

SAGE Research Methods Cases

Research through Gaming: Public Perceptions of (the Future of) Identity Management

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Research through Gaming: Public Perceptions of (the Future of) Identity Management

Link to the Research Output

- Not yet available (work in progress).

As part of a larger project addressing (the future of) identity management technologies, we wanted to survey public perceptions and use of such technologies. Keen to avoid or at least mitigate the effects of survey fatigue among our respondents, we decided to create a research game. In doing so, we would create for respondents a character and a mission and transform our research questions into game scenarios and challenges. In this case study, we discuss the process involved and the ways that the principles of gamification can be adopted in relatively low-cost ways by researchers working with limited resources. Several matters for consideration and potential drawbacks are also identified and considered; as with any innovative approach, researchers must be reflexive, but they can be rewarded with rich data – and happy respondents.

Learning Outcomes

- To understand the notion of ‘survey fatigue’ and have an idea of some of the ways that researchers can try to combat it, including gamification
- To be able to talk about why gamification may be a successful way to approach survey research
- To know the basic elements of game mechanics and to be able to think about how to translate research questions into game scenarios

- To be creative with survey questions in order to produce a game-like experience – and to understand some of the methodological implications of doing so
- To be able to recognise some of the potential drawbacks of gamified research in academic contexts and to be able to discuss ways of addressing them

IMPRINTS: Public Responses to Identity Management Practices and Technologies

People's feelings about identity management are complex and often contradictory: they will furnish Facebook and its multitude of apps with personal information and share intimate details about their lives, yet express anger and anxiety when electronic medical files are proposed. People sign up for store loyalty cards, yet campaign (successfully in some instances, such as the United Kingdom) against national identification (ID) cards. Increasingly, everyday interactions demand that people identify themselves: taking money out of the bank, using mobile phones, getting on the tube and so on, which makes how they manage their online and offline identities – and how they will do that in the future – a matter of real significance. Our current project is a 3-year, comparative and multidisciplinary research project looking at how UK and US publics engage (or not) with identity management practices, services, and technologies; how identity management is discussed in the public domain, from policy to film and television; and what is expected (both hotly anticipated and dreaded) of the future. What do people imagine for the future of identity management, how do they feel about it, and why?

The first phase of the research, therefore, identified and examined cultural and political scenarios of future identity management; we looked at how texts from policy, science fiction, film, and television imagined the future since these ideas help to inform people's knowledge of, and feelings towards, certain means of identity management. We found that biometric identity management technologies were shown as being an inevitable yet controversial part of our future; that radio frequency identification (RFID) and remote identification are also on the way, but are similarly controversial; and that the smart phone is developing inconspicuously as a key tool of identity management. In the

films and television programmes that we looked at, which revolved around identity management, we found themes of confusion (usually bound up in identity theft, for instance, in films such as *The Net*, from 1995, or where artificial intelligence was involved), control (involving pervasive surveillance technologies, either for population management by the state and/or corporations, as in the 2006 film *A Scanner Darkly*, or for entertainment purposes, as in *The Hunger Games* from 2012), and comfort (the kinds of shows in which the heroes – people such as *24*'s Jack Bauer or the Spooks team – use these technologies to protect the general public from the bad guys).

The second phase, then, was to look at how the public actually perceives these identity management technologies. Our interest was in the means of identity management that people currently use and how they see technologies developing in the future, and what they like and dislike in both cases. What do people see as vital to their identification now? How do they imagine they will be doing the same things in 2030? Which technologies do they accept, or even desire? Which would they reject – and would it make a difference depending on who or what organised that technology? We identified a number of methods to collect this data, varied so as to offer us a range of responses from a range of different sorts of people, including Q-sort, focus groups, cultural probes, hack jams, a standard survey, and the research games discussed here.

Why Use a Game?

Some of those methods catered to particular groups: in speaking to experts in the field, for instance, we used Delphi interviews and Q-sort methodology. In order to put the kinds of questions listed above to the general UK public, we could have conducted a traditional survey that included socio-demographic variables, attitude scales, and rank-order tasks. Yet there were two drivers for our decision to use a game:

- Survey response rates continue to decline (and in the case of web surveys, response rates were never as high as with other formats, anyway); as people are asked to complete more and more surveys, so their interest in them continues to wilt, a phenomenon known as 'survey fatigue'. This can manifest itself in several ways that researchers would rather avoid, such as 'straight-lining' (choosing the same response to a string of questions that use the

same scale), choosing random answers to speed up the survey and not bothering to finish the survey. So, even if you end up with data, it may well be data that tell you little about your sample (and worse, you may not realise it). Various approaches have been proposed to combat survey fatigue, including giving respondents information about why you want to hear from them and what you plan to do with what they tell you, offering incentives to participate, and even abandoning the survey format all together and simply giving people the chance to provide information in their own words. Yet none eliminates the possibility of compromise to the quantity or quality of response. Further, we should consider that 'fatigue' might also reflect ennui: the look and feel of traditional online surveys is extremely unlike anything else on the Internet today. The use of white backgrounds, radio buttons, grey shading and scales, and grids harks back to the Internet of the 1990s, far removed from today's dynamic user interfaces. Research comparing a traditional online survey, a Flash-based online survey and a gamified survey found that respondents spent longer answering questions in the game survey, straightlined less often and was reported by respondents to be the most fun.

- The fun theory posits that if something is fun, people are more likely to do it. An experiment by Volkswagen found that 66% more people turned away from the escalator and used the stairs at a subway station once the steps had been turned into functioning piano keys. Could we combat survey fatigue and still get answers to all the questions we had if respondents enjoyed giving us those answers? Market researchers have been keen to use gamification as a strategy and report finding that they tend to get more – and richer – responses as a result and that the gamified surveys tend to heighten rather than diminish a respondent's desire to complete another survey (of respondents to two research games in February 2013, 93% said they would participate in another similar study, and one respondent blogged about the experience, writing: 'I can say with absolute certainty that I was significantly more invested in this process than I have ever been in market research'). In a recent survey, one of the authors found that respondents aged 16–30 years spend up to 5 h and on average at least 1 h at a time playing console games, spend up to 30 min playing games on their mobile phones, and between 1 and 2 h playing games online – and all this at a time when it is being reported that students have 10-min attention spans. A fondness for gameplay could

offset waning willingness to fill in a lengthy survey because a game or even a survey with a few elements of play can help respondents to feel that they are actively participating in something. (If you want to read more about how gameplay can encourage people to undertake even the most mind-numbing tasks, read Chapter 11 of Jane McGonigal's book *Reality is Broken*, which details *The Guardian's* use of a game to enlist tens of thousands of readers to sort through MPs receipts and expenses claims in 2009.) Further, market researchers have found that people respond with more creativity to questions that demand it. This was particularly important for us. Our project was committed to being methodologically innovative and experimental, and since we would be asking respondents to imagine the future and tell us what they saw, we needed to engage them in something that would trigger imagination, fantasy, and emotion.

Creating Our Game(s)

Market researchers have tended to find that respondents to gamified surveys think that they have spent less time on the survey than they actually have (time flies when you are having fun, as the saying goes). We were still conscious, however, that we were attempting to harvest a lot of information and that we had two slightly different purposes bound up in our plans: we wanted to know how people manage their identities now, and also what they desire (or not) in the future of identity management. For this reason, we decided to create two games, one geared towards each purpose, each taking around half an hour, rather than attempting to create one very long game.

So what exactly is involved in gamification? In *Gamification by Design*, Gabe Zichermann and Christopher Cunningham talk about 'the use of game thinking and game mechanics to engage users and solve problems'. There are typically five basic elements in the way that games work: they have some kind of narrative or back story, the environment looks recognisably game-like, there are rules governing what you can do and how you progress, it involves some kind of challenge, and players have the opportunity to earn rewards. Those who claim that the impact of gamification on respondent engagement is negligible have typically failed to attend to these basic elements, imagining a traditional survey question superimposed on a static game-like

background to be ‘gamified’. A gamified approach does not mean that we no longer need questions, but rather, it is from our questions – and the answers that we seek – that we can build an appropriate environment, give our respondents some sort of relevant narrative backdrop and set them off through an appropriate set of scenarios.

For us, as academics working with the gamification experts at Research Through Gaming (RTG), this was an iterative process, an exchange of ideas between our data demands (i.e. what we wanted to get out of the game) and the designers' understanding (of what players want to get out of games). We shall focus on the first game, The Elite Secret Service Agency (T.E.S.S.A.), to show this in a little more detail. It was intended to give us an idea of the way that people currently employ and understand identity management technologies: those they use, how often, and for what purpose, and which they consider to be crucial for day-to-day living as a (UK) citizen. T.E.S.S.A. positions the respondents as a spy, and tasks them with destroying a rival spy's identity in order to take him out of action; they can win additional time and clues to use in later levels as they do so. This enemy, of course, attempts to take revenge by doing the same to our respondent, who must identify their most important ID tools and get them to the safety of T.E.S.S.A. headquarters within a time limit. In the end, our successful respondent gets to meet the head honcho and suggest better – safer – means of identification for use in future missions.

If we return to the basic game elements mentioned above, we can see how our game tries at least to emulate them:

- **back story:** position as a spy responding to covert activities of enemy spy
- **environment:** metallic colours, dimly lit scenes, characters with code names, mechanistic fonts, and so on to create an immersive spy-genre atmosphere
- **rules:** time limits, tasks must be completed as set before the next screen appears
- **challenge:** destroying enemy spy and responding to his counteraction
- **rewards:** players can earn extra time and clues to use in later levels

Earlier, we described the move from standard survey questions to game narratives as an iterative process, an exchange between academics and designers in which our research questions were gradually hammered into shape as a game scenario that made

sense both as a game scenario and in terms of the research question. Let us focus on part of Level One, for instance.

Of all the identity management resources currently used in everyday life, we wanted to know which people consider most important, most crucial to allowing them to live on a day-to-day basis. In a standard survey, we might have asked them simply to list those, or to choose them from a list that we supplied. If we have failed to engage our respondent sufficiently, we may find only the most obvious three, the first to spring to mind, or the first three on the list, in their response. In a gamified approach, we are putting the respondent into a critical situation with some time pressure – they must steal the items before Agent Ø returns home, and when they hear him entering, they must choose the three most important. They are not simply responding to a question that (probably) only we are interested in; they are solving a problem, in a situation that also has consequences for them (at least in the game). What we hope is that respondents' interest in and engagement with the research is sustained for longer and at a higher level and that this provides us with reliable information about each respondent.

Do It Yourself Gamification (or, 'Pimp My Survey')

Creating a good research game, one that satisfies all of your needs as a researcher and all of the respondent's needs as a player, can be an expensive and time-consuming process; we were fortunate to be working with designers who had purpose-built software systems invented precisely for such games and within a well-funded project in which methodological innovation and experimentation were positively encouraged. In many research situations, and particularly at undergraduate level, sufficient resources for a fully gamified survey are unlikely to be available. That does not mean, however, that the principles of gamified research – to improve the respondent experience and, with it, the quality and quantity of responses, by making a survey fun and engaging – cannot be applied to produce a *gameish* environment.

One option is to change the ergonomics – the feel – of the survey, simply by changing the way it looks. Instead of lists and tick boxes, for instance, you could ask your

respondents to tell you whether they like using public transport or not by clicking the appropriate emoticon. Instead of asking them to click their top three pastimes, have them drag and drop appropriate items (a tennis racquet, a games console controller or a pair of knitting needles) into a rucksack for a weekend away.

Even without giving your respondents superpowers or a secret mission, you can set them challenges by posing questions slightly differently. Let us say, for instance, that you want them to think of items that they would not be happy to buy online. Instead of 'Please list all the things that you do not like to buy online', you could instruct respondents with an added challenge: 'You have 90 seconds to think of all the things that you never like to buy online and write them in the box below'. (Market researchers who have tried this kind of questioning have found that they tend to get fuller responses using this kind of question, without even having to enforce the time limit.) You will need to think about how appropriate certain types of question are to what you are asking, of course – suggesting to respondents that their answers are in competition with others answering the survey, for instance, would not be right if you were asking about personal beliefs and values. Similarly, in some cases, it may be productive to give your respondents rules to abide by (perhaps asking them to tell you how they would describe UK news coverage of the royal family *in five words*, say, when they might otherwise have given one-word answers that you did not find very illuminating), but again they should be appropriate to the question.

Another game-like strategy for designing your survey is to put your respondents in some kind of scenario or role (again, this is simply a matter of wording the questions differently; it does not have to cost anything except the time spent thinking them up). If you want to know what kinds of films teenagers at a local youth club are into, for instance, give them a reason to think about it. 'You've won a trolley dash in Amazon's DVD warehouse. Which section do you head to first?' 'There's a glitch on iTunes and everything is free. Which films would you download before things were fixed?' 'You break your leg and have to spend 2 weeks in bed. Which films would you watch?' Remember, once more, that the way you frame your question might impact on the answer. In the first example, respondents may choose only films that they know to be out on DVD; in the second, they may choose the most recent, highest value films; in the third, they may choose their favourite films. Think about the kind of answers you want and make sure that the scenario you imagine fits that purpose. In fact, the same goes

for any and each of these game-like tactics. It might be helpful to produce something similar to [Figure 1](#), above, to keep checking that your game-like approach matches the research aims (and intended outcomes) of a standard survey approach.

Figure 1. Getting from research aims to game scenarios.

Methodological Issues

So far we have concentrated on the impact that gamification can have on the respondent's survey experience: the narrative form and enhanced visual elements, the elements of challenge, are designed to make it a more pleasurable and engaging one, eliciting more, and more detailed, responses. Using game techniques in research allowed us to gain data without even asking questions (for instance, rather than asking the respondent to name their three most important IDs, we place them in a situation where they have a limited time to take their most important IDs from a safe and escape). As should also be clear, however, gamification does raise a number of methodological issues, and the questions that these pose as to the usefulness, reliability, and validity of the data must be considered in your research.

First, we must consider the (potentially differing) extent to which a game will appeal to various groups in the population; if we want a representative sample, we are likely to be targeting some people who have little experience with or enjoyment of games. Thus, part of the challenge of creating your gamified survey is producing something that retains their interest and does not alienate them. There may also be questions as to how responses from such groups might differ if the same information were to be obtained in a more traditional fashion. In our research, the team at RTG designed the graphics, narrative, and language used in T.E.S.S.A. to be appropriate and accessible for the target population – UK residents aged 18 years and above – who are familiar with characters, films, and television series in the spy genre. One might expect age and gender to be the biggest factors in defining gamers and non-gamers, but data from the gaming industry show that the average player is 30 years old (with 35-year-olds being the most frequent purchasers of games), while in the United States, at least,

47% of gamers are female. The diversification of the gaming population has gone hand in hand with the proliferation of new platforms; almost all age groups have easy access to games on tablets, smart phones, the Internet, and consoles that, significantly, make greater and greater use of motion detection. In 2007, it was reported that care home residents in their 80s were 'addicted' to sports games on the Nintendo Wii. The T.E.S.S.A. game design was simplistic enough for users in any age group, requiring no complicated 'special moves' and incorporating a 'Hover and Learn' functionality that enabled users of any age who came across items or terms with which they were not familiar to see a pop-up explanation.

Other issues are raised by the game format itself: when researchers are concerned with attitudes and underlying perceptions, they generally present respondents with a long list of propositions to agree or disagree with using a Likert scale, but such an approach would be disruptive to the pace and rhythm of a game environment. In a fully gamified survey, researchers would need to find a way to work such propositions into the narrative of the game, and that itself may have implications for (a) the complexity (or not) of the kinds of issues and questions that can be raised and (b) the potential influence of question order. As Alan Bryman points out in *Social Research Methods*, there is inconsistent evidence as to the effect of question order; although there may be general guidelines, there are no hard and fast rules as to the best or most successful sequences of questions. In a game situation, there is potential for question order to be taken out of a researcher's hands, dependent instead on the requirements of the narrative and the respondent's journey through it. In the case of our research games, we were able to control question order very strictly, by organising the game into several levels: Level One, for instance, asked respondents about their current forms of ID, while Level Four asked them about their desires for future forms of identification. The narrative aided this level layout, and the rewards on offer for progress provided an incentive to continue even where the format might have become repetitive.

We may also consider the potential impact of the game environment and atmosphere on our respondents. In our project, for instance, the T.E.S.S.A. game was designed to create an atmosphere that was meaningful in the context of identity management: the dark colours and identity theft scenario borrowed from the many Orwellian narratives found in popular culture. Were our respondents 'primed' – that is, oriented to a particular course of action or set of responses – by that atmosphere? Or was this resistible?

We could equally wonder how different the data would be if the respondents were *not* placed in a frame of mind in which they are seriously considering their identity and identification choices.

Furthermore, both of the games that we employed placed our respondents in fantasy situations: first as a spy, then as a visitor from the future. Critics may pose questions, then, as to whether respondents think and act as themselves or as this imagined character; in the latter case, what does our data then represent? Evidently, there will be a connection between both types of responses, and research about gaming has told us that people generally create avatars to reflect themselves quite closely, but the assumption has not really been tested in academic research.

Evaluating Gamification

All of these are things to consider in taking a gamified approach, right through from conception to analysis; your 'solutions' will spring from such thought, and where they are only partial, they will help to inform your analytic reflections. One option might be to run a more traditional survey, using the same questions, alongside the game, to see whether the outcomes differ. (In doing this, you could use a comparable yet different sample rather than asking the same respondents to try both versions, thus avoiding the potential for responses in the second case to have been primed by the first. Even solutions may need further solutions!) Another option, and the one we have taken, is to conduct focus groups with some of our respondents, giving them the opportunity to reflect on the process and the differences (or not) that they feel it made to them to be playing a game rather than answering a standard survey. After all, if one of the motivations for adopting a gamified approach is to reduce the potential for survey fatigue, the method should perhaps first and foremost be evaluated by the respondents. Upon completion, 96% of respondents to T.E.S.S.A. indicated that they would like to do a survey like this again. A quarter ($n = 384$) left additional comments, of which 83% were positive and only 10% negative, but a more qualitative, in-depth exploration of respondents' reported experiences would provide a more rigorous examination of the method. So far, there has been virtually no academic work seeking to evaluate survey games, and the endeavour is complicated by the fact that there is no 'standard' way to compose or conduct a research game; comparing game X to a traditional survey may

not tell you very much about the comparison between game Y and a traditional survey. This is why we favour a reflective process that can help establish the successes (and the limits) of the approach in its own right.

Summary: Survey Research and Gamification

Our project is a broad-sweeping, multidisciplinary study of identity management technologies: how they are used, how they are talked about, represented, imagined, and what future people project for themselves and their identities. With various foci to go at, we employed a number of methods and were committed to innovation, which is how we came to the decision to use a research game to garner public perceptions of identity management technologies now and in the future. Our intention was to try something relatively new (particularly in academic circles) and to be creative and imaginative, in the hope that it would encourage the same from our respondents. We devised two games, each with its own back story and role for our respondents, and in each, we translated our research questions into scenarios; by fulfilling their role in these scenarios, each respondent would tell us about how they use identity management technologies and what they think of them with less chance, we hoped, of becoming bored with the topic or the line of questioning. The idea behind gamification is to create a more engaging respondent experience, increasing the probability that respondents will (a) agree to take surveys in the first place and (b) provide fuller responses to our questions, and the principles of gamification can be utilised even where a fully rounded research game is beyond the means of the project. A gamified approach is not without its potential drawbacks, disrupting as it does some of the assumptions that we make in traditional survey research and depending upon some new assumptions of its own, but with careful consideration of research goals alongside design, it offers the potential for gathering richer data and encouraging respondents to participate in future research, rather than dreading the arrival of another survey in their inbox.

Exercises and Discussion Questions

- We used (gamified) surveys to find out about the forms of identification that people currently use and consider to be important; how else might we have collected that information?
- In small groups, draft three (related) survey questions and then switch your list with that of another group. Can you think of a game scenario that would help you answer these questions? Can you apply the basic game elements we talked about?
- We mentioned questions of inclusion and exclusion in designing survey research. Who, if anyone, do you think gamified research might not appeal to, and why? Would game-like research be any better in this instance?
- If you were asked to complete a research game in a particular role (in our example as a spy, but it could be all sorts of characters), do you think this would influence the way that you answered the questions involved? What implications would that have for the research?

Further Reading

Adamou, B. (2011, May). *The future of research through gaming*. Paper presented at CASRO Online Research Conference, Las Vegas, NV.

References

Bryman, A. (2012). *Social research methods*. Oxford, UK: Oxford University Press.

McGonigal, J. (2011). *Reality is broken: Why games make us better and how they can change the world*. London, England: Jonathan Cape.

Zichermann, G., & Cunningham, C. (2011). *Gamification by design*. Sebastopol, CA: O'Reilly Media.

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