why high-tech products drive us crazy and how to restore the sanity*. Indianapolis: Sams.
- Curtis, P. (2005) Curb on mobile unblockers to cut crime wave. The Guardian newspaper Tuesday May 31, 2005. Available at <http://www.guardian.co.uk/mobile/article/0,2763,1495883,00.html> accessed 8.7.5
- Davis, M. (2003) Theoretical foundations for experiential systems design. *In Proceedings of the 2003 ACM SIGMM workshop on Experiential telepresence*. Berkeley, USA. pp. 45-52.
- Dearden, A., Lauener, A., Slack, A., Roast, C., and Cassidy, S. (submitted) Make it so! Jean-Luc Picard, Bart Simpson and the design of e-public services. *Submitted to the Participatory Design Conference- PDC 2006*.

- Dewey, J. (1934). *Art as experience*. New York: Pedigree.
- Djajadiningrat, J. P., Gaver, W.W., Frens J.W (2000) Interaction relabelling and extreme characters: Methods for exploring aesthetic interactions *Proceedings of the 2000 Conference on Designing Interactive Systems*. ACM Press, 2000: 66-71.
- Fielding, H. (1999) *Bridget Jones' Diary*. London: Penguin.
- Fletcher, C. (1975) *The Person in the Sight of Sociology*. London: Routledge.
- Forlizzi, J., and Ford S., (2000) The building blocks of experience: An early framework for interaction designers. *In proceedings of Designing Interactive Systems- DIS 2000*. New York: ACM Press pp.419–423.
- Forlizzi J., and Battarbee K. (2004) Aesthetics, ephemerality and experience: Understanding Experience. *In proceedings of Designing Interactive Systems- DIS 2004*. Cambridge Mass: ACM press pp.261-268.
- Gaver, B; Dunne, T; Pacenti, E (1999) *Cultural Probes*. *In Interactions: New Visions of Human Computer Interaction*. Vol. 1. Jan + Feb 1999.
- Gaver, W., Beaver, J. and Benford, S. (2003) Ambiguity as a resource for design. *In proceedings of ACM conference on Computer-Human Interaction (CHI 2003)*. New York: ACM Press. pp. 233-240.
- Hassenzahl, M. (2004) The Interplay of Beauty, Goodness, and Usability in Interactive Products. *Human-Computer Interaction* Vol 19.4 pp. 311-318.
- Hertzum, M. (2003) Making use of scenarios: A field study of conceptual design. *International Journal of Human-Computer Studies* Vol. 58.2 pp. 215-239.
- Holquist, M. (1990) *Dialogism: Bakhtin and His World*. London: Routledge.
- Hutchins, E. (1995) *Cognition in the Wild*. Cambridge MA: MIT Press.
- Jordan P (2004) Interviewed in *Interactions Magazine* Vol. XI.5 pp 40-41
- Lave, J. (1988) *Cognition in Practice: Mind, Mathematics, and Culture in Everyday Life*. Cambridge UK: Cambridge University Press.
- Lyon, D. (2003) Surveillance Studies: Understanding visibility, mobility and the phenetic fix: Surveillance and Society 1 (1) www.surveillance-and-society.org.
- Mann, S., Nolan, J., Wellman, B. (2003) Sousveillance: Inventing and Using Wearable Computing Devices for Data Collection in Surveillance Environments. *Surveillance and Society* 1.3 pp.332-355
<http://www.surveillance-and-society.org>
- McCarthy, J. and Wright, P. (2004) *Technology as experience*. Cambridge MA: MIT Press.
- McCarthy, J., Wright, P.C. (2005) Putting “felt-life” at the centre of human–computer interaction (HCI). *Cognition Technology and Work* Vol. 7.4 pp. 262-271.
- McQuaid H, Aradhana G. McManus M. (2003) When you can ‘t talk to customers: Using storyboards and narratives to elicit empathy for users.

In Proceedings of the 2003 International conference on designing pleasurable products and interfaces. pp.120-125.

- Morson, G.S. and Emerson, C. (1990) *Mikhail Bakhtin: Creation of a prosaics*. Stanford University Press.
- Nielsen, L. (2002) From user to character: An investigation into user-descriptions in scenarios. *In proceedings of designing Interactive Systems (DIS '02)*. ACM Press pp. 99-104.
- Norman, D.A., (2004) *Emotional Design: Why we love (or hate) everyday things*. New York: Basic Books.
- Nussbaum, M. (2001) *Upheavals of Thought: The Intelligence of Emotions*. Cambridge: Cambridge University Press.
- O' Hagan, A. (2003) Watching Me Watching Them Watching You. *The London Review of Books*. Vol. 25.19 October 2003.
- Orr, J. (1996). *Talking About Machines: An Ethnography of a modern job*. New York: Cornell University Press.
- Orwell, G. (1954) *Nineteen Eighty-four*. Harmondsworth:Penguin.
- Petersen, M.G., Luvigsen M., Jensen H.F., & Thomsen A. (2004) Embracing Values in Designing Domestic Technologies. *Proceedings of ECCE 2004*.
- Pevear, R. (2001) Introduction to Anna Karenina by Tolstoy L. Translated by Pevear R and Volokbonsky L. Penguin books.
- Preece, J., Rogers, Y., and Sharp, H. (2002) *Interaction Design: Beyond Human-Computer Interaction*. New York: Wiley.
- Pynchon T., (2003) Introduction to *Nineteen Eighty-four* by George Orwell. Penguin Modern Classics. Penguin, books London
- Reed D. (2005) Learning from loseables: An exercise in critical reflection. *In proceedings of Home-oriented Information Technology (HOIT '05)*. pp. 121-132.
- Rizzo, A. & Bacigalupo, M. (2004) Scenarios: Heuristics for Action. *In Proceedings of 12th European Conference on Cognitive Ergonomics*. ECCE-12 pp.153-160.
- Robson C. (2002) *Real World Research*. 2nd Edition. Oxford: Blackwell.
- Scott, J. C. (1985) *Weapons of the weak: Everyday forms of peasant resistance*. New Haven: Yale University Press.
- Shao, A. (1999) *Marketing research: An aid to decision making*. South Western College Publishing.
- Shlovsky, V. (1917) Art as technique, in Con Davis, R. (1986, ed.) *Contemporary literary criticism*. In *Modernism through Poststructuralism*. New York: Longman Press.
- Suchman L. (1987) *Plans and Situated Action*. Cambridge, UK: CUP.
- Vonnegut, K. (1986) *God bless you Mr Rosewater, or pearls before swine*. Bantam Double Day Dell Publishing.
- Welsh, I. (1996) *Trainspotting*. London: Minerva.

- Wenger, E. (1998) *Communities of Practice*. Cambridge: Cambridge University Press.
- Wood J. (2005) Inside Mr Shepherd. A review of *Jane Austen and the Morality of Conversation* by Tandon B. London Review of Books Vol. 26.21.
- Winograd, T. and Flores, F. (1986) *Understanding Computer and Cognition: A New Foundation for Design*. New York: Ablex.
- Wright, P.C. and McCarthy, J. (2005) The value of the novel in designing for experience. In Pirhonen, A., Isomäki, H., Roast, C. and Saariluoma, P. (Eds.) *Future Interaction Design*. Springer. pp. 9-30. in understanding work for design.
- Wright P. and Finlay J. (2003) British HCI group international workshop "HCI, the Arts and the Humanities" - York 21st July King's Manor, York, England