AN EXPLORATION OF THE USE OF MEMES IN DESIGN PROCESSES

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ABSTRACT
Memes can be seen as expressions of social discourse and may be considered both as source of information about sentiments regarding societal issues, and as a catalyst for sparking conversation. Since both potential uses have direct relevance for design processes, this paper reports on student projects that have experimented with the use of memes in both contexts. It concludes that the first use can spark inspiration and motivation among students but that its potential for reliable insights is challenged by various factors. With respect to the second use, student projects suggest that there is considerable potential for using memes as a catalyst for dialogue between opposite sides.

Keywords: Memes, netnography, design education, design methodology

1 INTRODUCTION
Design and design thinking has broadened in recent years, from addressing needs for new products and services, to targeting complex societal problems such as mental health, social inclusion and civil security. When confronted with design challenges related to such wicked problems, designers often resort to a standard toolbox of observation, interviews, surveys, diaries and focus groups. However, these are time-consuming and may not reveal opinions and sentiments in cases when they are awkward to share, or complicated to put in words. Access to a sufficiently large number of relevant informants to map wide ranges of societal opinions may also be challenge in a student project context. Netnography has recently received attention as an approach to complement more traditional research methods, as the internet is a source of and platform for societal discourse about a wide variety of themes. Meme's analysis has been proposed to make the invisible visible, get answers to questions that are not easy to ask, and thereby understand complex social phenomena better. This paper is structured as follows. First, section 2 provides a brief overview of memes as a concept and discusses how literature has addressed the analysis and use of memes in ways relevant for informing design processes. Section 3 draws on examples from student projects and explores further the relevance of using memes in design processes. Section 4 discusses findings and concludes the paper.

2 ON MEMES AND THEIR USE IN DESIGN PROCESSES
The term meme is widely understood to be coined by the evolutionary biologist Dawkins (1976) as a concept for how original ideas develop, adapt and spread through society, and often described as something 'catchy' which hops from brain to brain. Although it has been noted that what is and is not meme can be ambiguous [1], in an online context, memes have been acknowledged for being 'a prism for shedding light on aspects of contemporary digital culture' [2] and therefore as a means for expressing opinions, messages and sentiments that reflect broader societal discourse [3]. Often mentioned aspects of a successful meme are recognisability in the community where they are shared, evoking humour (often in the form of irony, sarcasm, absurdism), clarity and simplicity (although this may highly depend on community), having an element of surprise or uniqueness, and adaptability, forward ability, and relatability, i.e. a connotation with something emotional, such as nostalgia, frustration or anger. Memes can be seen as mere expressions that replace thoughtful conversation, and as internet's 'ventilation hatch' [4], but also as entry points for critical thinking [5] because at its best a meme exposes a truth about something and allows that truth to be captured and applied in new situations [6].
Iloh [1] makes a strong case for the use of memes in qualitative research as they are part of people's everyday expressions and mimic their speech while also functioning as and reflecting culture. She suggests that memes can support successful and harmonious interactions between researchers and

involved participants and be a useful tool to amplify and support remote qualitative data collection. Finally, memes can provide a more approachable, creative, and fun experience for those involved since humour in a qualitative study may lessen power asymmetries between the researcher and participants. However, Iloh's suggestions for how to use memes are restricted to using them to prime informants, as a conversation starter or icebreaker that orientates participants to the topic and guide the conversation further, letting it thereby become more open and exploratory in nature. She also stresses the ability to use memes to magnify certain topics in a safe way for both researcher and participants. Julien [7] refers to this as meme elicitation, using memes for providing an icebreaker and a focal point for shared attention, and using their humorous nature as a meaningful entry point, starting from a distanced, less personal way, thereby providing a non-threatening channel for engaging into deeper emotional discussions. Julien goes one step further than Iloh and suggests steps that a researcher can take to exploit memes in an interview situation, such as 1) collecting memes that appropriately reflect the experiences they would like to discuss with their participants and that might provoke a range of emotions, 2) choosing whether to send memes before the interview or introducing them at the start, and 3) selecting memes which the informant may identify with, or not. Follow-up questions could be about what is going on in the meme, what is meaningful in it, what emotions are connected to the meme, what the metaphor or larger context is that the meme represents, and what makes the meme so popular. Kaltenhauser et al. [8]. go beyond the use of memes as an icebreaker or conversation starter and introduce MEMEography as an approach which aims to analyse memes as a means of understanding an offline population without the disadvantages of physical presence as would be required for a conventional ethnographic approach. It consists essentially of two steps: collecting and selecting memes from online communities like Facebook, Reddit or Instagram, followed by an analysis of the selected memes with the purpose of forming hypotheses. Using both text and thematic analysis of several hundreds of memes, they demonstrated that they were able to obtain rich and valuable insights on a range of challenges about Intensive Care Unit practices without ever setting foot there.

In sum, the use of memes as a qualitative tool in processes relevant for design seems to focus on two applications. First, *the use of memes as a part of netnography*, highlighting its benefits over a conventional ethnographic approach, in particular in contexts where such an approach is impractical. Proposed methods for meme analysis include mostly extensive web scraping techniques [8], large language models, multi-model [9] or large multimodal models [10] but comprehensive instructional resources remain sparse. References to more hands-on ways to use memes to inform design processes, either to supplementing or replace conventional methods, have not been identified. Second, the *use of memes in a design intervention itself*, in particular in the context of facilitating communication, for example in dialogue between researcher and informant(s) or in an interview or focus group setting. This can be in the form of presenting memes as icebreakers, conversation starters or prompts to discuss cultural perceptions and societal issues, for example in hope of uncovering underlying beliefs and attitudes, but also as a means to inspire creativity and help informants to think outside the box.

3 ANALYSIS OF STUDENT PROJECTS

3.1 Exploring memes as a netnographic tool supporting a design process

To further explore the use of memes as a tool to obtain insight in online culture in relation to a societal phenomenon) draws mainly from six different pre- and final industrial design master projects in the 5-year integrated master programme in Industrial Design Engineering at NTNU Norwegian University of Science and Technology. Each project was of an explorative nature, rather than starting from a specific design brief. The master thesis students were by no means obligated to use the analysis of memes as a part of their project (it was a mere suggestion), nor were they provided with a specific tool or recipe to proceed with the analysis of memes. Instead, the shaping of the activity took form through own reasoning in combination with input from supervision meetings. For these projects, the analysis of memes was one of several methods used for context mapping and problem definition, in addition to more conventional user centred methods such as interviews, surveys, observations, focus groups, diary studies, cultural probes, et cetera.

One of the first projects took a starting point in men experiencing embarrassment and awkwardness in relation to sharing health issues with doctors and their environment in general [11]. Supported by insights from several blogs which explain how memes have become a tool for people to express themselves about embarrassing and awkward themes, the students collect memes to uncover which thoughts, experiences and messages about the topic were shared in online communities like Reddit.

Comments in response to these meme posts were also studied; they often (but not always) expressed compassion and support from individuals who could relate to the meme as well. To analyse the collected memes, first thematic sorting was used, identifying subtopics such as masculinity and male stereotypes, feeling lonely and lacking support, men criticising other men, bad experiences after trying to open up, and doubts about whether to visit the doctor. Then, memes from the various thematic groups were spread over a canvas, and sorted along an axis, ranging from 'memes making fun of men and provoking shame' to 'memes showing empathy for men, encouraging to get over shame'. One insight was that where memes end up is often dependent on the forum on which memes were shared. Memes were also used as a tool in a workshop setting, inviting participants to share their ideas using empty meme templates, presenting them in plenary, and a voting of the favourite meme.

A second project [12] focused on clothing in limbo; clothes that are perceived to be too clean to be washed but too dirty to put back in the closet, and therefore often end up on chairs, floors, hooks, thereby contributing to a messy indoor environment and premature laundering as people lose overview. One of the methods used to gain insight on clothing in limbo was mining the internet for memes on topics related to laundry and/or clutter. Memes were identified through using relevant keywords, and three clear themes that emerged from the meme analysis were self-deprecation, (self-)irony and social acceptance that everyone has challenges with clutter and/or housework (Figure 1). The memes were used in a workshop later in the project as conversation starters, where participants had to choose a meme that they recognized themselves in and explain why, which created discussion and uncovered more hidden or shameful thoughts and opinions.

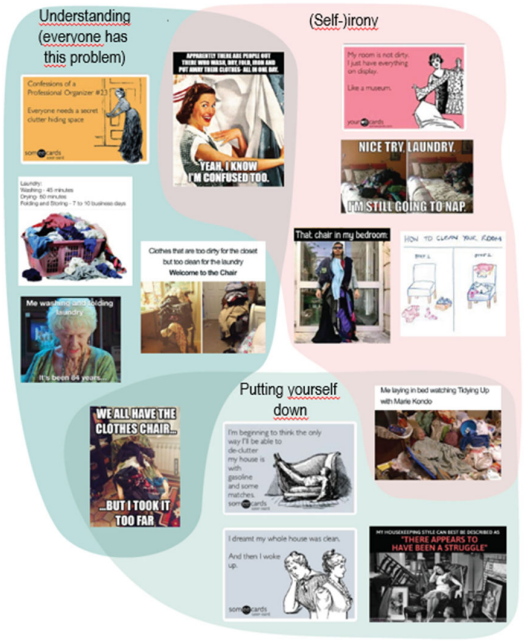


Figure 1. Meme sorting canvas [12]

In another project [13], meme analysis was used as one of several methods to map what kind of excuses people use to justify unsustainable choices they make. One of the findings was a clear insight in how some people become overwhelmed with the complexity of behaving sustainably, and how pointless individual actions feel sometimes. Although such insights are not novel, in a context of a student design project, memes are a grateful way to communicate such acquired insights. Interestingly, the student chose to explicitly refrain from humour in developing her concept of a making a confronting card deck of sustainability excuses and instead focused on a more serious and reflective approach. This choice was a direct result from the meme analysis, which taught the student that while humour can be an effective tool for engaging people, there is also a considerable risk of distracting them from the key message, as humour is very subjective, jokes could be misunderstood and even offend people.

In [4] the goal was to design an intervention that would help incels cope with involuntary celibacy. The fact that incels often communicate through memes makes analysis of memes shared in incel communities a particularly suitable method for studying dominant problematic attitudes in incel culture, not in the least because the community is difficult to reach using conventional research methods. The bad reputation of incel culture is partly due to dark humour (which needs a layer of irony to be socially acceptable) getting stripped of irony, whereby memes sharing actually becomes sharing of problematic views. In the project, memes were sourced from Reddit, Incels Wiki and other relevant meme websites, and sorted in four categories (Nice guys, Stereotypes and double standards, Rejection, and Misogyny). Analysing the 'nice guys' category suggested an attitude that 'being nice' gives incels the implicit right to have romantic relations as reward for this, but that they fail to see how 'being nice' can therefore be seen as manipulative. Analysing the category 'rejection' gave insight in how many incels have problems with coping with rejection and how this leads to destructive behaviour, hopelessness and isolation, and lack of healthy self-reflection. The category 'stereotypes and double standards' provided understand how incels often experience those societal norms favour women at the expense of men, making them feel marginalised and assuming a victim role as well as defenders against feminist ideals.

Two other projects used memes analysis along several other netnographic methods, such as mining online forums like Reddit and Quora, social media, news articles, product reviews, and popular Google searches. By sorting and analysing this information central topics were identified to potentially focus on in the remainder of the project. Meme analysis was found useful for highlighting emotional aspects and underlying perceptions and biases which may not surface through straightforward questioning, such as perceived fire risks and mistrust in providers in the context of a project on exploring battery perceptions [14], and frustration related to security personnel as well as one's own incapability to deal with stress factors before and during time spent on airports [15].

3.2 Testing memes as an element of design interventions

Figure 2. Meme from XDW2025 teaching material

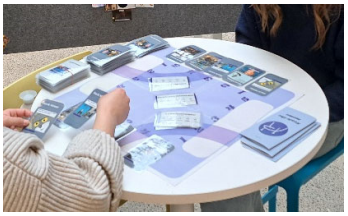
To explore the use of memes in the second application (using memes as a tool to facilitate communication with informants, as research method and/or aspect of a final design intervention), a week-long full-time workshop was held in connection to the 2025 Xplore Design Week at the University of Antwerp, where guest lecturers are invited to expose students to new methodological perspectives, resulting in a joint exhibition. The workshop was explicitly themed "Using and analysing memes in design projects". In this case (and thus in contrast with the master projects presented in the previous subsection), five students groups of students were provided with examples of sorting memes from these previous master projects, as well as a booklet with templates for doing so and for documenting their efforts. During this workshop, students were explicitly tasked to develop a meme-based tool to facilitate communication between participants in a setting and a theme of their choice, such as mediating between different generations, climate activists and climate sceptics, woke and anti-woke attitudes, or Dutch and Flemish people. The booklet templates focused on challenging students to identify, consider and experiment with so-called stretching scales: axes between extremes along which to sort memes. Examples provided included 'understanding vs. critical' and 'dry vs. vulgar humour'. Scales that the students considered themselves included left-wing vs. right-wing, soft vs. dark humour, defending vs. ridiculing, sarcastic vs. non-sarcastic, superficial vs. profound, positive vs. negative, niche vs. universal, socially acceptable vs. not, funny vs. not, ironic vs. sincere, sexual vs. not, original vs. parody, hopeful vs. cynical, and mocking own generation vs. other generation. The next step in the process was to experiment with sorting memes on a 2-dimensional canvas, along two axes of their choice, of which two examples are given in Figure 3.

Figure 3. Examples of stretching memes on a canvas

The students were offered additional templates for empathy mapping and inverse empathy mapping, and for making personas, to map what type of topics imaginable participants would (not) want to say think, feel, hear, see or say in a workshop setting, based on the meme analysis for the chosen topic. The workshop week resulted in five prototypes that each stayed fairly close to the design brief:

- *'Meme-it'*: an interactive tool for constructive discussion, based on leaving out words or sentences from well-known memes, and a poll where participants can choose between three alternatives that fit them best, with the poll results providing grounds for group discussion afterwards.
- *'Problematic Plinko'*: a game to reflect on one's own morality according to a Meme Morality Scale, which ranks from least to most offensive. Based on research during the workshop week, various memes have gotten a score, and participants, when presented with a meme, must guess what score that is, earning more points the closer they are to the answer, fuelling both discussion and reflection.

- *'Scale the meme'*; a card game to facilitate discussion on controversial topics, in which players are to scale five cards (either 'dark memes' or 'light memes') on one of 12 randomly picked scales (such as level of wokeness, respect or empathy), before discussing why choices are different, and earning points when convincing the other to adapt the order *(picture to the right)*.



- *'I have a ~~Dream~~ Meme!'*: a tool for using memes as conservation starter. The group made 10 memes for other students to vote on, each representing a situation that students were unhappy with in their daily study environment, such as restricted access to elevators, how courses were organised, problematic campus furniture, and exams not reflecting course content. Based on over 170 answers, a ranking with most problematic issues was revealed at the end of the exhibition, with department leadership present, and led to a very interesting discussion about how organising student involvement in departmental decision making where one of the students was invited to become student representative.

- *'Meme-Lab'*: a selection of memes was made into an installation where faces in the memes were replaced by mirrors, making it possible for visitors to see themselves within a meme, enabling them to reflect on and share their own share hidden thoughts and feelings about sensitive topics *(picture to the right)*.

4 DISCUSSION AND CONCLUSIONS

Regarding *the use of memes as a part of netnography*, experience with the students projects suggests that collecting and analysing memes is a meaningful exercise for collecting different perspectives of how people express themselves in relation to societal phenomena. Finding relevant scales along which to stretch the memes appears to be an easy and intuitive exercise which generates discussion about different perspectives on the phenomenon at hand. Students use collaborative tools like Miro and Figjam to sort and explore memes but laying them out physically appeared to spark the most fruitful discussions. It is also engaging for students to have a way to take in non-scientific or even potentially non-serious sources and perspectives into their understanding of the societal phenomenon under study. As these may not have been documented in any other way, they may point designers to perspectives that may be overseen using more conventional ways of doing user research. However, the choice of memes for the meme sorting exercise remains subjective. A designer will likely choose memes which are appealing and understandable, and source them from known platforms. A designer who is, for example, an avid user of Instagram, but not familiar with Reddit and the language used there, will have a harder time to recognise expressions and opinions which are common there, and/or risk (sub-)cultural misinterpretation. Some platforms seem much more suitable for finding extreme (for example hateful) opinions or subcultures, and when neglecting these, a full picture of how a phenomenon manifests itself in society will be impossible to get. Another complicating factor arises when memes are collected from heavily moderated fora, preventing a full picture of sentiments around a certain phenomenon. Thus, any level of societal discourse analysis that aims for results beyond the superficial is unrealistic unless based on extensive quantitative analysis of large numbers of memes collected by internet scraping techniques which document where, when, by whom (for example men or women) and for how long memes have been used. Such quantitative analyses are not feasible within the contours of a design project, and would compromise other benefits such as speed and motivation, in particular for design students. A quick and dirty meme analysis will never be able to identify the demographic characteristic of who will post individual memes, although this shortcoming may be mitigated somehow by crosschecking with user data on the platform's memes are collected from; some social media are known to be frequented more by a particular gender or age group. Web scraping techniques and image recognition tools have been proposed to measure meme popularity in social media, but adapting this to meme topic instead of meme image will be challenging. In conclusion, based on these arguments for and against, it is fair to conclude that the use of memes in a design process for the purpose of providing insights in what people think and feel, in particular in the context of sensitive topics, has significant limitations, but has the potential to identify interesting perspectives and uncover potential blind zones. It can therefore be useful addition to the designer's toolbox, and a relatively fast, fun and engaging way to acquire such insights, for example in the start-up phase of a project, after which preliminary insights can be triangulated by using other

tools. In some of the projects reported on here, students have also reported to have made memes themselves, which was found useful to immerse themselves in the topic and sort their thoughts.
Regarding *the use of memes in a design intervention itself*, results from the XDW2025 workshop suggest that using memes as a catalyst for sparking discussions between participants can be quite powerful. Memes seem to immediately widen the scope of opinions that participants feel comfortable sharing, as they provide both a distance (relating to what others have expressed about a topic), a proximity (relating to one's own perspective), and with that a spectrum of potential perspectives and opinions that provide a space for dialogue, defined by extremes with ample room to navigate in between. The projects all had in common that this space is visualised, in various creative ways, and that humour and ludic elements lower the threshold to enter this space and immerse participants in topics which otherwise may be awkward to discuss. An interesting observation is that the mocking nature of memes seems to allow for self-mockery and thereby showing vulnerability; stating one's possibly societally or politically incorrect opinion in a frivolous way and letting it thereby nevertheless enter the discussion. An important caveat is that when using memes in a workshop setting, or similar, it is very importance to assess the chances of workshop participants being sufficiently familiar with memes. Experiences reported here are mainly based on student participants, and using memes with participants who are not students has not been tested. But at the same time, this suggests that using memes can be an important pedagogical element when developing teaching material about topics such as sustainability, health and welfare technology, in particular around topics which include elements of embarrassment and awkwardness.

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