

Finding New Perspectives through Theme Investigation

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Many challenges that confront today’s society are complex and dynamic and require new perspectives to arrive at solutions that could not be found before. Finding such new perspectives is part of a process called reframing and one of its key stages is *theme investigation*. Understanding a problem thoroughly is crucial for creating effective solutions and theme investigation offers insight into human and social themes that underlie complex challenges. This article discusses how to investigate such themes, to deepen our understanding, to find a starting point for reframing and creating innovative solutions.

This work explicitly experiments with variation (conceptual, personal, and methodological) as a guiding principle for investigating human themes in real life cases. A process, best practices, instruments and tools for theme investigation are presented and discussed.

Keywords: design thinking; frame innovation; reframing; social design; theme investigation

Introduction

Design as a discipline and design thinking as a practice are becoming more relevant in dealing with complex problems in society (e.g., Manzini and Staszowski 2013; Markussen 2017; Deserti, Rizzo, and Cobanli 2018). Often, traditional problem-solving approaches cannot properly deal with wicked problems that are open, complex, dynamic, and networked, such as unemployment or radicalization. Kees Dorst’s work on frame innovation focuses on the practice of many professional designers to devote much attention to ‘reframing’ a problem, developing new perspectives on it, before creating possible solutions and interventions (Dorst 2015; Dorst et al. 2016). To reframe a problem, one must understand its underlying issues, the root causes for its complexity. Getting a deeper understanding of human and social needs, values, and experiences – human themes – that are at the base of a given problem, makes it easier to develop new perspectives that are promising because they acknowledge the core human issues at stake. Investigating these human themes is a crucial step in reframing where the thinking process detaches itself from the context of the original problem and focuses instead on the underlying issues, creating a foundation for reframing the problem.

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Theme investigation is an iterative team effort of identifying the themes, investigating their meaning from a broad range of perspectives, and discussing the findings, looking for shared understanding. The result is a rich experience of renewed thinking about possible directions to address the problem. Dorst acknowledges the importance of theme investigation, but little has yet been published about how to do this in practice.

The main research question in this work is: How can human and social themes that underlie complex problems be identified and investigated, to obtain a thorough understanding of a problem prior to defining a design brief? Sub questions are: (RQ1) What is an effective structure for processes of theme investigation? (RQ2) What factors influence the quality of theme investigation? (RQ3) What are useful investigation methods to create an understanding of these themes? (RQ4) How can results from theme investigation be shared in order to achieve a mutual understanding of themes?

This manuscript first positions the study in the context of related work on social design and phenomenology. It then presents the research method and discusses the frame innovation process. A case is introduced and discussed to illustrate how theme investigation is done. Then, findings and insights are presented in the form of a structured process, best practices for theme investigation, and practical instruments. Finally, a discussion is offered of the implications for complex problem-solving.

Related Work

This work originates in the field of social design that focuses on the creation of human values and meanings in the domain of human relations. Social design, sprouted from service design (Andrews 2010), addresses problems that challenge society by their complexity and impact (Armstrong et al. 2014; Manzini 2015; Deserti, Rizzo, and Cobanli 2018). Complexity and impact can be addressed in various ways. Koskinen and Hush (2016) distinguish three forms of social design: utopian (targeting large scale effects), molecular (small scale changes) and sociological social design (targeting social structures). Markussen proposes a framework to distinguish social design from social entrepreneurship and social innovation, with criteria such as *modus operandi*, social value, and effect-scale (Markussen 2017). Irwin (2015) identifies a continuum of design that evolves from service design, through social design to transition design, an emerging discipline targeting transitional problems both at the local and global, systemic level (Irwin et al. 2015).

An important challenge in social design is to embrace rather than diminish complexity, without losing track of how individual people experience it. 'It is the responsibility of designers to move beyond the frame of reference created by [...] stakeholders without ignoring them, [...] to acknowledge felt concerns as well as known concerns [and] to take the time to consider [...] concerns that nobody else expresses' (Tromp 2014).

Current practice of social design is criticized for being too focused on problem-solving and achieving efficiency-gains through the application of market principles (Julier 2017; Tonkinwise 2015; Deserti, Rizzo, and Cobanli 2018). For social design to

have impact, it must methodically focus on meaningfulness and durability of solutions, by studying how people give meaning to things and then formulating new ideas that influence this meaning (Verganti 2009, 119). This requires 'stressing the individual-social-environmental connection [and] turning to the human behavioural side of our problems.' Understanding the deeper 'existential problems, values, needs and behaviour' is required to 'adequately [...] design holistic solutions for our challenges that are socially, environmentally and economically sustainable.' (Sepers 2017). The key to complex transitions is to change beliefs and social norms. Therefore, designers must 'examine their own value system and [...] solutions will be best conceived within a more holistic worldview' (Irwin 2015).

In design activities, collaboration with end-users, stakeholders, and other actors is essential (Kimbell 2012). The role of social designers is to bring their design culture and creativity into the co-design process of forming visions, to guide other actors in a dialogic process 'that [designers] can trigger, support, but not control' (Manzini 2015). In this process, social relationships, social forms and processes become the object or medium of design. Koskinen defines *new* social design and suggests an understanding of aesthetics that transcends physical objects and is embedded in social forms created to provoke debate, to build communities, or conceptualize social change (Koskinen 2016).

Understanding value in people's individual lifeworld can generate novel insights for service innovation (Helkkula, Kelleher, and Pihlström 2012). The nature and complexity of value creation requires involvement of stakeholders with differing experiences (Edvardsson, Tronvoll, and Gruber 2011; Hodgkinson et al. 2017). In service management, the service experience is fundamental and the importance of phenomenologically determined values is emphasized (Vargo 2009; Schembri 2006; Vargo and Lusch 2008).

When human meaning and human experience play a central role, phenomenological analysis is relevant: the study of essences, of lived experience. Phenomenology emphasizes a connection between the analysis of lived experience and concrete interventions in contexts such as therapy and pedagogy (van Manen 1996). 'Pedagogical inquiry always has an inherent practical intent because sooner or later this knowledge figures in how one must act' (Langeveld 1979). This practical intent also guides the use of phenomenology in social design: to gain deeper insight from the lived experience of stakeholders in their own lifeworld.

Phenomenological analysis is systematic, explicit, self-critical and intersubjective. It uses contemplation and dialogue rather than empirical or analytical methods (van Manen 1990). Phenomenology takes a personal perspective, through a thoughtful, attentive attitude, to get a rich understanding of individual experiences, feelings, thoughts, and actions, and to reflect and identify common patterns and meaning. It 'explicitly utilizes variation as a technique: systematically comparing similar phenomena [...] results in a better view on things [...] and increased intersubjectivity.' (Beekman and Mulderij 1977).

Phenomenological analysis bridges the gap between idiosyncratic individual experiences and shared understanding of human themes. It is therefore a key method in theme investigation.

Research Method

The objective of this study is to determine what methods and techniques are effective for doing theme investigation in social design processes. The premise is that a shared, intersubjective understanding of themes is fundamental for achieving truly innovative frames for solutions. The hypothesis is that 'variation' is the key to this process: that diversity within the team as well as variation in perspectives and investigation methods are essential for doing this.

The approach chosen for doing this research is through reflective experimentation in problem cases presented by key stakeholders in a wide range of domains. Over a period of two years, the research team executed a series of projects, going through the first phase of the frame innovation process and experimenting with doing theme investigation. The experimentation involved the application of various methods and techniques for theme investigation and the evaluation of their effectiveness. The methods and techniques to be experimented with in the cases were intentionally not preselected by the research team, in order to preserve the exploratory nature of the research.

The research team consisted of five researchers, with four more participating in selected projects. Each project involved engaging with stakeholders in co-design. Evaluation was a process of continuous discourse in the team: after every co-design session, the team discussed and documented their personal experiences, to support collective learning and plan next steps in the exploration. The evaluation sessions addressed the overall process of theme investigation and what influenced its quality, the usefulness of the applied methods and techniques, and of the instruments for sharing results. This led to the identification of best practices and a structured process for theme investigation.

Process and Methods of Theme Investigation

Theme investigation is a key phase in frame innovation. This section first introduces frame innovation and then discusses the purpose and process of theme investigation. It then introduces one case study from the series of ten, to demonstrate theme investigation and what type of results are achieved in these cases.

Frame innovation as a conceptual framework

The essence of frame innovation is that complexity is best addressed through a thorough analysis of what lies under the surface of problems and challenges. Designers spend significant amounts of time trying to understand a problem, the way it is framed, and look for the 'deeper' issues behind the given question. The frame innovation process consists of nine phases outlined as follows (Dorst 2015) (Figure 1).

- (1) **Archaeology** – investigating the apparent problem, its history, the role of the problem owner, attempts at solving the problem, untried alternatives, the known solution space.

- (2) **Paradox** – identifying the problem situation as a deadlock, describing why the problem persists and what conditions prevent its solution.
- (3) **Context** – analysing the key stakeholders, their interests, influences, and the practices they manifest.
- (4) **Field** – extending the problem field to a wider social and intellectual space, investigating stakeholders’ interests, behaviours, values, related issues – ironically adding to the complexity of the field, but also opening up minds to ideas not considered before.
- (5) **Themes** – identifying and understanding universal values. From the broader field of issues, values, and motivations of stakeholders, a set of central human and social themes are identified that underlie the problem. These themes are often personal and hidden beneath the surface of everyday life: considerable effort is needed to identify, investigate, and discuss the themes.
- (6) **Frames** – from a thorough investigation of the themes, in particular those that are recognized and shared by the stakeholders, new thinking frames can be created. Since these frames emerge from the deeper, universal themes that were not originally recognized in the paradoxical problem situation, they are more likely to lead to innovative and effective solutions.
- (7) **Futures** – frames point to possible solutions and visions of what could work and how. At this stage, solutions are not yet designed in detail, but explored for viability.
- (8) **Transformations** – the feasibility and implications of solutions are explored and evaluated with participating stakeholders.
- (9) **Integration** – implementation of solutions requires changes of attitude in stakeholders, to achieve a structurally innovative approach to complex problems.

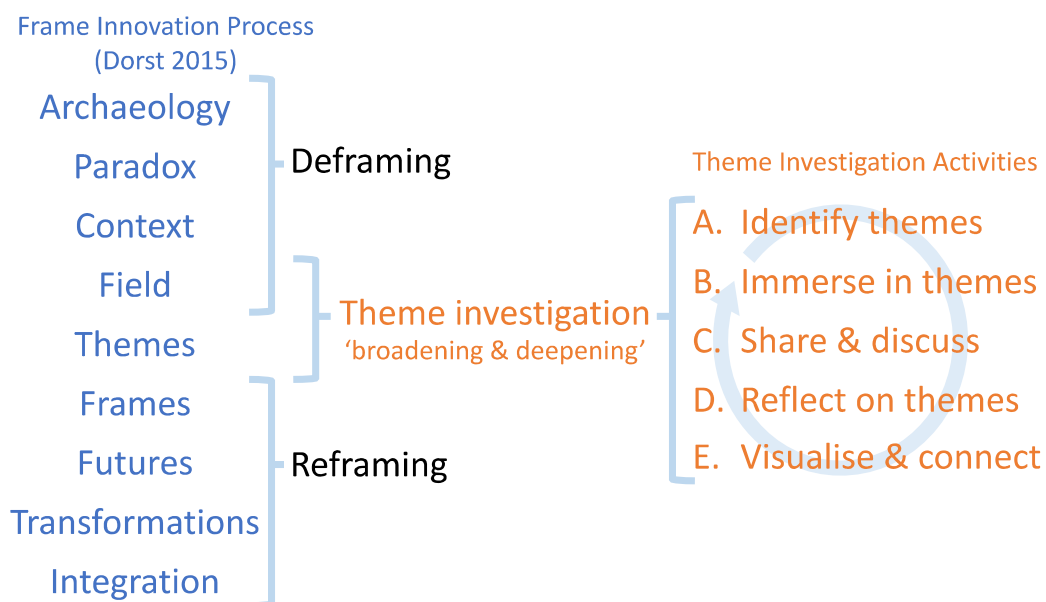


Figure 1. The frame innovation process (left) with theme investigation activities (right).

Frame innovation is a process of analysis and synthesis that pivots around theme investigation. As themes are identified in a larger field of issues, we leave the world of the current problem and its stakeholders behind: the themes are an answer to the question 'what is it all about?' Adolescent boys fighting in public (problem) is about establishing social hierarchy (theme) in the context of coming of age (theme). Theme investigation would look into other instances of dealing with establishing social hierarchy and study coming of age as a phase in adolescent development.

The process of theme investigation

Theme investigation exists in a conceptual realm that is divorced from the original problem framing, but not yet connected to any specific new way of framing. Therefore, frame innovation is essentially a three-step process of (1) 'deframing' – disconnecting from the problem's current frame – (2) 'broadening & deepening' – a frameless, reflective process – and (3) 'reframing' – the synthesis of new frames (see Figure 1).

Theme investigation involves identifying the most relevant themes in the field of issues, investigating the meaning of the themes, and finding inspiration from what we learn about them. This process makes it easier to find new perspectives, precisely because we study the themes outside the problem's context.

Identifying and studying the themes is an iterative process of divergence and convergence: as we study the themes, we begin to understand them better and recognize which are central to the case.

Methods of theme investigation

Because the themes to investigate generally relate to human emotions and values, the process must yield rich and varied insights into how these are experienced in different contexts. Variation is therefore a guiding principle in three different ways.

Firstly, conceptual variation compares and reflects on ways in which a theme is experienced. The value of personal experiences lies in the tacit knowledge they represent and the intuition and inspiration we gain from them. Phenomenological analysis (van Manen 1990) studies how a phenomenon (like 'fear' or 'loneliness') is experienced by people in different contexts. In theme investigation, it is an effective method to combine insights from different experiences and understand shared themes.

Secondly, personal variation in the backgrounds and disciplines of team members is essential for achieving conceptual variation, by exploiting the personal differences in team members: the personal histories and biases from specific (professional) backgrounds introduce nuances and varied perspectives or controversies into the discussion of themes.

Thirdly, methodological variation contributes to a richer understanding of themes. Phenomenological analysis is complemented with studying resources from science and philosophy and taking in cultural expressions in the arts. Science and philosophy offer insights into human themes, based on empirical and conceptual research, in a discursive manner that makes us understand themes conceptually and rationally. Cultural

expressions (music, film, poetry, theatre) include more evocative and subjective illustrations of themes and can make us feel them emotionally.

Studying the themes can be done in many ways and the choice of approach depends on three aspects: (a) the personal preference and experience of the researcher, (b) the nature of the theme itself, and (c) the amount of time available. The quest for deeper understanding of a theme like ‘fear’, or ‘loneliness’ could last forever. In professional practice, however, time is limited and information sources are not always available.

Following the guiding principles of conceptual and methodological variation, five perspectives from which to do theme investigation are presented in Table 1.

<i>Personal</i>	
Stakeholder perspective	In situ research with stakeholders offers rich accounts of relevant feelings and emotions, experienced by stakeholders in the problem area.
Researcher perspective	Personal experiences of researchers are rich and offer direct accounts of feelings and emotions, not directly related to the problem area.
<i>Analytic</i>	
Scientific perspective	Scientific literature will give valid information but can be difficult and comprise an abundance of publications.
Philosophic perspective	Philosophy will help with understanding the conceptual structure and dynamics of themes.
<i>Evocative</i>	
Cultural perspective	Poetry, popular literature, music, film, etc., offer evocative expressions and interpretations of the meaning of themes.

Table 1. Five perspectives from which to do theme investigation.

Through these perspectives, themes can be dissected, analysed, understood, felt, annotated, and exemplified. It is useful to describe the structure and dynamics of each theme. The structure of a theme refers to its internal aspects and features (physical, emotional, cognitive, motivational, or spiritual constructs) and to external relationships in (social) situations, how it relates to other themes and concepts. This can be plotted out in, e.g., a networked word cloud (Figure 2).

A theme’s dynamics can be investigated: what are driving factors or inhibitors in relation to the theme? What are causes and consequences, what are ‘ways out’? What human behaviours and experiences lead to or follow from ‘fear,’ how is it dealt with? These dynamics can be documented and expressed visually to help build a shared understanding in the team.

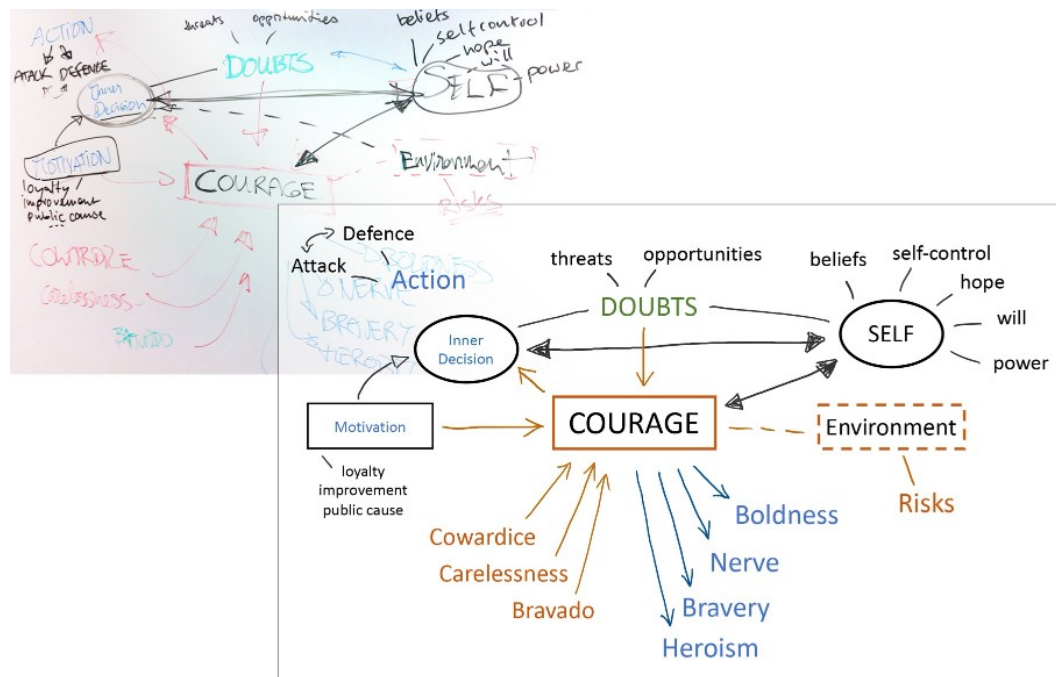


Figure 2. Typical whiteboard from a theme investigation session: analysis of the theme ‘Courage.’

As we deepen our understanding of themes, we gradually return to the problem field and look for new perspectives (reframing). From the themes, in particular those shared by stakeholders, new ways of thinking about the original context can be created that enable new kinds of interventions. Since these new frames emerge from the deeper, universal themes that were not recognized in the original problem situation, they are more likely to lead to innovative and effective solutions.

Case study: Public accountability for district policy in The Hague

The approach to theme investigation presented here was developed during two years of exploration in projects, mostly commissioned by the municipality, executed by the Social Design Lab in the city of The Hague (van Leeuwen et al. 2016) with stakeholders that were professionally involved or member of the target group of the problem situation. This section discusses the approach and outcomes for one such case: a project on accountability in neighbourhood governance.

Municipal governance bodies in urban neighbourhoods are challenged with multifaceted problems that require an integral approach to be successful and cost-effective. Such an approach was developed in the Mariahoeve district of The Hague, where numerous projects address multiple issues in an integrated manner. For example, the neighbourhood manager initiated a traineeship programme for students of vocational education to refurbish the porches of social housing in the neighbourhood. She used the combined budgets from different municipal departments and achieved results in terms of quality of housing, neighbourhood maintenance and safety, inclusive education and

employability, but also increased social cohesion and reduced loneliness. However, when different policy domains are addressed, accounting for an integral approach to the various budget holders is challenging because of predefined performance indicators, even when the integral results are good: budget reserved for social welfare cannot be accounted for when spent on improvement of public spaces. The stakeholders in this project, besides the neighbourhood manager, included the officials working with her and above her in the municipal hierarchy, professionals in various organisations involved in the project, the inhabitants, and the students.

A team was formed with academics and some of the public servants, including the neighbourhood manager. The team started deframing the problem by discussing ‘accountability’ with stakeholders in the problem’s context and with other professionals that deal with accountability, identifying experiences, issues, needs and concerns. This resulted in a list of 25 topics that play a role with respect to accountability, 12 of which were more central in the discussions: autonomy, attention, pride, courage, commitment, trust, dreaming, playing, challenge, confidence, duty, and fear. These topics were first explored in interviews with stakeholders, but discussed outside the context of accountability. After this first exploration, the team identified five themes as the most frequently mentioned in these conversations: pride, commitment, sharing, playing, and duty. With these five themes, further investigation was done with stakeholders and unrelated professionals, from various perspectives, using a variety of techniques such as conversations, storytelling, visual exploration, guided tours, and observations.

Discussing the relationships between these themes revealed that ‘trust’ had a central position in the constellation of themes (Figure 3). Trust is both given and received; it is required for experiencing and giving freedom; trust can lead to pride, courage, playfulness; it is a condition for commitment and sharing. Trust can exist on multiple levels and depends on (or determines) what we share: at the lowest level, trust is earned by proving yourself, sharing good experiences; next up, there is trust based on solid agreements; at the top, trust comes from mutual understanding and sharing the same values. Lacking trust leads to the urge to control and audit – a reaction that discourages innovation and experimentation in dealing with complex problems.

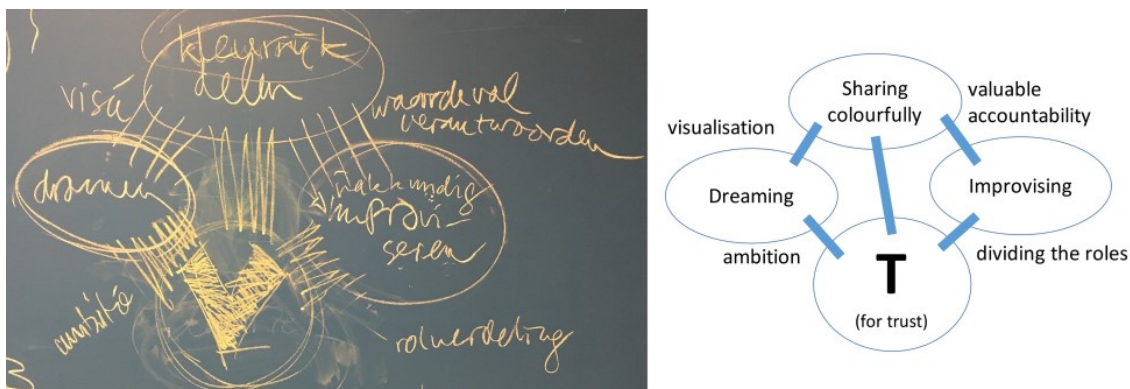


Figure 3. Moving towards frames from the central theme of trust.

'Trust' became the pivotal point for the formulation of new frames. Creating frames from the results of theme investigation is the next phase in the frame innovation process and outside the scope of this manuscript, but it is worth mentioning the frames that resulted in this project. The first frame was denoted as: 'Organizing accountability in ways that lead to higher levels of trust.'

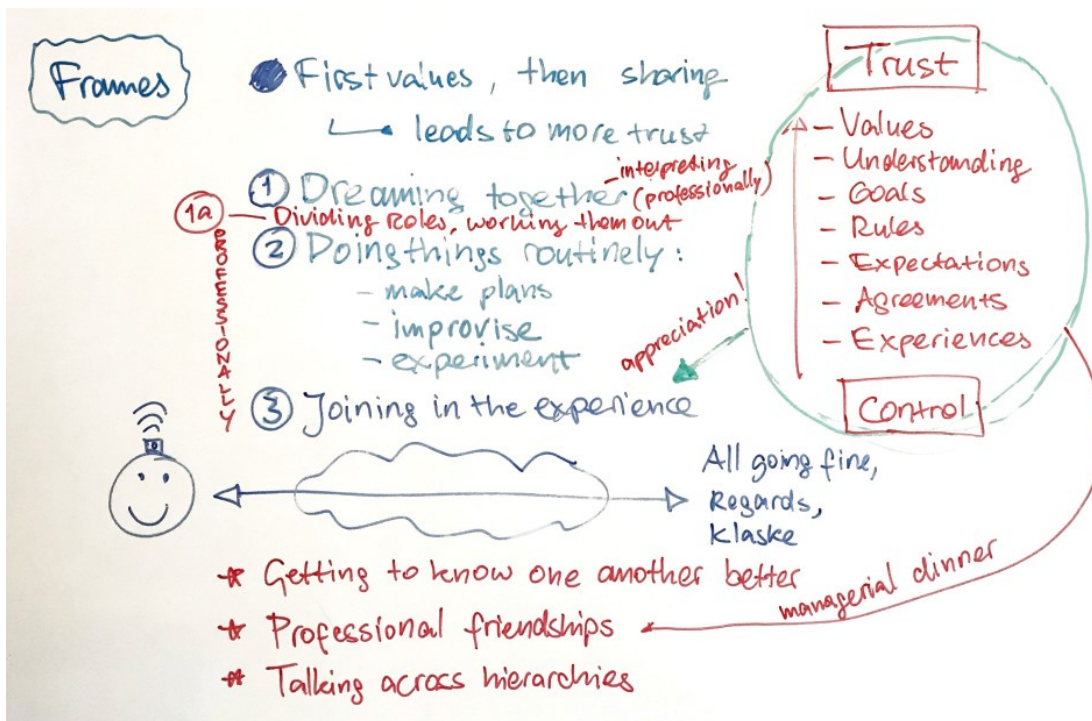


Figure 4. Draft of the four frames resulting from theme investigation and reframing in the 'accountability' case. The drawing indicates the range of possible forms of accountability: on the left, a live webcam shares all action 24/7 – high control, low trust; on the right, a simple note says: 'all going fine, regards' – low control, high trust. The parties involved need to find the optimal middle way.

Subsequently, the team developed the following four frames (Figure 4):

- 'First values, then sharing' – both parties involved in accountability first acknowledge each other's values, before sharing goals, approaches, and results.
- 'Professional improvisation' – professional activities do not always need advance planning: improvisation and experimentation are valuable but require trusting the professional.
- 'Illustrate vs. participate' – two ways of sharing results: communicating how results are obtained or inviting participation in the process.
- 'Professional friendship' – nurturing informal relationships between professionals, cultivating trust across hierarchies.

Findings & Insights

Through reflection on over ten case studies, similar to the one illustrated above, executed over two years, best practices for the activities in theme investigation have been identified and instruments for supporting these activities were created.

Best practices

Developing from Figure 1, the best practices for the activities of theme investigation, labelled A through E, are detailed in Table 2.

Last stage of Deframing	A. Identify potential themes – in a group session , a discussion of the stakeholder analysis leads to a first set of possible themes, intuitively chosen for investigation. Key question: ‘do we feel that this set of themes adequately represents the field of issues?’
Broadening & deepening	B. Immerse in themes – through individual research , various perspectives (see Table 1) are used to immerse oneself in the themes. C. Share & discuss themes – results from research are presented and discussed in a group session ; new insights emerge and key themes are determined. D. Reflect on themes – this involves a deeper individual reflection on themes, again from various perspectives, and checking insights with stakeholders. E. Visualize and connect themes – in a group session , the connections between key themes are discussed and visualized.
First stage of Reframing	Create new frames – in a group session , the understanding of the themes is related back to the problem, leading to ideation for new frames.

Table 2. Activities in the iterative process of diverging and converging in theme investigation.

Identify potential themes (activity A)

A fundamental principle of frame innovation is that the complexity of the problem at hand is recognized, acknowledged, and developed into a potential context for solutions. The initial stage of the process delivers an overview of the problem’s history and stakeholders. Delving into the values and interests of stakeholders, discussing those shared among them and what these actually mean, allows for the identification of underlying themes that usually relate to human (inter)personal emotions, needs, and values, such as ambition, insecurity, trust, courage, fear. These are often deeply personal and hidden, not normally made explicit in daily conversation and yet so commonplace in everyday life.

Immerse in themes (activity B) and reflect on themes (activity D)

When there are few key themes and sufficient time, taking multiple perspectives (art, literature, science) leads to a richer outcome and broader understanding of themes. Studying a single theme with several team members, each from a different perspective, leads to depth. As known from phenomenology, when the discussion of results from different perspectives converges to a single notion, this will probably be a valid notion, or at least interesting enough to investigate further (Beekman and Mulderij 1977). Convergence often happens quickly. In the case on accountability, 'pride' and 'responsibility' were key themes for the neighbourhood manager but also brought up by a local policeman whose pride did not come from the police as organisation but from his activities in the neighbourhood. Local family doctors shared how pride related to their sense of duty, motivated by personal values.

Starting with the personal and evocative perspectives, as opposed to the analytical perspectives (Table 1), provides an intuitive backdrop based on emotions that will serve as both input and reference for investigating the theme with more analytical perspectives, such as science and philosophy. Concrete personal stories (stakeholder perspective) are useful when told in sufficient detail and with genuine emotions; they will trigger our own memories and experiences (researcher perspective). Talking from the heart requires confidentiality. If you explicitly expect a trustful environment and practise it by entrusting your team with personal experiences, the team will co-create that trustful environment in return and the scene is set to expect personal stories.

Sharing stories is a fast way to find universal elements in unique experiences: different stories bring different perspectives and contribute to the wholeness of the experience. To further explore these personal perspectives, making a connection with cultural perspectives works well, e.g., by recalling experiences with art or using visual triggers. For example, picking a fascinating image-card from the Dixit game can stimulate associative thinking; making a collage is an easy activity that can help reflect on emotions.

Share and discuss themes (activity C)

More important than the choice of perspectives are the conversations and discussions in the team about the outcomes of investigation: group reflection is an essential activity. Understanding a theme requires thinking about it, but also sharing experiences, feeling it, using empathy, bringing multiple perspectives to the table. Associative thinking is easier and more productive when done together (Figure 5).



Figure 5. Open-ended sessions for dialogue and discussion, with no time-pressure, are essential for theme investigation.

Sharing stories in an evocative way provokes thoughts and emotions, yet it may take several hours in a session to reach the level of depth in understanding that the team finds adequate. An array of different stimuli, such as action and play – not just talk – helps to keep the team fresh and lively. Storytelling, roleplaying, and other forms of play can be useful tools to activate experiences.

When sharing and discussing outcomes of theme investigation, eliciting thoughts, feelings, and reactions is more effective than asking for proof, sources, and argumentation. Asking participants to react and associate will drive the team towards empathizing with each other's perspective, creating a common language and a collective narrative. This involves asking questions like: What does it evoke in us? What can we gain from this? How do you experience this? How can we explain this? What can we learn from this?

Visualize and connect themes (activity E)

Using a whiteboard helps reflective thinking and motivates the team to go deeper and refine their interpretations of themes (Figures 2 and 4). Writing up concepts, relating and reorganizing them, aids the thinking process as it happens. The act of collectively documenting conversations and accounts of experiences keeps discussions lively and progressive. Documentation will trigger recounting stories and insights gathered during theme investigation and can help drawing conclusions. Sketches and photographs of post-it sessions or whiteboards can be used to recall and explain the thinking process that led to certain choices, within the team and to stakeholders that were not involved.

Planning and initiating the process

Who is involved? Preferably, the project team consists of a mix of 'design thinkers' and stakeholders. Without the stakeholders, there may be insufficient connection to the case.

Doing frame innovation with only stakeholders is possible, but an experienced 'design thinker' can guide them in the process.

Stakeholders with a strong interest in existing solutions may tend to block or frustrate the process. They may find it difficult to detach from the original context or even fear new solutions that are not in their interest. In this case, it may be beneficial to involve them selectively or not at all. During frame innovation, new stakeholders may come to play an essential role in possible solutions. Stakeholders who are 'problem owners' are generally better partners than stakeholders who are 'current solution providers.'

Planning. The frame innovation process typically includes a sequence of sessions with dialogues and discussions that is interspersed with individual research activities. These sessions can get rather intense, as indeed they should. This requires each session to have ample time, with no stress on expected outcomes: it is intuition rather than planning that can determine if a theme is understood sufficiently. To maintain a dynamic flow of thoughts and vivid memories of these sessions, they must be planned with short intervals. The phase of analysing themes gradually shifts towards the phase of formulating frames. Using instruments such as the theme outline and theme mapping, described below, can help deciding when themes are understood sufficiently. With experience, the team will learn when it is ready to start formulating frames.

Initiation to wider thinking. For first-time participants in frame innovation, the methods and techniques are unclear and guidance is needed. The overall approach and the focus on understanding the problem by making the problem space bigger and more abstract must be explained. There is a tendency of participants to either focus too quickly on possible solutions or too long on the problem. They will be impatient discussing the themes in a universal context, unrelated to the original problem and without moving towards solutions. Helping participants take this step must be a deliberate effort. For example, asking them to tell about the last time they felt lonely will clearly take them outside the problem area. Often, participants need reminding about the purpose of theme investigation and the reason for stepping out of the problem context.

Instruments

Theme investigation can be supported with instruments that support documentation and therefore the thinking process. Along the process of executing the case studies, the 'Theme Outline' was created as one such instrument and its usefulness and that of 'Theme Mapping' is discussed here.

Theme Outline

When trying to create an intersubjective understanding of a theme, we need to assess which of its aspects play a role and what is relevant information to collect. The 'Theme Outline' provides a checklist for both investigating and analysing themes. It can be used to identify research questions and for capturing, summarizing, and communicating the

understanding gained through research. It plays a clarifying role in discussions about how well a theme is understood and what still needs deeper understanding.

The Theme Outline prompts to describe a theme in four dimensions:

- (1) The *structure* of a theme explains its meaning through, e.g. definitions, synonyms, antonyms, and relationships to other concepts.
- (2) *Responses* deal with how people react to a theme on a physical, cognitive, emotional, motivational and spiritual level, what they see, feel, want or believe, and how the theme affects them.
- (3) *Context* describes how time or the physical, social, and societal environment influence the theme, how it is expressed in these contexts, or changes with contextual events.
- (4) The *dynamics* describe how the theme works, causally or temporally. It identifies the driving factors or inhibitors, causes and consequences over time.

Which aspects are most relevant depends on the type of theme being researched and the kind of information the investigation yields.

Theme Mapping

When investigating the initially selected set of themes, other themes and related concepts may also appear significant. Associative thinking is a key activity in theme investigation and maintaining a structured overview of related themes and concepts is important. Eventually, the set of themes will need to be reduced to around six, to allow reframing to happen.

Diagrams are suitable ways of visualizing the collected information. The structure of a theme with its aspects and related concepts can be plotted in a word cloud or mind map. The dynamics of a theme or set of themes, how they work and relate, the states a theme can be in, its causes and effects, all this can be documented in a causal diagram (Figure 6) or simply a plus/minus list. Combinations of diagrams can be useful to show various aspects of a theme.

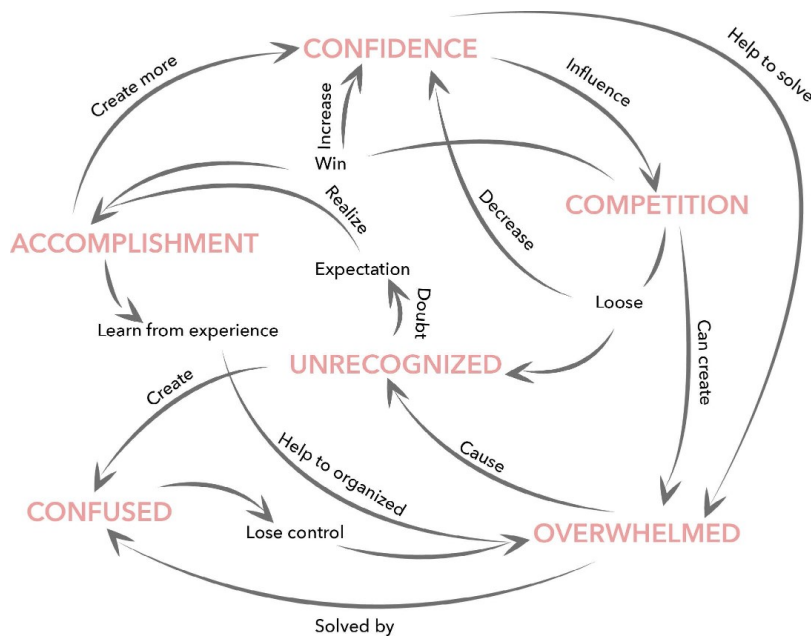


Figure 6. Example of a theme diagram with named relations between themes and connected concepts.

During the creation of diagrams, the themes with the most connections are generally the most relevant. However, intuition will tell if a relatively unconnected theme is important for understanding the complete picture and for creating new frames. Using visualizations to organize and integrate the most relevant concepts helps to identify patterns and a shared understanding of the workings of themes. It is often a suitable way of concluding theme investigation and starting with reframing.

Discussion

This research develops Dorst’s work on frame innovation by providing practical as well as conceptual detail to the crucial ‘Themes’ phase. The findings and insights presented above result from continuous evaluation, driven by the stated research questions, of numerous intensive sessions with stakeholders and researchers, engaging in theme investigation activities for real-world challenges.

Professionals and managers in design teams as well as students tend to find the ‘Themes’ phase a bit of an enigma when they first learn about it. Conscious application of variation in methodology and research perspectives, and of tools like the ‘Theme Outline’ and ‘Theme Mapping,’ makes it concrete and practical. There can still be a sense of magic when a deeper understanding of themes makes it possible to radically reframe a problem.

Referring to the research questions that revolve around how to do theme investigation and the hypothesis that variation is key in this, it is clear that there is no single recipe, method, or technique to investigate themes. However, addressing RQ1, theme investigation works best in an iterative process (Figure 1) of identifying themes,

investigating themes from various perspectives, sharing and discussing outcomes, further reflection on themes, and visualizing results.

The depth of discussions in the team is also one of the main factors that influence the quality of theme investigation (RQ2). Team members noted that making things personal and discussing findings led to the moments of deeper understanding. Variation among team members and of methods used appears to be a necessity to achieve the depth we are looking for.

Regarding the investigation methods (RQ3): using different methods and approaches creates a richer understanding than working with one method only. When looking for inspiration, breadth is just as powerful as depth, for two reasons: firstly, the quest for new perspectives benefits from a wide spectrum of conceptually different approaches, and secondly, these different approaches facilitate a reflective discussion about idiosyncratic differences and common patterns relating to a theme. Thus, breadth can even be a first step towards depth. Personal preferences in investigative methods become functional when discussing themes. Building a collective narrative through reflection can be helped by storytelling and reflective questions.

The different kinds of variation have a beneficial impact on reflective discussions. This is something that team managers need to be aware of and can actively stimulate and organize. Other factors that influence the quality of theme investigation include the dedication of time, receptiveness to the process, and team guidance.

The Theme Outline is a useful checklist for theme investigation and for sharing insights (RQ4). Are we interested in the emotional impact of a concept or in its dynamics: what triggers it, how is it processed, and what can it lead to? For example, philosophical investigation tends to result in deeper ontological understanding: what are key concepts, how are they related? Personal stories, on the other hand, tend to provide insight into emotional dynamics. The Theme Outline helps identify what is important to investigate.

Managerial implications

The value of frame innovation manifests itself in three ways: (a) new frames for interventions offer immediate value to case owners and stakeholders in creating solutions; (b) doing theme investigation with stakeholders has bearing that generally exceeds the case at hand and will impact the relationships between stakeholders; and (c) anyone can participate, it does not require specific expertise apart from genuine curiosity and a willingness to share and discuss personal experiences.

Further research is required to explore, measure, and enhance these effects. This will benefit the practice of social designers, both in terms of skills and work ethos and in terms of creating value-based procedures and relationships between departments and across hierarchies.

More than rational analysis or scientific investigation, frame innovation requires emotional openness and vulnerability. A team that embarks on this journey needs a team leader to organize a safe and inviting atmosphere and make participants feel at ease on a quest with an unknown destination. The process can be painful, magical, or both at different moments, but when a group truly captures deeper levels of meaning, suddenly

new directions for developing ideas emerge. In this process, the group members also acquire deeper investigative skills that are useful at any moment in their working life.

Finally, this work is about trying to do the impossible, like trying to model reality. Themes ultimately exist in the realm of lived human experience and trying to document them, whether in the context of teamwork or in a publication such as this, reduces that experience to its representation. We must never forget that the map is not the territory. Theme investigation is all about creating a shared understanding that is discursive as well as intuitive or emotional within a team of people. What we have found, and hope to communicate in this text, is that this shared understanding can be a strong source of inspiration for reframing complex challenges.

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