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Rich pictures for stakeholder dialogue: A polyphonic picture book

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We describe the design and use of a 'polyphonic picture book' for engaging stakeholders and research participants with findings from an interdisciplinary project investigating how UK citizens create and manage online identities at three significant life transitions. The project delivered socio-cultural and technical findings to inform policy-making and service innovation for enhancing digital literacy in online self-representation. The picture book presented findings through multi-perspectival, fictional scenarios about experiences of life transition. We describe our use of the book with our stakeholders in five workshop settings and our evaluation of the visual format for fostering stakeholder dialogue around the findings and their transferability. This paper contributes methodological insights about using visual storytelling to scaffold interpretative, dialogical contexts of research engagement.

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Charting the Digital Lifespan (CDL) was a two-year UK research council-funded project investigating how UK citizens create and manage their digital identities at three significant life transitions across the human lifespan: becoming an adult, becoming a parent for the first time, and retiring from work. Combining expertise in design, anthropology, cultural studies, and computer science, the project aimed to understand how self-representation in a digital context, or 'digital personhood' (Baym, 2015; Lee, Goede, & Shryock, 2010), is currently *experienced* by different generations, and how it is *envisioned* in the near future as individual citizens make sense of their changing lives mediated by new technologies. The overarching project goal was to generate social, cultural and technical insights from this unique lifespan perspective, to inform UK policy-making and service innovation for enhancing digital literacy and enabling self-representation online. To pursue this goal, the investigators sought to explore novel methods of design to disseminate the project's interdisciplinary outputs amongst its stakeholders (in industry, Government and the public sector), thus increasing stakeholder

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engagement and the potential for real-world impact and a demonstrable contribution to society.

These pursuits within the project were brought together in the design of a picture book (Durrant, Trujillo Pisanty, Moncur, & Orzech, 2015) that was used as a key resource in five stakeholder workshops. The researchers' primary aim through this book was to capture and communicate a synthesis of the research findings that were of interest and relevance to the stakeholders, and to foster discussion between them and the researchers about the potential value and transferability of the research for making impact. An additional methodological aim was to explore design practice in supporting collaboration between investigators to consolidate their interdisciplinary outputs. The book presented qualitative, interdisciplinary insights to stakeholders as a 'rich local picture' about individual citizens' lives.

In this paper we describe the design of the picture book for use in five stakeholder events. We provide the conceptual grounding of our visual-based approach, and the new storytelling method we devised to produce a picture book for research that draws upon multiple perspectives in the depiction of fictional, character-driven scenarios, to present: stories of participant experience; analytic insights; and design implications. We describe how the work of developing the multi-perspectival scenarios constituted a dialogical, collaborative design process that we found valuable for consolidating analytic insights from our studies. We go on to report feedback from workshop participants and facilitators on the efficacy of the book as a resource for communication, dialogue and further ideation. In closing we reflect on the methodological insights gained from this case, and its contribution to discourses engaged by the Design Studies readership on visual, polyphonic storytelling methods for interdisciplinary research communication and stakeholder dialogue within and beyond the academic context of study.

1 Interdisciplinary collaboration for future-oriented research

The CDL project engaged five partner institutions, combining expertise in different disciplines. Our overall methodology was experience-centred and grounded in phenomenology (McCarthy & Wright, 2004, 2015), establishing broad compatibility across the differing approaches adopted by the partners. We focussed on three research populations: young adults (18–21 years old), first-time parents (with children under two years), and recent retirees (retiring within the last five years). The team collectively generated a multi-generational understanding about creating and managing digital personhood from a *life-span perspective*.

The different partners investigated this subject matter in complementary ways. The humanities-oriented partners (including this paper's authors) employed qualitative methods, including ethnography and experience-centred design (Koskinen, Zimmerman, Binder, Redstrom, & Wensveen, 2011; Wright & McCarthy, 2010; McCarthy & Wright, 2015). Small sample sizes (up to 36 participants for each population studied) were engaged for participant observation, interviews and focus groups. Alongside this, research-through-design studies were conducted (Blythe, 2014; Fallman, 2003; Koskinen et al., 2011; Löwgren & Stolterman, 2004), deploying design artefacts 'in the wild' to generate social, cultural and technical research findings.

1.1 Synthesising interdisciplinary outputs

Content for the picture book was developed from empirical materials generated by two of the partners, Newcastle University and University of Dundee, with expertise in design and anthropology. Data was synthesised through collective analytic sessions that took place quarterly in the second half of the project. A phenomenological analysis produced high-level themes that formed the basis for the 'rich picture' we would communicate to stakeholders. To describe all the findings is beyond the scope of this paper, but the themes we elucidated were: 'Enablement through Digital'; 'Digital Social Norms'; and 'Enacting and Nurturing Relationships'. Each theme provided an interpretative frame for understanding accounts of lives lived online during a significant life transition.

Our aim was to design workshop resources that would invite discussion about the ways stakeholders understand how citizens make sense of digital tools and media use – both currently available, and envisioned. Ahead of designing the picture book and other resources, we established criteria about our stakeholders' known research interests, and invited them to raise topics of concern to address. Before describing how we produced the picture book, we first explain the concepts that informed our approach.

2 Picture book design for stakeholder engagement

Our experience-centred approach to the CDL project was grounded in philosophies of pragmatism and dialogism (McCarthy & Wright, 2004, 2015). In turn, the findings offered our stakeholders a qualitative understanding of the subject matter, a set of rich, idiographic accounts of individual lives. We viewed this as potentially complementary to the kinds of research typically encountered by the stakeholders, which are quantitative and mostly survey studies (Ofcom, 2015; UK Office for National Statistics, 2015). We proposed offering them an alternative view that illuminated detail in the felt life of individual citizens.

2.1 *Communication through characters and scenarios*

Given our focus, we set out to foster engagement around *individual stories*. There is a tradition within interaction design research of communicating ethnographic insights in the form of narrative vignettes (Orr, 1996). There is also a long history of scenario-based communication for practicing user-centred design for human computer interaction (Carroll, 2000). Both informed our approach. Scenarios provide concrete stories about user experience, rather than presenting this in abstract terms and generalisms; scenarios focus on the user's needs, hopes, fears and activities, for driving analysis and ideation (ibid). Carroll has demonstrated the value of scenarios – which often leverage visual storytelling – to prompt *envisioning* as well as concretisation. Design fictions offer a more recent creative method for envisioning, fabricating and contextualising near-future possible worlds; storyworlds critically explore speculative design spaces, populated with conceptual design proposals utilising ‘diegetic prototypes’ (Blecker, 2009; Kirby, 2009; Sterling, 2009). There are now mature approaches and critical discourses in design research on the use of scenarios to understand and ideate around subjective experience (e.g. Blythe, 2014; DiSalvo, 2012).

Indeed, scenarios have been critiqued for incorporating personae that may reflect stereotypes and (unwittingly) reproduce generalisms, thus undermining the sense of subjectivity that the scenario approach aims for (Nielsen, 2002). Addressing this critique, others have developed *character-driven* scenarios over plot-driven scenarios to retain narrative focus on idiographic, felt life (Blythe & Wright, 2006). Inspiration has been taken from literary theory and scriptwriting in these endeavours.

Building on this for CDL, our consideration of scenarios for design research was most centrally informed, after Wright and McCarthy (2005) and Blythe and Wright (2006), by a dialogical reading of the polyphonic novel; this is a literary genre expressing human experience in terms of *multivoicedness* and *characters in dialogue*. Wright and McCarthy (2005) appropriate Bakhtin's analysis of the polyphonic novel in relation to felt life to offer useful insight for guiding researcher engagement with accounts of experience; this is based on the Bakhtinian concept of the *unfinalisability* of experience: “the novel has the potential to be a multi-voiced dialogic – a useful stance for expressing the open and continually changing and developing nature of experience with technology” (ibid, p.14). Emphasised here, and taken on in our design process, is the function of character perspectives within a narrative to express the potential for dialogue about a complex subject matter or state of being.

2.2 *Visual methods of communication and ideation*

We now describe the conceptual grounding of our visual-based approach. Visual storytelling is often at the core of scenario design methods (Buxton, 2007;

Moggridge, 2007). The CDL studies collected large amounts of visual data, mostly relating to the expression of identity and selfhood through social media use; photographic and pictorial expression was found to be of central significance in our studies of digital personhood, as we report elsewhere (Durrant, Kirk, Trujillo-Pisanty, & Martindale, 2018; Trujillo Pisanty, Durrant, Martindale, James, & Collomosse, 2014).

The picture book format has traditionally been associated with children's storytelling (Nikolajeva & Scott, 2000). McCloud (1993) explores the medium of sequential art (that combines images and prose), offering insight into the potential of picture books to communicate to adult audiences and their wide application as a creative form of expression (see also Eisner, 2008). Sequential art has been used for interaction design research communication and argumentation (Durrant et al., 2011, pp. 273–284; Durrant, Golembewski, & Kirk, 2018; Dykes, Blythe, Wallace, Thomas, & Regan, 2016; Dykes, Wallace, Blythe, & Thomas, 2016; Rowland et al., 2010, pp. 2651–2660; Sousanis, 2015), and the value of the pictorial for disseminating research about human–computer interaction is increasingly recognised (Blevis, Hauser, & Odom, 2015). Our decision to develop scenarios in a picture book format for engaging stakeholder dialogue about our research aims to contribute to this growing body of work.

2.3 *A picture book for our project*

The CDL Picture Book captures collective, interdisciplinary insights from the project, depicted in the form of *fictional*, character-driven scenarios about individuals' experiences at the three life transitions we studied (Figure 1). Circulated to individual stakeholders in both digital form and as a soft-bound book, the resource served to afford personal reading and reference in both the context of workshop reflection and discussion, and afterwards.

The book contains three scenarios, each about one of the life transitions, and includes an Introduction for the reader. The narratives were collaboratively developed taking inspiration from *individual participant accounts* that (i) resonated with our analytic themes and (ii) saliently featured details mapping to our synthesised findings. Some narrative details in the scenarios' design reflected actual participants' description. The scenarios were populated with *fictional characters* that, rather than being seen as archetypes or personas (in the traditional sense), reflected instead the unique individuals we met in our studies, and their expressed understandings, hopes and fears about digital personhood in all its complexity. Narrative development was further informed by the interests of stakeholders that we identified, directing a *projective distillation* of findings for inclusion. The scenario development process required focused, face-to-face work by researchers who had a deep, expert understanding of the research being represented, at two daylong, round-table sessions

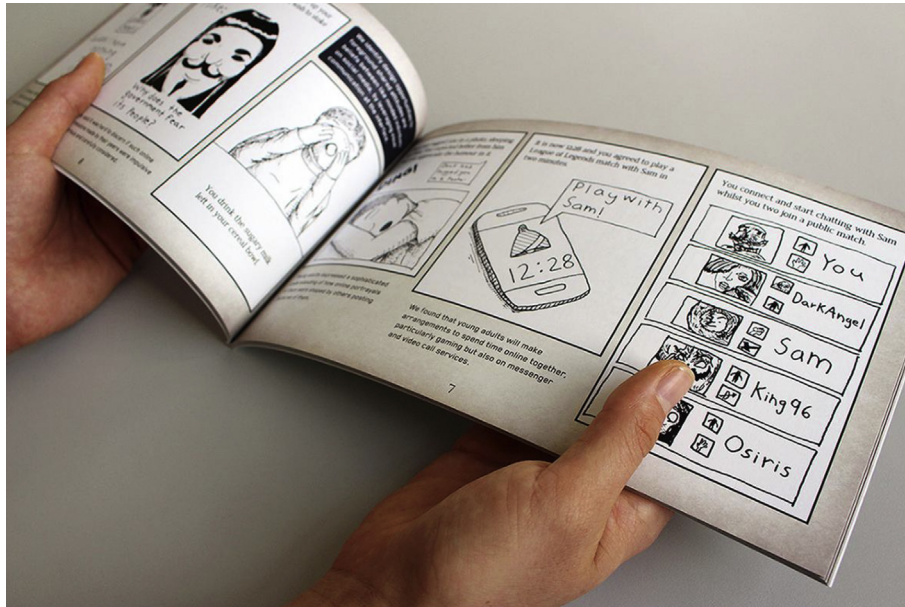


Figure 1 The CDL Picture Book, produced in digital copy plus as a soft-bound book, to afford personal reading and reference in the context of interpersonal, round-table discussion.

plus numerous email exchanges. In this way, whilst fictional, the scenarios were based on and grounded in empirical data – a strategy previously used by other researchers employing narrative approaches (e.g. Blythe, 2014).

2.4 Three perspectives on the research

We devised a structure for the scenarios that is arguably innovative, and builds upon previous design explorations of the picture book format (Durrant et al., 2011, pp. 273–284). Directly inspired by the concept of the polyphonic novel and multiple authorial voices (Wright & McCarthy, 2005), we set out to configure three perspectives on the scenario for the reader to engage with: (A) stories of participant experience; (B) analytic insights; and (C) strategic design implications (Figure 2). These perspectives – or authorial voices – are presented in the graphical layout as visually distinct from each other (Figure 3a and b). The stories of experience (A) are captured in sequential art form, through hand-drawn illustrations accompanied by prose descriptions of narrative events. Taking further inspiration from design fiction approaches (Blecker, 2009; Sterling 2009), the stories incorporate fictional, near future products and services, devised to spark critical dialogue on potential design directions and to motivate a generative process of ideation around the accounts of experience (see also Figure 7). A series of empirical research insights from our collective analysis (B) are captured as prose statements in a distinguishing typeface (on the parchment background); each statement is spatially juxtaposed with the corresponding narrative event that was inspired

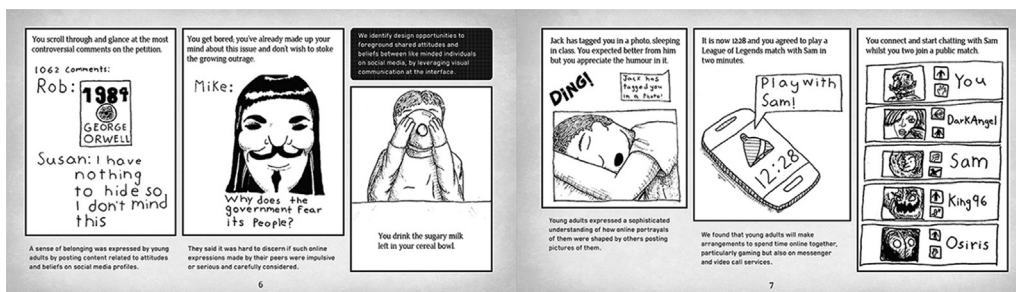


Figure 2 CDL Picture Book spread, showing the three perspectives on the research (pages 6–7).

by it. These insights reflect social and cultural understandings about the subject. A number of implications for service and system design (C) are presented in rectangular, round-edged boxes, juxtaposed with the corresponding narrative event.

Our intention through the introduction of the multiple authorial voices was to offer an engaging means (through (A)) to contextualise the research insights (B) and offer directions for their real-world applicability and transferability (through (C)), (see Figure 3b detail). Juxtaposing the voices enabled us to convey – in a relatively brief form – the idiographic nuance and complexity of experience that was perceived to be a core value of our findings, whilst delineating ‘fact’ from fiction.

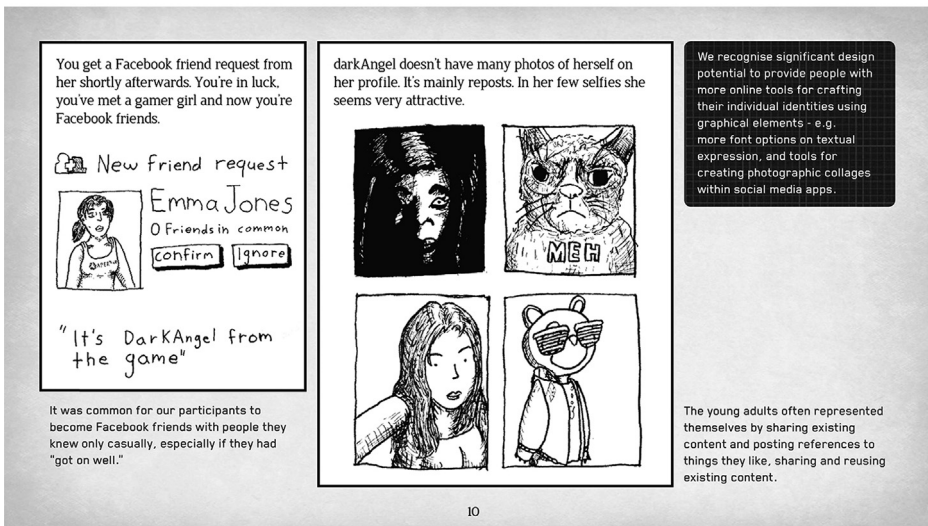
For example, in an early part of the Young Adults scenario, the depicted behaviour of the character named darkAngel reflects behaviour reported by a number of research participants across the two data sets (Figure 3a and b). However, as the narrative in the fictional scenario develops, the behaviour of the darkAngel character deviates from that voiced by - and observed of – the research participants; darkAngel becomes the *personification* of many of the participants’ *fears* about *their* manipulation by others in the course of on-line interactions, via the construction and expression of false or alternative identities (Figure 5).

A key function of our ‘multi-voiced’ book design was to open up stakeholder dialogue and sense making on our research rather than simply present results. To enhance this, we additionally devised three Dilemma Cards (A5-sized, connoting playing cards in form) – one corresponding to each scenario – that presented discussion points (using the multiple threads of (A), (B), and (C)) to extend each scenario with a narrative plot twist (Figure 4).

3 Stakeholder workshop design and analysis

We now describe using the picture book (and cards) within the stakeholder workshops. One workshop was planned from the project outset; and three

a



b

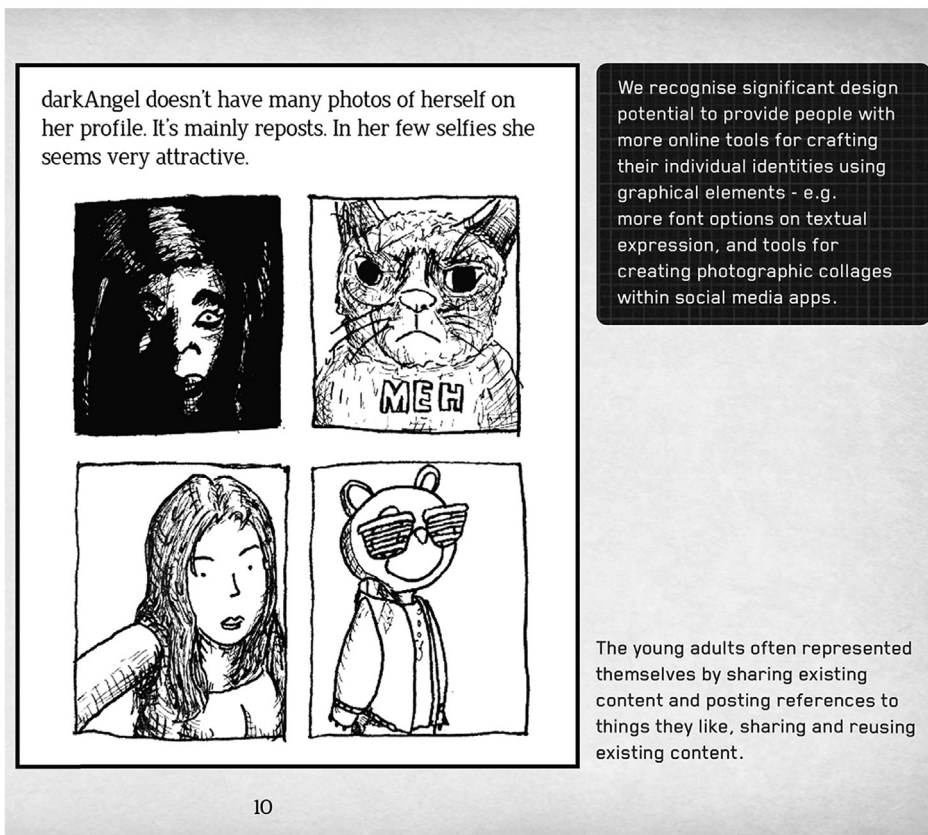


Figure 3 a. CDL Picture Book (page 10), showing the three perspectives on the research, b. CDL Picture Book detail, taken from Young Adults scenario (page 10).

of the stakeholders had sat on a steering panel in an advisory capacity across the project timeframe. The stakeholders invited to the planned workshop held interests and expertise ranging across crime, personal security, defence, taxation, personal data, media and design, and had senior roles in Government, industry or the public sector. This workshop was primarily positioned as an event for disseminating key project findings; however it was also seen as a generative for the production of a report synthesising the discussions and incorporating the additional input of the stakeholders in response. Our objective was therefore to create a discursive (dialogical) context for discussing new empirical materials of direct interest and relevance to those in a position to impact and shape services to UK citizens. Four further workshops, whilst not originally planned, were opportunistically developed post-project to extend discussion on our findings with stakeholder organisations and also with the participants in our research.


3.1 'Strategic Futures method' for workshops 1 and 2

For the first workshop design we appropriated the HM Government's Futures Toolkit 'Seven Questions' method (Cabinet Office & GO-Science, 2014), and considered how this could be supported by the picture book. The workshop agenda was refined through consultation with public sector advisors. Critically, we limited the session to half a day in duration, as the stakeholders were time-constrained. We also focussed explicitly on connections between the academic findings and practical areas of known relevance for stakeholders, to ensure that the workshop delivered satisfactory outcomes for them. Following a pilot, two workshop events were then run: the first with participants from Government, the public sector and industry; the second with an independent public sector organisation that had a direct interest in the responsible use of UK citizens' personal data.

Stakeholders were given details of the intended aims and outcomes of each workshop, and invited to shape these to fit their own objectives more closely; they provided ethical consent to participate anonymously in our methodological research on the workshop resources. They received digital copies of the picture book in advance, with the option to read (note that the dilemma cards were *not* presented in advance).

The workshops were structured to maximise interaction between the participants. Following introductions, they were split up into three equal-sized round-table groups. Each group was introduced to one scenario (Young Adults, New Parents, Recent Retirees) by a facilitator and was given an opportunity to read it individually, before engaging in a group discussion. Following discussion, participants were invited to move on to the next table, and engage with the next scenario. This was repeated twice so that all participants discussed all scenarios.

YA



YOUNG ADULTS

In the Scenario:


The young adult becomes friends with Gamer Girl darkAngel/Emma and heads off to hopefully meet her in person.

Afterwards:

The young adult is disappointed - he doesn't meet Emma at the party. And when he returns home, someone has broken into his flat and taken his iPad. He thinks "Maybe I shouldn't have checked in at the party using Facebook. Emma could see I was there, but so could everyone else."

Issues Raised:

- Are your online friends who they say they are? Wariness when getting to know people, what are danger signals or pointers to inconsistencies in the online world?
- How much information is too much? How can young adults protect themselves when the digital social norm is to share and respond?



YA

Figure 4 Dilemma Card accompanying Young Adults scenario in CDL Picture Book, intended to foster alternative readings of the scenarios and provoke new reflection on the research.

Stakeholders were asked to address the following questions from the Futures Toolkit (Cabinet Office & GO-Science, 2014) about each scenario, through facilitated group discussion:

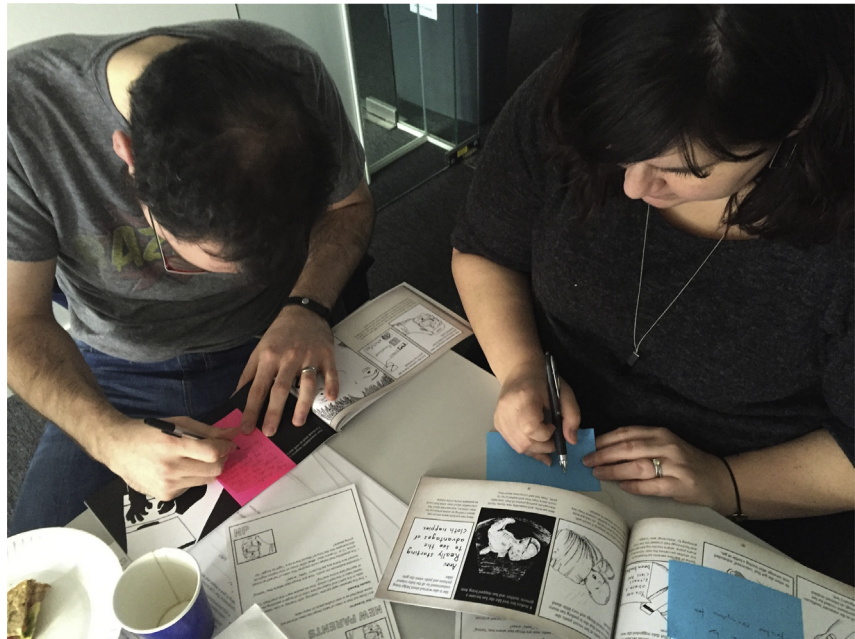


Figure 5 Workshop 3 participants engaged in creative ideation activity about New Parents.

1. What would you identify as critical issues for the future related to this scenario? (5 min)
2. If things went wrong what factors would you worry about? – What are the risks you identify for your organisation? (6 min)
3. Looking at your organisation, how might processes need to be changed to bring about desired outcome(s), maximising benefits and minimising risks? (7 min)

Additional questions if there was sufficient time were:

4. If all constraints were removed and you could direct what is done, what more would you wish to include?
5. If things went well, what's a desirable outcome?
6. What are the benefits you identify in this scenario for your own organisation?

Stakeholders were then introduced to the dilemma card for their scenario, and given time to read it, before being asked Question 2 (above) again. Once the groups had discussed the scenarios, everyone came together to summarise the findings and share the discussion points and knowledge generated. In Workshop Two, our host at the organisation led the final discussion. This focussed explicitly on how to apply knowledge generated during the workshop to that organisation's practice for engagement with the public and

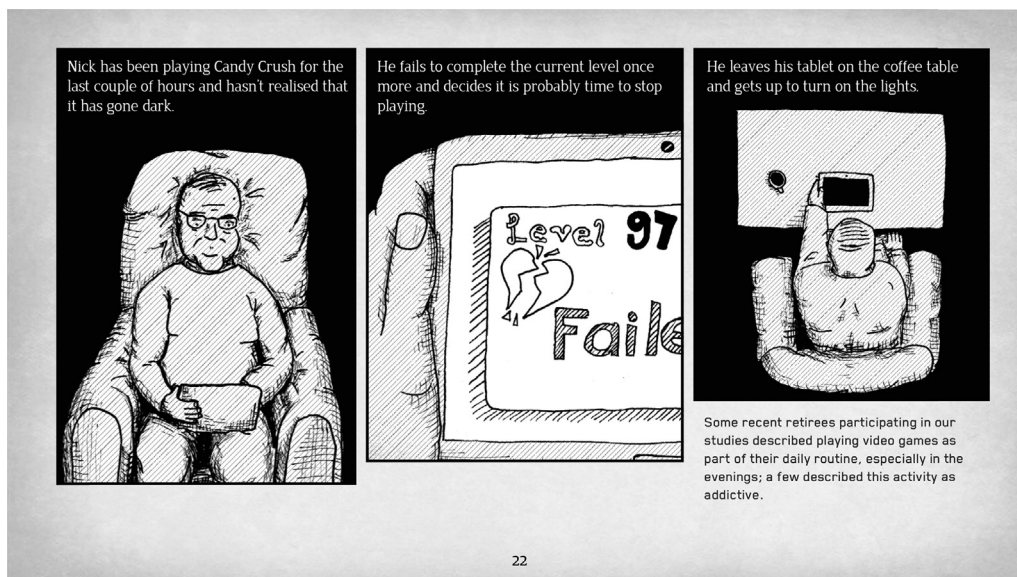


Figure 6 Storyboard from the Recent Retirees scenario (Page 22 of CDL Picture Book).

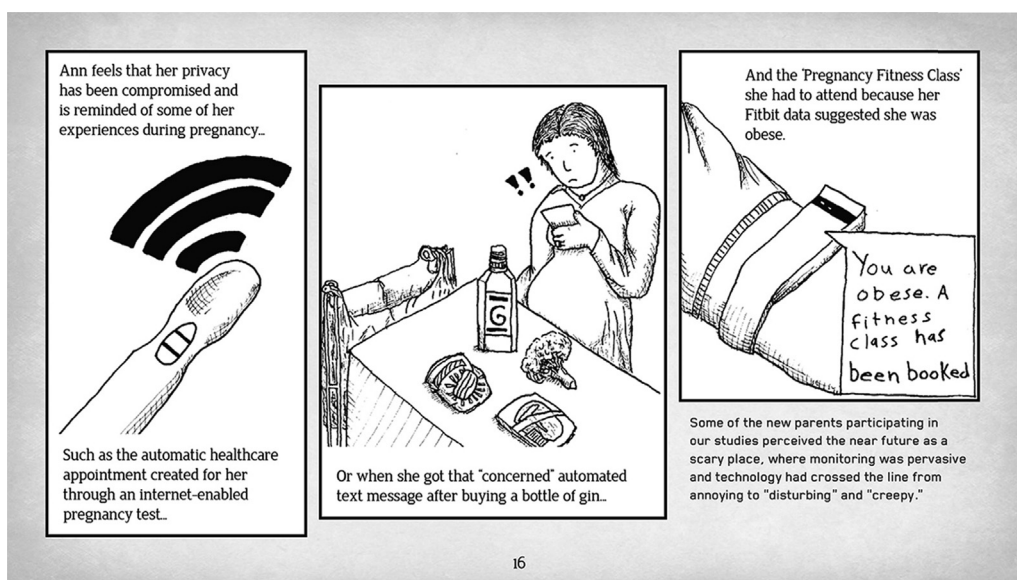


Figure 7 CDL Picture Book: an extract from the New Parents scenario that incorporates fictional products and services within the narrative events (page 16).

policymakers. Discussions were kept confidential between those present and documented in note form on flipchart paper.

A paper-based evaluation was then carried out; each participant was invited to respond to the following questions:

7. How did you use the picture book as a resource for supporting discussion with your colleagues about the subject matter of the workshop?
8. How did the character-driven scenarios and accompanying research insights, captured in the book, prompt discussion of potential policy directions and service design opportunities?
9. What are your thoughts on how this picture book could be used to communicate research insights within your organisation?
10. What do you see as the benefits and barriers to using this picture book approach as a resource within your organisation?

Discussions at the first workshop were captured and subsequently distilled in a ‘Stakeholders’ Report’, circulated to attending stakeholders after the event.

3.2 Analysis of picture book use in workshops 1 and 2

The first, second and third authors conducted a phenomenological analysis of the following data: responses to the paper-based evaluation (from 17 participants (SF-P) and three facilitators (SF-F)); participant observation by the first and second authors; and autoethnographic reflection on the book in use.

3.3 ‘Ideation method’ of workshops 3, 4 and 5

To complement the perspectives of representatives from stakeholders who operate in the *national* interest, we sought additional perspectives on the book from those who actually *participated in the original research* along with representatives from *local* organisations serving those participants’ communities. The first and fourth authors devised another method to engage these stakeholders with the book, adopting a focus group structure, and organising three separate group sessions, each focusing on one of the three populations.

For Workshop 3 we invited a married couple who participated in the original research with New Parents’ (NP). This couple, (I-NP-P1 (Female) and I-NP-P2 (Male)), had previously shown interest in knowing the research outcomes. They were joined by a paediatric nurse based at a local hospital (I-NP-P3 (Female)), who was also personally experiencing recently having her first child. The second group for Workshop 4 was composed of a participant from our Young Adult sample (I-YA-P1 (Female)), invited also because she was studying Marketing at University and held expertise and interest in the graphical communication of information, which we anticipated she would bring to a discussion of the book format. She was joined by the manager of the local YMCA (I-YA-P2 (Female)), and also by the Student Union (SU) Representative at a local University (I-YA-P3 (Male)), both of whom were interested to understand young adults’ experiences of managing online identities, and related concerns for well-being. Attending the third focus group session for Workshop 5 were two participants from the Recent Retirees sample (I-RR-P1 (Female) and I-RR-P2 (Male)), who again were interested in the findings. They were joined

by the Director of Engagement for the Institute of Ageing at a local University (I-RR-P3 (Female)), who worked with a local charity fostering public participation in research and innovation to support positive ageing experiences.

After initial email communication, participants were invited to Newcastle University for their session. They were posted a copy of the book in advance and encouraged to read all of the scenarios. Each session had at least two facilitators; the session with retirees had three.

Each session was two hours in duration and structured as follows. After making introductions and gaining informed consent, participants sat around a table and read the scenario that most closely related to their current experience or professional interest and expertise. After reading, participants were asked to comment on how they each related to the scenario: ‘Do you see yourself in this story?’, ‘Which characters do you identify with if any, and how?’, ‘How does the picture book scenario relate to your life or the work of your organisation?’, ‘What other experiences do you have that might relate to this scenario?’, and ‘What do you see as critical issues raised in this scenario for representing oneself online at this major life transition?’. The aim through this first group discussion was to critically engage with the scenarios, and to gauge and discuss the effectiveness of their content for representing a given population. The Dilemma Cards were then presented to participants, to prompt comment further and additional issues.

After this first activity, participants were given a rationale for the book design, and introduced to the three perspectives (described above). Participants were asked to provide critical comment on the book design for communicating research insights, including what perspectives may be missing and what other dissemination formats may be useful.

The participants then took part in a creative activity to respond to and extend the scenario content (Figure 5), and asked to choose a character from the scenario that they could relate to. They were then given the options to: (1) *Add to an existing character’s story* (by, for example, raising an important new issue for the character to address; or (2) *Create a new character* to introduce to the scenario who can represent a relevant issue (could be a person/service/organisation). Facilitators gave careful prompts to support this activity (e.g. by inviting a participant to consider articulating a social media profile for their character, or by providing support to the sketching of new story content through the use of graphical panels that could be joined in a sequence). Each participant presented their creative response back to the group to spark a further critical discussion about both the scenarios and the original research findings. We asked participants if they felt any new stakeholder concerns were generated in the session. Finally, we invited them to complete a paper

questionnaire including questions 7 to 10 in the questionnaire for Workshops 1 and 2.

3.4 Summary on methods

The two methods devised to engage the different stakeholder groups were thought complementary and appropriate for attending to individuals' differing involvement and personal or professional orientation to the CDL project. With the Strategic Futures method, we aimed to align with strategic approaches used by Government and the public sector to progress policy making developments, which many of our invited stakeholders would relate to and value. The Ideation method by contrast was geared towards fostering empathetic connection between invited stakeholders and the characters and narratives in the book.

3.5 Analysis of picture book use in workshops 3, 4 and 5

Whilst the first method generated observational data and hand-written responses to questionnaires, the second method produced written responses to the same questionnaire design plus other types of materials: picture books containing Post-It Note annotations and sketches; audio recordings and photographic documentation of the activities. The audio recordings were transcribed and the transcripts were subjected to an interpretative phenomenological analysis, attending to dialogue between the participants (I-P) and the facilitators (I-F). The first and third authors jointly coded the transcripts and the first author analysed the written responses from the nine participants recruited across Workshops 3, 4 and 5. The first author subsequently held round-table sessions with the third and fourth authors to further analyse the data in conjunction with the findings from the first two workshops. We then consolidated our methodological insights about the approach. Our insights are organised around themes, which focus on participants' practical sense making on their workshop experiences.

4 Evaluating the picture book use in stakeholder workshops

4.1 Grounding and opening up discussion

The picture book was predominantly used in all the workshop sessions “to understand the scenarios under discussion, then as a reference for particular talking points” (SF-P2). The book was found to provide “a good starting point for discussion” (SF-Facilitator 1), with the scenarios working to contextualise the presented research: “The format and structure introduced the range of concerns very effectively” (SF-P15); “it was useful as it instantly contextualised things and made it easier to engage with the questions and aims of the debate” (SF-P7); “It was a good way to begin a discussion and make sure that everyone was talking about the same thing – gave context” (SF-P11); The father

participating in Workshop 3 (I-NP-P2) reflected on how the story about individual experience could be shared with other readers to voice things that may otherwise be left unsaid: “the book helped to solidify a common narrative among the group and provide a basis for the flow of ideas; it gave immediate context for experiences that otherwise may not be universally shared.” The scenarios’ contextualising function was therefore key to participant engagement.

The book was found to bring research concerns ‘to life’ and helped anchor the unfolding discussion: “It provided specific examples as a basis for discussion, which is more helpful than starting from more general impression of people’s behaviour” (SF-P13). It was “referenced throughout the session to identify key areas of discussion” (SF-P14); it “kept conversation grounded as everyone had examples to refer to” (SF-P5). The format also supported the facilitators with keeping discussion focused to meet their objectives: the book “made the research concepts easy for the stakeholders to grasp, and allowed us to really maximise the time we had with them in one afternoon – we could jump right in, and talk about issues” (F2); it “invites engagement” (F3). For some, it also helped *open out* discussion: “The book provided a useful prompt and encouraged further consideration of issues beyond those directly referred to within it” (SF-P6).

The round-table context also supported the sharing of experience by fostering a convivial atmosphere. As I-RR-P1 in the Recent Retirees’ workshop (5) commented: “It’s a bit like being in a reading group, and I loved participating.” She added: “I think it is nice, that relationship that people have with a book”. Indeed, the printed form factor worked well at the tables to support the sharing of ideas, in all the workshops: “The tangibility and the narrative were powerful cues for personal reflection on the scenarios and discussion” (SF-P15).

4.2 From the abstract to the particular: making real

The scenarios were found to make research broadly *accessible* to non-academic, stakeholder audiences. For example, in Workshop 3, the participating new mother (NP I-P1), when asked about the format, replied: “If I’m honest, when you first sent the book to me, I thought ‘What is this?’ but just now, I imagine that you use it and people go ‘Oh, this is interesting’, and then you come in and you talk about the research-y bits; I think that’s probably great because people relate to it.” She added: “Having actual characters in an actual story was much more engaging than it would be just reading a research paper.” The marketing student (I-YA-P1) participating in the Young Adults workshop echoed this; she found the book “easy to get into” because of its sequential art (comic book style) format, “useful as it can attract audiences who normally wouldn’t be interested in research pieces.” Those participating in the Strategic Futures workshops were specific about the

graphic design, for example, the colour palette (“the monotone style worked well - its starkness and lack of colour invited the reader to think from the perspective of those pictured” (SF-P16)), and the visual layout (“link between the scenarios and the findings in the ‘call out’ boxes worked well to make the research insights seem clearer and more real” (SF-P4)).

Participants made a number of comments about the interleaving of project research insights with fictional characters and narratives. The book format showed “examples of things that can happen in practice, to stop conversation being too abstract” between the participating group members (SF-P1); “It enabled us to consider high level, potentially abstract concepts through the lens of ‘real life scenarios’” (SF-P3). Participants were navigated between the abstract and the particular – between the conceptual or summative and the reported experience or empirical instance: the book was “a useful referral tool, as it allowed you to relate a concept which you are trying to discuss at quite an abstract level to a more ‘real-life’ situation” (SF-P7); it provided “specific names and stories, with which to discuss hypothetical situations” (SF-P5). Anchoring the character-driven narratives in research data was also found to give the material that was presented credibility with participants, whilst service design insights were used as “hooks” (SF-Facilitator 2) for discussion. The SU representative in Workshop 4 appreciated the real life detail encapsulated: “I think it gets people to think a lot more and in more detail, and I also think it makes it more real and relatable – personable”. All the participants identified fresh opportunities to understand the breadth of views on individual experience connected to the research topic, and suggested that they could engage with this through the resource.

Those participating in the original research offered a unique perspective on the ‘realness’ of the characters and their relatability. For some, the scenarios supported remembering of felt experiences: “Since it took my thoughts and ideas from the study and put them into a comic, it was easy to remember what I’d said and had been feeling” (I-NP-P1); and “the more you talk about it, the more you remember personal experiences you’ve had” (I-RR-P1). For others, they recognised their felt concerns as more ‘universally’ felt: “the scenarios had key story hooks that related to concerns I have either discussed or dismissed at some point. The theme of universal information sharing regardless of how personal we may consider it is something that was communicated in the format of realistic concerns of an individual such that it was relatable” (I-NP-P2).

4.3 Communicating complex issues in an understandable way

The structure of the Strategic Futures method was found to give Workshop 2 participants time to reflect on issues relating to the responsible use of UK citizens’ personal data, which was their core focus as an organisation. Many participants identified the book’s communicative potential within their

organisation, as offering “a good discussion prompt” to foster internal dialogue (SF-P3, SF-P6), and “to convey issues” (SF-P12); “We could use specific examples like this to focus policy discussions around privacy notices, consent, etcetera” (SF-P13); “linked to future guidance, this could form part of an internal learning session” (SF-P14). The approach seemed transferrable and had capacity to open up further dialogue: “We could produce a version which supplemented your scenarios with issues from our own strategic concerns in this domain, to embed the discussions in a more directly relevant place, but at the same great level of insight” (SF-P15).

The book format offered a distillation of insight that was appreciated: “It is refreshing and helpful to have a different means of communicating findings which is *brief* – rather than a long discussion paper; we see a lot of the more traditional, lengthy and discursive papers in the day job, and this helps to make you consider things from the perspective of the public” (P4); “A quick and easy way to impart the information contained within” (P10). These participants also found the findings in the book usefully illuminated the *heterogeneity* of UK citizens’ experiences.

The efficacy of the resource was also considered for outward-facing dialogue. Participants in Workshops 1 and 2 also saw opportunities to integrate the different character views into advisory materials that they produce, aimed at policymakers, corporations and citizens: “thinking about how we present advice in an engaging way – again making helpful and practical points available to different audiences” (P4); “We could also use this approach more in external communications and guidance” (P13); for “communicating to the public complex matters in an understandable way”; “simple, clear, visual” (P12); “people relate to visual, graphical representation well” (P6). In sum, these (commercial/public sector) stakeholders found the book to support discussion about nuanced, complex issues.

In Workshop 5 focusing on Recent Retirees, participants noted how the book format opened up discussion about nuanced orientations to technology within the older adult population. This can be illustrated with a conversation between the two participating retirees from the original sample. Participant I-RR-P1 referred to a part of the Recent Retirees scenario in which a character called Nick is interacting with a new online service that turns out to be a scam. The participant said that, as a reader, she wasn’t sure if the character Nick was aware of the scam by the end of the scenario. In the following extract, she is in conversation with I-RR-P2, also in the original retiree sample, plus a facilitator and another participant I-RR-P3 (representing a positive ageing charity).

I-RR-P1: “I think you can say very complicated messages in these stories, I think it’s great. There is a lot to think about and you can go into

everything in greater depth. I mean on page 35, it just struck me what it says about the website asked for Nick's personal details, what you don't get from that is his concern that he shouldn't be putting in those details."

I-RR-P2: "The book does say retirees were concerned they were giving out too much personal information online."

I-RR-P1: "I've done the same thing, you sort of sign up for something and then I start to chicken out, and then you think, "Why do they want all this information?" Then that's when you get lots of spam marketing emails all the time."

Facilitator: "In the story he doesn't feel uneasy until the end."

I-RR-P2: "Should I have used it? Yes, exactly."

Facilitator: "I think the reveal with this scenario is that this is a real service. ... There are a number of sites out there that do exactly this."

I-RR-P3: "What I really like about the storyboard is this sort of narrative and the sub text messages that thread through. I think there's all sorts of scenarios for Nick.

This extract illustrates how the apparent ambiguity around the character's understanding of the scam was found to be engaging; it fostered both perspective taking and ideation between the participants as they read into subtexts that they found.

4.4 Creating an interpretative space for discussion

In the above extract we found I-RR-P1 to make an empathetic connection with issues raised in the Retirees scenario. The recognition by I-RR-P3 that "there's all sorts of scenarios for Nick" was developed in the part of the Ideation workshop in which participants used Post-It notes to reimagine alternative plot lines or character traits. Whilst engaging in this task, I-RR-P1 also said she liked how all three scenarios were linked, with characters appearing in different situations across the scenarios, which seemed to increase the complexity and richness of the story world and the possibilities for interpretation.

"It's lovely the way they're interconnected. Sometimes, you sort of get an impression, but then is it right or wrong? But sometimes, there's no right or wrong."

I-RR-P3 added: ““That is quite interesting, that you can give them a richness to their lives.”

In another part of the Workshop 5 discussion, the conversation focussed on a storyboard in which character Nick plays a computer game called Candy Crush (Figure 6). He is so absorbed trying to reach a new level that he doesn't notice dusk falling. Participants I-RR-P1 and I-RR-P2 described both deeply empathising with what they viewed as a storyboard with a positive tone, relating to their newfound entertainment: Candy Crush. But I-RR-P3 responded with a critical perspective, pointing out alternative readings that may be more negative in tone.

“I actually think that storyboard stands alone about how addictive Candy Crush is. People enjoy playing it and it's a positive thing when it's gone dark, because they've just been enjoying it so much. There is something ... around ... how if you are constantly failing at something then that can be negative and take away the positive benefits. So ... that scenario ... could be presented quite differently. ... It would be a totally different scenario to failing to reach the next level, if you see what I mean, because there's — obviously because he's tired perhaps — but I think that's interesting.”

I-RR-P1 responded to I-RR-P3's comment by reinforcing her own positive reading of the scenario under discussion, how for her being on her own online was a positive, enabling experience: “you can find out an amazing amount of things online, and the world is a smaller place.” In response, I-RR-P3 the noted how being online “can actually open up new opportunities to meet new people” and also acknowledged that readers' concerns about representation could be worked through in discussion using the picture book resource.

However, as someone with deep professional insight about engaging older adults and who addresses stigma and public commentary around dimensions of ageing in society, I-RR-P3 was well-placed to highlight the need to appreciate the implications of representing complex issues in the book for both positive and negative readings in a workshop context. This is an important consideration for running workshops and managing participants' responses.

4.5 Concerns around scope and representativeness

We can build on this last example to reflect on critical feedback we received about the efficacy of the picture book resource to represent the findings.

Participant I-RR-P3 was concerned that parts of the Retirees scenario (including the instance where Nick enters personal details for a scam service) could risk unhelpfully reinforcing stereotypes of older adults by portraying

them as lonely or vulnerable, with relatively low levels of tech literacy: “There are some subtexts here which I am a bit uncomfortable with, in terms of, “He’s on his own all the time”.

Concerns on scope and representiveness were also voiced in Workshop 2, in particular about the scenarios conceptually limiting the discussion space. One participant was concerned that the book, in narrative terms, was “fairly limited with three stories” (SF-P11). Another found the scenarios constraining the “scope to expand further to explain what people can do to remedy the issue or how to prevent it happening in the first place” (SF-P14); it was felt that the story world could have afforded more in this respect. Another participant was concerned “that in describing a specific scenario you may stifle discussion on an issue that may be useful but is not mentioned”. This point was echoed in Workshop 4 by the student I-YA-P1: “The scenario could be limiting as it narrows on one narrative, so people need to ‘look for’ the broader picture – for example, I don’t play videogames, but I have befriended people through forums.”

Other perspectives ameliorated such issues. One participant commented: “it seemed narrow that the scenarios all portrayed lone individuals in circumstances of some anxiety or risk, however in practice this allowed the discussion to include critiques of the scenarios, which was very useful” (P15).

Workshop 2 participants voiced differing levels of comfort around the role of fictitious elements in the scenarios (Figure 7): “I found it confusing when *completely* fictitious examples were used in the scenarios, for example, a pregnancy text that set up an appointment with a GP (General Practitioner); it would have been easier to understand if they were real life anonymised, but likely or common scenarios for that group” (P19). An interesting criticism here is on a perceived lack of clarity about the relationship between empirical evidence and fiction in the narrative. This was caused by our inclusion, in places, of fictitious, near-future products and services within the story world. This participant revealed how such fictions could be ‘confusing’ if not properly introduced.

Building on the last point, the facilitators in Workshops 1 and 2 reflected that the book needed a sufficient presentational context to be adequately ‘read’ and understood. As SF-F2 reflected, “I feel that to hand it over to others it might need a bit of framing”. The facilitator went on to point to the necessity of there being a dialogic process between the researchers, facilitators and the participants around the presentation of the resource: “I think without the workshop part of it, people might have difficulty walking away with the key points of the CDL project” (SF-F2).

4.6 Reflections on the picture book format

Workshop participants offered constructive criticism about disseminating the research through a format that gives salience to pictorial communication. In Workshop 4, participant I-YA-P3 highlighted how the book's format created interpretative spaces for imagination and conversation: "This book enables lots of topics to be covered but the picture format leaves enough information out to make scenarios in your head and think 'What will happen?' – It's great for discussions and interactive sessions." The YMCA representative in the same workshop added that the format was inclusive to engage those with whom she works, to "consider all levels of understanding": "Visual aids in my view are more appealing to use due to low levels of literacy where I work." In Workshop 3, I-NP-P2 also highlighted that the resource felt accessible: "The picture book has the benefit of being easily accessible, easy to 'pick up', as the graphic novel format is one with which many people are familiar."

However, I-NP-P2 also noted: "The challenge with this is that many see graphic novels as closely linked to the comic format and as such not for adults." Indeed, in Workshop 5, I-RR-P1 thought that the pictorial elements were connotative of children's books: "It's a cautionary tale, isn't it(?); It's a bit like a Grimm's fairy tale." I-RR-P1 considered the "comic book for an adult" to be quite unusual: "I don't think you really see them, do you?". It could be said that the format could influence its reader's interpretation of narratives with either a constructive or a disruptive effect, depending on the research goals and context.

I-NP-P2 also noted that other media forms could usefully augment the scenarios' communication: "while the book is a starting point for a discussion, the lack of aural communication in the material does put the onus on the reader or group leader to disseminate the message." He added: "a video would allow audio-visual communication of the story that could be tightly controlled at editing." He felt that a digital format was more fitting for the research subject: "a video or an interactive presentation would make a better use of the technology available, considering the subject matter." His partner, I-NP-P1, added: "if you're using storytelling, you aren't limited to a book, you can tell stories in podcasts, audiobooks, web comics..." Alternative formats were also suggested by other participants: "Apps or YouTube could be useful as well" (I-YA-P2); and "Digital murals around city centres" (I-YA-P3).

In Workshops 1 and 2, other practical concerns were voiced on the format, relating to the book production. Some considered the investment of effort in production could be justified if it delivered value: "It could be time-consuming but worthwhile I think" (SF-P1); "It involves more time and effort to prepare, as compared to simply presenting facts and figures; it actually requires very detailed research, to construct realistic examples, but is very

powerful if done well” (SF-P13). Our own concern in reflecting on its production is that the work of content creation and then providing the framing for its presentation necessitated, in the workshops conducted to date, significant input and representation by the research team members who were also the book’s *designers* – as experts on the book’s content and function. These concerns chime with I-NP-P2’s concerns around the communication of particular messages and facilitation of certain topics for discussion. The extent to which this book would work in a workshop without the presence of at least one of the researchers involved in creating it is an open question to explore in future work.

5 Discussion

In this paper, we offer a case of using picture books as a resource for designing. Specifically, we describe putting the polyphonic literary devices highlighted by [Wright and McCarthy \(2005\)](#) into practice in the design of a visual storytelling resource for stakeholder dialogue around research findings.

The book proved efficacious in scaffolding a dialogical space for stakeholder interaction. Reflecting on the utility of presenting definitive statements about the research outputs, we suggest that our research insights would always need to be grounded by the stakeholders themselves, *within their own practices*, if they were to be made sense of and be usable. Consequently, we saw the depicted findings as constituting dialogic elements of a research space that remained open for interpretation.

Arguably, the character-driven scenarios also helped create this interpretative frame. We return to [Wright and McCarthy’s \(2005\)](#) reading of Bakhtin to elaborate. In a Bakhtinian analysis of the polyphonic genre:

“We see the world of the novel from multiple perspectives of different characters with different value systems, and there is seldom one best way forward... Rather it is the relations between these value systems that drive the novel on. ... Furthermore, characters’ actions are not causally determined by plot, a creative response can be drawn out of them without destroying the coherence of the story.” ([Wright & McCarthy, 2005](#), p.15)

In the Young Adults scenario, part of which is depicted in this paper ([Figures 1–4](#)), the darkAngel/Emma character is positioned in empathic relation with the CDL research participants whose accounts are represented; this is captured on page 10 ([Figure 3](#)) in the juxtaposition of the pictorial depicting Emma’s social media profile pictures with the authorial voice of the researchers talking about their findings (B). Emma presents herself to character Matt (the young adult in this story) through different identities, at different events within the narrative thread, (e.g. she first met Matt as darkAngel via an online gaming

forum). It is the dynamics of the relationship between Matt and Emma that were intended to invite stakeholder engagement because concerns such as ‘wariness when getting to know people online’ were of core interest for discussion and ideation in the workshop context (Figure 4). Furthermore, we see here how the characters in the stories are actually operating, not just with each other, but in dialogue with *other authorial voices* of the book.

Connecting this example to methodological discourse: another criticism of scenarios for design research, aside from their historic use of stereotyped personae (Nielsen, 2002), is that they are often seen to close down interpretation by their readers about a design space of possibility by presenting a ‘unitary vision’ of a technological future (Gaver, 2011). Indeed, we received some critical feedback (above) about how the stories in the CDL picture book constrained thinking to the represented subjects. Arguably though, the unique, multi-perspectival format of the ‘polyphonic picture book’ as it might be dubbed – was found, by most at the workshops, to open up the dialogic imagination of the participants around the presentation of research and the possible design spaces that it suggests for consideration.

Our researcher positioning within the book design process and the workshop events is also significant to reflect on methodologically. Thinking in terms of a dialogical exchange, we, as a research team, collected new data and analytic insight through the book design process and the workshop discussions. The process of synthesising (and distilling) collective insights from a complex project into something brief, pictorial, and accessible required significant collaboration between the disciplinary partners in efforts to engage, analyse, and ideate around alternative perspectives on the project and its outputs. Developing and editing the book was found to be enriching for further collectively analysing the CDL data, such as deciding on research highlights and accommodating changes to story and character features to hone representations. It would be easy to mischaracterise the book as purely a form of dissemination, implying an articulation of finalised understanding from field research, but the richness of this design artefact is its incompleteness and the way in which production and engagement with it becomes a research tool itself. Simply put, our understanding of the research space was enriched through our own engagement with the picture book. We also recognise that our insight as this book’s *designers* contributed significantly to the running of the workshops (although activities were in three cases facilitated by others). These are important considerations for the transferability and scalability of the method.

As raised by our workshop participants however, there are possibilities to expand beyond the static sequential art format. Video, or digital media more broadly, may offer a rich space for providing animated content, and richer audio-based dialogue. This could frame the content and context for new kinds of consumption (e.g. in a stand-alone context, without researcher

guidance); and also support interactivity through new kinds of configurability that would allow ‘readers’ to turn layers of dialogue (such as a researcher commentary) on or off during a viewing. As was seen in Workshops 3, 4 and 5, we have also experimented with story completion methods, drawing on the ambiguous qualities of the picture book narratives to support the participants in providing alternative endings or perturbations to them, enriching engagement with the dialogical space. After Blythe (2014) such approaches also take narrative seriously, but extend beyond this to think about the use of more nuanced forms of narrative that might be co-constructed or emergent, from engagement with readers (as consumers of content), whilst also being grounded in the realities of our research data. Ultimately, however there is a significant caveat – one of the key strengths of the format was its perceived simplicity and ease of engagement for broad audiences; accordingly, any attempt to make more nuanced or more complicated presentations of the research does so at the risk of losing intelligibility and therefore reducing accessibility.

In closing, we reiterate our intended contribution with this paper to offer a case study account of the design and use of a polyphonic picture book format to open up stakeholder dialogue about the qualitative findings from an interdisciplinary research project. Reflecting on this process, we have suggested how aspects of the book’s format, content, and context of use offer methodological insights to the design community about using visual storytelling techniques with particular dialogical features, for scaffolding interpretative contexts of research engagement.

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