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# Care-full data, care-less systems: making sense of self-care technologies for mental health with humanistic practitioners in the United Kingdom

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**Introduction:** The days of dusty couches in therapists' offices behind closed doors are long gone. Now, personalized mood tracking, therapy appointments and breathing exercises are just mere clicks (or taps) away: Technologies for self-care (SCTs) that focus on mental health are both a flourishing industry and an academic field of interest. As societal, and cultural artifacts, SCTs for mental health are imbued with values, worldviews, and assumptions about these concepts by their designers and developers. Here, current SCTs tend to lean toward a more medical(ised) approach due to being shaped by dominant views of mental health as an individualized issue. However, this approach is only one of many potential pedagogies and approaches. As an alternative, we explore what SCTs for mental health could be like, from a humanistic, person-centered standpoint: We conceptualize mental health in holistic terms, as an experiential quality of everyday life.

**Methods:** To this end, we report on two engagements with humanistic practitioners and the person-centered approach as a guiding principle: First, we ran a workshop informed by the Rogerian "*encounter group*". This approach is focused on providing the space to meaningfully meet and relate to people. Inspired by this concept, we brought together humanistic practitioners to openly explore what technology for (self-)care means for them. Second, we build on the insights from the aforementioned study by organizing an asynchronous, online whiteboard for humanistic practitioners—counselors, students-in-training, therapists, and researchers—to explore their *utopian*, *realistic* and *dystopian* visions of SCTs.

**Results:** Through thematic analysis and affinity-clustering these engagements, we construct an understanding that technology within a person-centered, humanistic context is a constrained, ambiguous undertaking, yet also one full of potential.

**Discussion:** We conclude the paper by sketching out three design opportunities for how the person-centered approach, and humanistic psychology in general could be integrated into caring technologies.

## KEYWORDS

humanistic psychology, person-centered approach, participatory design, mental health, self-care, human flourishing, human computer interaction

## 1 Introduction

Considering mental health as a whole, the *World Health Organization* (WHO)<sup>1</sup> projects a worrying future, with 1 in 8 people encountering mental distress in their lives at some point, with the number of affected people steadily rising. We are living through uncertain, troubling times: Across all cultures, creeds or backgrounds, people are experiencing more and more mental distress. The need to counteract this development is pressing: Here, technology is seen here as a potential instrument to take pressure of healthcare systems already stretched thin, and to provide personally tailored (self-)care to support people in living meaningful, joyful lives (Doherty et al., 2010; Patel et al., 2018). Designed as phone apps, dedicated hardware, or VR experiences (and beyond), SCTs seek to make use of technologies' affordances to support people in caring for themselves (Sanches et al., 2019).

As tools that seek to augment how a person engages with their own mental health, creating SCTs is a difficult, delicate undertaking: It requires researchers, designers, and developers to conceptualize, implement and combine self-care, mental health, and technology as concepts (Sanches et al., 2019). These opinionated design choices are not only influenced by personal expertise, but cultural and societal forces, too. SCTs are therefore not only caring systems, but also communicators of implicit and explicit values and beliefs (Spors et al., 2021). As such, SCTs tend to be designed with dominant healthcare discourses in mind, and they tend to be aligned with common care pathways: Currently, this means providing care through cognitive-behavioral therapeutic interventions, the current "gold standard" approach (David et al., 2018). Within this context, mental distress is conceptualized as a mismatch between the individual's perception, and actual reality, which can be re-adjusted through continuous activities (Brewin, 2006).

Even though well evidenced and established, cognitive behavioral approaches have their own limitations (Leichsenring et al., 2018): Within SCTs, they may struggle to alleviate mental distress that is not rooted in an individual's perception of themselves, therefore side-lining environmental, cultural, or societal factors (Marshall et al., 2020; Ramos et al., 2021). They can present mental distress and health in too simplistic terms and oversell their own effectiveness (Spors et al., 2021). Here, it becomes clear that adopting an *one-size-fits-all* approach is not suited for the pluralistic nature of people, and their inner lives (Braveman and Gottlieb, 2014). There is great potential in exploring alternative, or additional approaches found within the therapeutic landscape, and to augment and extend what SCTs could be (Sanches et al., 2019). This paper seeks to add to this conversation, by engaging with a different therapeutic approach and pedagogy: The person-centered approach (PCA), as embedded within humanistic psychology (HP) (Cooper et al., 2013; Schneider et al., 2014). HP and the PCA were conceptualized to offset the tendency to treat mental distress in formulaic, standardized ways: Instead, counselors are focused on genuinely encountering their clients, and to understand mental health as an experiential feature that exists within people (Cooper

and McLeod, 2011). Given the pluralistic frame HP and the PCA create, we engage practitioners and students of these approaches: We explore their perception of SCTs, and what SCTs within a humanistic, person-centered grounding could be like.

The paper begins by exploring related literature. We outline how self-care and technology are being brought together and elaborate on humanistic psychology as a pedagogy and therapeutic approach. With this context established, we introduce two studies: *First*, an encounter-group with humanistic practitioners, and *second*, a shared online space for humanistic practitioners to speculate in, about the potential futures of self-care technologies. We thematically analyse and affinity map the data we collected and present our findings in the form of themes, trends and clusters. Then, we turn to discuss the work undertaken as a whole and extrapolate on our findings in the form of a set of three design opportunities for researchers, designers and developers: How to draw inspiration from humanistic psychology and the person-centered approach for SCTs.

## 2 Related literature

### 2.1 Self-care technologies for mental health

The World Health Organization's defines self-care as "*the ability of individuals, families and communities promote health, prevent disease, maintain health, and to cope with illness and disability with or without the support of a healthcare provider*".<sup>2</sup> Here, the WHO definition orientates self-care more toward a medical understanding of care, as adjacent to healthcare. However, both "self" and "care" are relative, contextual concepts that escape an absolute description, so the same applies to self-care: How it is understood depends on the research lens, perspective, or background at play (Godfrey et al., 2011). For the purpose of this paper, we describe self-care as a self-referential and self-relational endeavor: The "self"—often an individual person—orients themselves toward "care"—as an act of looking after oneself.

The wide plurality, yet personal nature of self-care makes it an attractive field for the adaption and augmentation through technology; particularly by integrating self-care into everyday life. For as long as personal computers have influenced people's lives, developers and designers saw potential in them to become caring systems: From Weizenbaum (1966)'s first (self-)reflexive chatbot ELIZA to current Amazon's Alexa providing daily mindfulness tips (Chung et al., 2018). The potential to embed SCTs into people's everyday lives is seen as way to allow people more agency regarding their own (mental) health by being a discreet and private tool (Price et al., 2014); particularly since mental health is still a stigmatized topic. SCTs may eliminate the need for dedicated expensive hardware while making it easier to stick with a personalized self-care schedule (Marzano et al., 2015) or sharing information with a care provider (Van Ameringen et al., 2017). Given the assumed ubiquity of smartphones (Heerden et al., 2012), mobile apps in particular are especially seen as a cost-effective opportunity to

<sup>1</sup> <https://www.who.int/news-room/fact-sheets/detail/mental-disorders> (Accessed 15/5/2023).

<sup>2</sup> <https://www.who.int/reproductivehealth/self-care-interventions/definitions/en/> (Accessed 13/12/2021)

deliver (mental) health-minded activities, directly to an individual person (De La Torre-Díez et al., 2015), with “*the [added] benefit of ‘anytime, anywhere’ usage*”, as coined by Barry et al. (2016). Self-care apps in the role of a useful companion can be seen as democratizing healthcare, as a potentially accessible tool for many (Marshall et al., 2020; Morley and Floridi, 2020). The same applies to web- or internet-based SCTs, as “[they] have the potential to be cost-effective, convenient, and reach a more diverse population than traditional, face-to-face interventions”, as described by Barak and Grohol (2011, p. 155). SCTs have the potential to alleviate strain on healthcare systems that may struggle to provide adequate in-person care (Ralston et al., 2019); while not fixing the underlying problems, SCTs could bridge the time it takes to see a professional (Ralston et al., 2019), offer signposting and context for self-guided self-help (Newman et al., 2011; Sarasohn-Kahn, 2013) or reach rural or deprived areas that lack care professionals (Pendse et al., 2019), e.g. by facilitating remote care endeavors like therapy (Bee et al., 2008).

However, there are also risks and downsides associated with SCTs; particularly in how they might engage someone with their own mental health: SCTs are at risk to perpetuate overly simplistic understandings and narratives about self-care and mental health, removed and decontextualized from the wider context of people’s everyday life. Common understandings of mental health feature “[...] a tendency to view mental health as an attribute of the individual, to emphasise the importance of more proximal psychological factors, and in turn to underestimate the impact of the wider social and structural determinants”, as expressed by Barry (2009). These understandings actively find their way into SCTs, as showcased by Parker et al. (2018): They investigated the messages found in 61 mental health apps in 2018 and found one common framing: “*Mental health problems were framed [in self-care apps] as present in everyone, but everyone was represented as employed, white, and in a family*”. While highly sensitive to the individual person in theory, in practice SCTs can perpetuate simplistic ideas about mental distress and place the onus of well-being on the individual, often with an *one-size-fits-all* narrative (Parker et al., 2018; Spors et al., 2021). The complex realities of mental distress do not lend themselves well to be easily advertised and implemented within an app, for example, potentially leading to an even more prescriptive approach to mental health and a loss of nuance in the process (Bhui and Bhugra, 2002; Carr et al., 2004; Thieme et al., 2016). As a result, SCTs can attempt to capture the richness of someone’s everyday (mental) health experience without context, thus “*flatten[ing]*” someone’s health experiences, as expressed by Cifor and Garcia (2020): Those who look after themselves are “*good*”, and those who do not lack self-discipline and show weakness (Lupton, 2013). Such a *healthist* framing, as coined by Crawford (1980), conceptualizes health as a purely individualistic endeavor, that comes down to exercising the *right* amount of personal and moral responsibility; without reflecting on the actual reality of health as negotiated, experiential quality. Extrapolating from this, SCTs are both cultural artifacts and active culture shapers that directly communicate ideas about mental health—in potentially beneficial and harmful ways. Therefore, for SCTs to be meaningful mental health companions necessarily requires

them to be investigated and designed from a variety of angles and approaches.

## 2.2 Humanistic psychology and the person-centered approach

Until the 1940s, psychology and therapeutic practices were dominated by (Skinner’s) behaviorism, which conceptualizes mental distress as misguided behaviors due to unfortunate conditioning and (Freudian) psychoanalysis, which understands mental distress as stemming from unresolved matters within the unconscious mind, influenced by psychological drives (DeCarvalho, 1990, 1991; Serlin, 2011; Davies, 2021). These two branches, now described as the “*first*” and “*second force*” in psychology (Benjafeld, 2010), are not without controversy, as they conceptualize mental distress—and people experiencing it—in universal and operationalised terms. Humanistic psychology (HP) represents a radical, fundamental shift and reconfiguration of what psychology *ought* to do. Kick-started as a response to the aforementioned paradigms, HP posits that “*once our basic human needs had been satisfied, self-betterment for the good of oneself and others became the highest occupation of life*”, as explained by Davies (2021, p. 267). HP concerns itself with human growth, and how to navigate issues that may block it: Here, “*betterment*” and growth do not refer to any form of prescriptive improvement. Instead, they are an expression of “*human flourishing*”: People existing in authentic, genuine and relational ways (Joseph et al., 2020). HP operates on the assumption that each person’s experience is uniquely different and uncategorisable, and as field considers a wide variety of pedagogies, therapy approaches and—even wider, philosophically speaking—ways of making sense of what it means to be human (Hamachek, 1987).

## 2.3 Applied humanistic psychology: the person-centered approach

The person-centered approach (PCA) can be seen as applied, practiced HP: It engages with mental health on an experiential, relational level (Lago and Charura, 2016). As its name may imply, the PCA as a therapeutic practice focuses on the therapy client as a *person* first: Their life experiences, understanding of themselves and their perception of the world form the frame for therapeutic exploration and inquiry. Murphy and Hayes describe this orientation: “[...] *person-centered therapists trust their clients’ knowledge about their experiences; their perceptions are the pertinent reality*” (Murphy and Hayes, 2015, p. 300). Counselors working with and within the PCA do not diagnose nor do they use external, *objective* instruments to measure or assess mental distress. Instead, they focus on relating to their client’s “*internal frame of reference*”, which is how each person makes sense of their existence (Rogers, 1949). This includes mental health, mental distress, worldviews and beliefs: As a result, therapy becomes what it has to be, guided by the client (Rogers, 1957a,b). The PCA understands mental distress as the result of the difference (“*incongruence*”) between a client’s lived

experience and their self-concept (Rogers, 1957a,b). On the flip side, this means that a supportive, safe and accepting environment enables people to access their “[self-]actualizing tendency” to process distress, to become and be authentically (Rogers, 1963, 2008). The barriers blocking a person’s self-actualisation and congruence can be multi-faceted and include individual, personal and external, environmental and/or political factors (Joseph, 2006; Brown, 2007). Self-actualisation is a complicated life-long, non-linear, and iterative internal process (Kvalsund, 2003), and the degree of self-actualisation is highly dependent on other people (Everingham, 2003).

Such an approach is a radical shift away from the therapist as an authoritative expert that does therapy to their client. Referring to Casemore (2011) and Kettley et al. (2017) describe this shift further:

“[...] from diagnosis and interpretation, to listening, and a willingness to be fully present without the apparent safety of expert status and a directive attitude, offered a focus no longer intent on problem solving, but on the development of a trusting relationship, facilitating the growth and development of the individual” (Kettley et al., 2017, p. 175).

### 2.3.1 Rogerian “core conditions”

A key figure in developing HP and the PCA was Carl Rogers, a psychologist and therapist from the USA (Joseph, 2006; Lago and Charura, 2016). Rogers began to lay out the PCA in the 1940s: He developed it out of his own experiences as a therapist, the experiences of his colleagues in clinical social work and meeting Otto Rank, one of Freud’s proteges and closest collaborators (Kirschenbaum, 2009; Murphy and Hayes, 2015; Kramer, 2019). Informed by his own research, practice, and life experience, Rogers (1957b) articulated a set of six “core” conditions to support people’s ability to change. These conditions support HP practitioners in providing a positive, conducive space for their clients; a space that enables people to undergo change (Rogers, 1957a, 1992; Tudor, 2011):

1. **“Psychological contact”**: The therapist and the client mutually experience each other and they engage in a self-aware process of relating to each other (Rogers, 1957b).
2. **“Client incongruence”**: The client is experiencing mental distress due to a mismatch between their authentic, genuine self and how they experience the world through their current self (Rogers, 1957b). Congruence (genuineness) describes the degree that somebody can be themselves (Tudor and Worrall, 1994).
3. **“Therapist congruence”**: The therapist brings their genuine self into the relationship with their client, to the best of their ability, in self-reflective, self-aware ways (Rogers, 1957b).
4. **Unconditional positive regard (UPR)**: The therapist receives the client openly, as the person that they are in that very moment, in non-judgemental and caring ways (Rogers, 1957b). Unconditional positive regard (UPR) is the practice of experiencing or “witnessing” someone without judgement; to fully accept someone for who they are (Crisp, 2011).
5. **Empathy**: The therapist receives the client in empathetic ways (Rogers, 1957b). Here, empathy “refers to understanding what

another person is experiencing or trying to express”, as described by Elliott et al. (2018).

6. **“Client perception”**: The client perceives the relationship between themselves and the therapist as genuine and accepting (Rogers, 1957b; Kettley et al., 2017).

Commonly, these six qualities are distilled into three “core conditions”: genuineness (Tudor and Worrall, 1994), unconditional positive regard (UPR) (Iberg, 2001; Bozarth, 2007) and empathy (Rogers, 1957b; Clark, 2010). These conditions create a baseline that encourage both the therapist and the client to be themselves, and to genuinely and authentically experience each other, in a mutual way (Murphy et al., 2012) to create the necessary “relational depth”—as coined by Mearns (2002)—for healing and processing distress (Murphy et al., 2012). In summary, the PCA is oriented toward mutual relationality and self-discovery. As a pedagogy and therapeutic approach, it places emphasis on the person engaging with it, and their agency, autonomy, and individual perception of the world.

## 3 Sense-making with humanistic practitioners

In this section, we showcase two studies which engaged practitioners and students of the PCA and HP in meaning-making processes, to draw out how they conceptualize technology for self-care, and mental health more broadly: *First*, we organized an “encounter group” with humanistic practitioners, which explored their personal understandings of technology for self-care and mental health in an open, relational meeting. *Second*, we ran an online, remote study, which engaged humanistic practitioners with speculation, and their potential futures of caring technology.

### 3.1 Epistemology

HP and the PCA naturally influenced how this research was conducted, as both concepts are fundamental building blocks of it. To provide more transparency and specificity, we elaborate here on our epistemological standpoint. Instead of presenting generalisable, universal knowledge, we adopt a stance of *situated* knowledge, as outlined by feminist scholar (Haraway, 1988): Science is a *contextual* sense-making process that is directly influenced by personal, cultural, and societal values and tensions. Concretely, this means that the knowledge we construct through the work undertaken is not absolute, but it is one of many potential versions. Here, we invite other scholars to critically assess the work presented here, and to continue and extend it, as an interdependent network. As such, we conceptualize this paper as a piece of writing to inform, inspire and challenge the reader in the tradition of humanistic writing. Here, we lean on “*humanistic human computer interaction*” by Bardzell and Bardzell (2015): Instead of being a passive consumer of the information presented in this paper, we see *you*, the reader, as someone who engages in an active process of relating critically to what this paper presents. In summary: Our process of knowledge creation is “*phenomenologically-situated*”,



as outlined by [Harrison et al. \(2007\)](#), which results in specific, contextual knowledge.

## 3.2 Study 1: encounter group with humanistic practitioners

For our first study, we organized an “*encounter group*”-informed meeting to learn how humanistic practitioners make sense of technologies for self-care, and therapeutic technologies for mental health in general.

### 3.2.1 Study context: encounter group

Developed by Carl Rogers and his colleagues in the 1970s, an *encounter group* is a group meeting centered around receiving and experiencing other people in relational, person-centered ways—non-judgmentally, genuinely and empathically: “*They are designed to promote self-enhancement and behavior change through a better understanding of human beings within relationships and through receiving feedback about oneself*”, as described by [Brison et al. \(2015\)](#), referring to [Schmid and O’Hara \(2007\)](#). Since radical relationality may be an abstract concept, we provide a comparison: A common research method that engages people in a group setting is the *focus group*. The researcher brings people with specific experiences, values, backgrounds and expertise together to make sense of a specific topic ([Wilkinson, 1998](#); [Rabiee, 2004](#)). As a researcher-directed endeavor, a focus group has a dedicated agenda, organized activities to share opinions and to discuss the topic at hand. It is a structured, facilitated and directed group endeavor. While similar in its setup, an encounter group forgoes most structures or requirements: Only the length and topic are set ([Rogers, 1971](#)). The actual experience spontaneously emerges from the embodied nature of being with others. The entire focus of an encounter group lies within radically relating to other people and one’s self during the encounter ([Cooper et al., 2013](#); [Brison et al., 2015](#)), and “[...] *to be willing to meet across differences*”, as described by [Proctor \(2019, p. 245\)](#).

### 3.2.2 Study setup, recruitment and participants

Potential participants were approached through the researchers’ personal networks, social media, and our university-internal mailing lists. We reached out to local practitioners and students of the PCA and HP, through the members’ directory of the British Association for Counselling and Psychotherapy (BACP). Four humanistic practitioners joined [first author] in November 2019, who participated in a researcher-as-participant capacity. The meeting was scheduled and lasted for two hours, with “*What do humanistic practitioners think and feel about self-care technologies?*” being the only guiding question.

All four participants were accredited counselors and/or therapists and practiced HP and PCA in a professional capacity. All names are pseudonyms:

- *Michelle* is an integrative counselor, drawing from multiple therapeutic paradigms. She focuses on clients that have

left their home countries, particularly people who consider themselves expatriates from the UK.

- *Barbara* is a counselor that specializes in play therapy for and with children.
- *Lewis* is a recently accredited counselor who is in the process of establishing his own private practice in the UK.
- *George* is a long-term established integrative counselor, that both worked in counseling education and maintained a private practice. He works in the UK, but also internationally.

### 3.2.3 Data collection and analysis

The workshop was audio recorded and transcribed externally by a transcription service. Transcripts were shared with participants to ensure accuracy. We analyzed the transcript thematically and inductively, after the self-reflexive six-phase process by [Braun and Clarke \(2006, 2012\)](#): All authors engaged in collective sense-making throughout the analysis process, through discussion and reflection. Concretely, [first author] familiarized themselves with the data (*Step 1*), and sketched out a preliminary set of codes, which was iteratively, collectively refined into a final set of codes (*Step 2-3*). [First author] used this set to step through the data once more, and sketched out preliminary themes (*Step 4*), which were finalized together, with all authors (*Step 5*), and written up in this paper (*Step 6*).

### 3.2.4 Findings

In this section, we present our findings as themes: We showcase participants’ quotes to illustrate the themes. Each quote is unpacked through an explication, and contextualized.

#### 3.2.4.1 Theme: (De)humanized technology

The first theme in this study showcases how humanistic practitioners understand technology as a medium that exists within many different influences, tensions, and agendas. Here, technology is not a neutral tool, but technology becomes an instrument that is operationalised within a healthcare environment. Practitioners perceived technology as a tool that is prone to be (ab)used for a wide variety of nefarious purposes—mostly by using mental distress to make a profit, as *George* explains:

**Quote 1: self-help as the first negative step (*George*)** —  
 “[...] *So, you walk into your doctor’s with a mental health issue, you’re going to meet literature, you’re going to be directed towards computer programs or whatever. And I have to own up to having an anathema for those sorts of things. It worries me deeply. Because it’s an attempt, largely through economics, I suppose, to replace the relationship and that’s a fundamental value for me, that it is the relationship.*”

In this quote, *George* conceptualizes SCTs as tools that erode the interpersonal caring relationship between a therapist and their client: Instead of potentially supportive tools, they are deployed to forgo fostering human connection (“*you’re going to meet literature*”). Instead, they are used to reduce (human) costs, and to triage mental distress (“*you’re going to be directed towards computer*”).

programs or whatever”—with a clear disinterest in holistic care or healing (“attempt [...] to replace the relationship”).

Michelle further elaborates on this circumstance, framing it as a systematic and structural issue—driven by what she sees as capitalistic healthcare interests:

**Quote 2: external profit incentives (Michelle)**—“You know, like the technology that you use is one thing. In the hands of groups who want to make money or even take it a bit further, and maybe this is a little bit paranoid, but the NHS [National Health Service, United Kingdom] who wants to save staff. Is that a good thing? Overall, I think not.”

Michelle outlines here how she conceptualizes that SCTs, or caring technologies are not the problem in themselves, but that the context they exist in, makes them prone to being exploited by “groups who want to make money”. She reflects that a healthcare system like the NHS is not free from such profit-driven incentives, as she describes the NHS as “want[ing] to save staff”—by proxy, these constraints, and influences shape how care is designed and delivered through technologies.

Throughout the encounter, practitioners reflected on technology drawing and integrating elements from therapeutic pedagogies or practices, without grounding them within the needed human contact, or relationality, as expressed by Lewis:

**Quote 3: human relationship within therapy (Lewis)**—“I find it very surreal when technology and apps and whatever try to bring therapy elements in, given that therapy is about bringing down to [...] the relationship is key. [...] Therapy is about the human relationship, and that’s the essence of it. And so, it’s interesting how tech approaches that, you know?”

Within this quote, Lewis summarizes one of the core ideas of the person-centered approach: meeting people where they are and meeting them in person (see Section 2.3.1). He identifies the need to be relational in person as an important aspect that caring technology would need to address (“the human relationship”).

The next quote illustrates a similar sentiment, in which Barbara raises concerns about non-personalized, automated therapy through technology:

**Quote 4: therapy by numbers (Barbara)**—“I’ve seen quite a lot of things floated around where you replace a therapist with an automatic answer machine or you’re almost doing therapy by numbers. And I think that’s quite concerning for me, because for me, a therapist [...] you go with the toolkit that works for the client.”

Barbara criticizes technology that aims to “replace” therapists and automate care in universally-assuming ways (“therapy by numbers”). She contrasts this way of providing care with a tailored, personalized “toolkit works for the client” which is based on the therapist’s expertise and working relationship with their client.

A similar perception is also expressed by Michelle: She explains that relying on SCTs may override someone’s own perception of their mental health—by essentially trusting the machine more than themselves:

**Quote 5: technology and tick boxes (Michelle)**—“Yeah, and then if you don’t match one of those tick boxes, what do you do with that? Where do you go with it? If you say, well I’m not in one of those tick boxes, obviously I don’t need [care], you know? [...] And I think that’s something that comes from probably a cultural side lining of mental health, I think, yeah. You’re either unhealthy or you’re okay, there isn’t any kind of—you can be—just need a little bit of a nudge or help or support or whatever else.”

Michelle characterizes SCTs as reductive, and as not representative of the plurality of mental health (“don’t match one of those tick boxes”). She provides an explanation for this circumstance by outlining how mental health is seen as a binary affair that sits between “okay” and “unhealthy”. She pushes back against this understanding by outlining that people have varying needs of care (“there isn’t any kind of [...] a little bit of [...] help”).

Similarly, Barbara also voices concerns about SCTs convincing people that they may have a problem—without acknowledging that mental health exists on a spectrum:

**Quote 6: technology creating “problems” (Barbara)**—“Yeah, I kind of wonder if I normalize abnormal mental health as well, through those apps. By almost creating ‘you have a problem’ you know? I all have different moods, and that’s okay.”

Barbara is describing how self-care technologies can become normative agents by sorting people’s experiences into predefined categories (“you have a problem”). Without additional context or reflection, a mood may be labeled as a mental health problem—even though it may just be a normal expression or reaction to everyday life’s circumstances (“different moods, and that’s okay”).

In summary, all practitioners stressed the importance of interpersonal contact in a caring environment: Technology has the potential to support and facilitate healing connection, it is often operationalised to reduce human relating for economic reasons, or presents mental health in too universal, simplistic terms.

### 3.2.4.2 Theme: levels of care

In the second theme, we describe how humanistic practitioners see mental health and distress as a matter that cannot be universally approached: As an experience, it requires tailored, personalized and adaptive care. Within this context, practitioners consider technology to be a medium with the potential to both support and disrupt therapeutic care on multiple levels.

The first quote illustrates how practitioners conceptualize care as a multi-faceted, pluralistic endeavor and experience, as Michelle elaborates:

**Quote 7: levels of care (Michelle)**—“[...] looking at levels of care. A bit like Maslow, but not—if you can imagine a pyramid but actually sometimes, I need that really intense, proper, face-to-face care with a therapist. But sometimes I don’t need that, I just need a light touch, yeah? You know, because I don’t need that intensity all the time. But it needs to be part of the mix.” (Emphasis added.)

Michelle explains that care cannot be provided as one universal, single-note approach: People have different needs that need to be addressed appropriately (“proper, face-to-face”, “light touch”). She stresses that this variety is important for the holistic nature of care (“part of the mix”): To consider care on a spectrum of varying “intensity”—as inspired by hierarchy of needs by Maslow (1954).

While practitioners discussed several aspects of how varying levels of care may look like, one concept was emphasized throughout—*connection with others*—as described by Michelle:

**Quote 8: connection (Michelle)**—“*I think connection is really important, because I don’t think we necessarily all need a therapist. But I do need connection.*”

In this quote, Michelle exemplifies that mental health and mental distress requires an individual, tailored approach to care, that is build on connection with others. She draws out that such an approach to care does not necessarily require seeing a professional (“therapist”), but encountering others (“*I do need connection*”).

Within this context, George stressed that a meaningful connection should be the baseline for caring technologies:

**Quote 9: facilitation of relationships (George)**—“*[...] but technology for me is something which has to facilitate rather than replace a relationship.*”

In this quote, George draws attention to the fundamental values of HP and the PCA: A genuine connection with others. Here, he draws out the role that technology could fulfill: To act as a facilitator, and as a support for relationality.

In the following quote, Michelle provides an example for *everyday* technology being used in such a supportive way:

**Quote 10: re-framing everyday technologies (Michelle)**—“*[...] I do little interventions even on things like WhatsApp. Where I’ll record a particular thing, small thing for my client and then they have it with them. And bizarrely, that’s proved really helpful just to being able to [...] but they hear my voice. But if I’m re-parenting them or something, hearing my voice has been really helpful. So, I’ve just been experimenting in little ways, so what can I use technology for? So, I’m really interested in this area.*”

In this quote, Michelle showcases how she re-configures an existing technology to provide her clients with smaller therapeutic “interventions”: Here, she imbues an everyday communication application (“WhatsApp”) with caring qualities. She draws out how she re-configures technology (“experimenting”) through open exploration (“*what can I use technology for?*”). Instead of operating in a narrow, prescriptive frame, Michelle uses technology in personalized, adaptive ways.

Participants contemplated the frame that technology could offer further, particularly by outlining how technology may inhibit relational encountering: It might not be able to receive people in ways that others are capable of—particularly in warm, non-judgemental ways—as Barbara expresses:

**Quote 11: witnessing others (Barbara)**—“*I think you bring up a good point about being witnessed, actually. Some of that is very important, isn’t it? Another human being witnessing or not be critical of you, just holding that space for you. Which is very difficult for technology to do?*”

Barbara outlines here how people can interact with each other in meaningful ways just by “*holding space*”, e.g., by engaging with another person in non-directive, non-judgemental and genuine way—which again echoes the *Rogerian core conditions* (see Section 2.3.1). She outlines that such a mode of interaction is “*very difficult for technology to do*”—again emphasizing the need for a human-in-the-loop when it comes to care through, with and in technology.

Considering how mental health needs exist on a spectrum, the group also speculated about caring technologies failing people—by getting in the way of their intrinsic wellbeing processes:

**Quote 12: mental distress sells (George)**—“*[...] because I suppose my underlying faith is that people are intrinsically [...] self-actualising. And given the opportunity, they will want to maximise their potential and maximise their ability to form community. But it’s—I don’t know how technology can help that. Perhaps the easiest way to see how technology helps those who would want to block that, or channel it, or sell it, control it.*”

In this quote, George doubts that technology may support people in self-actualising. He critically reflects on this circumstance, outlining structural factors and actors (“*who would want to block that*”). His understanding conceptualizes technology as a tool that is used to enforce and “*control*”, only interested in providing care for the financial incentive (“*sell it*”).

In summary, humanistic practitioners encounter mental health as an experience that cannot be approached universally, but one that needs to be approached in considered, nuanced ways. Providing these levels of care through supportive technology can be possible, but it a complicated, complex undertaking.

### 3.3 Study 2: speculating with humanistic practitioners

The previous study sketched out many perceived issues with current SCTs, but also the potential of technology to support genuine relationality. For our second follow-up study, we sought to explore these potentials that emerged out of the encounter further: “*What could technology for self-care be, with a humanistic, person-centered underpinning?*”. To answer this question, we invited practitioners and students working with humanistic psychology and the person-centered approach to speculate and to think about potential futures of SCTs.

#### 3.3.1 Study context: speculation

Speculation is the act of imagining potential *things*—including objects, technologies, futures, or worlds among other concepts (Dunne and Raby, 2013). As a reflective, generative and

interrogative tool, speculation can highlight personal, cultural and structural values, influences and tensions: The question “*what if ...?*” becomes the starting point of inquiry (Dunne and Raby, 2013). By engaging with the imaginary, the nuances of the current everyday can be made visible. Lenskjold reflects on this orientation: “*Speculating [...] opens up a dynamic space between possible futures and preferable futures—or between reality and the impossible—where fictional scenarios and social dreams, grounded in everyday situations, can become catalysts for public debate*” (Lenskjold, 2015, p. 2). Here, scholarship stress the need to not shy away from friction doing this process, and to “*stay with the trouble*”, as described by Haraway (2016); to not default to easy, neat solutions, but to confront and wrestle with the interconnectedness of the world(s) we live in (Kozubaev et al., 2020; Farias et al., 2022). Applied to a participatory context, speculative practices encourage people to imagine potential futures, worlds, or concepts *together*, as a collective (Gatehouse, 2020).

The following study uses such a collective, speculative approach to (1) learn how participants make sense of the current and future potential of SCTs within a framing of humanistic psychology, but also (2) to discover how humanistic practitioners conceptualize SCTs *right now*.

### 3.3.2 Study setup

We prepared an asynchronous, online space for participants to engage with on MURAL,<sup>3</sup> which is a browser-based collaborative white-boarding service. It provides a shared space for people to write, draw, organize virtual sticky notes, and add other forms of media, e.g., YouTube videos. Concretely, we designed and prepared a set of four online whiteboards on MURAL that featured speculative prompts, that participants were encouraged to respond to. Here, we leaned on speculative scholarship that makes use of common literary motifs, and genres of *utopia*—an ideal world, the “*best case*” scenario; *ustopia*—a realistic world juxtaposing “*good*” and “*bad*” elements, and *dystopia*—an undesirable world, the “*worst case*” scenario (Lindtner et al., 2016; Noortman et al., 2021). These genres are popular staples within cultural production, e.g., found in art, TV series or books (Clardy, 2011; Trotta et al., 2019). As speculation is not an *easy* undertaking (Galloway and Caudwell, 2018), we anticipated that these three concrete framings would (1) support people to connect their own *unique* positionality to them and (2) provide a frame to assess how *far, wide and deep* participants would speculate, e.g., *what do they anticipate in their version of the near future?* (Kozubaev et al., 2020).

Each board echoed one of the genres, with several questions to stimulate reflection and inspiration toward speculation with and through humanistic psychology and the person-centered approach:

- **Utopian MURAL board:** This board encouraged “*blue sky*” thinking and speculating about self-care technology with the question: “*What does utopian self-care tech look like?*”, contextualized with “*Imagine you had access to unlimited resources and a team of people supporting your vision: What futures would ‘best case’ self-care technology invite?*”.

- **Realistic MURAL board:** This board prompted participants to think about “*What does realistic self-care tech look like?*”, contextualized with “*Imagine a set of realistic futures! What kind of self-care technology would these futures encourage and make?*”.
- **Dystopian MURAL board:** This board invites participants to reflect on the question of “*What does dystopian self-care tech look like?*” and contextualized with “*Imagine the worst-case scenario: Futures in which everything has gone wrong with self-care apps, programs, devices and tools*”.
- **Private MURAL board:** Each participant was assigned a private, personal MURAL as a diary, and place to explore, reflect and report on their own self-care practices: “*What does self-care technology mean for you?*”, contextualized with “*Based on your current understanding, what is self-care tech for you?*”. This board was private and could only be accessed by each participant and [first author].

Along with the links to the boards, we prepared two short videos that (1) introduced MURAL and explained how it works, and (2) a video introducing the context of the study—particularly the speculative, open-minded framing of it. Participants were explicitly encouraged to respond to the questions and prompts in any way that they saw fit, as long as it could be placed into the MURAL board. Participants could add to the MURAL boards anonymously, to encourage honesty, and to provide the possibility to comment on affiliations, institutions, or accreditation bodies without the fear of repercussions.

### 3.3.3 Recruitment and participants

From August to September 2020, nine people joined the study initially, with one person dropping out due to personal reasons, resulting in eight people in total. Most participants were counselors ( $n = 5$ ), followed by students/in-training ( $n = 2$ ) and one researcher using HP in their work. All participants were asked to adhere to a code of conduct, which outlined that all interactions in the space had to be respectful. We designed and made a specific website for recruitment—[URL to website]—that showcased the study, provided a FAQ, and introduced the research team. We shared the call for participants for this study through our personal networks, particularly through social media, mailing lists and Facebook groups that centered around humanistic psychology. We reached out to practitioners of humanistic psychology through the *British Association for Counselling (BACP)* and the *Association for the Development of the Person-Centered Approach (ADPCA)*.

### 3.3.4 Data collection and analysis

Participants posted a variety of different notes, images, and sketches on the boards. Most of these postings had text-based and visual qualities; often comprised of multiple pieces: For example, a set or collage of sticky notes, images, and icons or emojis expressing a concept all together. To capture this richness, all posted data was inductively affinity mapped. Karen and Sandra describe affinity diagramming as “*a technique that supports inductive thinking. It is a way to synthesize qualitative information into conceptual groupings*” (Karen and Sandra, 2017, p. 203). For each board, [first author]

<sup>3</sup> <https://www.mural.co/> (Accessed 15/5/2023).



grouped all data preliminary into groups, guided by the data, in an inductive, iterative fashion. These groups were finalized into thematic *clusters* through iterative, collective discussion by all authors. Then, we turned our attention to make sense of all clusters across all boards: We bridge their insights by defining and highlighting overarching patterns, as thematic *trends*.

### 3.3.5 Findings

In this section, we present two thematic trends that we constructed out of the data across all public boards, as in practice, private boards were rarely used. All text-based notes are presented as plain text. Notes have been edited for clarity—e.g., correcting misspellings—but their content remains verbatim.

#### 3.3.5.1 Trend: People as People, not “Users”

This trend captures the emphasis that participants placed on the right framing of SCTs and the people using them, to *actually* enable care.

The first cluster (1)—“*Normative Tech-Solutionism*”—stems from the “*Dystopia*” board. Participants understand SCTs as potential harmful tools that strip people of their agency: Mental health is not seen as an experiential human quality, but a problem to be *solved* through extractive technologies.

- 1.a) “All online posts etc are algorithmically processed e.g., sentiment analysis and automatic diagnosis and interventions take place with no human interaction”
- 1.b) “People not thinking for themselves and passively accepting that the machines are always right!”
- 1.c) “AI bias discriminates vulnerable groups; options are inaccessible and hardly affordable by the affected populations”
- 1.d) “In some ways anything which is tech oriented is dystopian as the user presents a version of themselves as opposed to experiences their vulnerability, anger or shame in an actual human interaction”
- 1.e) “Everything is data - quantified self gone OTT with governments having access to all of it”
- 1.f) “Intrusive in the service of surveillance and manipulation”

In this cluster, *humanistic anxieties about technology disrupting self-care become visible*: One participant elaborates further on this harmful potential, as disconnecting people from their genuine emotions, by presenting an idealized self (“*the user presents a version of themselves*”, 1.d). Within this *dystopian* framing, SCTs do not support people to make sense of their mental health but reduce them to passive data subjects that are under surveillance and manipulation (1.f). Here, care is not a collaborative, negotiated and fluid process between different actors, but a painful process of removing human difference. This notion echoes humanistic fears about previous, and current universal approaches—see Section 2.2: Mental health is seen as an “*issue*” to be solved, instead of a life-long quality in flux. This fear manifests clearly in this cluster: Dystopian SCTs process our every move as data (1.e), coerce us into thinking and feeling what the *it* prescribes (1.b, 1.f)—without any checks, or any way to intervene (1.a, 1.d). SCTs are seen as a potential oppressive tool that entrenches already existing marginalization further (“*discriminates [against] vulnerable*

*groups*”, 1.c). This cluster showcases an understanding of the human element being at risk in mental health care on all levels: Normative SCTs do not allow space for experiential, discursive and relational qualities of human “*things*” related to mental health, e.g., people’s thoughts, experiences, moods, or memories. Instead, they demand data that is easy for the “*machine*” to capture and process, quantifiable in clearly defined categories. Their world view dictates: *What cannot be measured, does not exist*.

The next cluster (2)—“*Intentional SCTs*”—is constructed out of the “*Utopia*” board:

- 2.a) “I think it’s partly about being unregimented and not bombarding you with notifications and even silly rewards. It’s about knowing what the user (the self) responds to and working with that.”
- 2.b) “[SCT] encourages users to think and explore their feelings and understanding their own meanings. Not telling users how to think or feel.”
- 2.c) “I AGREE! GAMIFICATION AT ITS WORST BECAUSE IT INFANTILISES IN THE PURSUIT OF MEANINGLESS ‘USER ENGAGEMENT’”
- 2.d) “Responsibly innovative and person-centred”
- 2.e) “Tech that explicitly challenges the medicalisation of distress, i.e. explains why it does not use certain terms such as ‘mentally ill’”
- 2.f) “Users being asked what they want from self-care; user-centred rather than developer centred”
- 2.g) “That users could create their own self-tech care; that they could design a bespoke package that integrated different therapy philosophies not just tech that use a CBT template about ‘faulty thinking.’”

This cluster describes potentials for how SCTs could be supportive, by outlining both best and worst practices: Participants expressed strongly that SCTs need to value and support their client’s autonomy (2.a, 2.b, 2.e). Here, emphasis was placed on people being able to make sense of their mental health in their own ways (“*feel*”, “*think*”, 2.b), and not to propagate pre-determined narratives or expectations (“*Users being asked what they want*”, 2.e, 2.f). Similarly, practitioners also stressed the need for SCTs to not enforce pre-conceived, static notions of mental health as “*faulty thinking*” (2.g) or being “*mentally ill*” (2.e) without context. Instead, participants outline how SCTs should be (“*person-centered*”, 2.d)—with intentional, meaningful use of technology was seen as key (2.b, 2.c). This orientation is indicative of fundamental humanistic values, and speaks to the importance of providing clients with space to self-actualise in (see Section 2.2). As such, participants envision SCTs of being fully and only in service to the person using it (2.f, 2.g), and not to offer engagement for the sake of engagement (2.c), or “*silly rewards*” (2.a). This cluster highlights a critical view of current approaches to mental health: Participants describe worries about SCTs leaning toward formulaic, medicalised, and static care.

#### 3.3.5.2 Trend: mental distress as an everyday, experiential quality

The next cluster (3)—“*Nuanced Handling of Mental Health*”—is constructed from the “*Realism*” board:

- 3.a) “Reframing what distress is and contextualising it in life contexts.”
- 3.b) “Finding a way to normalise with real data - to show people that some level of distress is normal”
- 3.c) “Asking people what hope means for them and challenging the idea that people are broken”
- 3.d) “I think this is mostly about realising that using technology and being in spaces mediated by technology are as much related to your wellbeing as the ‘real’ world around us, and accepting the good and bad parts, but striving to enhance the good.”
- 3.e) “Giving a different side of the ‘mentally ill’ model, i.e., tech developed by people who critique the medical model.”

This cluster points to a humanistic view of mental distress necessarily requiring existing “context”, by being embedded within an understanding of someone’s personal circumstances and wider influences (“real world”, 3.d). The notion of “real” permeates this cluster: Participants juxtapose the construction of mental health and mental distress through technology as often not being *true* to people’s actual experiences—practitioners express that technology can profoundly fail in how it measures, assesses and presents them (“real data”, 3.b). On the flip side, participants expressed the importance of normalizing mental distress, including its mediation through technology, as an everyday occurrence (3.a, 3.b, 3.d), and not as a sign of being “broken” (3.c). Within this interplay, “hope” emerges as an important concept to facilitate “real” contextualisation; for people to perceive and approach their mental health through a pluralistic, *realistic* experiential lens that is neither all good or all bad (3.c, 3.d, 3.e).

The next and last cluster (4)—“Dominance of Medicalised Care”—is constructed from the “Dystopia” board:

- 4.a) “People are seen as ‘ill’ rather than trying their best to survive”
- 4.b) “That it is all about modifying ‘faulty’ thinking or brain re-wiring”
- 4.c) “Anything that isn’t evidence based is not allowed to exist.”
- 4.d) “Cognitive Behavioural Therapy as the only available therapy and the eradication of person-centred therapy.”
- 4.e) “The death of creativity in the therapy world”
- 4.f) “Everything is goal driven and the death of creativity”

In this cluster, participants describe worries about medical(ised) approaches in SCTs dominating the technology. Here, fears about common views of mental health being reductionist become visible: People are seen as “ill” (4.a) and “faulty” (4.b), with mental distress being framed as an issue in apparent need of being corrected or cured. In a similar vein, participants express worries about a loss of alternative, or pluralistic care approaches and pedagogies: Here, practitioners reflect on the streamlining of therapy and counseling as a normative activity (“goal driven”, 4.f) by specifically calling out how creativity in the field is being eroded, and how *behavioral* approaches like cognitive behavioral therapy are valorised (4.d, 4.e, 4.f). The result of these perceived factors is a caring context that denies the everyday, and sometimes laboursome, experientiality of mental health and mental distress (“trying their best to survive”, 4.a). Instead, participants describe it leading to a *flattening* of

mental health experiences: Both in how they are being understood (“faulty” thinking in need of correction), and how they ought to be approached (through behavior intervention).

## 4 Discussion

In this section, we discuss our findings. After outlining the limitations of the work presented in this paper, we present potential design opportunities for caring technologies that use humanistic, person-centered approaches as inspiration.

In **Study 1** (see Section 3.2), we engaged practitioners through an encounter group to discuss (self-)care technology from a person-centered humanistic perspective. We thematically analyzed the data to construct two themes: The *first theme*, *Levels of Care* (see Section 3.2.4.2), showed how practitioners characterize technology in ambivalent, conflicting ways: On the one hand, they see it as a medium with the potential to support nuanced, layered and personalized care. On the other hand, they understand it as a tool caught between economic profits, healthcare constraints and competing understandings of mental distress—e.g., Michelle describing how the technology and its contexts can be conflicting (see Section 3.2.4.1). The *second theme*, *(De)humanized Technology* (see Section 3.2.4.1), showcases how participants stressed the need for human, interpersonal contact as a fundamental feature of mental health care, and an understanding of mental distress as a mundane everyday occurrence, an experiential facet of life that should not be judged, or evaluated—e.g., Barbara explaining the value of being witnessing in genuine ways (see Section 3.2.4.2). Within this framing, (self-)care is not an universal *one-size-fits-all* activity that is enacted top-down: Instead, it is a negotiated endeavor between people, that requires and allows a nuanced, pluralistic toolkit of potential approaches, tools and mediums—e.g., Michelle explaining how she sends audio messages to support her clients via Whatsapp (see Section 3.2.4.2). In both themes, participants considered humanistic qualities as difficult to integrate within *current* SCTs and their constrained contexts, environments, and goals.

Based on these insights, we conceptualized **Study 2** (see Section 3.3) as an attempt to go beyond the status quo, and to explore the potential of humanistic SCTs through speculation. We invited humanistic practitioners and students to speculate, re-imagine and re-configure SCTs collectively using asynchronous, anonymous online white boards. We constructed two trends out of images and text that participants posted, which echo technology being an ambiguous, contested yet powerful tool: The *first trend*, *People as People, not “Users”*, (see Section 3.3.5.1), describes how participants construct an understanding of current SCTs as normative mediums, that approach mental distress from an universal standpoint: Instead of being an individual client with agency and needs, the person using the technology is understood only as an “user”, whose behavior ought to be changed. In this trend’s first cluster, *Normative Tech-Solutionism* (see Section 3.3.5.1); participants elaborate on SCTs being a disruptive means to a clearly defined end: To make people with mental distress function, or perform being functionable—e.g., “[the] user presents a [idealised] version of themselves” (1.d). In the second cluster,

“Intentional SCTs” (see Section 3.3.5.1), participants describe alternative ways for SCTs, by centring their agency and SCTs being holistically in service of the person engaging with them—e.g., by being “responsibly innovative and person-centered” (2.d). The second trend, *Mental Distress as an Everyday, Experiential Quality*, (see Section 3.3.5.2), echoes the need for SCTs to approach mental health as an in-flux quality in people’s lives, without a preconceived, fixed frame of what it should or ought to be. In this trend’s first cluster, “*Nuanced Handling of Mental Health*” (see Section 3.3.5.2), participants outlined ideas of SCTs could actually embody or provide to people, including “*what hope means*” (3.c) or wrestling with the reality of technology mediating our mental health, to “*accept[...] the good and bad parts*” (3.d). Participants stress, once again, that mental health, as a personal quality, should not be approached through a normative, outcome-driven lens—but “*to show people that some level of distress is normal*” (3.b). In the trend’s second cluster “*Dominance of Medicalised Care*” (see Section 3.3.5.2), practitioners expressed anxieties, fears and concerns that technology can be a tool to further the current medical(ised) status quo—e.g., “*people are seen as ‘ill’ rather than trying their best to survive*” (4.a)—and to shift (self-)care even further away from being a relational, experiential quality toward depersonalized automation—e.g., “*everything is goal driven*” (4.f).

As we have showcased, current, common approaches to mental health tend to center an individualistic, often decontextualized, view of self-care that seeks to alleviate distress—without necessarily engaging in sense-making of an individual’s experience (see Section 2.1). Throughout both studies, participants echoed concerns by describing how this medical(ised) stance manifests itself as the dominant force in healthcare, and by proxy, in caring technologies as replacing, reducing, or automating caring practices. In contrast, participants characterize a humanistic framing as radically different from this perspective: Here, mental distress is seen an experiential facet of everyday life (see Section 2.2). It is understood as an unsettling discrepancy between the self that a person currently is, or has to be, and the self a person may seek to authentically be. This interplay between a person, their possible selves and their environment is recognized as “*incongruence*” (see Section 2.3.1). Across both studies, participants showcased a pluralistic view of technology full of tensions and contrasts, that oscillated between these two framings, as a difficult undertaking: Participants see SCTs as being mostly “*one-size-fits-all*” tools, that are heavily influenced by profit-driven agendas, as actors eroding of interpersonal care—qualities that are antithetical to a humanistic understanding of care (see Section 2.2). As such, the speculations of the participants tended to be pluralistic, yet they were firmly rooted in realistic ideas, contexts, and capabilities of technology. Here, we see how speculating beyond the status quo is a difficult, multi-faceted undertaking: Participants did not perceive technology as a neutral actor, but as a medium firmly intertwined with medicalisation, and normative potential harm. However, participants did see value in technology, where/if SCTs center relational, considered, and contextualized care: Here, the *situatedness*, context and framing of SCTs was vital to access this possibility. This includes an understanding of mental health as a multi-dimensional, relational quality that touches on all aspects of someone’s

life—including personal, cultural, societal, environmental, and political dimensions.

## 4.1 Limitations

Before heading into our design opportunities, we elaborate on the limitations of the work showcased in this paper:

- **Emphasis on our epistemology:** As described earlier, we designed and undertook the two studies from a “*phenomenologically-situated*” epistemological standpoint (Harrison et al., 2011), with a strong humanistic underpinning (see Section 3.1). As a result, the knowledge created through these research endeavors is specific, contextual, and relational: It is constructed through the people involved in it, through interpretation, context, and collective sense-making.
- **Participant self-selection:** While we took great care to ensure that our studies were as accessible as possible, we still relied on English-speaking participants with the interest, time, energy and technology to participate in our research. Similarly, our recruitment channels were heavily targeted toward practitioners and students of HP from the UK and the USA. By default, this configuration excludes a great deal of people.
- **Covid-19 pandemic as context:** The second study happened during the height of the Covid-19 pandemic. Such a monumental isolating and traumatic event may have influenced participants’ state of minds, resources, and energy at the time.

## 4.2 Design opportunities: toward person-centered, humanistic SCTs

Based on our insights, we outline several design opportunities for SCTs by using humanistic psychology and the person-centered approach as inspiration for their conceptualisation, design, and development. Using the concept of “*in/congruence*” as our spring board to develop our design opportunities, we call back to the “*Rogerian core conditions*” (see Section 2.3.1); as principles to support people in their congruent self-actualisation journey: We use the concepts of “*genuineness*”, “*unconditional positive regard*”, and “*empathy*” as guiding principles and inspiration for exploring what humanistic, person-centered (self-)care technologies could offer, and be like. As with all humanistic endeavors, these opportunities are not meant in absolute terms, but constructed out of the research team’s *situated* understanding (see Section 3.1).

### 4.2.1 Design opportunity: empathy

As a humanistic principle, “*empathy*” invites us to relate to other people, to feel with them openly and to get to know them and ourselves better in the process (see Section 2.3.1). Within the context of designing (self-)care technologies, empathy invites a process of honest reflection and interrogation of our positionalities as makers of them: *What assumptions, narratives, and stereotypes about self-care, mental health and mental distress do we hold within*



ourselves? How might our own experiences with mental health influence the conceptualisation, design, and development of SCTs? How do we make sense of this design space? How do we think it should be addressed, managed or “treated”? These questions confront designers with their own positionalities, and how they make sense of their own mental health. From a person-centered perspective, it becomes clear that designing technologies for care is not a neutral endeavor, but a situated, contextual undertaking of being a person with mental health (and distress) in the world, too.

Embarking on this process of (un)learning requires a supportive environment and the psychological safety, time, and space for people to step through this (difficult) process—it should not be taken lightly or rushed, as the designer’s beliefs, worldviews and opinions may be challenged, unsettled, and reconfigured. However, once kick-started, this self-reflexive process invites designers to radically relate and encounter themselves and others, as people living in an interdependent world: We see great opportunity for designers to wrestle with their understandings of the status quo, their motivation to work in a caring design space and to wrestle with common, dominant and ubiquitous approaches. This process allows designers a rich and deep engagement with mental health across all domains, while also offering them an opportunity for personal growth and self-actualisation.

#### 4.2.2 Design opportunity: genuineness

As a person-centered value, “genuineness” asks people to be as authentic to their true selves as possible, to bring themselves as they are, into that moment in time (see Section 2.3.1). If we seek to design pluralistic SCTs that approach mental health *genuinely* as an experiential part of everyday life, it is vital that designers engage with mental health, self-care, and technology as complicated, negotiated, and complex topics; to avoid a “flattened” presentation of mental health, as expressed by Cifor and Garcia (2020). Designers need to confront and reflect on why people turn to SCTs: Therefore, designing them requires a sense-making exercise of how SCTs fit within wider systems of (health)care, technology, and culture. Bringing concepts, activities, and assumptions together in a self-care context means that they enter relationships with each other that need to be adjusted, balanced, and tested: As designers, are we adding game elements to our self-care app to support people in building a meditation practice, or are we looking for a mechanism to keep people subscribed to it at all costs? (see *refTrend: People as People, not “Users”*).

The interconnectedness between every aspect in the SCT will fundamentally influence how somebody is able to practice self-care with it; as approaches, concepts and ideas all come with benefits and opportunities, but also with historical, cultural and societal baggage and challenges (see Section 2.1): *Which pre-defined goals, outcomes, and ways of being are we currently imbuing SCTs with, why and what for?* Throughout all studies, participants showcased how mental health care happens in a contested space, full of interpersonal relationships, environmental influences, economic interests, and political decision-making, e.g., see Sections 3.3.5.2 or 3.2.4.2. Here, we see an opportunity to explore SCTs as artifacts that aim to be of genuine service to the person who is using them, and to receive them as they are: To approach mental health and mental distress as part of the human experience, and not to center the dominant discourse by default, e.g., as described by practitioners in Section

3.2.4.1. Concretely, this means unpacking SCTs and their framings holistically: Understanding mental distress as a deficit in need to be solved will directly inform a designer’s decisions, and how much freedom, and flexibility they can or should allow their “users”. This framing informs the SCT’s priorities: Which data, metrics, actions, and activities could or should be collected from the “user”, and taught to them as a practice in the SCT, as characterized by practitioners in Section 3.3.5.1. Here, we see great potential in SCTs to be designed for radical, fundamental agency and autonomy; as expressed by participants in Section 3.3.5.2.

A potential experiential, humanistic framing of SCTs could result in providing people with the *genuineness* to make informed decisions about the SCT’s intent, as highlighted by participants in (see Section 3.3.5.1); to be able to judge how suitable, flexible and adaptable it is for them and their contexts; for a SCT to showcase clearly what it can and cannot provide (see Section 3.2). It is important to note that this does not mean that every SCT must be usable by every single person: Instead, it means shifting away from presenting SCTs as seemingly neutral tools without ulterior motives, toward showcasing them *genuinely*: As designed artifacts with a clear underpinning and goals in mind—including a wide variety of different values, pedagogies, ethics, and morals (among others), all designed for different people.

#### 4.2.3 Design opportunity: unconditional positive regard

Within a session of person-centered counseling, the therapist seeks to receive their client with “*unconditional positive regard*”; to not judge the other person, but to witness them in their entirety (see Section 2.3.1). Participants described at length how caring technology is easily employed as a harmful actor, always at risk to disrupt people’s relationship with themselves (e.g., see Section 3.2.4.2), their connection to other people (e.g., see Section 3.3.5.2) or even their understanding of care as a whole (e.g., see Section 3.3.5.2). Participants showcased how caring for people with and through a humanistic lens is a relational contextual undertaking, that requires personalisation, nuance and rapport building between people (e.g., see Section 3.2.4.1). Throughout both studies, they outlined that SCTs are interfaces that are afforded a great deal of power, and by proxy, demand great vulnerability from the people engaging with them (e.g., see Section 3.3.5.2). Bringing these two aspects together, we see an opportunity to take this relational understanding of care as a negotiated, holistic, and quality into SCTs. We encourage designers to intentionally focus on the process of interacting with them, instead of concentrating on the potential outcomes of using a SCT: Instead of presenting the common narrative that self-care is something to be done through a SCT, we encourage designers to radically imagine what self-care with a SCT might mean and look like, through a critical humanistic lens. How do you build relational trust with an interface, and how can we design supportive structures, that allow for unconditional positive regard? Instead of a plethora of activities to choose from, what if we designed interfaces that ask what the person needs from them?

Within this context, designers could explore different intensities of (creative) care through SCTs that go beyond a singular interface, and to reconfigure, contest and re-imagine the interplay with other technologies. *Instead of presenting SCTs as existing outside of a person’s wider world, (how) can we design with*



*the everyday messiness that happens within technology?* Mundane examples include ordering food on our phone, but also using it to video call our therapist or writing business emails on our laptop, but also accessing mindful breathing exercises through it. Embracing this interplay as part of people's experiential experience of mental health is not without risk, but it embraces technology as a pluralistic, complicated everyday medium that is already deeply embedded in people's lives and care contexts (e.g., see Section 3.2.4.2), in good and bad ways. As such, we encourage designers to go beyond directed endeavors that either seek to alleviate distress or improve mental health, but to allow themselves to explore or adopt a more interconnected view. We see this relationality in itself as an invitation to think, feel and design outside of the common notion of getting "users" from "unwell" to "well"; for many different SCTs to support many different people in their self-actualisation, their journey of coming into themselves, as many different, yet unique authentic selves.

## 5 Conclusion

In this paper, we engaged humanistic practitioners to conceptualize and make sense of their understanding of self-care technologies. Through two studies—an encounter group and an online space for speculating about self-care technologies—we investigated current issues, potentials and from a person-centered, humanistic perspective. Through thematic analysis and affinity mapping, we constructed an understanding of self-care technologies as ambiguous, ambivalent tools that are caught between cultural and societal tensions. Humanistic practitioners see potential in technology to support care pluralistically, but they currently see it as means to reduce interpersonal care to a minimum, and to individualize mental health further. We wrestle with these clashing insights and outline three future design opportunities for the design and development of self-care technologies based on person-centered, humanistic values and concepts.

## Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

## Ethics statement

Both studies were approved by the Ethics Committee of the School of Computer Science at the University of Nottingham. The

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studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

## Author contributions

MF, PB, and DM were PhD supervisors of VS at the time of conducting this research. VS wrote the first version of the manuscript. MF, PB, and DM helped revised it. All authors contributed to the conception, design, analysis of the studies showcased, and approved the submitted version.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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