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Protocol for 'virtual presence': a qualitative study of the cultural dialectic between loneliness and technology

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ABSTRACT

Introduction Most research on loneliness comes from the health sciences, statistically seeking to measure the health-related effects of feeling alone or isolated. There is a need to expand on this understanding and explore loneliness as a more complex social phenomenon. In this article, we present a qualitative design for studying the intersection between loneliness, technology and culture. Conceptualising this as the cultural dialectic between loneliness and technology, we aim to unpack the reciprocal ways by which understandings of loneliness shape technology, while technologies also affect society's understandings of loneliness. In elucidating this dialectic, we aim to develop new knowledge and a novel theoretical framework for understanding loneliness and its technological solutions, which, in turn, can enable better solutions to contemporary problems of loneliness.

Methods and analysis We will adopt a qualitative approach that combines interviews, participant observation and textual analysis to explore loneliness and its technological solutions from the perspectives of policy-makers, producers, professionals and users in Norway and the UK. The data will be analysed through an analytical framework combining insights from discourse theory and philosophical debates on presence, which will allow us to capture and rethink fundamental assumptions about loneliness and technology. Outcomes will be revised understandings of loneliness, relevant to researchers, entrepreneurs, policy-makers, clinicians, educators and the broader public.

Ethics and dissemination The project has been evaluated and approved by the data protection officer at Oslo Metropolitan University and by the Norwegian Social Science Data Services. Additional ethical approval for data collection in the UK has been provided by the University of Oxford Interdivisional Research Ethics Committee. Informed consent will be obtained from all participants. Findings will be disseminated through peer-reviewed publications, international conference presentations and lay media.

Strengths and limitations of this study

► Our qualitative approach can facilitate in-depth exploration of the complex relationships between loneliness, technology and culture.
► Our material will be well suited for theory development.
► The study is not designed to generate 'effect sizes' or formulaic service solutions.
► The study is limited to two countries and cannot directly be generalised to other contexts.

and health-related costs estimated to be substantial.[3] Recent years have also seen loneliness emerge as a political issue, with the UK appointing its first minister for loneliness and the Norwegian government singling out the prevention of loneliness as one of three key public health priorities.[4] Adding to this, the ongoing COVID-19 pandemic has entailed widespread isolation measures with consequent increases in loneliness, pushing the topic further up the public agenda.[5]

Loneliness has received significant scientific interest. Overall, research on loneliness is dominated by psychological and health science perspectives, using quantitative methods to address questions such as 'who and how many people are lonely', 'is loneliness increasing' and 'what are the effects of loneliness'.[2] Loneliness is here defined in subjective terms (eg, as 'the unpleasant experience that occurs when a person's network of social relations is deficient in some important way, either quantitatively or qualitatively'[6]), in contrast to social isolation, which is defined in objective terms as having little or no regular social interaction with others. Research has mostly focused on the elderly, but studies also show loneliness to be prevalent among younger age groups.[7] Findings indicate that loneliness is associated with the loss of a partner,[8] long-term illness or disability,[9] living alone,[10] lockdown and shielding,[5] and having

INTRODUCTION

Loneliness is emerging as a key societal challenge. For years, the media have reported a growing 'epidemic' of loneliness,[1] with loneliness being depicted as a public health challenge on par with smoking,[2] and economic

an ethnic minority background.[11] Chronic loneliness is also shown to have considerable negative effects on mental and physical health,[12] including association with increased risk of disease and mortality.[2]

While providing important and policy-relevant results, these quantitative studies of loneliness have also been criticised for operating in an overly narrow conceptual frame.[13 14] For instance, although the documented negative impact on health is important, the singular focus on health as the context for loneliness leaves other relevant contexts unaddressed (eg, the civic, political and social contexts). There is also a widespread tendency to define loneliness a priori as a health problem and narrowly as a quantifiable single 'thing' to be researched using standardised measures. Scientific, political and lay discourses, thus, privilege a restricted understanding of loneliness. Taking for granted what loneliness is, these discourses smooth over the multiplicity of and frictions between competing understandings and experiences of loneliness.[13 14] There is also a risk that uncritical conceptual frameworks will prove costly, if we use misguided definitions, interventions and measures to frame and solve a problem we do not fully understand.

To explore other perspectives on loneliness, we provide a cultural analysis of how loneliness is represented, perceived and acted on. 'Culture' here denotes patterns of meaning that shape people's interpretation and action—patterns that vary both between and within countries and other social units.[15] Specifically, we draw inspiration from a small body of cultural studies that start from the assumption that 'there is no single true and binding description of loneliness on which everybody can or must agree'.[16] These studies show that loneliness is subject to contradictory discourses, ranging from stigma and shame to romanticism and mystique.[17 18] The meaning of loneliness is demonstrated to change significantly over time, with an increasing entanglement between various understandings, which are often overlooked when discussing the problems of loneliness.[17]

However, while these studies go some way in demonstrating the cultural complexity of loneliness, they do not address how technologists and industry designers have emerged as key players in attempts to tackle the problems of loneliness (especially since the onset of the COVID-19 pandemic[19]). Redressing this, we will explore the concept of loneliness by examining the tools through which loneliness is addressed and 'solved'. We contend that loneliness technologies can serve as a lens for understanding contemporary discourses about loneliness. On the one hand, these technological innovations necessarily presuppose what loneliness is and how the problem of loneliness should be solved. On the other hand, technology can shape these understandings, giving new meaning to what it means to be lonely in digital society. Accordingly, loneliness technologies can facilitate an analysis of what we call the cultural dialectic between loneliness and technology: the reciprocal ways by which understandings of loneliness shape technology, while technologies affect

Figure 1 AV1: a robot for children who cannot attend school because of long-term illness (photo: No Isolation).

society's understandings of loneliness. In scrutinising this dialectic, the project will elucidate what loneliness is and can be in digital society.

Our arena of study

'Loneliness technology' is a loose term encompassing everything from video chat solutions to social robots, smart speakers, social media and virtual reality platforms. Our project will focus particularly on AV1 and KOMP, two communication technologies developed by the Norwegian start-up company No Isolation, with the express purpose to reduce loneliness in their users.[20] AV1 (figure 1) is a robot for children who cannot attend school because of long-term illness; the robot is placed in the classroom and provides the child at home with a video connection to his/her teacher and classmates. KOMP (figure 2) is a communication tool for elderly people, which allows the exchange of text messages and photographs as well as video conversations with relatives and friends. Both are so-called telepresence technologies, meant to combat loneliness by offering presence at a distance.

Figure 2 KOMP: a communication tool for elderly people (photo: No Isolation).

These technologies are currently marketed in Norway, Sweden, Denmark, Finland, Germany, Austria, the Netherlands and the UK. The primary focus of our fieldwork is Norway, but we will also create a sensitising case in the UK where these technologies are at an earlier stage of adoption and spread. In studying these two technologies from the perspectives of users, producers, professionals and policy-makers in both Norway and the UK, we will learn more about the cultural contexts for technological development and implementation.

Research questions

To unpack the cultural dialectic between loneliness and technology, we address four interrelated research questions:

Q1: How do policy-makers articulate the relationship between loneliness and technology?

Q2: How do producers work to promote telepresence technologies in a culture in which technology is considered both a cause of, and solution to, loneliness?

Q3: How are loneliness technologies perceived, used and negotiated by various subgroups of users?

Q4: How can we rethink the relationship between loneliness, technology and culture, in light of new and technologically mediated ways of being copresent?

METHODS AND ANALYSIS
Objective

Our objective is to explore the cultural dialectic between loneliness and technology: the reciprocal ways by which understandings of loneliness shape technology, while technologies also affect society's understandings of loneliness.

Duration

The project lasts from August 2020 to December 2023.

Collection of data

Our qualitative approach combines interviews, participant observation and textual analysis to explore loneliness and its technological solutions from the perspectives of policy, producers, professionals and users, focusing mainly on the Norwegian context (including research with users of the technologies) and using the UK as a sensitising contrast (where empirical data will be gathered on stakeholder experiences only, and not from end-users).

Given the context of an ongoing pandemic, we will rely heavily on videoconferencing tools for data collection. Most of our interviews, and a good portion of our participant observation, will be conducted by use of telepresence technologies such as Skype or Zoom.[21 22]

Policy

To understand how loneliness and technology are represented and approached at the societal level, we will conduct a document study of Norwegian and UK policy documents. We will begin by analysing the newly released white paper on public health in Norway[4] and the UK government's strategy on loneliness,[23] and extend our sample by tracing documents that either cite or are cited in these two key texts.

The policy level will also be studied by conducting interviews in Norway and the UK with 15–25 managers, counsellors and employees in non-governmental organisations (NGOs), whose work include loneliness or loneliness reducing technologies. Following Evans,[24] we see these workers as de facto policy-makers, in that they interpret and shape policy at the municipal and local level. Interviewees will be recruited by email enquiries to relevant agencies. Key questions will include what they see as the potentials and pitfalls of technology and how they compare technological solutions to other loneliness interventions (eg, initiating broader structural reforms in the civic community).

Adding to this, we will identify and analyse a sample of legal documents to understand how loneliness and its technological solutions are defined and regulated in legal terms. Key texts are likely to include the European Union's General Data Protection Regulation, the European convention on human rights, the Norwegian Personal Data Act and the Health and Care Services Act, as well as relevant documents of legislative history. Together, this will help elucidate the legal frameworks surrounding contemporary loneliness technologies.

Producers

Against the backdrop of policy, we will study the producer of AV1 and KOMP, No Isolation, to see how they work to promote these technologies in the Norwegian and UK contexts. We do this based on interviews with approximately 20 members of the firm (including the chief executive officer and members of the research, sales and communications teams) about their promotion activities.

In Norway, over a period of at least 12 months, we will conduct participant observation by following company representatives at marketing meetings with municipalities and organisations, as well as at conferences and expos. In the UK, we will observe meetings, analyse documents and conduct interviews with up to 30 stakeholders to understand how potential purchasers of the technologies evaluate their potential.

In both Norway and the UK, a key question will be how producers relate to and negotiate with other and potentially conflicting discourses about loneliness and its technological solutions. We will also ask more generally how the producers promote their products, what challenges they face, and why they decided to work with loneliness technology to begin with.

Professionals

AV1 and KOMP are sold and used in specific organisational and service contexts. AV1 is marketed for use in schools, and KOMP is marketed at elderly users, most of whom are either recipients of home care or dwellers in nursing homes. We will, therefore, investigate how professionals in these settings understand and approach these

loneliness technologies. Specifically, we will conduct interviews with 20–30 health professionals in Norwegian municipal nursing homes and home nursing services. We will also interview 20–30 teachers across public primary, secondary and upper-secondary schools in Norway, with first-hand experience using AV1 in the classroom. Interviewees will be recruited partly through self-selection (eg, emails to school and nursing home administrators), and partly through snowball sampling via end users (described below). Key interview topics will include the character and function of copresence in mediated and non-mediated form; the nature of loneliness, its causes and possible solutions, and responsibility and ownership of loneliness as a problem; and specifically about the technologies in question and experiences and perspectives on their uses.

Users

Finally, we will map how loneliness technologies are perceived, used and negotiated by end users of AV1 and KOMP in Norway. We will recruit and interview at least 30 users of AV1 (ages 6–19) and at least 30 users of KOMP (ages 80+), focusing on their experiences with loneliness and using these technologies. Interviewees will be recruited through patient organisations, NGOs and service organisations that provide AV1 and KOMP free of cost in Norway; to ensure a broad sample, we will seek to vary interviewees' age, gender, ethnicity and geographical location. Key questions will include: How do they experience the virtual presence offered by these technologies? Do they believe AV1 and KOMP help reduce loneliness? Do they see technological mediation as a barrier to or an enabler for participation? And do their experiences and views vary according to gender, age, ethnicity and geography?

As AV1 and KOMP are communication technologies, their use is codetermined by the actions and mindsets of extended networks of users: AV1 will not provide virtual presence without the active engagement of classmates and teachers; KOMP will not reduce loneliness if nothing is sent to the screen by family members. To capture more fully the perceptions, uses and negotiations of these technologies, we will, therefore, interview at least 30 members of both the AV1 and KOMP end users' extended networks of users in Norway.

Patient and public involvement

The study is overseen by an advisory board with members from the broader public. The Oxford arm of the study is undertaken in partnership with the group's patient and public involvement and engagement group and earlier work on virtual presence technologies that informed this study was overseen by an advisory group with patient representation.

Data analysis

The research team will undertake iterative stages of data analysis to produce a first stage analysis (eg, themes/ narratives/in-depth case studies), which will be synthesised to produce an integrated dataset across the different contexts, which will then be analysed according to our analytical framework.

Analytical framework

Our analytical framework combines insights from discourse theory and central philosophical debates on presence.

First, the project uses a discourse analytical approach in which loneliness is treated as an empty signifier, whose meaning depends on how it is articulated in relation to other signifiers.[25 26] Accordingly, we assume that 'there is no single true and binding description of loneliness on which everybody can or must agree'.[16] Specifically, the project draws on Bacchi's[27 28] 'what's the problem represented to be' approach, which starts from the premise that proposed solutions reveal what one considers problematic or in need of change. Bacchi serves us with six analytical questions: (1) What is the problem represented to be in a specific discursive representation? (2) What assumptions underpin this representation of the problem? (3) How has this representation of the problem come about? (4) What is left unproblematic in this problem representation? (5) What effects are produced by this representation of the problem? (6) How/where has this representation of the problem been produced, disseminated and defended? Adding to Bacchi's problem focus, we shall take an equal interest in what the solutions are represented to be, what assumptions underpin them and how they came about, and so on.

Second, we combine this open-ended discursive approach with concepts and insights from the philosophical debate on the metaphysics of presence in Western philosophy and culture.[29–31] Introduced by Heidegger, the term metaphysics of presence characterises an implicit bias towards understanding 'being' as presence or as being present, an understanding of both ourselves and our surroundings as fixed entities and events structured in space and time.[29] According to Heidegger, observations, experiences and emotions 'here and now' gain both ontological and epistemological priority over representations, reproductions, dislocation and deferral. In other words, the 'here and now' is seen as the ultimate guarantor of the existence of our surroundings and of the truth of our beliefs. This insistence on spatiotemporal presence is the foundation of some of the problems related to the understanding of representation as a duplication of reality, creating a hierarchy of existence in which what is being represented is seen as more real than the representation.[29]

In asserting to offer presence at a distance, the development of telepresence technologies questions the primacy of the 'here and now' in a very acute way. At the same time, the technologies assume that there is an original and ideal presence that 'virtual presence' aims to imitate. We will use this debate on the metaphysics of presence as an analytical lens for questioning some of the fundamental

assumptions underpinning contemporary discourses about loneliness and their technological solutions. More specifically, we will use this long-lasting philosophical debate empirically to explore and discuss how loneliness is addressed through digital means in current society. To that end, we will focus especially on the dialectic between presence and absence, and between being present and being in the present. By thus combining an open-ended discursive approach with insights from the debate on the metaphysics of presence, we aim to identify new and problematise dominant discourses on loneliness in digital society.

ETHICS AND DISSEMINATION

The project has been evaluated and approved by the Data Protection Officer at Oslo Metropolitan University and by the Norwegian Social Science Data Services (a national ethics committee for social scientific research in Norway, including research on children and other vulnerable groups). Ethical approval for the UK stakeholder study was provided by the University of Oxford Interdivisional Research Ethics Committee (9 February 2021 reference number R73899/RE001). Participation will be based on informed consent (including parental consent when studying children), and all empirical data will be stored securely.

Findings will be disseminated through peer-reviewed publications, international conference presentations and lay media.

POSSIBLE OUTCOMES

Empirical novelty: extending studies of loneliness

We will extend studies on loneliness by exploring the interrelationship between culture, loneliness and technology. Specifically, the project will explore two recently developed loneliness technologies, comparing perspectives of policy, producers, professionals and users in Norway and the UK.

Theoretical novelty: rethinking the relationship between loneliness, technology and culture

By meta-analysing our empirical material and critically analysing dominant discourses in research on loneliness, we will develop a novel theoretical framework to better analyse and understand the relationship between loneliness, technology and culture.

Methodological novelty: reappraising telepresent research methods

Echoing the insight that interviewing as a practice is increasingly becoming part of everyday life,[32] we will contribute by considering the methodological impact of increased uses of telepresence technologies in digital society. Doing so will involve a reconsideration of the much-rehearsed argument that telephone and video-interviews are less natural and thus inferior to interviewing face to face.[33]

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