14 Probes

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Introduction

Probes are a method for developing a richly textured but fragmented understanding of a setting or situation. Developed in a design context, their purpose is not to capture what is so much as to inspire what might be. Because their motivations come from design, Probes embody a different set of sensibilities from most other social research methods. Most fundamentally, they make a virtue of uncertainty and risk, acknowledging and celebrating the idiosyncratic interpretations of designers and participants. They aim to open up possibilities, rather than converging towards singular truths, and can be conceived as part of a conversation among designers and the people and places for which they design.

Originally conceived of as Cultural Probes, the probe process was developed by designers then at the Royal College of Art (RCA) for Presence, an EU-funded project that aimed to increase the presence of older people in their local communities using new technology (Gaver and Dunne, 1999; Gaver *et al.*, 1999; Gaver *et al.*, 2001; Gaver *et al.*, 2004a). Several educational, governmental, and commercial entities collaborated on Presence and each brought different methods and methodologies to explore the design space from different angles. Example methods included oral histories, concept trials, user forums, user profiles, and relational maps (Hofmeester and de Saint Germain, 2000). These methods were stretched to apply to the unique context of designing technology for older people in local communities, however the techniques and research stance stayed close to the problem solving and optimization approach of traditional usability research methods.

The designers from the RCA, however, set out to take a more experimental approach. They framed the Presence project as facing two fundamental challenges: one conceptual, and one pragmatic. Conceptually, they wanted to subvert stereotypical representations of the elderly as frail and marginalized, as well as assumptions that computation should focus on productivity and efficiency. Instead, the designers intended to tap into people's inherent playfulness and mindfulness in the products they would eventually propose. Pragmatically, they knew this meant getting to know the targets of their design work – groups of volunteers from Norway, the Netherlands and Italy – in ways

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different than those afforded by traditional research instruments. Rather than focus on problems and needs, they wanted to know about hopes and fears, curiosities and dreams. At the same time, they did not want their research findings to dictate the design, but were anxious to leave ample room for their own interests and imaginations.

In response to these challenges, the designers drew from the theory and techniques of the situationist international (Debord, 1967) and to some extent surrealism (Levy, 1936) in order to articulate a new approach. The surrealist pursuit of the marvellous in the face of apathy spoke to the designers' desire to forge an approach that was playful in intent, delivery, and eventual designs. Surrealist techniques for elevating the unconscious and provoking new dialogue, such as dream writing and games of chance, provided resources of inspiration. Likewise, the situationists' ethos of grounding surrealist ideas more in the everyday and particularly in the fabric of place provided a resonant philosophy for understanding the very different cultures and communities in the Presence project. Techniques such as détournement and dérive were familiar tropes that the designers had played with in previous work and they sought to use their principles in the Presence context as well. More concrete inspiration came from Fluxus boxes, packages of diverse games, cards and suggestions produced as part of the avant-garde movement, which suggested that research materials might also be produced as similarly diverse and loosely organized collections (Kellein, 1995). Hence, the Cultural Probes process emerged as a design led, arts inspired, approach to developing new understanding and perspectives of cultural communities.

In material form, the Cultural Probes consisted of packets of provocative items that set various tasks for the volunteers. These included a customized disposable camera with instructions for taking pictures of 'something beautiful' or 'something you see from your kitchen window', custom-made postcards with questions on the back, kits for annotating maps in various ways, and an album to be filled with personal photos. The designers introduced the Cultural Probe packet to the participants as an experiment – not in the sense of 'you are our subjects' but in the sense of 'try this if you will'. Participants took their probes home, lived with them over a course of a month or so, and returned the individual items separately via post to the designers. The waves of returned responses combined into rich evocative glimpses of the varied participants' lives and communities. These responses themselves became probes or prompts for the designers to respond to in turn, by sketching new ideas and working through possible prototypes with the participants.

This initial experience of the Cultural Probes proved inspiring and engaging for the designers, the participants, and eventually the larger technology and design communities as well. Social scientists as well as designers have taken the Probes into a number of different contexts and in a number of different directions: some more effective than others. In the pages to follow, we will revisit the methodology of probes, examining the way of thinking that underlies the approach and reflecting on how this manifests in the design of particular items.

Case study: Domestic Probes

The tactile and situated nature of probes makes experience the best avenue for understanding them. One needs to receive a probe packet, take the probe items out of the kit, hold them, reflect on them, live with them, and use them. Alternatively, one should be on the design side, creating probes and experiencing their return. In lieu of this possibility, we describe here an example of one probe study in some detail.

The Domestic Probes were designed to provide insight into the context of the home and the possible new roles of technology there. As with the Cultural Probes, the Domestic Probes were employed in order to present rich evocative glimpses into people's home lives as a means of opening new conceptions of what technology for the home should look like and do. The first twenty respondents to a small advertisement placed in citywide newspapers and magazines were recruited for the study (see Figure 14.1). No steps were taken to ensure variety of demographics or to control for participants' motivations, yet the group turned out to be quite diverse in terms of socioeconomic status
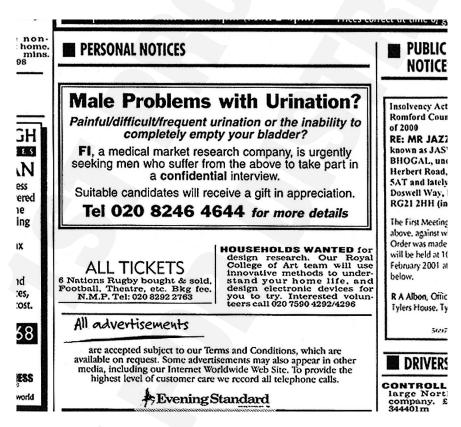

Figure 14.1 Advertisement for Domestic Probe volunteers.

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Figure 14.2 The Domestic Probe packet containing 10 individual probes.

and age, and became very engaged with the Probes despite any original preconceptions about the project.

The probes were distributed to volunteers during handoff meetings in which two or three designers met with the volunteers in their homes to give a loose description of the project (e.g. 'It's about designing technology for the home'), an explanation of the probe process (e.g. 'This is a packet for you – fill out the things that seem interesting or useful and send those back. Ignore the rest'), and a brief description of each probe in the packet (see Figures 14.2 and 14.3).

Dream Recorder
A repackaged digital memo-taker with instructions to use it after waking from a vivid dream. Pulling the attached cord activates the device, turning on the small LED in front. The volunteer has 10 seconds to record an account of their dream, after which the device shuts off. No provision is made for reviewing or editing their recording.

Listening Glass

An ordinary drinking glass is packaged with a marking pen capable of writing on glass. The instructions suggest that, when interesting sounds are heard around the home, the glass should be held to the ear and placed near the source of sound to amplify it. When the sounds stop or interest dwindles, the volunteer should write what they heard, along with the date and time, on the glass itself. The intention was to sensitize the designers, and volunteers, to sounds around the home.

Bathroom Pad

A pad with about 20 pages, each printed with a short news feature for comment. Topics range from a description of robotic dinosaurs and jewel-encrusted toilets to a quote from the Queen to the effect that 'one is fortunate to have a garden in central London'. Designed with a built-in hook to facilitate leaving near the toilet, the pad was intended to elicit comments on a variety of topics outside the immediate domestic environment.

Disposable Camera

A 35 mm disposable camera is repackaged to remove it from its commercial origins and printed with a list of requests for pictures on the back. These ranged from straightforward ('take a picture out your window') to requests requiring interpretation ('the spiritual centre of your home'). Extra pictures are included for participants to photograph whatever they wanted to show us. Overall the intention is to get out-of-the-ordinary photographs, unlike those one might expect if asking for a photographic home tour.
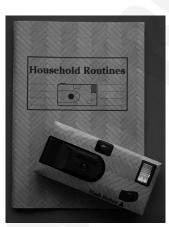
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Floor Plan
An A4 sheet of stiff paper is printed with a dotted grid and instructions to draw a plan of the home. The intention was to receive an overview of the home's layout but experimentation was encouraged. For example, one participant drew the sequence of rooms visited in the course of a morning.

Friends and Family Map
Participants are requested to draw a diagram showing their friends and family. This common data collection tool from the social sciences is altered by the addition of images, such as the cricket pitch and tidal marine life shown here, intended to suggest unusual metaphors.

Household Routines Camera and Workpad
An A4 format workpad has 20+ pages for recording domestic routines, labelled with categories such as 'cleaning', 'socializing' and 'cooking'. A repackaged disposable camera allows photographic evidence of the routines to accompany written descriptions.

Household Rules
A set of various tags is pre-printed with the heading 'house rule'. Participants were instructed to write down domestic rules and leave them in appropriate places. Verbal instructions stressed that rules could range from the mundane ('don't put your feet on the table') to the unspoken ('don't discuss money until I've had my coffee').
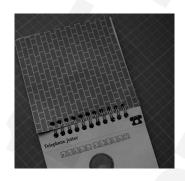
Photogram Paper

A large (A3 format) piece of photograph paper is provided in a cardboard tube. The instructions suggest making a collage of household objects upon it – when exposed to light, unshaded areas turn blue while those under objects remain white. The image can be fixed by immersion in water and returned. The intention was to collect evidence of artefacts in the home through a task that encourages aesthetic play.

Pinhole Camera

A pinhole camera, constructed from an empty dog food tin, is labelled with instructions suggesting that it be placed in front of an interesting view, the small piece of black tape removed from in front of the hole, and then replaced after about 30 seconds exposure. Volunteers were instructed to write a brief description of what they had photographed (as a back-up in case the photograph failed). The intention was to contrast the casual images taken with the disposable camera with a single image taken in this more ritualistic manner.

Telephone Jotter Pad

A small (10 cm^2) pad containing a variety of images and occasional writing, including questions. The contents ranged widely over a set of domestic issues, including questions about the home's behaviour, spirituality and aesthetics. The instructions (and name) suggest that people jot down responses, or just doodle, while engaged in other tasks.

Visitor Pad

An A4 pad requests comments to be written by every visitor to the household. Based on visitor books found in, for example, cultural attractions, columns are included for recording the visitor's name, the date and time of their visit, and their comments.

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After about a month, the designers revisited the participants to collect completed probe packs and have informal discussions about their experiences. Now it was the designers' turn to engage with the probes that trickled back. The returns were displayed in their studio for the designers as individuals and as a group to read through, reflect on, and converse about, ultimately as a context for their design proposals (see Figure 14.4 for examples). Note that the designers did not 'analyze' the returns, at least not in the sense of systematic comparisons or summaries. As with many aspects of the probes, it is difficult to generalize across the returns in terms of proportion returned or nature of responses. As hoped, and indeed designed for, each volunteer chose to complete a slightly different set of the probes. Some volunteers concentrated on items that requested written response, others on taking pictures and drawing images. Some did most of the items, some only a few. Some were terse, others elaborated at length. The varied ways in which participants approached the probes themselves seemed symptomatic of the way they lived their lives. Taken together, the returns created a textural understanding of a home or 'the home', one that was multi-dimensional and shifting depending on the concerns of the time. In addition, some returns – e.g. a house rule requesting that people hang their clothes 'the right way', a photograph of a man lying on the floor gazing into a fish tank, a note of admiration for the Queen – took on the role of landmarks, focusing attention for varying degrees of time.

As the probe returns arrived, the design team started working on sketch proposals. Comprised of little more than an image or two and a short caption, these were the first seeds of what would be developed into fully functional prototypes, some of which made it to the final implementation stage. The History Tablecloth, for example, is a lace pattern tablecloth made with an electroluminescent material that lights up underneath objects left in one place for a period of time. The tablecloth subtly signals the flow of objects in surfaces of the home. Another example, the Drift Table, looks like a modern coffee table, yet includes a video porthole displaying aerial views of the English countryside that shift direction and speed depending on the arrangement of weight on the table's surface. These designs, and the others resulting from the probe process (e.g. Gaver *et al.*, 2004b), subverted familiar notions of what technology in the home could or should do and pushed both the designers and the participants to think about the home and technology's role in the home in different ways.

A natural inclination in reviewing the probe returns and the process in general is to construct a linear narrative. It is tempting to take the History Tablecloth, for example, and try to identify the causal probe and response(s). The process was far more roundabout than this, however. The Domestic Probes had an impact that lasted for years after the study, and continues to influence the design team today. At the same time, the designs that followed were informed by a myriad of influences in addition to those of the probes, including other studies, the availability of technologies developed by project partners, influences from contemporary arts, and the designers' own
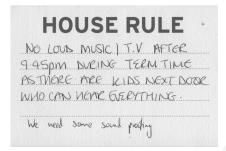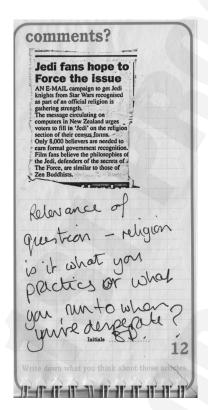
Figure 14.4.1
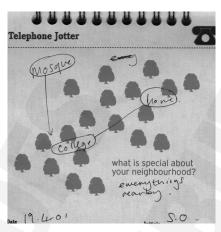Sample return of a Household Rule

Figure 14.4.2
Sample return from the Telephone Jotter

Figure 14.4.3
Sample return from the
Bathroom Pad
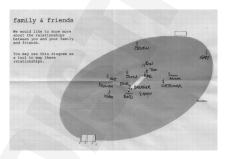

Figure 14.4.4
Sample return of a Friends and Family
Map

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inclinations. The designers believe the probes were invaluable in informing the designs, but tracing a path between them is utterly impossible. Assuming an easy link between the probes and designs is a mistake. The artefacts used in the process (the probes, the prototypes) are critical but equally important is the way of thinking that leads to them.

The probe approach

The entire probe process is rooted in a particular logic that guides the creation of the probe artefacts, the framing of the probe engagement, the interpretation of the probe returns, the prototyping of design responses, and the assessment of the design implementations. Fundamental to this approach is its motivation and how this affects the implicit criteria to which the work is held accountable.

In terms of motivation, probes were developed in and for a design process that disregards traditional utilitarian values in favour of playfulness, exploration and enjoyment. They were not intended to support a process of deducing definite truths about target communities in a manner more familiar perhaps to social scientists, nor the problem solving process familiar to many designers. Instead, the designers aspired to find new and unexpected areas in the space of possible designs. The Cultural Probes, for example, were intended to stimulate new ways of thinking about the elderly and their communities. The Domestic Probes were designed to stimulate new thinking about the home. Both aimed to prompt new ideas about technology.

Being motivated by the desire to inspire new ideas rather than understand existing practices has the implication that probes need not be accountable to values such as replicability, representativeness and comprehensiveness, generalizability, or even accuracy. Instead, what is important is that they provoke new design ideas and move both designers and participants out of their comfort zones. For the probe artefacts, this means emphasizing their ability to uncover surprising particularities while giving a sense of familiarity with certain settings. Probe items are designed to elicit individual and often incommensurate responses from people, to resist generalization, and to invite unexpected responses. The assumption is that, in this way, they will uncover previously unexplored possibilities for design that more standard methods, with their emphasis on certainty and generality, would mask.

Allowing surprises to emerge leads to several important design guides for the probe process. In order to avoid surface engagements and support empathetic interpretation, for example, probes such as the Listening Glass encourage participants to take a fresh look or new perspective on familiar surroundings and practices. Others, such as the Camera and the Telephone Jotter Pad, provide prompts for people to produce images and text unlikely to emerge in the context of more expectable research prompts. The richness and diversity of the entire collection invites surprises simply by opening the door to many and varied responses. Finally, the unexpected is courted through

deliberately undermining traditional research roles of the researcher versus subject and design roles of problem-solver versus problem-holders. Traditional roles are bound by expectations whereas circumventing these roles holds the potential for new exchanges. The motivation of leaving room for the unexpected drives a probe process that is at once destabilizing and playful, provocative and at the same time inviting.

Courting the unexpected uncovers subjective truths: interpretative, multiple and provisional ways of acting and making meaning in the world. Valuing subjectivity over objectivity shapes the corresponding values embodied in the probe process. Idiosyncratic and felt experiences are valued over majority or statistically significant ones. Evocative glimpses are preferred to complete pictures. Uncertainty is valued as a productive state for exploration rather than a condition to be resolved. Playfulness is valued as an attribute that stimulates creativity and engagement. Intuition is valued as a powerful source of knowing and acting. In short, inspiration for design ideas is valued over information (Gaver *et al.*, 2001).

The uncertainty inherent to the probes prevents the designers from putting too much stock in them. Their interpretation is provisional, and this allows multiple interpretations to coexist. In addition, they are but one resource, but one (incomplete) view into the target community. Designers value their own intuition in constructing interesting interpretations, in the same way that they trust participants to rely on their own intuition in choosing one possible response to complete the probes. Intuition, uncertainty, and subjectivity are taken forward into the designs, so that they are devised to be open to interpretation as well. Just as a single truth is not sought or expected about the communities for design, there is not a singular truth projected on to the eventual designs themselves. Throughout, the intention is to deal with settings and their possibilities in the spirit of literature, with its embrace of nuance, complication and ambiguity, rather than science, with its quest for simplicity and certainty.

Using probes as sources of inspiration and leaving room for the unexpected leads to opening up conversations. The probe process is a back and forth, a gifting (ibid.) between designers and participants. In creating the probes, the designers endeavour to produce something delightful and evocative. The probes are not customized for a particular individual, yet they are customized for a project, and their situated nature is evident in their content and appearance. As highly crafted yet handmade items, the probes carry the designers' fingerprints with them. In other words, the probes are not just aesthetically pleasing questionnaires enticing participants to tell more about themselves. The probes speak about the designers in a way that is designed out of most questionnaires.

As a dialogic exchange, the probe process fosters a two-way relationship. The thought and energy devoted to designing the probes matches the anticipated thought and energy invoked in order to participate with the probes. The designers convey through the probe artefacts and process both a desire to learn about the participants and an acceptance of the designers' own ignorance.

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They do not presume that the probes will capture the participants' lives completely or succinctly. Furthermore, the conversation does not end once the probes are returned. The probe returns are a rejoinder in the conversation providing an opening for another response, usually in the form of design proposals and prototypes. Whereas a typical survey or questionnaire asks for input toward a final result, the probe responses start another point of conversation between designers and participants.

From logic to method

Specific probe implementations, such as the Domestic Probes described earlier, flow from the overall logic or mindset behind the probe process. Without this mindset, probes may simply comprise a collection of provocative and aesthetically pleasing prompts without a unifying purpose. In this section, we will outline the movement from approach to methods – considerations and reflections on how the probe logic is articulated through the probes themselves. The popularity of the probe method speaks to its success in terms of its results and its applicability in a number of contexts (Boehner *et al.*, 2007). In reflecting on the actual probe designs, it is worth reflecting on what makes them work.

Prior to suggesting any specific probe items (e.g. a Dream Recorder or Listening Glass), the designers have several guides for keeping their process true to the probe mindset. First, they engage in extensive conversations about the proposed participants and the context for design. For example in the case of the Domestic Probes, what makes a home different from a hospital? How would different people define 'home'? What might they value in the home, and how would they demonstrate this? These questions start priming the designers to think more critically about the broad aspects that characterize settings as well as the fine details that make the setting unique for each individual. Over time, a set of themes of enquiry emerges: routines, spirituality, privacy or community. Potential probe ideas are vetted in terms of whether they would fit these themes and the rhythm of the context, either by working with them or against them.

As the designers begin developing the probe artefacts, they stylize a particular aesthetic. The Domestic Probes are relatively bright, with elements of formality (lists of instructions, grids for filling in responses) undercut by more playful elements and instructions, and a hint of strangeness that overlays the set. Other probes might be quieter and more minimal, or more obviously playful and amateurish. A given probe set both reflects the setting to be explored and the designers' own interests and enjoyments. Unlike standard social science tools, where part of the value is in their generic and therefore generalizable nature, probes thrive on personalization. It is essential that the probes look well finished and sophisticated but also convey that they are not mass produced.

The designers assess the probes holistically in terms of how each probe artefact is situated in the environment as well as how multiple probe artefacts

work together. Both the Cultural Probes and the Domestic Probes used a kit of individual artefacts that together provided for a variety of engagement and involvement. Some probes allow for immediate responses; whereas, others will require more thoughtful introspection. Some probes may require a large time investment; whereas, others can be quickly completed. Some probes focus on images, others on text. Silly or fanciful probes are balanced by more searching ones. And so on. The purpose of this variety is two-fold. First, it allows for participant choice. Participants can work with what speaks to or inspires them instead of filling out something they feel required to do. Second, the variety across the probes stymies standardized responses and surface analysis. Comparing responses on the Bathroom Pad with the Dream Recorder, for example, may prove more interesting than trying to draw standard patterns across either alone. As the probe mindset emphasizes, the point is not to whittle down insights but to expand them.

As the name suggests, a probe must be probing. Each probe requires some kind of engagement and gives something for people to react to or do. A probe is a prompt but not a script for engagement. The instructions for the probes are carefully worded so as to allow for a degree of openness and improvisation. At the same time, probes are constrained to address certain topics in certain ways, and often to limit the amount of information that can be returned and to thwart obvious strategies for answering. Filling out the probes is meant to be a fun process and not a chore, a process that rewards the participants as well as the designers. Completing the probes should feel like a process of expression and the artefact one creates should be more beautiful than the empty probe (for instance, an annotated Listening Glass is far more interesting than one that has not been completed). Not everything will be captured in the returned artefact, however, and this is also part of a successful probe – they shouldn't be so authoritative that they prevent imaginative over-interpretation.

Not all probes work. The probe process on a whole is judged in terms of whether it opens up conversation, provides inspiration, and results in innovative ways of thinking about and designing for a particular context. Individual probe artefacts are judged as successful if they do two things: generate some level of engagement and provide interesting responses. No single probe is expected to generate responses from all participants but if a single probe elicits little or no response, or if the responses they elicit are flat, incoherent, or uninspiring, the probe misses the mark. For instance, the Visitors' Comment Book attracted only a few, lacklustre responses. On reflection, the designers realized this probe did not embody several essential attributes, most having to do with how it was situated in its social environment.

The reflections above indicate important aspects of designing probes, however, there are no hard and fast rules for creating successful implementations. The Cultural Probes and the Domestic Probes both used kits of multiple artefacts, for example, but variety of engagement and responses could also be obtained through a single artefact. It is allowing for variety that is important. Likewise, to say that probes should be provocative does not detail how this might

be achieved, or even what constitutes a provocative prompt. Probes are situated within the specific contexts in which they are used, so that probes designed for London homes will undoubtedly be quite different from those designed for Tuscan villagers, and probes from one design team are unlikely to resemble those designed by another. In sum, probes themselves are neither a methodology nor defined by any particular physical artefacts. Instead, probes are a moving target, and risk is one of their essential characteristics.

(Mis)appropriating probes

The design team that developed the original probes anticipated that the approach would inspire the design community. In their playfulness, openness, and embrace of ambiguity and absurdity, probes seemed to mirror aspects of the design process itself. Equally, embodying an appreciation for the limits of knowledge appeared valuable in maintaining room for imagination. Letting go of comprehensiveness, replicability and convergence is liberating in moving design away from the accountability of scientific approaches. The situated and idiosyncratic nature of the resulting process made the originators loath to construct formal probe methods: 'the results might be beautiful but as heartless and superficial as an advertising brochure' (Gaver *et al.*, 2004a). However, the originators also anticipated that the probe process would be taken up in ways that conflicted with the original mindset. We will explore two of the most common approaches to adaptation that veer from the spirit of the probes and examine the drive underpinning this conflict.

The first adaptation uses the probes as a form of discount ethnography – where the probe process is justified as a means for gaining rich insights without the typical time required for an ethnographic immersion in the field. This misunderstanding about the probe process was perhaps sparked by the probes' origin story when the designers acknowledged a gap of time and distance prohibiting extensive field studies (Gaver *et al.*, 2001). Yet, the decision to use probes was not dictated by pragmatic constraints alone, but also by the values the researchers wanted to explore. In the Domestic Probes situation, field studies in a local setting would have been an option but were not selected. In both cases, the probes were chosen not because they could yield rich insights more quickly than field studies but because they would stimulate unexpected responses and provoke new ideas in a playful and open manner.

Furthermore, although there may be discount approaches to the probe process, there is nothing cut-rate about the process itself. Designers may spend less time in the field, but time is shifted, not saved. The possibility of a discount method only materializes by ignoring critical aspects of the process, for instance by recycling an existing probe kit instead of developing a unique one or skipping the essential sketching stage of the process (Boehner *et al.*, 2007). A discount approach to the probe process typically selects a few popular probe artefacts: e.g. a disposable camera with a set of tasks, a journal, and a set of postcards. Results from the probes are used for a brainstorming session that

quickly leads to prototype designs. A discount approach to the probes leads
to discount designs.

The second adaptation seeks information instead of inspiration for design.
In this case, a packet of probes is employed as a data-gathering tool in an effort
to reduce possibilities rather than to expand them. The probe results are often
combined with interviews or some other data gathering technique, either done
in parallel or as a follow up, as the researchers seek clarification about what
a participant meant by a particular probe response. Researchers advancing an
information approach to probes latch on to the invective to make the process
fun, engaging and beautiful. Yet, they ignore the value the probes place on
embracing uncertainty, eschewing a formulaic approach and avoiding
validation of a single right answer. As a result, this information approach to
the probes jazzes up generic surveys or questionnaires, but leaves the survey
mindset intact. The information approach proposes a conversation between
researcher and researched, but it is a conversation toward a set conclusion.

Both of these common adaptations draw on examples of specific probe
artefacts rather than the approach behind them. In other words, the probe kit
becomes the methodology as opposed to the methodology influencing the
design and implementation of the probes. Although both the Cultural Probes
and Domestic Probes used a collection of probe artefacts, this is not the only
possible instantiation of the probe methodology. One of the critical elements
of probes is that it forces the designers out of familiar patterns of seeing and
interpreting – simply relying on a standard tool kit would not meet this
requirement.

Both the discount and information approach to the probes spring from a
scientific mindset that seeks description, certainty, and a univocal narrative
free from the bias of researchers. The probes mindset challenges these values,
replacing them with an appreciation for partial access, engagement and
inspiration. Using probes embraces intervention, uncertainty and projection in
order to balance a grounded account of participants with the kind of openness
that inspires design. Those who seek to adapt probes to their own research
ends should be aware of what they are taking on and what they might be leaving
behind.

. . . to the social sciences

Probes were developed as a declaration of independence from the implicit
requirements of social science methods, in an attempt to construct a design-
centred approach to understanding people and settings. Nonetheless, the probes
approach has attracted attention within the social sciences as a potential new
addition to their repertoire. The discussion above should suggest some of the
challenges this may hold. The probes process upends existing roles of
researcher and subject. It allows for fabrications, failure and mistakes. It
expects different implementations, and different participants, to produce
different results. It depends on personal influence and interpretations. It delves

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into idiosyncratic and singular details as opposed to statistically significant patterns. All these features may make the probe process difficult for the social sciences to digest.

Nonetheless, there are several possibilities for using probes within the social sciences. An obvious approach would be to assimilate them as an information seeking method, as we discuss above. At the simplest level, existing research tools such as questionnaires and tools for self-documentation could be given a more playful, aesthetically crafted appearance to make them appealing to participants. Somewhat more radically, probe tasks could be the basis for more interventionist studies in which participants are urged to think about their orientations and activities more explicitly or from unfamiliar perspectives. In order to ensure that the results provided useful information, the probes could be designed to more readily permit systematic comparison and codification, perhaps in conjunction with some sort of debriefing. Such an approach would maintain some of the active, stimulating qualities of the probes, while relinquishing the ambiguity and openness of results for multiple interpretations.

Another variation of the information-seeking approach would be to maintain the uncertainty and provisional nature of probe interpretation, but restrict their use to the opening stages of research. Probes could be used in early contact with people and settings of interest, to open a conversation and generate a wealth of materials leading to new research topics and hypotheses. After this stage, more definite methods could be used to produce traditionally accountable data.

Beyond adding a new research instrument to a traditional toolkit, however, the probe process could be used to provoke reflection on the core values and practices of the social sciences. Rather than being assimilated to notions of replicability, objectivity and generality, the probes could operationalize a challenge to such assumptions. Joining an emerging movement extending from ethnomethodology to many of the other approaches described in this book, the probes suggest a form of research that abandons 'science' in favour of a more human engagement with the social. This would entail embracing provisional understanding, subjective engagement, particularity and ambiguity not only in the process of research, but in its presentation as well. Rather than presenting authoritative accounts, the aim of such research would be to produce richly textured, situated and idiosyncratic clues for its audience to interpret. In the end, the results of the probe process would themselves be probes, implying respect for the users of research to develop their own multilayered accounts of the evidence.

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