

The Digital Transformation of Mental Health

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**Dedication**

To Alex, Mom, Gabby, and Copper.

## Abstract

The United States is experiencing a mental healthcare crisis. Alongside growing numbers of mental illness diagnoses we are also faced with the problems of practitioner scarcity, the geographic remoteness of populations in need of mental healthcare, and prohibitive costs for services that might otherwise be within reach. A potential solution to these problems, many technologists, healthcare workers, and others believe, is the integration of technology into the delivery of mental healthcare. This dissertation explores the emergence of a field that seeks to do just that, that I term the digital mental health industry, and which encompasses three areas: telemedicine, applications, and artificial intelligence.

Despite the interest that the digital mental health industry attracts, as of yet there has been little study of it unto itself. This project provides not only an examination of the technologies it relies upon, but also its workers' beliefs as well as the field's broader social and medical effects. Methodologically this dissertation utilizes a combination of fieldwork, interviews, and textual analysis to tell the story of how the digital mental health industry came to be, how it is changing what it means to be mentally ill or healthy, and how technology mediates processes of self-care.

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## Chapter One: Introduction

A thirty-something Caucasian man, looking disheveled and unhappy, lies in bed. He is dressed in a hospital gown and his arms are wrapped tightly around himself. He is facing the camera and looks miserable. “Mister Green?” a voice calls. The man in the bed, presumably Mister Green, ignores the call, but he is summoned once again: “Mister Green, I’m over here on the screen.”

Mister Green turns his head and, from a different angle, we see that he is in a hospital, and that near the foot of his bed there stands a large screen featuring the image of an older, bespectacled, suit-wearing man. This other man sits in a different location, a room with a couch positioned behind him, while in the hospital a woman standing by Mister Green clutches a pile of medical files to her chest.

The camera cuts to the room where the man in the suit is seated, providing viewers with his perspective into the hospital room, also through a screen. “I’m Doctor Black,” he tells Mister Green. “And I’m here to do a psychiatric evaluation. I know it is a little unusual, but I want you to feel as comfortable with me here on the screen as you do with Nurse Jackie there. Okay?” Mister Green nods, slowing sitting up in bed, and directs his attention toward Doctor Black’s onscreen image.

“Can you tell me what’s been going on in your life?” Doctor Black asks.

“I.. I don’t know,” Mister Green responds, shaking his head and running his hand through his hair. “I just...” He trails off into silence.

“And how long have you felt this way? When did this start?” Black asks.

“It just sort of happened one day. It came out of nowhere.” He breaks eye contact with the doctor and rubs his temples.

“Have you been taking any kind of medication for this?” Doctor Black asks.

“Yeah, I was on some antidepressants. They didn’t help,” replies Mister Green. Doctor Black types something on his computer keyboard then turns back to Mister Green. “And are you still taking the medication?” he asks.

“It didn’t really seem to be much use, so no,” answers Mister Green, shaking his head.

“Well, we’re going to work together on this,” Doctor Black tells him confidently. “And I know that, in time, we’ll be able to get you back to the way you were before. Okay?” he smiles at Mister Green, and an optimistic, upbeat piano melody begins to play. “So let’s get started, shall we?”

(“Telepsychiatry Session,” 2012)

The United States is experiencing a mental healthcare crisis. Alongside growing number of mental illness diagnoses we are also faced with the problems of practitioner scarcity, the geographic remoteness of rural populations in need of mental healthcare, and prohibitive costs for healthcare services that might otherwise be within reach (Frueh, 2015; Girgis, 2014; Ornstein, 2016). With all of this in mind, there are many who are of

the belief that there will unlikely “ever be enough highly trained professionals to treat all patients globally with the therapeutic “gold standard” of one-to-one therapy” (Jones et al., 2014, p. 1603; Proudfoot, 2012). Delays in accessing healthcare services often lead to negative outcomes, including longer (and more expensive) hospital stays, worsened prognoses, and increased illness severity (Weissman, Stern, Fielding, & Epstein, 1991). The commercial described above, therefore, is one that suggests a potential solution to these problems: the integration of communications technologies into the delivery of mental healthcare services to expand their reach. This is in line with a growing sentiment amongst technologists, healthcare workers, and even legislators, who share the belief of clinical psychologist and author B. Christopher Frueh: “Technology is the key to solving mental healthcare access problems in the twenty-first century” (p. 304).

This dissertation explores the emergence of the field that seeks to do just that, an industry that I term the digital mental health industry (DMHI). The DMHI encompasses three areas (telemedicine, smart device applications, and artificial intelligence) where technology and mental health meet, both in medicine and culture more generally, and attempts to provide solutions to a number of concerns: the growing prevalence of mental illness (in particular, anxiety and depression) amongst all populations in the United States, the role of technology in our everyday lives (including how we care for ourselves), and a growing distrust in the long-term efficacy of psychopharmaceuticals. Despite the interest that it attracts, as of yet there has been little critical study of this industry unto itself. Therefore this project explores both the means of production and distribution of DMHI technologies, the beliefs that circulate amongst industry workers that make them feel that their work is important, and how the tools they create are

received by the general public as well as medical and regulatory authorities. This dissertation offers a combination of industry fieldwork, interviews, historical research, and textual analysis to tell the story of how the DMHI has come to be, how it is changing what it means to be mentally ill (in both popular culture and medical discourses), and how technology is mediating processes of self-care, particularly related to mental health.

These questions do not always have clear answers for a number of reasons that I address in this introduction. For starters, culture and medicine have an ongoing, complex relationship as they work together in defining what constitutes both health and illness; medical professionals and socio-cultural scholars alike have yet to agree upon a sufficient diagnoses for what even constitutes mental illness; meanwhile, we have seen the emergence of a neoliberal ethos of illness prevention in all matters related to health, including mental health; and finally, technology's prevalence in how we manage ourselves and our lives has led to widespread changes in how mental illness is both diagnosed and managed. One of the challenges associated with studying the culture of a technology (and in this case, an industry built upon the emergence of technologies), is avoiding what Carolyn Marvin (1988) describes as an "instrument-centered perspective" (p. 4). Instead of focusing on a particular technology, or set of technologies, this project explores changes being wrought from within the medical industry as well as those being imposed from the outside by technological changes. This is, therefore, largely a study of cultural changes: how traditional medical fields are adapting to changes wrought by communications technologies, particularly video conferencing, smart devices, and artificial intelligence; how technological industries are forcing those changes to happen;

and, of course, how individuals (both users of digital health toolsets and their creators) imagine their industry and their work within it.

The findings of this dissertation come from years of both studying – and participating in – the digital mental health industry using a combination of methods: in-depth interviews, fieldwork, my reflections after using many of the tools that were objects of analysis, and critical analysis of popular – and medical – discourses related to mental health practice and theory. As I did all of this it was of the utmost importance that I use multiple methods to create an analytical process whereby I was able to double (sometimes even triple) check my analyses to establish that this work accurately reflects the DMHI and its discourses, and not simply my own opinions. This ethos draws from a rich tradition of anthropological, ethnographic, and media studies scholarship championed by feminist researchers who are concerned with matters of accuracy in reporting, and demonstrating their respect while learning from - and collaboration alongside - their research participants. To that end I often shared interview transcripts with participants who wanted to reflect upon our conversations and who sometimes wanted to clarify their statements before I analyzed them. In this way, I attempted to combat what Judith Stacy described as exploitation of the “subject” in my research by working with participants despite my being an industry outsider.

Just as Marvin (1988) urges us to see beyond technology itself when we study technology, this dissertation asks readers to see beyond the digital mental health industry even when we believe that is what we are examining. As such, this work explores the discursive formations that encompass the digital mental health industry: technology, medicine, mental health, mental illness, labor practices, affective states and emotions,

their relationships to and with productivity, and digitization of health more generally, so as best to understand how, and why, this industry has emerged. This project, therefore, is not merely a study of the relationship(s) between medicine, culture, and technology--it is also a critical media studies project that explores questions of power and representation, and the ways that the latter in particular plays a significant role in determining the efficacy and usability of DMHI technologies. As Marvin (1988) writes in *When Old Technologies Were New*, we ought to shift our focus

from the instrument to the drama in which existing groups perpetually negotiate power, authority, representation, and knowledge with whatever resources are available. New media intrude on these negotiations by providing new platforms on which old groups confront one another. Old habits of transacting between groups are projected onto new technologies that alter, or seem to alter, critical social distances. New media may change the perceived effectiveness of one group's surveillance of another, the permissible familiarity of exchange, the frequency and intensity of contact, and the efficacy of customary tests for truth and deception. Old practices are then painfully revised, and group habits are reformed. (p. 5)

With that in mind, each chapter of this dissertation explores the rationale that led to the formation of the DMHI and the questions it raises about what it means to take good care of one's mental health during the twenty-first century, from its claims of expanding mental healthcare access, to its perpetuation of the problematic medicalization of mental states, and even the ethical quandaries related to the implementation of artificial intelligence in providing healthcare.

In the pages that follow, I use three phrases (mental disorder, mental illness, and mental distress) somewhat interchangeably. "Mental disorder" is the terminology preferred by the American Psychiatric Association, but the phrase itself is not value-free: disorder suggests divergence from order, or normalcy, which ultimately can be fixed (or at least attempts should be made to fix). Those working in the emerging fields of

neurodiversity and mad studies, for example, argue that this phrase perpetuates a pathologization of difference and able-ism (Brownlow, 2010; Runswick-Cole, 2014; McWade, Milton & Beresford, 2015). As McWade, Milton and Beresford (2015) write,

those politically aligned with the psychiatric survivor movement tend to reject medical concepts of their distress and as such would not consider themselves to be psychologically impaired, whereas the social model of disability tends to be read as maintaining impairment to be a biological fact... (p. 306)

Nonetheless, I have chosen to use both “mental illness” and “mental disorder” in this dissertation because those who work in the DMHI use them themselves, and although I agree that there is a degree to which diagnoses of mental illness and/or disorder *might* perpetuate able-ism, there are also those who take pride in their “madness”<sup>1</sup>.

### **Sectors of the Digital Mental Health Industry**

The DMHI itself has three the sub-sectors within it: telemedicine, the smart device sector, and artificial intelligence. Telemedicine is a field that encourages the use of communications technologies to provide medical care at a distance (“About Telemedicine,” 2017). These technologies include, but are not limited to, mHealth tools (that is, cellphone and wireless devices that are therefore mobile), computers, and the Internet (World Health Organization, 2011). Some entities use other terminology to refer to the same (or similar) practices and processes: The World Health Organization uses “eHealth,” for example, while others prefer “e-health” (Eysenbach, 2001). The concept of telemedicine was, in its earliest days, created to provide medicine to geographically remote locations, through either asynchronous or real-time mechanisms (World Health Organization). Today, however, in providing care for those populations, it is increasingly

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<sup>1</sup> For scholarship on the Mad Pride movement, see the work of Schrader, Jones and Shattell (2013) and Farber (2012).

available by those who would otherwise be able to access medical care. For example, an ever growing number of insurance companies cover telemedicine services, and this includes some services for Medicare and Medicaid patients (“About Telemedicine”).

When it comes to mental health care delivered via communication technologies, terminology also varies. Cavanagh and Millings (2013) use “e-mental health” to describe “resources [that] might include tele-therapy services, internet based interventions, mobile phone applications and self-help programmes dedicated to mental and behavioural health. Mental health related social networking sites can also fall under the remit of e-mental health” (p. 198); Riper, Andersson and Eysenbach (2010) also use “e-mental” health but explain it as “a generic term to describe the use of information and communication technology (ICT) –in particular the many technologies related to the Internet –when these technologies are used to support and improve mental health conditions and mental health care” (p. e74); Yellowlees, Chan and Parish (2015) call telepsychiatry “the use of videoconferencing to perform psychiatric consultations” (p. 477); Simpson, Richardson and Pelling (2015) use telepsychology to describe “psychological interventions mediated by distance technology” (p. 249); and telemental health refers to “a use of telemedicine to provide mental health assessment and treatment at a distance” (Hilty et al., 2013, p. 444).

Although the mHealth (mobile health) component of telemedicine includes cellphone technology, this does not mean that smartphones or smart devices themselves, nor the applications on them, currently count as medical devices unto themselves. The U.S. Food and Drug Administration (FDA) embraces the possibilities of beneficial health interventions through mobile technologies (“Mobile Medical Applications,” 2015), but also differentiates between what constitutes a mobile application that is under their



purview (i.e., regulated as a medical tool) versus those that are simply applications. This latter group, such as those that can be downloaded through the iTunes or Google Play stores, are not considered medical mobile applications despite their mobility and claims of medical efficacy. Mobile medical apps, which they *do* regulate, are defined as “medical devices that are mobile apps, meet the definition of a medical device and are an accessory to a regulated medical device or transform a mobile platform into a regulated medical device” (para. 5). In this view,

**Mobile apps that transform a mobile platform into a regulated medical device and therefore are mobile medical apps:** These mobile apps use a mobile platform’s built-in features such as light, vibrations, camera, or other similar sources to perform medical device functions (e.g., mobile medical apps that are used by a licensed practitioner to diagnose or treat a disease). (“Examples of MMA’s the FDA Regulates,” 2015, para. 5, emphasis in original).

Despite the FDA’s determination of what ought to be regulated and what is left unregulated, those who work “beyond” the purview of its regulatory influence remain excited the growth in the smart device industry. The International Telecommunication Union (2015) estimates that, by the end of 2015, 69% of the world’s entire population of 7.4 billion people had 3G mobile broadband coverage. This is particular exciting for those who believe in the efficacy of smartphone medical devices and applications, for as Proudfoot (2012) notes, mobile phones

offer unique opportunities for accessing health information, monitoring progress, receiving personalised prompts and support, collecting ecologically valid data, and using self-management interventions when and where they are needed. Furthermore, entry barriers associated with other forms of technology are minimised, enhancing the potential to reach underserved populations. (p. 111).

Applications for mental health typically fall within one of the two types described by Burns et al. (2011): those that are interactive with their users, providing a platform “to input information about their situation or internal states, and provide in-the-moment

responses personalized to a patient's immediate needs," whereas the other category refers to the technological capacities of smartphones (such as their GPS systems, Bluetooth, voice recorders, accelerometers, and so forth), "that could provide clues to patient states and contexts" (p. 2). Aguilera and Muench (2012) call these capabilities "passive sensing" technologies and argue that applications that use them already, or likely soon, will

include intervention components such as notifications when an individual is aroused (e.g., through galvanic skin response, heart rate variability, etc.) to engage in stress- management techniques or, as noted earlier, alerts based on GPS or geographic information to avoid high-risk situations... With new voice capture and analysis technologies becoming more commonplace... to assess the emotional tone of speech or use text recognition software to assess depressive or other symptomology... [and] facial scans to determine emotion from subtle facial cues. (p. 6)

All of these, the authors believe, will create data that can be shared with the user his or herself, either to prompt an active response or to create visualizations of their data, while also being share-able with mental their healthcare provider.

The third component of the DMHI is Artificial Intelligence (AI) and "learner machines," which are being increasingly used to provide therapeutically derivative care to their users. When Dr. Joseph Weizenbaum developed ELIZA at MIT in 1966, it was the first artificial intelligence of its kind: capable of responding to natural language conversations with users, who typed statements (or sets of statements) to the program, ELIZA would engage users much as a psychotherapist might (Weizenbaum, 1966). The ELIZA program was so successful, in fact, that some of those using ELIZA had believed that they were conversing with a "real" therapist, a "real" person, and were shocked (and believed their privacy was violated) upon learning ELIZA's true identity (Weizenbaum, 1976). In the years since ELIZA was released, vast improvements have been made to AI

that is capable of natural language conversations, and subsequently the relatively new field of embodied conversational agents (ECAs) has emerged that explores the efficacy of these tools (Provoost et al., 2017).

### **Cultural Studies of (Mental) Health and Illness**

Regardless of which sector of the DMHI a technology falls within, I utilize a cultural studies approach to explore its socio-political dimensions. Cultural studies research troubles the taken-for-granted assumptions about what constitute facts and beliefs, often looking to the political and cultural effects – and rationalities – of many of our everyday practices. In the context of this dissertation, that means examining not only how digital health technologies are understood by practitioners and clinicians within medicine, but also how those working in other fields (such as psychology, psychiatry, and technology creation) believe that their work is changing what it means to care for oneself effectively with particular emphasis upon mental health. Although it is beyond the scope of this dissertation, looking at how these products are received in depth would create a more comprehensive project, although here I relied only upon my own textual analysis to do so.

Many cultural studies projects, exploring to the relationship between self-care and health, use Foucault's (1988) conception of "technologies of the self" to explore the relationship between how we care for ourselves and how those behaviors and beliefs reflect the broader interests of neoliberalism (see Miller, 2008; Heyes, 2006; Bedor, 2016; Lupton, 2015; Brijnath & Antoniadis, 2016 for some examples). These technologies, Foucault wrote,

permit individuals to affect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct and way

of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection or immortality. (p. 18, 1988)

Through this lens, the various toolsets, trends, and discourses discussed in this dissertation can be understood on two levels: first, as literally the tools that people are using to care for themselves and, secondly, as reflective of the larger-scale political and financial beliefs that are evocative of neoliberalism. Ultimately, that is what this project contributes: a study of how the development of a new industry related to the management of mental illness, and the maintenance of mental health, are two sides of the same, neoliberal coin.

When it comes to mental health and illness, it is important to critically interrogate the processes of diagnoses and mental health management that have facilitated the turn toward digital health interventions. Health, and mental health particularly, is neither value-free nor acultural. Like bodily illnesses more generally, what is considered a mental disorder depends largely upon one's culture, context, and position in society. For example, when it comes to experiences with schizophrenia and "hearing voices," recent anthropological scholarship has found extreme variation in the experiences of Americans versus people from other nations (Luhmann, Padmavati, Tharoor & Osei, 2015). In one study involving interviews with participants from India and Ghana, individuals "insisted that their predominant or even only experience of the voices was positive – a report supported by chart review and clinical observation. Not one American did so" (p. 42). And while Indian and Ghanaian citizens often believed the voices they experienced were those of family, friends, or spirits, American participants "experienced voices as bombardment and as symptoms of a brain disease caused by genes or trauma" (p. 42). The authors of the study concluded by suggesting that the effects of "cultural shaping [on

the experience of auditory hallucinations] may be more profound [than previously thought]. It seems from our evidence that auditory hallucinations are not only construed differently in different cultural settings, but that their affective tone actually shifts” (p. 44). This position, sometimes called social constructionist or cultural relativist, situates an experience as medical, and especially an illness, in ways that are culturally contingent (Brown, 1995). When taken to an extreme, those who critique the diagnostic processes of mental illness assert that it is easy to pathologized any divergence from a presumed “normal,” and that diagnoses are a fiction designed to maintain social order. Thomas Szaz (1973; 1987; 1997; 2008), for example, who was both a psychiatrist and prominent critic of psychiatry, argued throughout his career that

The claim that “mental illnesses are diagnosable disorders of the brain” is not based on scientific research; it is a deception and perhaps self-deception. My claim that mental illnesses are fictitious illnesses is also not based on scientific research; it rests on the pathologist’s materialist-scientific definition of illness as the structural or functional alteration of cells, tissues, and organs. If we accept this definition of disease, then it follows that mental illness is a metaphor, and asserting that view is stating an analytic truth not subject to empirical falsification. (2010a, para. 11)

Another prominent critique of diagnoses of mental illness comes from those using the framework of medicalization. “Medicalization” is a term that reflects this process of transforming of non-medical parts of life into treatable, curable, illnesses or diseases vis-à-vis medicine (Conrad, 2007). These critiques suggest that overzealousness to problematize normal parts of the human experience, considering them medical problems, is a mistake. As already described, what we medicalize – or do *not* to medicalize – is based upon social values, norms, and customs, none of which are infallible or static (Parens, 2013). In *Saving Normal: An Insider’s Revolt against Out-of-Control Psychiatric Diagnosis* (2013a), Allen Frances argues that psychiatry, like many other

medical fields, is emblematic of the problem of medical “overreach,” wherein “commercial interests have hijacked the medical enterprise, putting profit before patients and creating a feeding frenzy of over diagnosis, over testing, and overtreatment” (p. xix).

Normative mental distress is particularly apt for medicalization due to the fact that what even constitutes a “mental disorders” is itself unclear (Kinghorn, 2013). Psychiatry, for example, rather than define itself by what it *is*, defines itself by what it *isn't*:

Unlike pediatrics or geriatrics, psychiatry does not define itself by reference to a specific demographic population. Unlike general surgery or anesthesiology or radiology, it does not define itself exclusively with reference to specific technologies or interventional practices... Unlike certain medical specialties such as nephrology or cardiology, psychiatry cannot lay exclusive claim to a particular body part or organ system... Nor can psychiatry define itself according to a particular institutional structure of practice, since psychiatrists have long shed their historic identification with inpatient institutions and now work within a broad and diverse array of practice settings. (p. 47)

As explicitly articulated by psychiatrist Allen Frances, former head of Duke University School of Medicine’s psychiatry department, “There is no definition of a mental disorder” (Greenberg, 2013, p. 23). Pressed for clarification, and why one had been included in the most recent edition of the psychiatric bible, the *Diagnostic and Statistics Manual*, if this really was the case, Frances reiterated that despite that, still, “it’s bull shit... I mean you can’t define [mental disorder]” (Greenberg, p. 23).

Despite this critique, the legitimacy of the American Psychological Association (APA) itself in the United States due, in large part, to its publication of the *Diagnostics and Statistics Manual* (DSM). Yet it was not even until the DSM’s third edition as published that a working definition of mental disorder was finally included in the publication itself (Spitzer, 1999). Then, in the fifth iteration of the DSM, it became defined as

a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities.

There are other controversies related to the DSM: some contend that it is more of a profit-driven publication than one intended to actually help people (Frances, 2013b), while still others are bothered by the processes associated with arguing for what “new” disorders ought to be included in newer versions. One of the most outspoken critics in this vein is Allen Frances, who argued that this edition of the *DSM* was particularly riddled with problems:

The DSM-5 did not address professional, public, and press charges that its changes lacked sufficient scientific support and defied clinical common sense. It was prepared without adequate consideration of risk–benefit ratios and the economic cost of expanding the reach of psychiatry just when the field is about to achieve parity within an expanded national insurance system. I found the DSM-5 process secretive, closed, and disorganized. Deadlines were consistently missed. Field trials produced reliability results that did not meet historical standards. I believe that the financial conflict of interest of the American Psychiatric Association (APA), generated by DSM publishing profits needed to fill its budget deficit, led to premature publication of an incompletely tested and poorly edited product. The APA refused a petition for an independent scientific review of the DSM-5 that was endorsed by more than 50 mental health associations. Publishing profits trumped public interest. (2013b, p. 221)

Although mental illness itself may be unable to be clearly defined, and there are clearly systemic problems within the fields of psychiatry and psychology that plague even the creating of the *Diagnostic and Statistics Manual*, we can more easily operationalize what it means to be mentally healthy than ill. According to the Center for Disease Control (CDC), mental health

includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make healthy choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood. Although the terms are often used

interchangeably, poor mental health and mental illness are not the same things. A person can experience poor mental health and not be diagnosed with a mental illness. Likewise, a person diagnosed with a mental illness can experience periods of physical, mental, and social well-being. (“Learn About Mental Health,” paras. 2-3)

Yet even this definition does little to clarify what exactly mental health *is* other than suggesting it invokes our (holistic) well-being and contrasts it with mental illness<sup>2</sup>. Sara Ahmed (2007) writes, “Rather than begin with the question ‘what is happiness?’,” she writes, “a cultural studies approach asks: ‘what does happiness do?’” (p. 7). To answer this, we can look to the data related to what *unhappiness* does: in 2010, the economic “burden” of depression was determined to be roughly \$210.5 billion (Greenberg et al., 2015). In the wake of this quantification of mental distress, increasingly employers and corporations alike are looking toward options for promoting mental health amongst employees. Articles from *Forbes* (Zwilling, 2014) and *Fortune* (Addady, 2015), for example, position happy workers as productive workers, and investing in mental health is obviously a cost-savings initiative.

Investing in the mental health of employees, therefore, prior to their experiencing mental distress (whether diagnosed as mentally ill or not), is part of the decades-long turn towards preventative health measures in the United States. Medical emergencies, from a business perspective, are extremely expensive and demand immediate resources and attention that divert healthcare providers from others (Derlet & Richards, 2000).

Resources can be saved, on the other hand, by investing in pre-emptive healthcare strategies that emphasize wellness and the prevention of distress. From a historical

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<sup>2</sup> The CDC defines mental illnesses as “conditions that affect a person’s thinking, feeling, mood or behavior, such as depression, anxiety, bipolar disorder, or schizophrenia. Such conditions may be occasional or long-lasting (chronic) and affect someone’s ability to relate to others and function each day” (“Learn About Mental Health,” 2018, para. 1).



perspective, this is in line with what has been known as the emphasis of preventative medicine as a central aspect of managed care in the United States. Managed care is, like wellness more generally, an ongoing process that requires self-work and self-care: “Managed care is neither a singular process nor a static event. Rather, managed care is chimeric and dynamic, and is a highly regionalized – even local – phenomenon that is modeled by territorial demands” (Navarro and Cahill, 2009, p. 1).

Yet one of the fundamental changes wrought within the US healthcare system as a result of the Health Maintenance Organization Act by President Richard Nixon in 1973 was an emphasis on creating preventative care methods. Today, preventative healthcare practices are often encouraged (or even required) by insurance companies, as these include “maintenance checks” such as annual exams and check-ups. Rhetorics of illness prevention are already common in medicine (for example, wear sunscreen now to avoid skin cancer in the future, an example of what Levina and Quinn (2011) call the making of “pre-patients”).

What makes mental health different, though, is that preventative practices related to mental healthcare are practiced through digital toolsets in the here and now to promote and sustain what is assumed to be mental health in the present. This shift (toward indirect training and health promotion prior to the experience of illness) is part of a long line of continuing evolution when it comes to how we, the culture at large and medical professionals, believe how mental illness is best managed. During the early part of the twentieth century, for example, the public viewed lobotomies and direct brain manipulation as a favorable treatment for mental illness (Johnson, 2014). Yet lobotomies became less popular over the years, acquiring a dark and sinister tone in media content,

and preferred methods of treatment shifted from direct brain manipulation to indirect methods made possible by the advent of psychopharmaceuticals. By the 1970s it was believed that

15 percent of all Americans reported having used Valium or one of its cousin drugs in the past year, 5 percent of them “regularly” (daily for months or more at a time). The numbers were even higher for women, 20 percent of whom reported use in the past year, 10 percent regularly—twice the rate of men’s use... (Herzberg, 2006, p. 79)

However these, too, eventually experienced a profound decrease in popularity: critiques from second wave feminists (who positioned them as a form of social control), the Rolling Stones’ song “Mother’s Little Helper” (with lyrics that stated “Mother needs something today to calm her down / And though she’s not really ill / There’s a little yellow pill / She goes running for the shelter of a mother’s little helper / and It helps her on her way, gets her through the day”), and former First Lady Betty Ford’s admission of a Valium addiction shifted public perception of these drugs from positive to questionable (Herzberg, 2006; Herzberg, 2009; Jagger & Richards, 1966; Speaker, 1997).

As Horwitz (2010) describes it, beginning during the 1980’s a “turn” emerged within psychology which led to SSRI’s created for depression to overtake the position of these anti-anxiety drugs on the market. He writes,

The heyday of anxiety during the 1950s and 1960s was followed by its steep decline beginning in the 1970s, accelerating during the 1980s and 1990s, and stabilizing in the early 2000s. Over the past half century, those mental health conditions in physicians’ offices, psychiatric clinics, research, and popular culture that were seen as problems of “anxiety” came to be called “depression.” Likewise, antidepressants replaced anxiolytics for their treatment. (p. 118)

Since the 1980’s the prescription rates of SSRI’s have skyrocketed, increasingly by nearly 400 percent (Pratt, Brody, & Qiuping, 2011). Those supporting a

pharmaceuticalization critique would argue that that mental distress has been medicalized as depression and anxiety, and that those who are diagnosed as such are prescribed psychopharmaceuticals. In response books like *Prozac Nation* (Wurtzel, 1994), *Listening to Prozac* (Kramer, 1997), and the critique that easily-acquired psychopharmaceuticals now create people who are “better than well” (i.e., enhanced in lieu of treated for a legitimate medical condition) (Elliott, 2004) emerged in response to worries about the way that the human experience is changed due to the pharmaceutical industry’s influence, suggesting a pathologization of normal childhood as ADD diagnosis rates skyrocket (Miller, 2008), while still other researchers argue that easy access to stimulants like Adderall and Ritalin has changed the nature of college learning and blurred the lines between what counts as normal academic performance and enhancement therefore (Levinson & McKinney, 2013; Maier et al., 2013).

Ultimately, as I argue throughout this dissertation, the latest turn we are seeing in the treatment of mental illness is a turn toward the prevention of illness by encouraging all people to consider themselves pre-patients (Levina & Quinn, 2011) and to sustain their mental health (and to treat their mental distress) through digital toolsets. This change is facilitated by a growing amount of scholarship questioning the long-term efficacy and effects of some of the most largely accepted antidepressants (Cartwright et al., 2016). In this context, wherein perpetual work upon the self (and using new technologies to care for oneself effectively), we can see the interconnectedness of illness prevention (and even illness management) with a neoliberal ethos.

This emphasis upon productivity exemplified in the CDC’s definition of mental health, and in particular, one’s ability to “work” and “contribute” to the community, is

emblematic of the ways that a neoliberal ethos has infiltrated the domain of health in general and, more specifically, mental health. According to Michel Foucault a neoliberal context is one in which cultural norms are dictated by market principles. An economic logic underpins the state's decision to divest responsibility for its citizens, instead encouraging them to educate themselves (supposedly a way of empowering them) as how to best care for themselves with reduced oversight and support. Although government proper is reduced, governing continues as individuals learn to manage "the conduct of conduct" (Foucault, 1991).

Media discourses concerned with psychiatry have long appeared on television (*Dr. Phil*, *LA Shrinks*), in films (*Analyze This*, *What About Bob?*, *Gothika*, *Girl, Interrupted*), their paratexts (*Vulture's* "Armchair Analyst" series), speculation as to celebrities' private lives (the public "meltdowns" of Britney Spears and Mariah Carey provided much tabloid gossip and fodder during the early and mid 2000's), and an array of self-help books promising happiness, peace, and well-being. Yet, I would argue, this is not just all fun and games. It is indicative of a broader cultural trend: the importance of having (at least a basic) understanding of what constitutes mental health, mental illness, and what practices are necessary for their respective maintenance and treatment. To put it succinctly, "mental illness is a topic about which most laypersons know a little but few know a lot" (Wahl, 2004, p. 55). Nikolas Rose describes the infiltration of matters related to the mind and mental health as those that constitute the "'psy' – the heterogeneous knowledges, forms of authority and practical techniques that constitute psychological expertise... (1999, p. vii)." In sum, knowledge of psychology, psychiatry, and mental health are more than "merely" entertainment; they are pedagogical. From direct-to-

consumer advertising that television viewers are bombarded with, to the cultural mythologies and discursive formations propagated by fictional programming, the widespread dispersion of medical information insinuates that the general population “will be able to better understand their health conditions and may be led to seek medical consultation by visiting a physician” (Liu & Gupta, 2011, p. 205).

### **Dissertation Outline**

Chapter two responds to the question of how, if at all, the DMHI is expanding access to mental healthcare, which is the rationale championed as its *raison d'être* by those working within it. My analysis suggests that the truth is more complex than this oversimplification of what it means to literally “expand access” suggests. In fact, data I gathered from fieldwork at the American Telemedicine Association’s conference, in conjunction with interviews that I conducted with practicing teletherapists, suggest that the way this phrase is actually used in the DMHI has little to do with expanding mental healthcare to historically underserved groups, and instead refers to improving the quality of care that would still be received. The unfortunate consequence of this is the perpetuation of systematic inequities that already exist between groups based on identifiers such as sex, race, and socio-economic status, for as “increasing access” continues to be used to describe the effects of the DMHI, there has thus far been no data to indicate that it has had this effect upon people who are in the greatest need of mental healthcare.

Chapter three explores the ways that the DMHI perpetuates the medicalization of normative mental distress through a process that I refer to as psychosurveillance. This tendency to transform non-medical, everyday experiences (including stress, anxiety, and

depression) into medical discursive formations has wide-reaching cultural effects: it transforms all of us into what Levina and Quinn (2011) call “pre-patients,” and is part of a larger cultural turn towards communitarianism as part of responsible citizenship practices. Although technological advances, such as Facebook’s suicide preventing algorithm, are celebrated as innovative ways to prevent people from harming themselves (and others), my analysis illustrates that the work, the labor, of psychosurveillance will also require participation (i.e., surveillance) by humans.

Chapter four explores the ways that the fetishization of artificial intelligence, particularly in relation to therapeutic chatbots, presents an equally troubling turn in the search for technological prevention mechanisms for mental distress. As that chapter illustrates, there are many ways that algorithms (and the technologies that use them) have historically marginalized and oppressed particular groups of people. Unfortunately, as my analysis of toolsets on the market illustrates, those that are currently available perpetuate these discriminatory practices in multi-fold ways.

I conclude the dissertation in chapter five by revisiting my case studies and making predictions about the future of digital health as we transform, culturally, into what can be understood as a control society. The technologization of mental health, I suggest, is representative of broader cultural shifts related to power, control, and individuality.

In sum, each of these case studies examines a different facet of the digital mental health industry so as to create a project that surveys not only some of its most innovative technologies, but also to highlight the similarities across various platforms (i.e., technologies for self-care) despite their superficial differences. Although, by the time of

writing, some of these technologies may be considered outdated, or the examples I use may no longer be true or in use, what I have found as I developed this project is that my arguments about the political nature of these toolsets holds true regardless of how they are modified and/or updated. Therefore, despite the fact that technologies I describe may, at some point in the future, seem laughably old, my hope is that these case studies and my ensuing analyses will be taken seriously by those who are truly invested in creating toolsets intended to democratize access to mental healthcare in the coming years.

## **Chapter Two: The (Mis)use of “Access” in the Digital Mental Health Industry**

Although the digital health industry’s rapid growth suggests otherwise, findings from the American Medical Association titled “Reducing Health Care Disparities: Where Are We Now?” noted that, “while overall quality [of health care] is improving, access is worse and there has been no improvement in lessening disparities” (Gold, 2014, p. 2). More salient to the matter of mental health is data that is even more discouraging: according to the National Surveys on Drug Use and Health, the population that most often seeks mental healthcare is white and female and, similarly, white people are the ones who receive the most prescriptions for mental disorders (Substance Abuse and Mental Health Services Administration, 2015). People of color continue to receive subpar healthcare compared to their white counterparts (“Minority Health: Recent Findings,” 2013) and seeking mental healthcare services continues to be particularly stigmatized amongst them, a problem further compounded by gender (i.e., for men) and by income level (i.e., amongst those with lower incomes) (Abdullah & Brown, 2011; Costello et al., 2003; Perese, 2007). Other research has found that even if people of color and those with lower incomes *do* seek mental healthcare services, the biases of practitioners themselves present additional hurdles play a significant role in preventing their acceptance as new patients (Kugelmass, 2016).

With those statistics in mind it would seem self-evident that any discussion of expanding access to mental health services would seek to provide access to persons who, historically and today, have been the most underserved in this regard. According to Merriam-Webster, for example, the foremost definition of access is “permission, liberty, or ability to enter, approach, or pass to and from a place or to approach or communicate



with a person or thing” (2017, para. 1). In my home discipline of media studies, access refers “to the opportunity, ability, or right to gain entry to a space or possession of a thing. One of the most common formulations is *to have access to* a given object, action, or context” (Ellcessor, p. 7). This coalesces with how “access” is used in public health scholarship, where there is therefore a general consensus amongst

most researchers recognizing that access is related to the timely use of services according to need... Although some researchers distinguish between the supply and opportunity for use of services and the actual using of health services... most view access to health services as including realized need. (Peters et al., 2008, p. 162)

As I argue in this chapter, however, the term “access,” when used by those working in the digital mental health industry, is largely unrelated to what these definitions would suggest. Instead of using access to describe methods of providing those historically underserved (i.e., *without access*) groups in touch with mental healthcare providers or simply technologies themselves to improve mental health, “access” is instead used to describe the *improved* quality of care, facilitated by technology, and provided to persons and populations that have historically (and continue today) to receive the best mental healthcare of any US demographic. This reframing of “access” from being about a matter of expansion to a matter of quality improvement, I argue, widens the gap between those who do and do not have access to mental healthcare services.

Methodologically, in addition to interviews with DMHI workers in the fields of telemedicine and smartphone applications, this chapter uses a combination of fieldwork from professional conferences and textual analysis of advertisements to facilitate my analysis and discussion. Ultimately I argue that this industry’s (mis)use of the term “access” and phrase “increasing access” perpetuates a systematic blindness, even erasure,

of mental healthcare disparities for those populations that are beyond the purview of those who are inappropriately using that word to describe their work. Beyond that matter, the implementation of technology in mental healthcare has fundamentally shifted what it means to provide mental healthcare services online, rendering this workers part of an expanding, Internet-fuelled gig economy.

### **“Access” in the Field of Telemedicine**

In an article titled “Guidelines for the Practice of Telepsychology” the Joint Task Force for the Development of Telepsychology Guidelines for Psychologists (2013) describe the role of technology in relation to access for mental healthcare as follows:

Technology offers the opportunity to increase client/patient access to psychological services. Service recipients limited by geographic location, medical condition, psychiatric diagnosis, financial constraint, or other barriers may gain access to high-quality psychological services through the use of technology. (p. 792)

Yet I began to notice a disparity between “access” as discussed in medical and public health research and “access” as understood in the telehealth industry during my time at the American Telemedicine Association’s (ATA) 2016 conference in Minneapolis, Minnesota, where for three days I attended keynote presentations and panels, toured an exhibition hall where the latest and greatest in telehealth technologies were showcased, spoke to professionals involved in the administration and implementation of the technological systems that allow patient-provider interactions to occur, as well as professionals whose work involves these platforms. The largest ATA conference to date, then-President of the association Reed Tuckson began the conference keynote by pointing to the impressive turnout, grandiose location, and impressive exhibition hall as he noted that this, the twenty-third anniversary of the association’s founding and twenty-

first annual meeting: it “really solidifies that telehealth has moved from the periphery to the mainstream of American clinical medicine.”



*Then-President of ATA Reed Tuckson addresses conference attendees*

The goal of this year’s conference, Tuckson went on, was to generate new strategies to enhance access to telehealth services, an important mission as we were entering a “new, bright era of telehealth that promises to do so much for the health of the American people.” Interest in the field was growing, and growing quickly; this conference included members from 42 countries and every state in the United States. This year, Tuckson told us, ATA boasted over 10,000 members and housed 415 organizations within it. Despite its growth, the organization still had work to do, particularly with legislators and White House officials. He was pleased to announce, therefore, that some of those key congressional members, who were central to those efforts, were in attendance. The audience clapped enthusiastically.

Yet while technological advances were showcased throughout the conference, I was unable to find any conversation (publicly or privately) related to expanding access to health services (mental health or otherwise) to populations who had a demonstrated history of being underserved in that regard. While hundreds of new and noteworthy

technologies and services were on display, they positioned themselves as improving (i.e., making easier) care specialists' workflows as they already existed. It was on no one's agenda to provide services to populations that were entirely without them.



*ATA's 2016 exhibition hall housed nearly 300 exhibits*

Many products featured at the exhibition hall touted themselves as “concierge” platforms, offering to moderate and coordinate telehealth practices, to schedule with patients on behalf of practitioners and to facilitate their interactions; others showed off the latest and greatest wearable technologies that, they argued, were poised to change how medical professionals gather and organize patient data. Although beyond the general purview of this project, my conversations with other attendees confirmed my suspicion that many of the technologies and services being offered were fundamentally similar, although their representatives manning the exhibition hall's booths believed (or at least were paid to declare) that their products were better than those of their competitors.

Eventually I came to the realization that “accessibility” in the field of telemedicine refers to a tool's *usability*, and not usability by just anyone, but by clinicians, practitioners, and administrators who work within the medical industry. Telemedicine seeks technological solutions for making medical interactions, whether

doctor's visits, health record management, and so forth, easier through the implementation of technology, or by *enhancing* patient-provider interactions through the use of technology. That is to say, technology is used improve the quality of care that patients receive. Again, neither of these refers to expanding the reach of medicine, but by improving healthcare services that are *already* accessible by using technologies in new and innovative ways.

Consider, for example, my experiences during Monday morning's plenary session, a presentation titled "The Human Touch of Telemedicine." "This is not [a story] about wires; it's not about the technology; but it's about the patient," Jon Linkous, then-CEO of ATA informed the audience as the lights dimmed for a brief film. Conference attendees were then shown a short documentary that told the story of Kathy, an elderly white woman from Iowa, who had always been an avid dancer but, as she aged, become unable to dance, walk, or even maintain an active lifestyle. Although she had traveled to Minneapolis for surgery, we learned, she was able to return home to Iowa after her procedure rather than staying in a hospital or recovery center, thanks to a remote patient monitoring service offered by MedTronic, a medical device company (which, not coincidentally, was featured prominently at the ATA conference as one of its sponsors). In many cases, as research suggests, patients recover better (and faster) at home, and Kathy was provided with the technological tools to partake in their remote patient monitoring system (involving wound cameras, an iPad, and other monitoring devices). Kathy, who must have been invited for the session, was then invited on stage and when asked what she thought of her at-home recovery, she responded that it was "so much nicer than a rehab center!"

My intent in sharing this story is to highlight that, barring any unforeseen complications, Kathy *would have* recovered from surgery regardless of whether she had stayed in a hospital post-procedure, had been sent to a nursing home, or (as she was able to do) was discharged for an at-home recovery. I mean to emphasize that the implementation of remote monitoring system *enhanced* her recovery, making it easier than it might otherwise had been if she had not been able to go home. This (important) distinction highlights the problem with the way that “access” was deployed at the ATA conference: there was a rhetorical slippage between the (separate) ideas of *accessing* care and receiving *higher quality care* through the implementation of technology into the healthcare experience. The latter issue (higher quality care, facilitated by technological advances) is only possible for those *who already have healthcare services*.

Although Kathy’s narrative was unrelated to matters of mental health, this troubling slippage was further evidenced by other panels and presentations I attended during the next few days that were, in fact, related to mental health and illness. One session, for example, discussed the benefits of using technology to decrease the length of inpatient hospital stays (for mental health crises); another explained how best to identify communities in need to telemental health systems (as the presenter described them, places “where patients are presenting as in need of mental health services *by complimenting the care services that are already provided*”); another showed how a prison telepsychiatry program increased the comfort and ease that psychiatrists experience by working with inmates from the safety of their own homes rather than actually going to prisons; and more. While it is true that members of these groups (inmates, persons living in geographically remote areas, and Kathy) deserve quality

health care, the issue that I am highlighting to is the widespread misuse of “increasing access” to describe what telemedicine actually does, for although it may increase quality of care, it in no way increases the reach of healthcare services.

By the conclusion of the ATA conference it was clear to me that although I was now thoroughly familiar with how that particular organization (mis)uses discourses of “access,” despite its mission “to promote professional, ethical and equitable improvement in health care delivery through telecommunications and information technology” (“About ATA,” 2018, para. 4), it would be valuable to learn more about the experiences and beliefs of telemental health practitioners themselves to further explore the matter. After receiving IRB approval I sought out telemental health professionals from all over the United States, soliciting participation over email for (what I hoped) would be a number of in-depth interviews, to better explore how they understood their roles as (online) mental healthcare providers and, I hoped, that they might see their work as expanding access to those services. In total I spoke to five telemental health professionals, some of whom were licensed psychologists, while others were counselors and social workers. After transcribing those discussions, potentially identifying information (including names, places of employment, and so forth) were removed from transcripts or altered. In excerpts from our conversations that follow below, each has been assigned a pseudonym.

### **“Accessibility” as Ease of Workflow Integration and Legitimation of Practice**

In all of my interviews with persons providing mental healthcare services online, there was a shared belief that the use of technology does not fundamentally alter the services offered to clients; instead as Paula, whose background is in clinical and

academic research on telemental health services for rural populations<sup>3</sup>, put it, “the only difference [between traditional therapy and this work] was an interface, an electronic interface.” The value of teletherapy, she and others explained, is that it is essentially just like traditional, face-to-face therapy, yet rather than meet at a practitioner’s office, you “meet” virtually, through a mediated interface.

Another participant, George, who describes himself as an early adopter of communication technology into his therapy practice, used a discussion of the ethical questions and regulations related to teletherapy to highlight how this work’s legitimacy depends upon its relationship to and with traditional therapy:

When I was [initially] doing [telemental health] there was nothing [in terms of regulations]... Now I face certain risks if I get a patient who calls from Europe or something and they want online therapy. There are some things I am doing that wouldn’t be considered what you would want to be doing with online therapy as far as things like, do you know where their local hospital is, for instance, in case they need to be hospitalized? Can I certify that they are who they say they are? Am I certified to even practice in that country? Do I have to call it something other than therapy, like coaching or something, and do another treatment?

Although George’s remarks illustrate that, in some ways, telemental health care providers face challenges that are particularized to those working with communication technologies, even when they choose to “break the rules” and violate professional

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<sup>3</sup> It is worth emphasizing that many of teletherapy’s proponents, including Paula, advocate its implementation because of their desire to see the lack of mental healthcare services available to geographically remote and rural populations improved (Mohr et al., 2008; Miller et al., 2003; Kazdin & Blase, 2011; Zheng & Gray, 2014). Through this lens, we actually *do* see “access” and “increasing access” being used correctly (akin to their traditional use in public health research), as the goal is to put persons in need of mental healthcare in touch with persons and services that, without technology, they might never have received. However it is worth noting that despite the interest in providing rural populations with mental healthcare through teletherapy, there is correspondingly little (academic) interest in exploring the potential benefits of teletherapy for urban populations although what limited research exists in this vein (e.g., Grubaugh et al., 2008) noted that there was little difference between the two as to their openness to receiving telehealth treatment.



guidelines for practice, they are still very much that their actions are taken in relationship to the regulations that *do* exist. Therefore interviewees' use of comparing their work to face-to-face therapy functions in two, inter-related ways: not only does it highlight the legitimacy of this work (as they position it as not all that different from traditional therapy), it also illustrates the degree to which, as I argued earlier, discourses of accessibility are often used in telemedicine to describe the ease of integration of technology into practitioners' workflows and toolsets.

As to the other use of "accessibility" in this field (that medical care is made "more" accessible to the degree that technology improves one's care), interviewees were largely in agreement that teletherapy offers (some) benefits that traditional, face-to-face therapy does not. Sonja, a clinical social worker with over twenty-five years of experience and who has been working as a teletherapist for a number of years, told me that her "clients (when on their own couch) are less nervous [than in her office], and the research says it's about the same. There is some research on it. So I'm pretty comfortable with that." Laura, a psychologist who runs an independent teletherapy practice in addition to full-time employment with a healthcare and medical services company, emphasized that "the convenience factor" of teletherapy is what attracts many of her clients: "Logging on at 8:30 when your kids are in bed, and you can focus on you, and you don't have to drive anywhere, you don't have to take off work, and all of that, is just a big plus [to them]." Other participants echoed this sentiment about the appeal of convenience to clients.

### **Teletherapy as Gig Work**

There is a flip side to this, however, for while the quality of care for a patient is increased through teletherapy, the integration of these digital toolsets is altering, on a

fundamental level, what it means to be a practicing mental healthcare provider. The need to make oneself an “accessible” therapist or counselor has, to a certain extent, begun transforming teletherapy work into what I argue is an online, medical gig economy. Although interviewees, for the most part, expounded upon the benefits of “flexibility” in their work as telemental health professionals, in the sense that they (as well as their patients) enjoy it, their remarks are also emblematic of how gig economy workers similarly validate their work.

The advertisement features a woman in a white lab coat holding a tablet, standing in a brightly lit hallway with yellow pillars. The text is overlaid on a dark teal background.

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INSTITUTE**

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*Will be recorded for your convenience*

Still not sure if telebehavioral health is right for you? Find out why now is the right time for you to get started:

- Reach more clients/patients
- Lower your overhead
- Work from the convenience of any appropriate location via the Internet

*Advertisement for the Telebehavioral Health Institute*

**Private practice with no doors and no overhead.**

Join over 2,000 therapists on the world's largest online counseling platform.

We provide the marketing, the technology and the additional income. You provide the professionalism, the care, the experience and desire to help people.

**Why work with BetterHelp?**

**Volume**  
Over 1,000 people sign up at BetterHelp every day looking for a counselor to help with their life's challenges.

**Flexibility**  
Better-Help can be your major source of income ("full time") or a supplement to your current work. You choose how many people you want to work with, and you are in full control in selecting each potential client.

Since most of the work at Better-Help is asynchronous, you are in control of your schedule and are free to choose the times that work best for you. Morning, afternoon, evening or all day - your focus is 100% counseling. You do not need to worry about acquiring clients, billing, support or operations. We handle it all!

**Requirements**

- Licensed by a state board to provide counseling (e.g., LCSW, LMFT, LPC, PsyD or similar credentials).  
*NOTE: Unfortunately, if you are an intern or if you require supervision to provide counseling services, you cannot be a provider at BetterHelp at this time. Also, we are unable to accept substance abuse counselors, school counselors, registered nurses, career counselors, Christian counselors and business coaches (unless they have an additional license as a mental health counselor).*
- Experience in individual counseling for adults
- Excellent writing skills
- Reliable internet connection
- US resident

*Note: Counselors are not BetterHelp employees but independent providers.*

*Both advertisements espouse the benefits of this work*

For comparison's sake consider a 2015 study of Uber employees, which found that 85% of them were attracted to the work by its promise of flexibility (Hall & Krueger, 2018). Michelle, who works for a group private practice and runs her own teletherapy business, told me

I really love the flexibility of [this work]... I can really do it from anywhere because I have the Skype app downloaded on my phone... I don't have to really focus on being at the office from 10 to 6. And I drive a lot because my jobs are all at different locations across the suburbs, and so I drive probably four hours a day an that would be four hours a day where, if I had my own private practice brick and mortar, that I would be losing [time] from clients.

Yet the reality of this work, these interviews also revealed, is that it is not a sustainable source of income, despite the level of "skill" or entrepreneurialism one possesses as a psychologist, psychiatrist, therapist, or counselor. Paula, for example, emphasized that "it's [not] possible to have a practice that's solely dedicated to telemental health... it's not realistic. There aren't enough hours in the day to be able to support that."

An ethos of entrepreneurialism also pervades teletherapy, which similarly circulates in other areas of the gig economy (e.g., Ravenelle, 2017; Graham et al., 2017; Shade, 2018). George, for example, while refraining from calling himself even an

entrepreneur explicitly, takes pride in the fact that he was an early adopter of technology into his psychology practice and claims to be one of the first teletherapists. Twenty years ago, he told me, he “was looking for something new and challenging” and therefore created his online practice:

I taught myself how computers work, and I taught myself about the Internet, which was just starting then, how to build websites. It became a new challenge for me... I just taught myself all of that, and then decided to see if I could start to build a practice as a challenge, using technology... I was getting referrals from it back when there weren't a lot of other people using it. I was one of the few psychologists on the Internet, period.

Laura, although comparatively new to teletherapy, was drawn to practicing teletherapy not because of her technological prowess, but because of her dual licensure in two states. Her entrepreneurial spirit results not just from seeing the practical utility of this, but also her drive to have her own business:

So because I worked in two states and was – and still am – licensed in both states, I just thought, well, why not make something available for people so not during the day, at night, the weekends, when the kids are in bed, they don't have to drive anywhere... it was very new [when I started] and I just wanted something else to do that was my own business, but I didn't want to have to go to an office, have overhead, and I just wanted to do exactly what I do and love to do and help people, but make it a little more accessible.

Yet the (proposed) benefits of flexible work, coupled with the fact that, as Paula noted earlier, there are not enough hours in the day to support an online practice, results in what I would claim is a *forced* flexibility: telemental health worker must work around already-full (or nearly full) work schedules in order to practice online. While flexibility appears to empower workers in all sectors of the gig economy, flexibility is also to their detriment, for seeing patients online often means working at all hours of the day and night. Sonja, who already possesses a full time job (as do Laura, Michelle and, these days, even George), explains:

one of the nice things is I can do [this] any time [patients] want. And lets say a patient wanted a session at 5 a.m. or 10 at night or something due to their own work schedule. I have no problem doing a 10 pm session with them... I just go turn on the computer and it's really easy... I can do sessions around the clock.

Ultimately, the improved “access” that telemental health services offer to users comes at a cost to mental health professionals, resulting in a transformation of what it means to be a mental health practitioner. This work is becoming essentially an on-demand service relegated to odd hours because telemental health workers are forced to work full time jobs in addition to trying their hand at online entrepreneurialism. Increased accessibility, in the end, has created a demand for a highly skilled online workforce, although for the time being these individuals do not appear to perceive themselves as gig workers. Instead, they rely upon the rhetoric of “flexibility” to describe what they do.

My other claim, that access is also used to refer to an increased quality of care, was also supported by interviews. Michelle stated that while in-home therapy is an option for patients who are unable to leave their homes, teletherapy is a *preferred* method:

You can do home therapy. I've done home therapy before, but a lot of times [clients] don't feel comfortable because they're so embarrassed about certain medical conditions that they don't want people coming over to their house because then it's like, oh, I have to prep for them, I have to get the living room ready and make sure things are nice. And that just doesn't seem right to me either all the time. So e-therapy kind of takes care of that.

Paula expressed a sentiment similar to Michelle's when she noted that there are times when patients will say, ““It's really good to talk to somebody who doesn't live in my community. I don't have to worry about running into you at the grocery store.” So there's safety for the patients.” In this sense, increasing access increasing the *level of comfort* and improving the therapeutic experience. This, of course, is important when there are, as George told me, “the competition is tremendous for therapists and online therapists.”

### **“Access” in the Applications Sector**

My experiences at the American Telemedicine Association were disappointing. The expectation I had held (that those interested in telemental health were, like me, exploring avenues for providing mental health care to traditionally underserved populations) was not met, despite their claim of increasing “access”. I was buoyed by the fact that telemedicine is only part of the digital mental health industry and decided that perhaps those working beyond the confines of traditional medical services might perhaps be more interested in increasing access to mental healthcare resources than telemedicine workers were. Therefore, when I learned about another professional organization dedicated to innovations in digital health care, that actually *did* deploy discourses of revolutionizing healthcare<sup>4</sup>, I was excited to learn more. Therefore I found myself, in early January of 2017, in San Francisco at the third annual WinterTech conference, an annual event held by a group called Health2.0.

WinterTech was a one-day event held at the Julia Morgan Ballroom in the midst of JP Morgan Week. The city was bustling. Hotels were full; restaurants were packed; space in the city was extremely limited as twenty thousand people came to see the newest and latest developments in health technology. Beginning on a Wednesday with a 7 am, invite-only breakfast event for tech developers and potential investors, the rest of the day featured a series of panels, demonstrations, “fireside chats” (minus the fires), and provided a sense of what types of companies and start-ups have been faring well and what will likely see growth in the coming year.

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<sup>4</sup> When I visited Health 2.0’s website in late 2016, the banner at the top of the page asked, “Ready to revolutionize healthcare?” (“Health2.0,” 2016).



*Indu Subaiya and Matthew Holt, co-founders of Health2.0*

Unlike the American Telemedicine Association’s conference, where technological interventions were pitched at doctors, medical professionals, and those working in the healthcare industry itself, WinterTech attendees seemed to be of the opposite mindset: here it was emphasized that the most important and valuable changes in health technology begin with having patients and consumers in mind, not by facilitating the practice of medical professionals and industry members themselves. To put it simply, patient experience was prioritized over upholding established workflows and processes. Here the philosophy was that new technologies, in order to be successful, should disrupt (even attempt to dismantle) the current healthcare system, rendering patients themselves in control of their data and how it is can be used.

Yet I was troubled by the response given to a question I raised during the keynote presentation from Paul Markovich, President and CEO of Blue Shield of California, when I asked what I believed to be a rational follow-up to this “revolutionary ethos” that emerged. My question was how the digital divide would affect access to these technological solutions that were being proposed. Markovich actually looked uncomfortable visibly uncomfortable for a moment before replying that the cost benefit

of getting people a smartphone versus paying for their hospital visit was enormous, but that was beyond his organization's purview. "Yes, it's an issue," he acknowledged, "but this [work] creates an incentive for health plans to bridge that gap." The accessibility of digital toolsets, in the sense of possessing smart devices, I realized, was taken for granted amongst this group, and I began to acknowledge my own naiveté. Although these people claimed to possess a desire to disrupt the medical industry, and indeed espoused those discourses in their promotional materials and their talks, the applications sector is still an *industry* and, like any other, seeks to be financially lucrative. While conference attendees wanted to help others by empowering them with digital toolsets, they still were seeking financial stability.

Just as I had the previous summer, I left this conference also feeling put out. I was now cognizant that despite my (what I recognize now were naive) hopes, this conference too had been driven by the logic of capitalism rather than increasing access to healthcare (i.e., it explicitly sought to connect technological innovators with investors and bringing new technologies to market, not out of altruism, but because of the likelihood of profits). Yet I realized, too, that WinterTech attendees represented only a handful of technologists working to solve problems faced by those in need of health interventions, particularly related to mental health. And, considered alongside a different set of interviews that I was conducting, I still believed that most people were drawn to this side of the digital mental health industry by a desire to improve the lives and health of others.

I contacted potential interviewees through Internet searches, hoping that they would be open to conversing with me about their experiences and beliefs working in this field. As with the interviews with teletherapists, names and identifiers were removed or



altered in these interviews and each was assigned a pseudonym. Although I conducted a total of six interviewees, one participant subsequently asked me not to use our conversation, citing professional concerns.

### **“Access” as Portability**

After my experience at WinterTech, where matters of “access” were seemingly unimportant (and beyond the scope of conversation) because it was presumed that everyone possesses smart technology, I was unsurprised to find a similar sentiment expressed during interviews. As multiple participants pointed out to me, the cultural norm of having a smart device, and checking and using it throughout the day, leads to the general sense that “access” refers simply to a device’s portability, the ability to keep one’s technology within reach. Jordan, who created an application for anxiety and depression after realizing there was nothing on the market that satisfied his needs, emphasized the value of smartphones as being in their ability to perform Ecological Momentary Assessments (EMA’s) of users (that is, interventions where users input data in real time rather than recalling it later, thereby making data more accurate). Another participant, Don, whose own experiences with anxiety led him to want to create toolsets for others, made the explicit connection between EMA and portability:

I think it’s interesting that everybody has these devices on them [all the time], and recording metrics about what people are doing, and how people are being out in the world. And that can help inform people of trends about anything that they might be doing, either positive or negative.

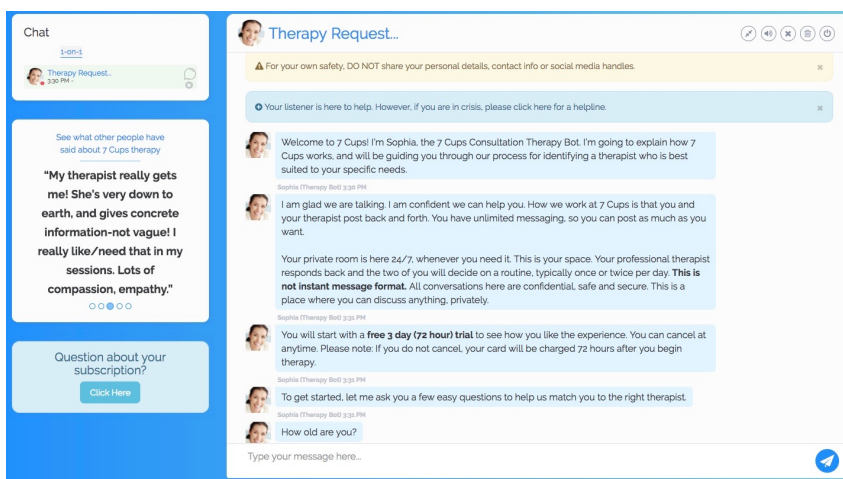
Mary, a psychologist who also works as a consultant for a mental health application, described a similar sentiment that also reflected teletherapists’ comments related to increased quality of healthcare:

Assuming you are overcoming the stigma associated with seeking treatments for something, which many people are not, then you've got all these other [barriers]... you've got to physically get there, you still have to pay the co-pay... all of the "costs", the time cost, the effort cost, the disappointment in having to [find a new doctor], you know, do things again... These online versions of physical and mental healthcare is really an extraordinary opportunity to make the distance between person and the care [they need] much, much shorter.

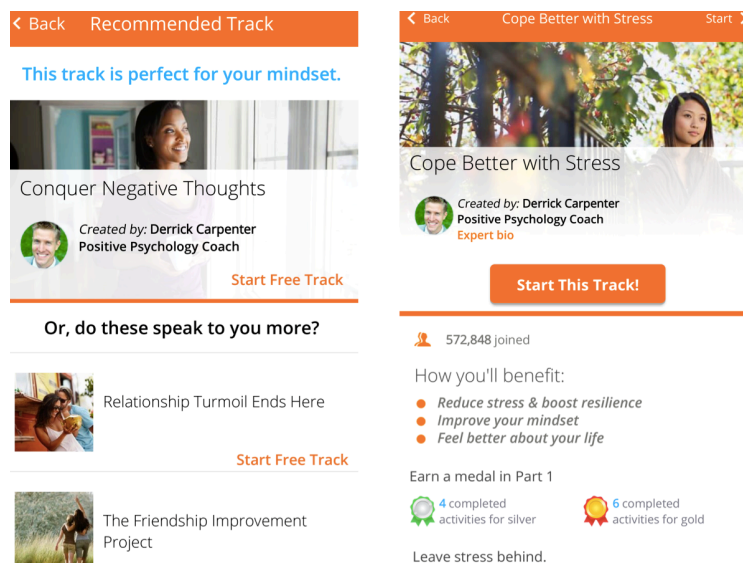
Yet it is important to remember that portability unto itself is fundamentally not the same as accessibility. On the one hand, it is true that it is easy for those who have smartphones and devices *already* to pull them out of their pockets on demand. However, this obfuscates any sort of necessary discourse about how such a framing of "accessibility" fundamentally overlooks the digital divide (that is, the fact that not everyone has a smartphone). Referring back to Elcessor's (2017) definition of access, and its emphasis upon having "to the opportunity, ability, or right to gain entry to a space or possession of a thing" (p. 7), we can see that this is largely overlooked from both interviewees as well as conference attendees. Yet the reality, as Proudfoot (2012) describes, is that there are many "entry barriers associated with other forms of technology are minimized [with mobile phones], enhancing the potential to reach underserved populations" (p. 111). Paired with the International Telecommunication Union (2015) estimates that, by the end of 2015, 69% of the world's entire population of 7.4 billion people had 3G mobile broadband coverage ("ICT facts and figures: The world in 2015," 2015), it seems increasingly likely that, someday, everyone may be using this technology. It is important to remember, however, that amongst those "entry barriers" that exist is whether all populations *want* to incorporate these tools into their lives, and which populations will be more eager than others to do so. Here the notion of the digital divide, which refers to the disparity between those who have access to technology and those who

do not, must also be understood as forgetting that “not having” may be mistakenly deployed and obscure the fact that not all populations want nor have the capacity to integrate these tools into their lives. Digital natives, as those who have lived their lives in a wired and networked world, because of their comfort with technology, can integrate these into the processes and flows of everyday life more easily than those who are alternatively described as “digital immigrants,” who must learn to effectively “adapt” to the networked, wired world (and may not want to do so) (Prensky, 2001).

This brings me to what, I believe, is an important point that is overlooked by those working in the digital mental health industry: that accessibility is different than usability. In my experiences using many of the mental health smartphone applications, which I describe and analyze in the third chapter of this dissertation, it became clear that a very specific “type” of person was represented in the toolsets themselves became clear: women, particularly white women.



*A white, female chatbot tells users about 7 Cups of Tea*



*In Happify, women are often pictured, although there is some ethnic diversity*

The textual analysis<sup>5</sup> that these toolsets underwent during the time that I used them underscored the wealth of media and communication scholarship supporting the argument that representation matters; if members of underrepresented or historically marginalized groups do not see themselves represented in media content, or are represented in negative ways, then there are very real consequences (interpersonally, interpersonally, and with relationships with the world at large) as a result of them (Leavitt, Covarrubias, Perez & Fryberg, 2015; Boylorn, 2008; Carilli & Campbell, 2012).

The pervasiveness of female bodies in these tools and their advertisements, particularly

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<sup>5</sup> Textual analysis is an analytic method used by cultural studies scholars that allows the researcher to analyze the content of a media text or texts (Fürsich, 2009). Despite criticisms (e.g., that an analysis that is “text only” omits other areas important to cultural studies (such as the production and consumption of texts (du Gay et al., 1997; Williams, 1974; Philo, 2007), it remains an oft-used method despite the protests (of some) that it is not a form of scientific study. As Phillipov (2013) points out, however, insistence that empirical research methods access real dimensions of experience that textual approaches can only abstractly theorize ignores the inevitable partiality of all academic studies... Because they find creative ways to articulate experiences that would otherwise be inaccessible to empirical research methods, the use of text-based approaches can improve, rather than weaken, our understanding of popular media and culture. (pp. 210-211)

white bodies, ultimately perpetuates the stigmas associated with mental distress for those persons that are not represented in these images: people of color, men, and older persons.

When asked who is using digital toolsets, and how that affects how these tools are further developed, the answer from one interviewee, Jordan, was revealing:

We know that our median [user] age is twenty-eight years old. We know that we are about eighty percent female. And we have a lot of other information about how many of those individuals are receiving mental health services and some other information... To some degree [demographic information affects future developments]. It helps us understand how we can market to that audience a little more effectively, but I think our demographic is going to shift as we continue... But it certainly helps us tailor the consumer application based on sort of what expectations are within that demographic.

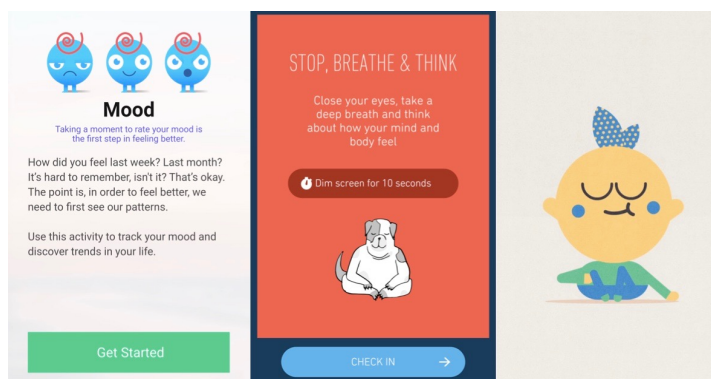
The reality of who is using digital mental health tools essentially mirrors the demographics of the population that already seeks therapy and receive prescriptions for psychopharmaceuticals: young women, particularly white women. This information, Jordan acknowledges, helps determine marketing strategies so that they can market toward this *same* population more successfully. Rather than consider how to market the tools beyond that demographic, what this essentially does is reify the circularity of the essential problems with the digital mental health industry: that it increases the quality of tools for those who already have access, whilst deploying a (false) rhetoric of access expansion, and ultimately serving a homogenous community.

My interviewees did not say this explicitly, nor am I aware whether their choices in selecting particular bodies and identities to represent was as intention as Mars's. Even so, I did ask Levi why his application, which uses a "white sounding" voice, does so:

We actually tried out a bunch of different voice actors, male and female. We had some that were very relaxing but people felt were too robotic. We had others that had a lot of humanity in their voice, but people were more alienated by the different accents. So the woman we ended up with was a combination of a soothing voice that also felt like it had some humanity in it, where people could

tell this isn't like Siri [a robot] talking to me, and also they couldn't pick out where she's from. And that ended up being important when, you know, we're definitely being used across the country and across the world. It can be off-putting if somebody's got, you know, like an east coast accent, Midwest accent, southern accent. That's easier for people to pick through when they're not from that part of the country. So those are the three criteria for why we ended up with her.

Although other applications avoid the problematics of representation by using images of cute characters, such as those below, even the *non*-representation of diverse bodies ultimately does nothing to counteract the lack of representation and diversity that exists within this industry.



*Left to right: Characters from Pacifica, Stop, Breathe, & Think, and Headspace*

Some applications avoid this problematic altogether by utilizing images of characters, especially cute characters, rather than making choices about what “types” of people and identities to represent in their content. When representations are made of humans, however, they are most often white and, if not white, still bear traditional markers of femininity.

To clarify, my argument is that discussions of accessibility by those working in the applications sector refer to the ability to carry a device around, but what is overlooked is the importance of creating portable toolsets that are actually usable and effective for a diverse range of bodies and identities. As I found as I used applications, these toolsets

spoke to me and my particular identity: as a white, twenty-something woman, I saw myself represented in them both visually and aurally. Yet, as my growing familiarity with them revealed, not all users would find themselves, or *see* themselves, in them.

My concern is not just a result of the scholarship illustrating the psychological effects of not seeing oneself in media content; it is also directly related to the significance of identity in relation to how mental healthcare treatments are administered to populations (Windsor, Jemal, & Alessi, 2015). Ample scholarship has outlined the relationship between racism's effects and mental illness, distress and disorder by people of color as a result of racial discrimination (Torres, Yznaga & Moore, 2011; Chou et al., 2012; Sanchez-Hucles, 1999). Studies have repeatedly suggested that diagnostic instruments for psychiatric disorders do “not uniformly eliminate racial disparities in diagnostic outcomes... the preconceived notions clinicians may have about patients based on race, gender, or socioeconomic status, remain an important influence on how patients are assessed” (Neighbors et al., 2003, p. 251). Other findings highlight that African Americans are far more likely to be diagnosed with mental disorders than their European American counterparts (Schwartz & Feisthamel, 2009). Schwartz and Blankenship's (2014) survey of 24 years of empirical research on race and psychiatric diagnoses found that both African Americans and Latino Americans are consistently more likely to be diagnosed with mental disorders than European Americans. I would argue that not only is the promise of increasing access and serving all bodies equally through digital toolsets false, some of these tools are actually sharing false information with their users to the detriment of their mental health. This is counterproductive – and counterintuitive – to circulating claims that these tools are helping persons in need.

## Conclusions

This chapter began by exploring whether there was any veracity as to the claims of digital mental health industry workers as to whether the fields of telemedicine and smartphone applications are, as they claim, increasing access to mental healthcare. Based upon what I have found, however, I would go so far as to categorize its use in this field as a form of doublespeak that allows those working in these fields to (unfairly) receive both cultural and institutional support for claiming to facilitate the ability of underserved populations to receive medical care, when it is actually quite clear that, in the case of mental health services, what I believe has happened is only an improvement in quality of care rather than services to people who do not receive any. To substantiate this further I would need to conduct interviews with those who use teletherapists as their primary mental health caregivers, yet this is still noteworthy even in the context of this more limited study because what I found in my interviews and fieldwork is that its usage perpetuates the continued invisibility of those populations who, historically and today, continue to receive inadequate health care (particularly mental health care) yet are, through this (misleading) deployment of access expansion, effectively written out of contemporary telemedicine practices as potential consumers of interest.

This is not to say that the work being done to improve the quality of mental healthcare received by individuals is of no consequence; my argument is that couching it within the frame of expanding access is not only wrong, but also perpetuates the symbolic erasure of particular identities from the realm of concern: people of color, men, those with little to no income, and so forth. On a cultural level this promotes what is clearly discrimination and oppression, while on a technological level it indicates a future



where healthcare disparities are only widened by the implementation of digital toolsets.

Dilts (2012), for example, writes on the issue of race and ability in voting and representation, and claims that

It is neither intentional *nor* accidental that U.S. jails and prisons have once again become Jim Crow asylums, filled primarily with persons of color, a shockingly high number of whom are mentally ill, and nearly all of whom are stripped of the vote. The openly racist, sexist, and ableist norms that drove the adoption of disenfranchisement in the nineteenth century continue to ground these exclusions to the vote, meaning that the ideal figure of the American citizen *continues* to be compulsorily white, male, heterosexual, and able-bodied. (para. 4, italics in original)

It is important to historically contextualize this. Critiques of psychiatry have long held that diagnoses serve the purpose of maintaining a social order rather than doing anything more material (Drescher, 2010). As Greenberg (2013) notes, “drapetomania was never considered for the *Diagnostic and Statistical Manual of Mental Disorders...* but that may be only because there was no such book in 1850” (p. 2). Perhaps the earliest example of psychologization due to race, “drapetomania” was “a disorder of slaves who have a tendency to run away from their owner due to an inborn propensity for wanderlust” (Schwartz, 1998, p. 357). While the DMHI does not, at this point, offer diagnoses for users, it is unfair and blatantly false to state that a user’s identity has no affect upon how they are subjectified as a mentally ill subject. If this toolsets truly are to make a difference in expanding access to mental health tools, for populations who have been oppressed *by* what constitutes the psy as well as *by refusing to provide* access to the psy, then for the time being, it is unlikely that these tools will ever do more than provide lip service to these claims.

In this same vein was the issue raised earlier in relation to how “increasing access” *is* being used, correctly, to explain how teletherapy is enabling rural persons to

have access (through technology) to mental healthcare providers. My concern is this: just as “urban” has come to be understood as a code word for “black,” (just as “inner city” was demonstrated by Hurwitz and Peffley (2005)), I suggest that “rural” can similarly be understood as code for “white.” I am troubled, therefore, when I read claims such as, “Nowhere is the need for mental health services more prevalent than in rural locations” (Perle & Nierenberg, 2013, p. 24) when, in fact, the statistics and data shared at the beginning of this dissertation point out that there *are* other places, particular people, for whom there is a greater need. Even so I recognize the problems inherent in describing what constitute either “urban” or “rural” populations as either white or black; neither is a monolith, and to do so risks the systematic erasure of diversity in those contexts (see Illing, 2017). My overarching argument in this chapter, however, is that those working in the DMHI (and those discussing it in related fields), need to exercise caution with the words and phrases that they use. It is very easy (and has already been illustrated by my data) to use these words incorrectly, and to do so without being held accountable for them.

Finally, I would also like to return to my claims about how the Internet (and the advent of teletherapy) have fundamentally altered what it means to provide mental healthcare services in digital contexts. Although the emphasis (i.e., the appeal) of teletherapy to potential users is that they can access mental healthcare services, essentially on demand, the broader effects of this shift has been that workers themselves are creating a fundamental shift in what their work entails. Although the appeal of practicing online is evidenced in what interviewees shared with me (the benefits of a flexible schedule, not having to pay overhead costs, and so forth), the problem of

competition, and that it is virtually impossible to sustain an online practice, was also raised in discussions. What this leads to is a forced flexibility by healthcare professionals who must demonstrate an entrepreneurial ethos, managing online practices as well as traditional ones if they want to achieve financial stability. In this context, persons who already received (or were likely in a position to receive) mental healthcare services have experienced greater access in the sense that, yes, they can (much more easily) find mental healthcare service providers who are willing to work with them on their schedules and, potentially, for lower fees than traditional therapy. Yet the result is that these healthcare workers themselves are made more accessible, to their own professional detriment.

In sum, it is true that there are ways that “access” is changing in the digital mental health industry. For the most part, however, those changes have naught to do with actually providing access to mental healthcare services to those populations that, historically and today, have gone largely without them (or which continue to be drastically underserved). Instead “access” and “increasing access” are rhetorical slippages that provide an umbrella for a number of interrelated phenomena: changes in how mental healthcare workers *make themselves* accessible to their patients; changes in the *quality* and *ease of access* for persons who, very likely, might otherwise still be able to receive mental healthcare; and finally, it allows those working in this industry to ignore the needs of minority populations (who are demonstrably in the most need of mental healthcare) and to focus instead upon what are largely white populations, located in geographically remote areas. This discriminatory undercurrent in patterns of thinking about and discussing persons in need of mental healthcare services may be unintentional, but its

consequences are the systematic erasure of the same bodies and identities that have been historically oppressed in the United States.

### Chapter Three: The Rationalities and Effects of Psychosurveillance

Facebook recently announced that it will expand, worldwide, a program designed to prevent suicide. The move comes after successful tests in the US to identify Facebook users who may be at risk...

Facebook began testing the software in March 2017, and while the company hasn't revealed full details about how the program works, we do know that the system relies on a pattern-matching algorithm. The program scans the text of Facebook posts and comments for certain phrases that could be signs of an impending suicide, like a friend commenting, "Are you okay?" or "Can I help?"

If the software identifies a possible suicide threat it's sent for review to a team of Facebook specialists trained in handling suicide and self-harm concern. Facebook also uses that pattern recognition to escalate the most concerning reports, those of people who might need immediate attention. Those reports are escalated to local authorities, twice as quickly. In the past few months Facebook has worked with first responders on more than 100 wellness checks based on this system, the company says...

Of course, machines can never replace psychological help or support systems for those in need. But when it comes to in-the-moment suicide prevention, another first responder could be the algorithm.

("A Facebook Algorithm That's Designed for Suicide Prevention," 2018)

In January 2018 *NBC News* posted a video on its website as part of a series titled *Algorithmics*, which explores "how invisible, computer-controlled database sets of rules are making decisions for us, everyday" ("A Facebook Algorithm That's Designed for Suicide Prevention," 2018). That month's feature, transcribed above, was titled "A Facebook Algorithm That's Designed for Suicide Prevention." Throughout the two-minute segment a male voice narrated as cartoon images of social media widgets, maps of the world, data sets, first responders, Facebook comments, Google searches, and more moved across the screen. While the video provided a succinct summation of over a decade's worth of technological advances in suicide and self-harm interventions on the Internet, what it omitted are the broader-scale shifts in cultural beliefs related to the areas of surveillance, technology, and mental health that have facilitated our acceptance of online interventions like those that it described. This chapter fills that void by describing

a practice, and an ethos<sup>6</sup>, that I refer to as psychosurveillance, which includes the monitoring of one's own mental state as well those of others, and which I argue is central to contemporary, "good" neoliberal citizenship<sup>7</sup>. In chapter one of this dissertation I discussed labor in the digital mental health industry, emphasizing how the work of teletherapy has rendered online mental healthcare workers part of an expanding digital gig economy. In this chapter I explore the values and beliefs psychosurveillance *represents* as an ethos *and* as a form of labor. The question guiding this chapter can be understood as follows: what are the large-scale, cultural logics embodied (and enacted) by psychosurveillance and its related processes?

Initially this chapter provides the theoretical context facilitating my development of psychosurveillance, particularly governmentality and surveillance scholarship. I also discuss affect theory as well as the ethical dimensions of conducting research projects related to mental health and the Internet. Following that I trace the emergence of psychosurveillance using two case studies that highlight the problems it creates: first, psychosurveillance perpetuates the belief that technology can solve social problems,

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<sup>6</sup> My use of "ethos" is akin to that used by Barry, Osborne and Rose (2006), meaning "a way of orienting oneself to history" (p. 6). Here "ethos" is used to assert a wide-ranging philosophical orientation, particularly in relation to modes of governmentality.

<sup>7</sup> As discussed in the introduction to this dissertation, cultural studies scholars typically discuss neoliberalism in relation to the work of Michel Foucault, who used the term to describe how economic principles are pervasive across all cultural domains. Under neoliberalism, individuals are encouraged to see themselves as entrepreneurs who are capable of caring for themselves as social support mechanisms (government proper) is reduced. Therefore, when Foucault (1991) writes that individuals learn to effectively "govern" themselves by learning to manage "the conduct of conduct," he is suggesting that both the motivations for managing conduct – and the ways that management transpires – are part and parcel of governmentality in action. A "good" neoliberal citizen, therefore, is one who demonstrates an ability to conduct his or herself appropriately, whereas "bad" citizens (or citizens in training) are seen as in need of changing their behaviors so as to demonstrate effective self-governance (see Ouellette & Hay, 2008).

which is not only false, but also dangerous, in that it adds credence to the belief that increased surveillance is not only good for us, but also *necessary* for us to function as (cognitively) healthy persons. Second, I also show the inherent problems associated with psychosurveillance as a normalized set of practices, looking to the ways that the labor that makes it possible is exploitative. I accomplish this by building upon affective labor scholarship and the ways that psychosurveillance is framed as a communitarian<sup>8</sup> endeavor rather than a form of labor. To make these arguments I share my experiences having content flagged on Facebook as indicating intent to self-harm<sup>9</sup> and my experiences using DMHI smartphone applications, particularly an application called *Cups of Tea*, which asks users to act as “Listeners” by chatting online with other application users, ultimately assessing their mental health needs.

### Theoretical Context

#### Psychosurveillance

In 2008 Abraham Biggs, a 19-year-old from Pembroke Pines, Florida, became the first known person to live stream their suicide, doing so on the website on Justin.tv (Friedman, 2008). In the wake of his death noted social media strategist David Griner espoused a particularly significant sentiment: "It's impossible for sites like Justin.tv to monitor everything that's going on, so *that puts the burden on the community* to help stop bad things from happening" (para. 29, italics added for emphasis). Griner's comment

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<sup>8</sup> Van Houdt and Schinkel (2014) define communitarianism as “a paradoxical combination of neoliberalism with certain communitarian values” (p. 47). Although neoliberalism emphasizes *individual* responsabilization, communitarianism emphasizes community-oriented responsibility.

<sup>9</sup> When I made the decision to do this, I was well aware of the ethical implications of creating a false cry for help on the Internet. Yet I ultimately decided that this was the only way I could verify whether Facebook's claims about its practices in this regard were true.

suggested that fault, in this case, did not rest with Biggs himself; rather, the rest of us, who were responsible for his online monitoring, were the ones who “failed” by missing whatever warning signs he had shared, indicative of his decision to end his life, beforehand.

Griner’s emphasis upon communitarian surveillance reflects what Ouellette (2012) argues in about media’s “heightened role in postwelfare civic responsibility” (p. 57). In her work Ouellette contends that TV has become a “platform for mobilizing resources and activating capacities to solve problems from homelessness to environmental destruction... these initiatives enact dispersed, privatized solutions to hardships and needs” (p. 57). Although the medium is different in this case (i.e., websites versus television), what Griner’s comment reflects is an expansion of the same sentiment of communitarianism in the context of neoliberalism<sup>10</sup> wherein media become a means of addressing social problems. I encourage a similar reconceptualizing of surveillance in relation to mental healthcare through varied technologies to enhance what would, ideally, be a comprehensive mental healthcare system.

Psychosurveillance<sup>11</sup> is a framework that accounts for practices related to the dispersion of the “psy”<sup>12</sup> throughout culture alongside emerging modes of technologically

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<sup>10</sup> For more on communitarian neoliberalism, see work from van Houdt and Schinel (2014) and Walsh (2008).

<sup>11</sup> The etymology of psychosurveillance is psychology (the study of mental functioning) and surveillance; it has naught to do with psychopathy and/or psychopaths.

<sup>12</sup> As discussed in the introduction to the dissertation, Nikolas Rose describes the psy disciplines as “the heterogeneous knowledges, forms of authority and practical techniques that constitute psychological expertise...” (1999, p. vii). Today they are dispersed throughout culture rather than relegated solely to medical professionals.



facilitated surveillance<sup>13</sup>. It owes much to scholarship exploring the intersections of surveillance, technology, and governmentality, particularly that which argues that varied forms of surveillance are integral to facilitating contemporary neoliberalism, such as governmentality. Michel Foucault (1991) developed the term “governmentality” to describe the ways that power operates (and is dispersed) in contemporary society. “Government,” he writes, “has a finality of its own, and in this respect again I believe it can be clearly distinguished from sovereignty” (p. 94). Historically, he argues, sovereign powers, or sovereignty, ruled, and enforced that rule upon both people and things. Today governmentality, or simply “government,”

is a question not of imposing law on men, but of disposing things: that is to say, of employing tactics rather than laws, and even of using laws themselves as tactics – to arrange things in such a way that, through a certain number of means, such and such ends may be achieved... the finality of government resides in the things it manages and in the pursuit of the perfection and intensification of the process which it directs; and the instruments of government, instead of being laws, now come to be a range of multiform tactics. (p. 95)

In other words, Foucault’s argument is that power does not rest entirely within an entity (e.g., a monarch). Instead power is seen, experienced, and dispersed through a variety of channels. These varied channels create the “multiform tactics” that he describes. An analysis of governmentality therefore, as Macleod and Durrheim (2002) write, “attempts to interlink the micro-effects of power... with the macro-strategies of power without privileging one or the other...” (Macleod & Durrheim, 2002, p. 45). An analysis of psychosurveillance that conceptualizes it as one of the “tactics” or channels for neoliberal

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<sup>13</sup> Surveillance scholarship owes much to Jeremy Bentham (1791), particularly his conception of the panopticon: an architectural structure perpetuating surveillance by individuals who are unsure if, or when, they are being watched. Foucault (1977), who reconceptualized the panopticon, suggested that the possibility of surveillance existing beyond architectural structures explains why individuals moderate their conduct and govern themselves whenever there is a *possibility* of their being surveilled.

governmentality, which is what I offer in this chapter, therefore examines both the macro strategies and micro practices that perpetuate the belief that surveilling the mental health of others is necessary.

Existing media studies scholarship exploring the intersections of surveillance and governmentality interrogate a range of socio-cultural phenomena, such as the effects of hidden cameras on Reality TV (Andrejevic, 2007), social media platforms (Farinosi, 2011), public surveillance cameras (Koskela, 2003), and more. While the particular technologies being studied may change in each of these projects, their commonality is the argument that surveillance (or, at least, *potential* surveillance) encourages individuals to develop new capacities for caring for themselves and managing their behavior. This brings us back to Ouellette and Hay's (2008) argument that media play a significant role in perpetuating practices of "good citizenship." Although other scholars have suggested the utility of Bentham's panopticon, and panopticism more generally, in understanding why persons are motivated to manage their conduct under the auspices of surveillance at all times (Gordon, 1987; Campbell & Carlson, 2010; Green, 1999; Krueger, 2005; Dupont, 2008; Waycott et al., 2017; Bucher, 2012), scholars like Hay and Ouellette use governmentality to highlight how surveillance is only *part* of what motivates individuals (and populations) to manage their conduct. In their view it is freedom, or at least perceived and presumed freedom, which explains why we enact good citizenship: it is not out of simple fear that others are watching us and that there will be (negative) repercussions for poor self-management, but rather that we are free, or can be free, despite the possibility (even probability) of others watching us at all, or most, times. Lateral surveillance, one such form of watching "that includes [people] keeping an eye on

those around them” (Andrejevic, 2004, p. 397), is therefore a necessary part of what Griner emphasized in his plea for communitarian online monitoring, and is used in this analysis to frame both how and why communitarianism now includes surveillance of the mental health of others, whether through the content they share on their Facebook or through other social media channels<sup>14</sup>.

The question becomes, however, how we can believe we are “free” if we also know that surveillance is, or may be, happening at (nearly) all times? Neoliberalism, and governmentality as one of its strategies, would not be possible without believing that freedom is possible, even under the auspices of surveillance. Although we can argue that being watched by others restricts individual freedom, the reality is that we have also seen a normalization of technological infringements upon privacy (and the ensuing belief that new technologies lead to the “death of privacy” (Lauer, 2011, p. 567)), circulating in public discourse for nearly two hundred years. Although it is beyond the scope of this project to explore that history, other media scholars have developed histories of media technologies, including so “basic” a tool as the telephone and portable camera, to suggest that media, in all its forms, has always produced anxieties about privacy (see Lauer, 2011; see also John & Peters, 2017).

Even so, there are contemporary demarcations from the past that render this moment unique. As Henry Giroux (2015) writes,

Surveillance has not only become more pervasive, intruding into the most private of spaces and activities in order to collect massive amounts of data, *it also permeates and inhabits everyday activities so as to be taken for granted.*

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<sup>14</sup> The behavior of President Donald Trump, for example, who uses Twitter to assert falsehoods are facts (Gessen, 2017), and tends to forget and deny statements that were caught on camera or audio recorded (Stewart, 2017), has been used to suggest that he is suffering from one, if not more, mental illnesses (Lee & Eisen, 2018; Lee, 2018)

Surveillance is not everywhere, but *its presence has become normalized*. (p. 113, italics added for emphasis)

In sum, the normalization of surveillance in all areas of contemporary life has been so thorough that surveillance is normalized, and therefore not seen as oppositional to freedom. This is of paramount importance because freedom, or at least the illusion of freedom, is necessary for strategies of governmentality to be effectively enacted.<sup>15</sup>

Psychosurveillance, as one of those strategies, relies upon the paradoxical nature of our belief that we are free while also constantly being surveilled.

Although, as Giroux stated, surveillance is “not everywhere,” it is largely our assumption that it *may be anywhere* that encourages individuals to manage their conduct. Various contemporary technological developments, which we use in (nearly) all processes of our everyday lives, are constantly monitoring our behavior, gathering information about us, and sharing that data with others. Even digital toolsets that appear “free” to use, such as social media and search engines, make money by allowing advertisers to target particular demographics whose information they have collected (Lehtiniemi, 2017). While other scholars argue that health technologies play an important role in shaping human behavior (Lupton, 2012; 2013; 2014), my interest in this chapter is not so much in how human behavior is shaped *by technologies themselves*, but rather new behaviors facilitated by technology in relation to mental health and illness.

Psychosurveillance is one such behavior whose popularity – and ease of practice – has risen dramatically in recent years.

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<sup>15</sup> Although it is beyond the scope of this dissertation to explore *why* we have grown more accepting of pervasive, technological surveillance, it is worth noting that research suggests that most US Americans *are* accepting of the National Security Agency’s surveillance practices (Reddick, Chatfield & Jaramillo, 2015). Others suggest that this is an effect of the September 11, 2001 terrorist attacks (Ball & Webster, 2003).

## Affect Theory

In addition to the practices that result from our acceptance of, and participation in, psychosurveillance, it is also useful to consider psychosurveillance's affective dimensions. In other words, we should look not only the concrete behaviors that psychosurveillance facilitates, but also the feelings, emotions, and dispositions that it generates. As Michael Hardt (2007) describes, exploring affect illuminates "both our power to affect the world around us and our power to be affected by it, along with the relationship between these two powers" (p. ix). Rather than conceptualize affect as a method, it is more useful to consider affect an orientation to exploring the effects of affective states such as happiness (Ahmed, 2007; 2010), depression (Cvetkovich, 2012a; 2012b), and whatever other "moods" (Ahmed, 2014) lie in between.

Interest in the affective dimensions of cultural phenomena spans decades and disciplines. Despite the risk of oversimplifying that history, it is worth noting some of the differences, and commonalities, that are circulated about affect theory's emergence. Michael Hardt (2007), whose co-authored text *Empire* (Hardt & Negri, 2000) is sometimes suggested as an early-days catalyst for generating widespread interest in affect, suggests that there are two dominant trends within studies of affect: gendered labor, as explored initially by second wave feminists, as well as the economic dimensions of intellectual, or cognitive, labor (2007, p. xi). Patricia Clough (2010), another foremost thinker in the affect tradition, suggests that interest in affect emerged during the 1990's because of problems encountered by those working within the traditions of poststructuralism and deconstruction, particularly as neither seemed to facilitate a philosophical return to bodies and bodily matter (p. 206). Imogen Tyler (2008) similarly

suggests two paradigms from which affect studies have emerged. The first, as Clough suggests, evolved as a result of dissatisfaction with poststructuralism, while the second did not so much “emerge” during the 1990’s (or 2000’s) but actually has a much longer, richer history that is evidenced in feminist media studies. Here, she writes, “feminist work on media, such as film and television, and genres, such as melodrama, have always been concerned with affective registers and feminist theory has long been concern with women’s “emotional labor”” (p. 88).

My interest in the affective dimensions of psychosurveillance encompasses interest in affective labor as well as the circulation of emotions and feelings (i.e., affects) in online communities. Affective labor, Oksala (2016) suggests, can be

theorized as an important subcategory of immaterial labor. It is the labor of human contact and interaction, which involves the production and manipulation of affects. Its “products” are relationships and emotional responses... Affective labor is thus immaterial in the sense that its products are intangible, even though it is usually corporeal and mixes with material forms of labor. (p. 284)

Similarly work from Jarrett (2014) argues that unpaid labor is necessary “in capitalist economics,” and although she points explicitly to labor done in the domestic sphere by women as “necessary input to capitalist circuits of exchange, producing healthy, socially adept, well-nourished laboring bodies” (p. 14), my argument is that affective, feminized, uncompensated labor need not be geographically or spatially grounded. Affective labor (such as listening to the emotions of others, which I explore in the second of my two case studies, as well as psychosurveillance more generally), and the gendered expectations that are normative to emotional labor<sup>16</sup>, are intrinsically interwoven with productivity as a

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<sup>16</sup> See research from Arlie Hoschild (1983) on how women’s work includes emotion and affect management.

central value of capitalism. Caring for others<sup>17</sup>, even under the auspices of psychosurveillance, can itself be understood as a form of affective labor. In the context of psychosurveillance in digital contexts, we use data so as to assess the feelings, the emotional and affective states of others, and in turn use our emotional responses to that data to determine whether they fall within the bounds of “acceptable” behavior.

The latter area of interest within affect studies—that is, how individuals experience affective states and also how affect circulates—brings us back to the earlier discussion of psychosurveillance as emblematic of communitarianism. Shared interest in a particularized set of affective states (e.g., depression, melancholy, sadness) are in line with an emphasis upon communitarianism: we monitor not only the mental health of those whom we know personally, but also (as I demonstrate in my analysis of the *7 Cups of Tea* application) unknown others. As Sara Ahmed (2004) writes,

emotions *do things*, and they align individuals with communities—or bodily space with social space—through the very intensity of their attachments. Rather than seeing emotions as psychological dispositions, we need to consider how they work, in concrete and particular ways, to mediate the relationship between the psychic and the social, and between the individual and the collective. (p. 119)

Much in the same way that Cvetkovich (2012a; see also Cvetkovich 2012b) positions depression, as “a cultural and social phenomenon rather than a medical one” (p. 132), I suggest that those mental states that fall under the umbrella of “distress” (including, but not limited to depression), are capable of creating relationships between “the individual and the collective” despite, how initially, they are imaged as private, lonely, and isolating.

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<sup>17</sup> To care for others, according to Engster (2005), is to “help them satisfy the basic biological needs necessary for survival and basic function... food, sanitary water, clothing, shelter, rest, a clean environment, basic medical care and protection from harm...” (p. 51).

## **Internet Autoethnographic Research**

My use of an ethnographic method in this chapter results from my belief, shared with other feminist researchers, that knowledge is situated and that what constitutes the personal is political. To that end the data used in this chapter is autoethnographic, as I share my own experiences with psychosurveillance, as one who is surveilled (on Facebook) and one who surveils others, following the autoethnographic tradition wherein “the researcher's own life experiences [are used] as data for theoretical analysis” (Crawley, 2012).

Although it is not clear what precisely it would mean to employ a “feminist methodology” in one’s research (Cook & Fonow, 1986), my methodological choices are influenced by ongoing discussions in the realm of ethnography, in which feminist approaches are juxtaposed with more traditional (i.e., masculinist) research traditions. Feminist ethnographers are concerned with the matters of voice, power, and interpretation, and strive to avoid “othering” the research subject by destabilizing the traditional boundary between researchers and their “Other” participants (Behar & Gordon, 1995). It is also not unusual for feminist ethnographers to find themselves effectively “written into” their scholarship (see Viswewaran, 1994), thereby blurring the lines between herself as the ethnographer and the subject of inquiry. This is all very much in line with the feminist truism that “the personal is political,” a mantra that has permeated the thinking of these writers and the production of their texts.

Taking that to heart, the data that I use in this chapter is about my *own* experiences. While there has been a significant amount written in relation to Internet ethnographies, wherein the Other is studied, in traditions referred to as “virtual



ethnography” (Hine, 2000), “netnography” (Kozinets, 2006), or “cyberethnography” (Gajjala, 2002), the experiences of the researcher his or herself are also apt for analysis.

As Bengtsson (2014) writes,

Researchers, just as much as those we study, do have bodies, exist in offline spaces and have ongoing everyday lives that must be acknowledged as integrated dimensions of the research process. (p. 863)

In this chapter I take that argument a step further, by foregrounding my own experiences rather than considering, more than in passing, the experiences of others with whom I interact in online spaces. Drawing upon the tradition of autoethnographic scholarship<sup>18</sup>, I refer to this an Internet autoethnography<sup>19</sup>.

Autoethnographic research complements my use of affect in this project, as both are methodological traditions that allows the researcher to acknowledge the personal, lived, and felt resonances that their work has upon them. Crawley (2012)’s definition of autoethnography, for example, highlights the affective dimension of autoethnography, which she describes

as a kind of self-interview, which is not a defined method with specific parameters but rather a balancing act between modernist empirical science, postmodernist deconstructions of science and subjectivity, and the activist pursuit of recording marginalized ideas and voices. Its usefulness lies in an interdisciplinary place between humanities and social science—like most critical theory, especially that of bodily experience—evoking and theorizing simultaneously but refusing to be boxed into categorical notions of method and

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<sup>18</sup> Ngunjiri, Hernandez and Chang (2010) note that while autoethnographies are one of a myriad of research methods, including “ethnographic, phenomenological, and other qualitative approaches, autoethnography allows researchers to dig deeply into their own experience, including the attendant emotions in ways that may not be possible if they were being interviewed by someone else” (p. e8).

<sup>19</sup> Others have others have used the term “auto-netnography<sup>19</sup>” (e.g., Kozinets, 2006; Kedzior & Kozinets, 2014) as a method within “netnographies” more broadly. Kozinets and Kedzior describe this method as one that allows the researcher “to provide added personal participation to the study of online cultural and communal phenomena in order to comprehend their nuances from a necessarily and suitably engaged position...” (p. 8).

the ruling relations of knowledge production. Like the iridescence inside a clam shell, it appears to change color as you turn its angle to the sun. (Crawley, 2012, p. 144)

In addition to illustrating the interconnectedness of feminist (auto)ethnography and affect theory, a discussion of how to conduct *ethical* ethnographic scholarship on the Internet is also warranted in this chapter. Unlike traditional ethnographic research, Internet ethnographies are complicated by a number of interrelated issues: blurred lines between what constitute public and private spaces, who “owns” data that is publicly accessible, whether quoted data can be traced back to its author, the difficulty in obtaining informed consent in online contexts, and more<sup>20</sup> (Roberts, 2015; Linabary & Corple, 2018; Germain et al., 2017). In 2001 Eysenbach and Till published one of the earliest attempts to highlight these difficulties, noting that

While the internet makes people’s interactions uniquely accessible for researchers and erases boundaries of time and distance, such research raises new issues in research ethics, particularly concerning informed consent and privacy of research subjects, as the borders between public and private spaces are sometimes blurred. (p. 1103).

Following that, in 2002 Kozinets presented four principles for ethical Internet ethnographies: full disclosure of researcher presence, guaranteeing the anonymity of research participant(s), seeking feedback from the group that is studied, and asking permission before using direct quotes. By 2010, however, he changed his mind,

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<sup>20</sup> Facebook, for example, continues to receive backlash for its decision to allow researchers to manipulate user emotions, in a project illustrating that persons shown positive messages are more likely to feel positively, while those shown depressing content were more likely to feel depressed (Coviello et al., 2014). Even more recently, Facebook’s founder, Mark Zuckerberg, was chastised by a US Congressional panel for operating under the motto “move fast and break things,” wherein the tools and technologies the website was creating and implementing changed faster than legislation could keep up with (“Mark Zuckerberg Testimony: Senators Question Facebook’s Commitment to Privacy,” 2018).

suggesting instead that in some cases it may be acceptable to engage in Internet ethnographic research without the consent of community members. Following his train of thought on the (possible) justifiability of covert research, Reilly and Trevisan (2016) suggested that covert methods may be acceptable if, for example, a platform's Terms of Service agreement does not bar research. Other have added that when we discuss the ethical dimensions of Internet ethnographies, those discussions need to be grounded in their particular contexts, and made on a case-by-case basis, than as a result of sweeping generalizations about the particularities of a platform (Pentzold, 2017; Ess, 2013; Henderson et al., 2013). Still others argue that when we are studying others in mediated contexts, we should take their opinions, thoughts, and (likely) responses to the research procedures into consideration when determining what constitutes ethical research (Brown et al., 2016).

In lieu of authoring scholarship about the predicted justifiability – and platform users' responses – about Internet ethnographies, some researchers have actually asked users to respond to these hypotheticals as research projects unto themselves. Fiesler and Proferes (2018), for example, conducted a study of Twitter users' perceptions of Twitter research, using the principles found in the Belmont Report<sup>21</sup> (US Department of Health and Human Services, 1979) to frame their analysis. Although they found that participants were concerned, to a great extent, about their privacy and the potential for their identification in research processes, the authors conclude by emphasizing that they “do *not* recommend that platforms solve this problem by making it impossible for researchers to collect public data. As expressed by many of our respondents, science and research is

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<sup>21</sup> For more information on the Belmont Report's history see Beauchamp (2008).

important” (p. 11, italics in original). Ultimately, while the Association of Internet Researchers created research guidelines (Ess & AOIR Ethics Working Committee, 2002), they – like technology laws – are hardly representative of the current state of potential research practices made possible on the Internet.

The necessity of making ethical decisions when it comes to Internet research, particularly in matters related to mental health, is of paramount importance. Although, as Fiesler and Proferes (2018) illustrate, social media users are wary of their information being used for research in general, when the purposes are related to mental health, which is particularly stigmatized, the stakes are higher. Even so, these ethical issues are largely unexplored in scholarship that exists at the nexus of Internet research and mental health. My experiences at a conference presentation, wherein researchers shared their newly developed, pre-diagnostic model for ADHD based upon Twitter users’ posts, was deeply unsettling in this regard. When I asked the researcher whether he believed that his work to create a predictive model for a mental disorder had considered some of the aforementioned ethical dilemmas, his response was telling. He emphasized that this data, once shared on the Internet, had become public property, and although he expressed a desire to prevent his toolset from getting into (what he called) the “wrong hands,” he defended the project based on its IRB approval<sup>22</sup>. Unfortunately, this researcher’s suggestion that IRB support absolved him of having to consider the feelings and beliefs

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<sup>22</sup> Unfortunately even review (and approval) by an IRB is not an indicator of a research project’s ethicality (see Elliott, 2015 and Stone, 2015).

of those who produced the data he analyzed is largely par for the course in contemporary Internet research practices<sup>23</sup>.

Beyond the imperfect nature of institutional (and for-profit) IRB's, research ethics discussions become even *more* complex when it is autoethnographic scholarship that is being undertaken in lieu of other-orientated scholarship such as that which is described above. As Newmahr and Hannem (2018) write,

IRBs can, and have been known to, intervene in autoethnography... Since few stories are devoid of other people, the characters in our stories become “human subjects,” and, whether or not we understood ourselves as engaged in research when our stories occurred, once published, our stories become data, the argument goes—data obtained from human subjects, without consent forms or waivers. (p. 5)

Carolyn Rambo (2007), for example, experienced her institution's IRB intervening to block the publication of an autoethnographic account of her intimate relationship with a student on the grounds that he had not granted her permission to document their relationship.

Although I thoroughly considered the ethical dimensions of all of these issues, the University of Minnesota's IRB ultimately did not consider this project within the scope of “human research”<sup>24</sup> and it was therefore exempt from review. Although IRB approval does not necessarily negate ethical questions when it comes to scholarship, I decided that my intended methods would not violate the rights of those involved in the study<sup>25</sup>.

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<sup>23</sup> In a meta-analysis of published articles using netnography as their method, for example, researchers found that it was rare for researchers to include any discussion of research ethics whatsoever (Tuikka, Nguyen & Kimppa, 2017).

<sup>24</sup> According to our correspondence, this was because it was beyond the scope of the FDA and DHHS definition of human research.

<sup>25</sup> I generated three questions that I – and others – should ask themselves before conducting Internet research: first, will the researcher be overt and covert? Second, who will be studied, and what would their likely response be if they learned they were part of

## Case Studies

### Facebook's Suicide Prevention Mechanisms

There are some who suggest that we engage in performances, or presentations, of the self on digital platforms due to the centrality of technology in our everyday lives (Sauter, 2014; Krämer & Winter, 2008; Bakardjieva & Gaden, 2012). As a result, a number of scholars have examined Facebook profiles as just such a site wherein these performances occur (van Dijck, 2013; Toma, 2013; Mehdizadeh, 2010). Although some researchers believe that there is a distinct advantage to networking websites and home pages *in lieu of* spatially grounded interactions, in that they allow the user to “have more control over their self-presentational behavior than in face-to-face communication” (Krämer & Winter, 2008, p. 106), these presentations are the result of user-generated content, content that enables surveillance of us by others. We may be able to choose what content to produce and share, but once it is seen, gathered, or analyzed by others, the effects of surveilling us are beyond our control.


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an analysis? Finally, what do these platforms Terms of Service agreements state, if anything, in relation to research? In the Facebook case study I was overt whereas on *7 Cups* I was covert. Having been trained as a Listener by *7 Cups of Tea*, ability to talk to people over the messaging platform was as legitimate as any other, non-researching person's. I never veered from the conversational script that I was trained to follow. Therefore my dual role as a researcher and a Listener never caused me to provide sub-par care to anyone. Although part of this work involved sharing my experiences interacting with others, my analysis would not include evaluating their mental state(s). Although I am sure that they may not like being unknowingly part of my research, even tangentially, the *7 Cups* platform itself goes to great lengths to protect the anonymity of those who use its services, and because I would never ask for – or share if voluntarily given to me – any identifying information, there is absolutely no chance of their identity ever being disclosed. Finally, Facebook has historically been accepting of research (both overt and covert) whereas *7 Cups of Tea* similarly encourages scholarly inquiry.

Although the most popular social networking platforms each have their own approach to responding to content that indicates an intent to harm oneself or others, Facebook's approach is unique in that while it asks users to flag or report troublesome content, it now has implemented the aforementioned algorithm that analyzes non-flagged posts. Yet the company's interest in user mental health began much earlier than the deployment of that particular algorithm<sup>26</sup>. In fact, it was years before that, in 2010, that Facebook's Safety department launched. Facebook has offered users the ability to report suicidal content since 2011, although February of 2015 marked the first time that posts could be flagged directly as containing suicidal content (Kleinman, 2015). This decision was made as Facebook worked in conjunction with suicide prevention groups including Innovations in Suicide Prevention, Now Matters Now, the National Suicide Prevention Lifeline and Save.org (McSpadden, 2015). On the department's informational page visitors are told, "nothing is more important to Facebook than the safety of the people that use it," and that the department's mission is "to provide [the user] with updates and information to help keep you and your family safe while using Facebook or surfing on the Internet" ("About," 2015).

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<sup>26</sup> Facebook uses many different forms of AI algorithms to solve various social issues (e.g., combatting terrorist recruitment), although this is the only one related to public health that we have been made aware of (Greenemeier, 2018).



**Facebook Safety** added 2 new photos. Like Page

February 25 · 🌐

Keeping you safe is our most important responsibility on Facebook.

Today, at our fifth Compassion Research Day, we announced updated tools that provide more resources, advice and support to people who may be struggling with suicidal thoughts and their concerned friends and family members.

We worked with mental health organizations Forefront, Now Matters Now, the National Suicide Prevention Lifeline, [Save.org](https://www.save.org) and others on these updates, in addition to consulting with people who had lived experience with self-injury or suicide.

One of the first things these organizations discussed with us was how much connecting with people who care can help those in distress. If someone on Facebook sees a direct threat of suicide, we ask that they contact their local emergency services immediately.

We also ask them to report any troubling content to us. We have teams working around the world, 24/7, who review any report that comes in. They prioritize the most serious reports, like self-injury, and send help and resources to those in distress.

For those who may need help we have significantly expanded the support and resources that are available to them the next time they log on to Facebook after we review a report of something they've posted. Besides encouraging them to connect with a mental health expert at the National Suicide Prevention Lifeline, we now also give them the option of reaching out to a friend, and provide tips and advice on how they can work through these feelings. All of these resources were created in conjunction with our clinical and academic partners.

We're also providing new resources and support to the person who flagged the troubling post, including options for them to call or message their distressed friend letting them know they care, or reaching out to another friend or a trained professional at a suicide hotline for support.

These updates will roll out to everyone who uses Facebook in the U.S. over the next couple of months. We're also working to improve our tools for those outside the U.S.

--Rob Boyle, Facebook Product Manager & Nicole Staubli, Facebook Community Operations Safety Specialist

### *Facebook Safety's statement on suicide prevention*

This status set forth the agenda that Facebook would follow for the ensuing years. Importantly, suicide is being framed as a matter of safety for the Facebook community. Interestingly, however, these descriptions of new policies are not directed toward individuals experiencing distress; rather, they are directed toward individuals who are being told this information to improve the actions they take as they conduct psychosurveillance of others. Creating a safe Facebook community is done for the benefit



of those *not* experiencing mental distress, but it is only as a result of their psychosurveillance of others, and acting appropriately (by reporting to the authorities and/or Facebook administration), that that safety can be ensured.

I believed it was important to verify the veracity of not only these claims about the processes and safety measured described by Facebook, but more importantly for the sake of exploring the mechanisms and ethos of psychosurveillance, to better understand how the experiencing of engaging in psychosurveillance, particularly the reporting processes, are experienced. Three years ago, therefore, I asked a friend to report the following status to Facebook as indicative of a suicide threat<sup>27</sup>:

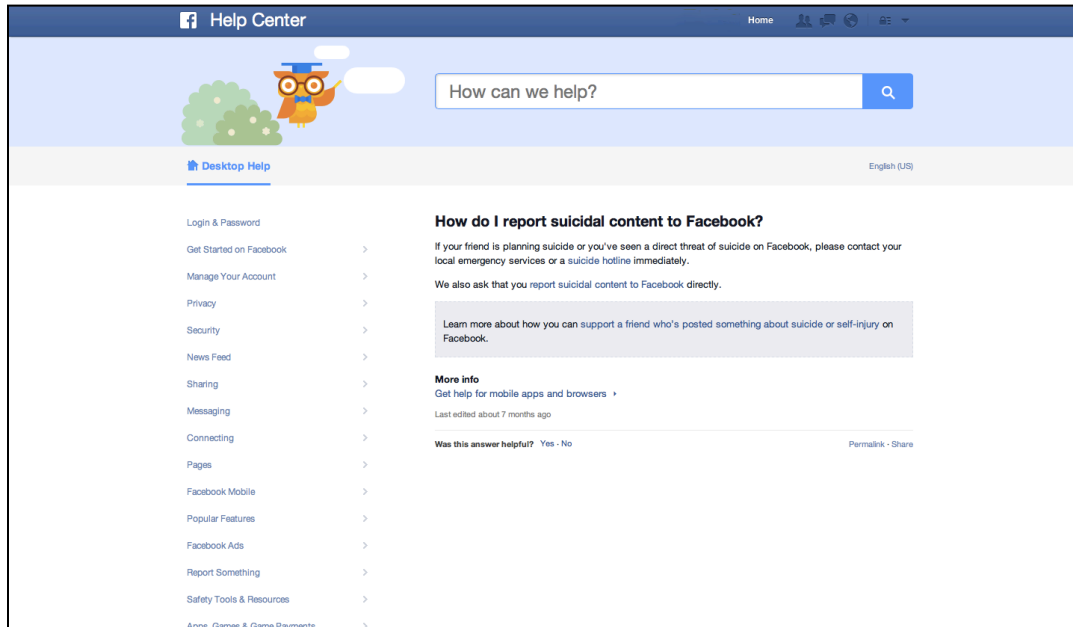


*My Facebook status*

My collaborator was unable to flag the status itself as containing suicidal content, despite Facebook claiming that was possible for troublesome posts, so instead they went to Facebook's Help Center to determine how to report the content.

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<sup>27</sup> Before posting that status, I posted another on my Facebook page indicating that the suicidal post was for research purposes only. Allow that post may have affected the outcome of the experiment, I did not – and do not – believe it would have been ethical *not* to include it.



### *How to report suicidal content*

They then followed the link to “report suicidal content to Facebook” and were brought to this form:

The screenshot shows the "Report Suicidal Content" form. The form is titled "Report Suicidal Content" and includes the following sections:

- IMPORTANT:** If you've encountered a direct threat of suicide on Facebook, please contact law enforcement or a suicide hotline immediately. If the person you're worried about is a member of the US military community, be sure to mention this so they can provide this person with custom support.
- Full name of the person who posted the content:** As it appears on Facebook. There is a text input field.
- Link (URL) to this person's profile:** There is a text input field with the placeholder "https://www.facebook.com/...".
- Please provide a link to the content you're trying to report so we can investigate.** To get a link to the exact content you want to report:
  1. Find the content (photo, video, comment, etc) you want to report
  2. If this content is on someone's wall or in news feed, click on the date/time it was posted (next to Comment)
  3. Copy the URL from your browser's address bar:
- Link (URL) to the content:** There is a text input field with the placeholder "https://www.facebook.com/...".
- Screenshot:** There is a "Choose Files" button and a note "no files selected".
- Additional info:** (Ex: a copy of what was posted, if you can't provide the link). There is a text input field.
- Send:** A blue button at the bottom right of the form.

At the bottom of the page, there is a footer with links: "About", "Create Ad", "Create Page", "Developers", "Careers", "Privacy", "Cookies", "Terms", "Help".

### *Reporting suicidal content*

Following this they were taken to the page above (for reporting suicidal content) and included all the necessary information, and were subsequently directed to the following page:

**Report Suicidal Content**

**IMPORTANT:** If you've encountered a direct threat of suicide on Facebook, please contact law enforcement or a suicide hotline immediately. If the person you're worried about is a member of the US military community, be sure to mention this so they can provide this person with custom support.

Full name of the person who posted the content  
As it appears on Facebook

Link (URL) to this person's profile

Please provide a link to the content you're trying to report so we can investigate. To get a link to the exact content you want to report:

1. Find the content (photo, video, comment, etc) you want to report
2. If this content is on someone's wall or in news feed, click on the date/time it was posted (next to Comment)
3. Copy the URL from your browser's address bar:

Link (URL) to the content

Screenshot

Optional

No file chosen

Learn how to upload a screenshot


Additional info  
(Ex: a copy of what was posted, if you can't provide the link)

*Report suicidal content*

Next, on another Facebook page (that every account has) called a “Support Dashboard,” their report of my suicidal content remain open until the following messages were received:

**Report Suicidal Content** Case #239778434

Case is closed Re-Open Case Remove from Support Dashboard

 We sent you a message. 6 seconds ago

Hi,

Thank you for your report. We will review the reported material and get back to you soon. In the meantime, if you have encountered a direct threat of suicide on Facebook, please immediately contact law enforcement.

For reports in the United States or Canada, we also recommend that you or the user who posted the content contact the National Suicide Prevention Lifeline, a 24/7 hotline, at 1-800-273-TALK (8255).

For reports in the UK and Ireland, we recommend that you encourage the user who posted the content to contact Samaritans on 08457 909090 (UK) or 1850 609090 (ROI).

For reports in Norway, we recommend that you encourage the user who posted the content to contact Kirkens SOS: <http://www.kirkens-sos.no/> or on 815 33 300.

For reports in Finland, we recommend that you encourage the person who posted the content to contact the Finnish Association for Mental Health: <http://mielenterveysseura.fi/> or call 09 41350510 or 09 41350501.

For reports in the Netherlands, we recommend that you encourage the user who posted the content to contact Foundation 113Online: [www.113online.nl](http://www.113online.nl) or call 0900-113 0 113.

You also can view a list of suicide prevention hotlines in other countries by visiting: <http://www.befrienders.org/> and choosing from the drop-down menu at the top of the page.

If you want to learn more about how to identify and respond to a friend you are worried about, we recommend that you visit Lifeline's "Help a Friend" section: <http://www.suicidepreventionlifeline.org/gethelp/someone.aspx>

Thanks for contacting Facebook,

*Report closed message*

**This case has been closed, so you don't need to do anything else. Thanks for contacting us.**

**Case history**

You contacted us. 3 minutes ago

**Full name of the person who posted the content**  
Emma Bedor

**Link (URL) to this person's profile**  
<https://www.facebook.com/emma.bedor?fref=ts>

**Link (URL) to the content**  
<https://www.facebook.com/emma.bedor?fref=ts>

**Additional info**  
11:34 Post

I am going to end my life.

**Your email**

*Case history*

They then received two follow-up emails to the account associated with their Facebook:

From: Facebook <[info+oo27mzu.aeaujlqhx@support.facebook.com](mailto:info+oo27mzu.aeaujlqhx@support.facebook.com)>  
 Date: Mon, May 11, 2015 at 11:42 AM  
 Subject: Re: Report Suicidal Content  
 To:

Hi,

Thank you for your report. We will review the reported material and get back to you soon. In the meantime, if you have encountered a direct threat of suicide on Facebook, please immediately contact law enforcement.

For reports in the United States or Canada, we also recommend that you or the user who posted the content contact the National Suicide Prevention Lifeline, a 24/7 hotline, at 1-800-273-TALK (8255).

For reports in the UK and Ireland, we recommend that you encourage the user who posted the content to contact Samaritans on 08457 909090 (UK) or 1850 609090 (ROI).

For reports in Norway, we recommend that you encourage the user who posted the content to contact Kirkens SOS: <http://www.kirkens-sos.no/> or on 815 33 300.

For reports in Finland, we recommend that you encourage the person who posted the content to contact the Finnish Association for Mental Health: <http://mielenterveysseura.fi/> or call 09 41350510 or 09 41350501.

For reports in the Netherlands, we recommend that you encourage the user who posted the content to contact Foundation 113Online: [www.113online.nl](http://www.113online.nl) or call 0900-113 0 113.

You also can view a list of suicide prevention hotlines in other countries by visiting: <http://www.befrienders.org/> and choosing from the drop-down menu at the top of the page.

If you want to learn more about how to identify and respond to a friend you are worried about, we recommend that you visit Lifeline's "Help a Friend" section: <http://www.suicidepreventionlifeline.org/gethelp/someone.aspx>

Thanks for contacting Facebook,

The Facebook Team

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Hi,

Thank you for your report. We'll review the information you provided and may contact the appropriate authorities to follow up on this matter.

If you encounter a direct threat of suicide on Facebook, we request that you contact law enforcement or a suicide prevention agency immediately. If possible, you should also encourage the person who posted the content to contact their local suicide prevention agency. For helpline information, please visit the Help Center:

<https://www.facebook.com/help/103883219702654/?ref=cr>

Please rest assured that these reports are kept confidential. If you need to report suicidal content on Facebook in the future, please use this form:

<https://www.facebook.com/help/contact/305410456169423/?ref=cr>

View updates from your support dashboard: <https://fb.me/1MD39vD3FP2kd9J>

Thanks,

Henry  
 Community Operations  
 Facebook

### *Follow-up emails*

These are my collaborator's (unedited) reflections on the reporting experience:

My experience with reporting suicidal content was in some senses more sterile than others because of the controlled situation.

To report a specific form must be accessed, rather than simply reporting access, which I had to google in order to locate. The form required some information which may be difficult in a rapid response (the time of the post must be provided, but that information is not always shown on the post (rather how old the post is shown)).

After completing the form you are taken to a page on the "Facebook Support Dashboard" which I did not know existed, and was unsure how to access for

future reference until I googled it. There was contact information provided if I believed a potential suicide was imminent.

Facebook responded within five minutes with a report on the case concluding it was closed. It provided contact information for suicide hotlines, and little else. Overall, I thought the reporting system worked as a means to provide information to the person responding to the report for contacting support hotlines. Otherwise, it seemed ineffective as a tool for prompting action especially by the police. The system for evaluating potential threats appears to be weak, and presumes the certainty of the poster. Namely, in this case where the post that was reported was followed by a disclaimer that it was part of a research experiment, facebook automatically discredited the validity of the threat. To me this seemed hasty, and risky, given the stakes at play.

Three hours passed between me posting that status and receiving a message from Facebook inquiring as to my well-being. I received that message (below) after attempting to log into my account:

**People Care About You**

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A friend recently let us know that something you posted made them concerned about you. We want to make sure you have the resources you need if you're going through something difficult.

There are organizations that offer confidential, individual support. To get more information about services in your area, please select the country where you're located:

Select

---

[Learn More](#) [Get Support Info](#)

*Facebook tells me that people care*

Clicking the “Learn More” button took me to the Help Center page titled “I need to find a suicide hotline for me or a friend.” In order to actually log into my Facebook account, however, I was required to enter a country under the “Select” tab, which I entered as the United States. Next, I clicked the “Get Support Info” button, which brought me here:

**Confidential Support When You Need It**

---

There are people available to help whenever you need it. Lifeline offers confidential support and other resources day or night.

National Suicide Prevention Lifeline  
<http://www.suicidepreventionlifeline.org>  
☎ 1 800 273 TALK (8255)  
📄 <http://suicidepreventionlifeline.org/gethelp/fbchatterms.aspx>

If you're a member of the US military community (ex: active soldier, veteran or family member), [get help here](#).

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*Facebook shares support information with me*

Clicking the “Back” button allowed me to change my country of residence, but my account remained inaccessible to me until clicking the “Log In” button, which directed me my Facebook home page. Other than this required clicking through in order to be presented with the National Suicide Prevention Lifeline’s contact information, I received no other notices or messages from Facebook. Twelve hours after posting the status, I deleted it from my Facebook profile page.

That experiment occurred in the spring of 2015, roughly three years prior to the time of writing this dissertation. Today, when looking for information on how to report information about suicide or self-harm intent on Facebook, users are directed to a webpage, and to follow a process, that are exactly the same as when my collaborator reported me three years ago.

### Report Suicidal Content


IMPORTANT: If you've encountered a direct threat of suicide on Facebook, please contact law enforcement or a suicide hotline immediately. If the person you're worried about is a member of the US military community, be sure to mention this so they can provide this person with custom support.

**Full name of the person who posted the content**  
As it appears on Facebook

**Link (URL) to this person's profile**

Please provide a link to the content you're trying to report so we can investigate. To get a link to the exact content you want to report:

1. Find the content (ex: photo, video, comment) you want to report
2. If this content is on someone's Timeline, click on the date/time it was posted (ex: 27 minutes, May 30 at 7:30pm)
3. Copy the URL from your browser's address bar:



**Link (URL) to the content**

**Screenshot**  
Optional

No file chosen

[Learn how to upload a screenshot](#)

**Additional info**  
(Ex: a copy of what was posted, if you can't provide the link)

*Facebook's 2018 reporting webpage, the same as it was in 2015*

It is very likely, then, that the process and experience, both by reporters and those who are the subject of concern, remain the same.

Although Facebook very clearly wants its users to feel motivated to report alarming content, it is also clear that relying upon others to provide those reports was not being seen as an adequate response to the amount of suicide and/or harm indicating content that existed. As a result, they generated the algorithmic intervention that now scans and analyzes user statuses. The fundamental problem with the celebratory discourses about the implementation of this AI, however, is that it may cause individuals to feel even *less* motivated to go through the reporting mechanisms to share troublesome content with Facebook administrators, or even to call emergency services (i.e., to call



911) if they believe individuals pose an imminent threat to themselves or others. This is largely because of the celebratory discourses surrounding the deployment of this AI when it was developed and then launched, particularly in that these discourses ultimately position the technological intervention as better than those offered by humans engaging in lateral surveillance.

If we return to the *Algorithmics* episode, for example, at no point was it mentioned that this AI was created and implemented in order to *support* the actions of human reporters. Instead, the AI is described as new, exciting, groundbreaking, and seemingly even better (that is, faster and more efficient) than humans might be in surveilling the mental health one another. Of course, the episode did end by emphasizing that “machines can never replace psychological help or support systems for those in need.” Yet how or why that might be true, however, was never explained.

Fundamentally this reflects a broader issue when it comes to the appropriate applications of AI into processes of everyday life: while some are of the belief that artificial intelligence is vastly superior to human intelligence and may, someday in the future, render us obsolete, others suggest that we would be better off incorporating it into processes and workflows in ways that *support* the practices and workflows of humankind. Unfortunately, the sentiment expressed by Facebook founder Mark Zuckerberg falls into the former category, evoking the belief that AI is faster, better, and stronger than humans when it comes to suicide prevention. Consider his words, for example, when he announced the deployment of the AI to serve this purpose:

Here's a good use of AI: helping prevent suicide.

Starting today we're upgrading our AI tools to identify when someone is expressing thoughts about suicide on Facebook so we can help get them the support they need quickly. In the last month alone, these AI tools have helped us connect with first responders quickly more than 100 times.

With all the fear about how AI may be harmful in the future, it's good to remind ourselves how AI is actually helping save people's lives today.

There's a lot more we can do to improve this further. Today, these AI tools mostly use pattern recognition to identify signals -- like comments asking if someone is okay -- and then quickly report them to our teams working 24/7 around the world to get people help within minutes. In the future, AI will be able to understand more of the subtle nuances of language, and will be able to identify different issues beyond suicide as well, including quickly spotting more kinds of bullying and hate.

Suicide is one of the leading causes of death for young people, and this is a new approach to prevention. We're going to keep working closely with our partners at Save.org, National Suicide Prevention Lifeline '1-800-273-TALK (8255)', Forefront Suicide Prevent, and with first responders to keep improving. If we can use AI to help people be there for their family and friends, that's an important and positive step forward. (Zuckerberg, 2017)

Zuckerberg is not alone in his belief that AI will, at some point, be capable of solving social problems. Curious as to how the launch of this AI was reported upon at both the national and international levels, I conducted a search of magazine and newspaper content published between 2010 (when the Facebook Safety department was launched) and 2018 (when this chapter was written). Of those articles that included the keywords Facebook, suicide, and algorithm in their text, very few provided more than a recycling of Zuckerberg's words, emphasizing that the social networking giant is seeking to combat suicide and self-harm *through technology*. Instead of positioning the algorithm as a support tool for human surveillance and reporting, Zuckerberg (and many media outlets) instead positioned them as *better* than what humans are capable of, which

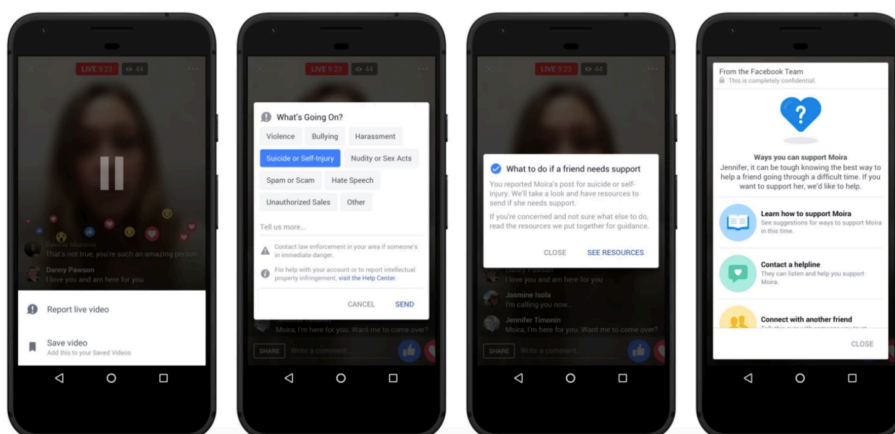
perpetuates the false belief that technology unto itself can improve our lives<sup>28</sup>. The belief that advances in technology will someday lead us to a perfected society, or utopia, is a perspective sometimes referred to as technological utopianism (Segal, 1985). Yet despite Zuckerberg's seeming belief in that ideal, and how fully he seems to believe that Facebook may play a role in evolving our society, Facebook's actions in other arenas related to suicide prevention reveal that despite the advances made possible by AI, psychosurveillance still requires participation by human actors.

To illustrate that point we can look to Facebook's actions and public statements in the wake of self-harm and suicide being broadcasted through its live stream function.<sup>29</sup> In March 2017 the company's lead researcher in suicide prevention, Jennifer Guadagno, was quoted in the *New York Post* saying that Facebook will not immediately end a user's live stream if an individual threatens suicide or self-harm. Although viewers (i.e., Facebook friends) can report the live stream to administrators in the same way they can report status updates and posts, Facebook will not end live streams even when that happens.

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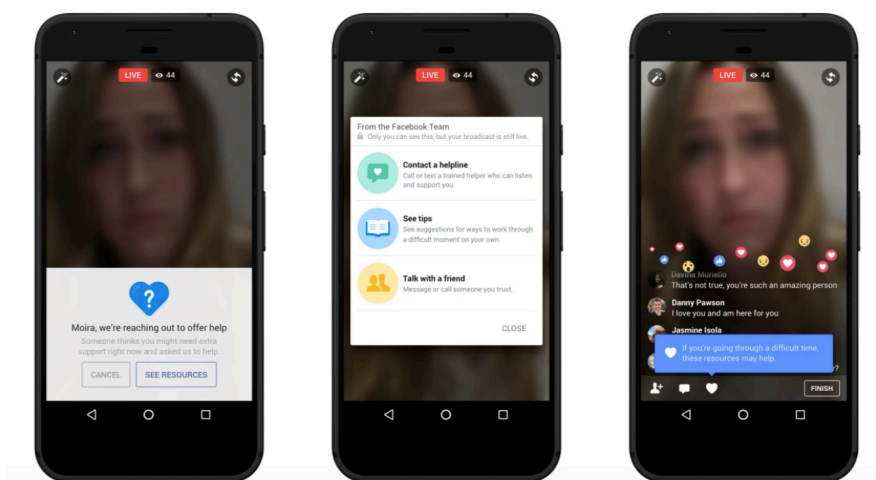
<sup>28</sup> More recently Zuckerberg told a Congressional panel that AI will solve other social problems, although when that will happen (and how) is unclear (see Harwell, 2018). The alternative perspective, that AI is best suited to enhancing the capabilities of humans, is espoused by technologists such as Dr. Eric Horvitz, who argues that "Machine intellect is now going to extend our abilities, specifically along different dimensions" (2018). In his view, AI is a useful supplement to humankind's capabilities.

<sup>29</sup> In addition to suicide and self-harm, there have also been a number of murders, rapes, assaults, and other violent and criminal acts broadcast via Facebook's live stream function (Isaac & Mele, 2017; Kantrowitz, 2017).



*The reporting process for live streams with suicidal or self-harm content (Dickey, 2017)*

Instead, Facebook claimed it will allow broadcasts to continue but will monitor them all the while, overlaying the stream with suicide prevention tools on the screen that only the broadcaster can see. This course of action, Guadagno stated, “opens up the opportunity for people to reach out for support and for people to give support at this time that’s critically important...” (Vega, 2017, para. 11)



*The tools imposed on users' screens when they live stream troublesome content (Dickey, 2017)*

Yet we should consider those public statements alongside internal Facebook guidance documents that were recently leaked to the media and published by *The*

*Guardian* in 2018 in a series titled The Facebook Files (“Facebook Files,” 2018). These documents illustrated that the company had motivations other than allowing “people to reach out for support,” as Guadagno claimed, when it decided not to interrupt live streams of suicide or self-harm (Vega, 2017, para. 11). According to these leaked documents, Facebook believes that “Videos of violent deaths, while marked as disturbing, do not always have to be deleted because *they can help create awareness of issues such as mental illness,*” adding that they “will allow people to live stream attempts to self-harm because they do not want *“to censor or punish people in distress”*” (Hopkins, 2017a, paras. 13 and 18, italics added for emphasis). Perhaps most illustrative of the ethos of psychosurveillance, and the necessity of having surveillance occur by other humans (and not AI), is Facebook’s policy that “footage will be removed *“once there’s no longer an opportunity to help the person”* – unless the incident is particularly newsworthy” (Hopkins, 2017b, para. 2, italics added for emphasis).

These guidelines clarify that, despite Zuckerberg’s statements about a technological utopia wherein AI solves (mental health) problems, these live streams are allowed to continue broadcasting because of their potential to prevent *further* acts of self-harm by others in the Facebook community. The imagined “other” engaging in psychosurveillance is not, therefore, the AI whose benefits Zuckerberg continues to extoll; rather, it is other *people*, other *humans*, who are meant to learn from the mistakes (i.e., the “bad” behavior of imperfect citizens) of others. If Facebook’s desire truly was to stop or prevent suicide and/or self-harm, allowing them to continue to be shown to Facebook Friends would not serve that purpose; yet that decision, along with the stated

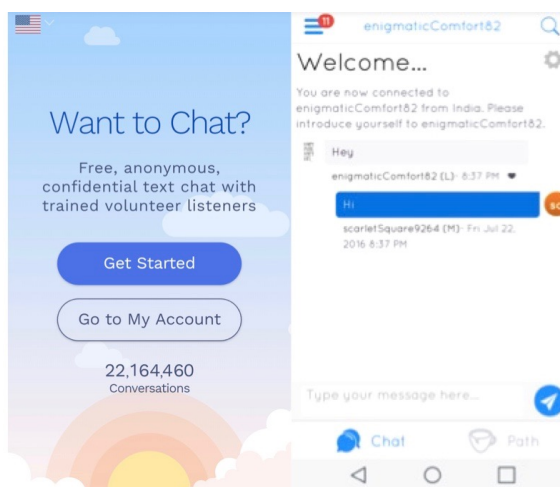
desire to not censor or punish persons experiencing distress serves provides a similar, even pedagogical opportunity for one's social network to become more familiar with what constitutes mental distress, furthering their expertise in the psy domains.

Finally, the guideline that footage is only removed once help is not possible, unless an incident is deemed especially noteworthy, further underscores this point: footage can remain up if it contains content that can teach "us" (i.e., the humans who use Facebook) about memorable events. Ultimately, despite Zuckerberg's suggestion that AI might be able to stop suicide, these guiding documents illustrate the centrality of psychosurveillance performed by humans, both in order to report video content, but also in order to be "taught" what constitutes mental distress. AI and algorithms are not neoliberal citizens, who are supposed to learn to care for themselves properly as enterprising individuals; despite what Zuckerberg suggests about the perfectibility of our social world by artificial intelligence, humans are always the intended actors when it comes to mechanisms of psychosurveillance. Ultimately what this means is that, beyond the ethos of psychosurveillance as one of governmentality's multi-form tactics, we need to develop a particular set of skills that reflects our participation in digital surveillance practices. Yet the actual labor, the work, that psychosurveillance involves is both masked by rhetorics of communitarianism and overshadowed by excitement about technological advances, particularly the novelty of suicide-preventing AI.

### **"Listening" with 7 Cups of Tea**

Unlike the celebratory discourses of AI and algorithmic interventions as central to psychosurveillance, there are still particular elements of the digital mental health industry

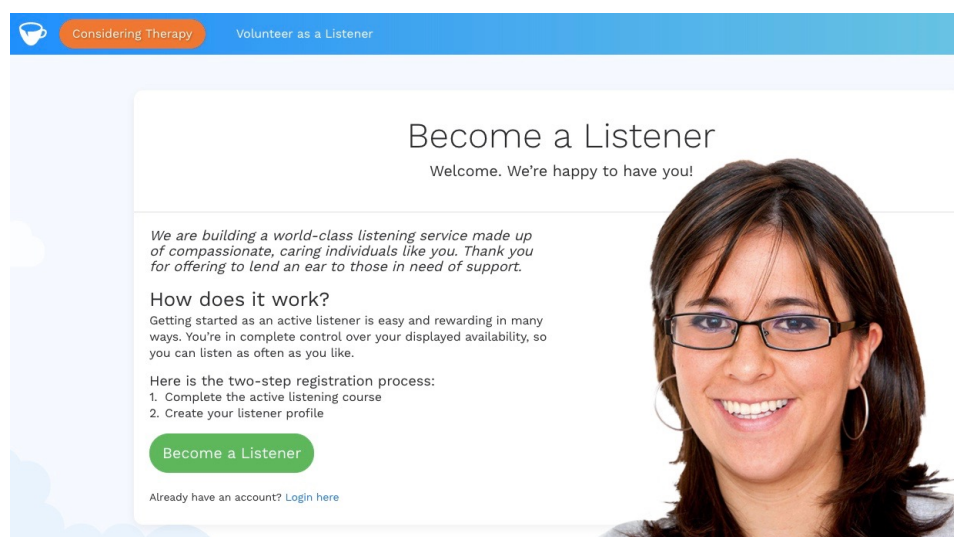
wherein the human practices (i.e., labor) of psychosurveillance are clearly apparent. Consider, for example, the ways that many smartphone applications with claims of benefitting user mental health that enable their users to “connect” with others, whether in chat rooms, on discussion boards, or through various means of direct messaging. *7 Cups of Tea* is one such toolset that I used for a number of months as I conducted my dissertation research, first perusing its offerings, and eventually offering my own services as a Listener. Dedicated Listeners are what makes *7 Cups* unique amongst these toolsets, as volunteers called “Listeners,” offer their time engaging (i.e., messaging) with other users who are seeking support. Listeners, it should be noted, are not trained mental health professionals, and although *7 Cups of Tea* does *also* offer to connect members with trained mental health professionals there are, unsurprisingly, fees associated with those sessions. Being connected to a Listener, on the other hand, is free.



*Using 7 Cups of Tea for the first time, I was connected to a Listener (located in India)*

There is ample research suggesting that individuals with mental illness experience health benefits when connected to supportive online communities (Naslund et al., 2014; Highton-Williamson et al., 2015; Naslund et al., 2015). My intent here is not to contradict those findings. My concern is related to the labor, the actual work, that psychosurveillance demands, in the context of *7 Cups of Tea* and other similar DMHI toolsets, but also in the cultural context wherein psychosurveillance is a normative practice more generally.

Fundamentally, engaging in psychosurveillance, whether in the context of *7 Cups* or any other digital toolset, adds tangible economic value to that toolset. Listeners, therefore, are performing a form of labor that is entirely uncompensated. The use-value of the listening (whether formally, through channels like *7 Cups of Tea*, or informally), though, is obscured by the mystical properties associated with the altruism of “helping others” that makes it possible for tools like *7 Cups* to even exist.



*Considering the gendered dimensions of affective labor, I was not surprised that the image used to appeal to potential Listeners was of a woman*



Although 7 *Cup*'s Listeners are not trained mental health professionals, they are "trained" by the company itself. I signed up for that training, which began (online) as follows:

Active listening is a great way to care and support another person. At first, you will likely find it to be a bit challenging. In normal relationships, we tend to take turns talking and sharing. With active listening, you are focused primarily on the other person. Your careful listening helps the other person to feel heard, valued, and understood. Keep in mind that active listening is not counseling or advice giving. You shouldn't try to solve their problems. ("Listener Training," 2018, para. 2).

This training included a short, online course in which I was taught how to reflect emotion, ask questions, evaluate and improve my own listening skills, engage in active listening over text and chat, maintain confidentiality, know when to suggest trained therapists and/or resources, discern who is a troll versus who is genuinely seeking help and support, and how to practice Internet safety. Although that list may seem long, it should be noted that it took no more than 10 minutes to complete the course and the quizzes that were part of each unit. Although my own education has been devoid of any sort of mental health training, it does not require an advanced degree to know that in the context of working with persons seeking mental health support, ten minutes is a woefully inadequate amount of time to spend learning how to fulfill those needs. In fact, the minimalistic amount of training I received frightened me, not necessarily because of how inadequate *I* felt about *myself* as a prospective caregiver to others over this platform, but also in that I could imagine other people who may take the training even *less* seriously

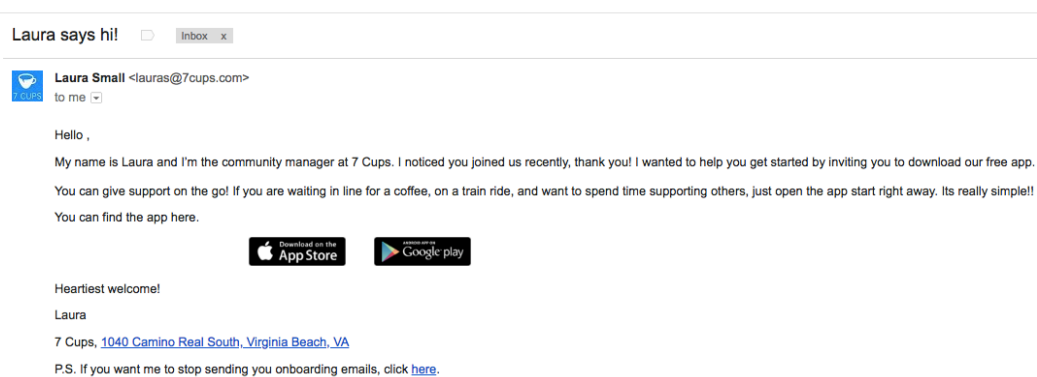
than I providing even *worse* care and, potentially, harming those with whom they interact.

### *An example of a Listener Training unit*

Despite my trepidation, I continued with the training, at which point I was required to engage in a “practice chat” session. Here I had to pick the correct answers in a mock conversation with someone who wanted to talk to a Listener.

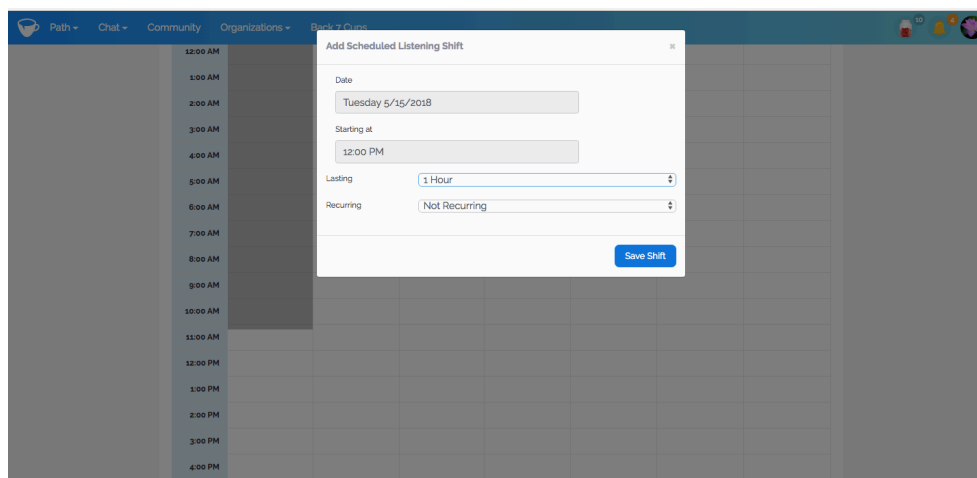
### *Practice chatting*

Subsequently I was required to type a series of “promises” (“I promise to treat people seeking help with dignity and respect. I will respond promptly to people seeking my help. I promise to act in a kind, compassionate, and supportive manner to fellow listeners on 7 cups.”), and then I was brought to a scheduling form. This genuinely surprised me, for unlike the email I received after signing up in which I was told that I could be a Listener during my spare time (see the email below), I was now required to schedule a block of time during which I would Listen to others.



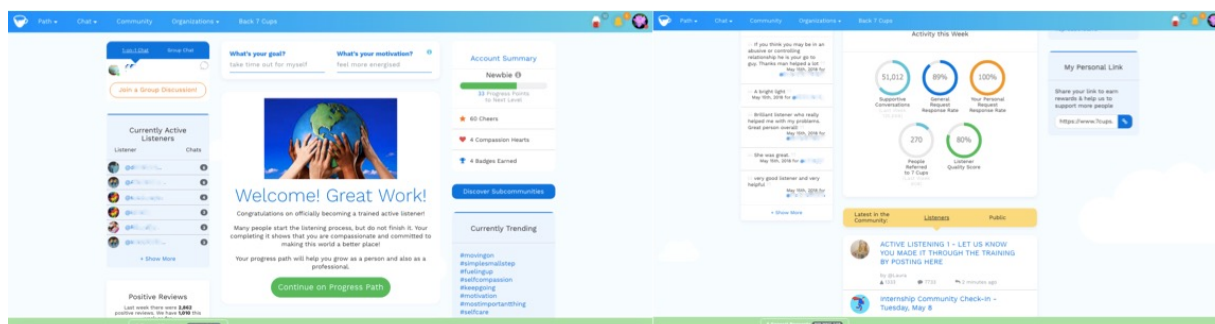
*When I first signed up as a Listener I was told that Listening is done during free time*

Although Listening is premised upon altruism, it is very clearly a form of affective labor: Listeners must schedule blocks of time, do an uncompensated form of work, and do so in a high-stakes environment (where the mental health of others is at stake).



*The default setting scheduled me for a 2-hour shift on a recurring basis, which I opted out of*

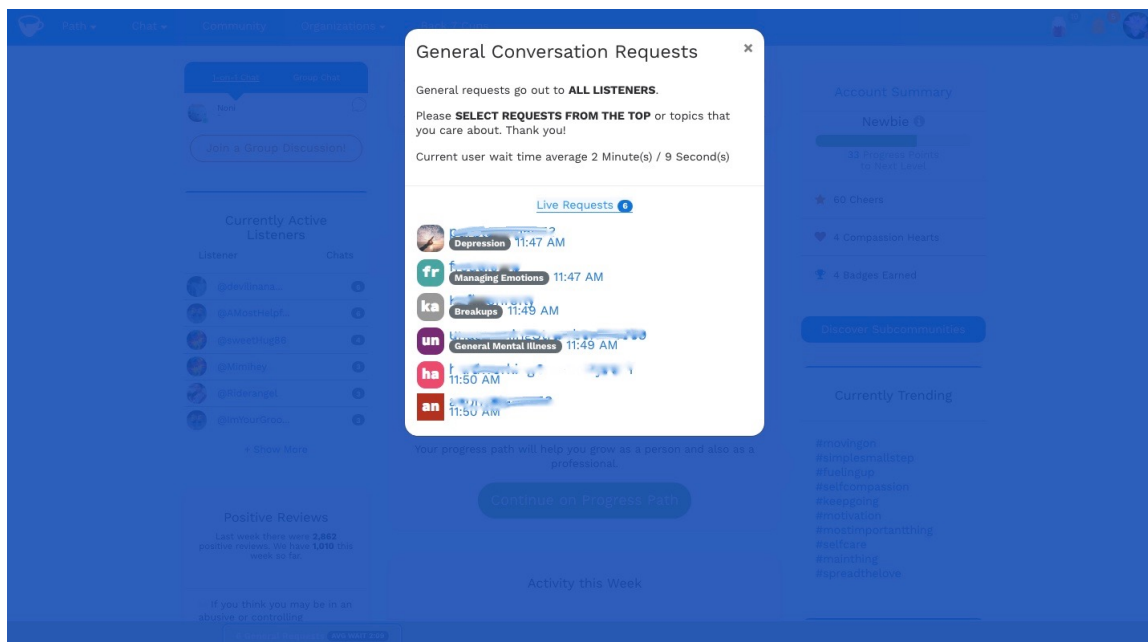
What's more, the automated scheduling prompted me to block out a 2-hour shift on a recurring basis and, as I would quickly learn, as soon as I logged into the system, the sound of ringing telephones would prompt me to "answer" chat requests that became more urgent as more people sought the services of Listeners.



*My Listener homepage*

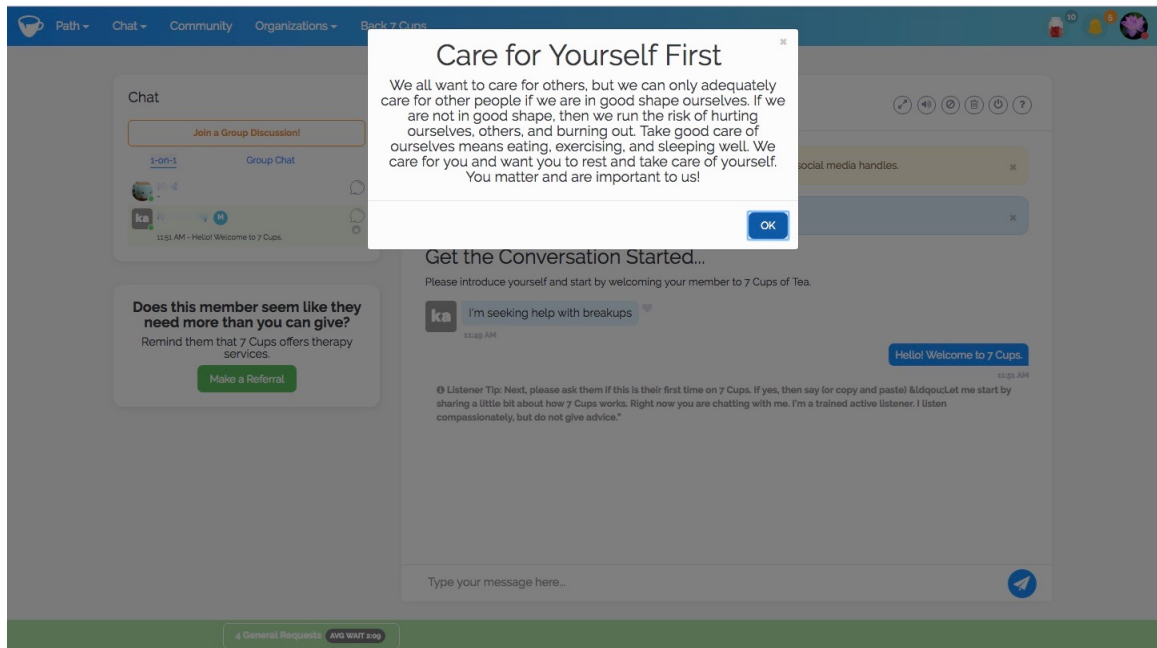
My Listener home page (pictured above) contained information about available Listeners, trending topics, blank spaces for me to personalize (which I did not do), and charts of listening activity that week. At the bottom of the screen, a green bar showed the number of 7 Cups users who were actively waiting for Listeners to chat with them. As I

came to see, a green bar meant that an acceptable number were waiting, whereas an orange or red bar suggested that too many were waiting and that we Listeners needed to engage with them more quickly. I clicked on the green bar where conversation requests were hovering, and was faced with the following window:



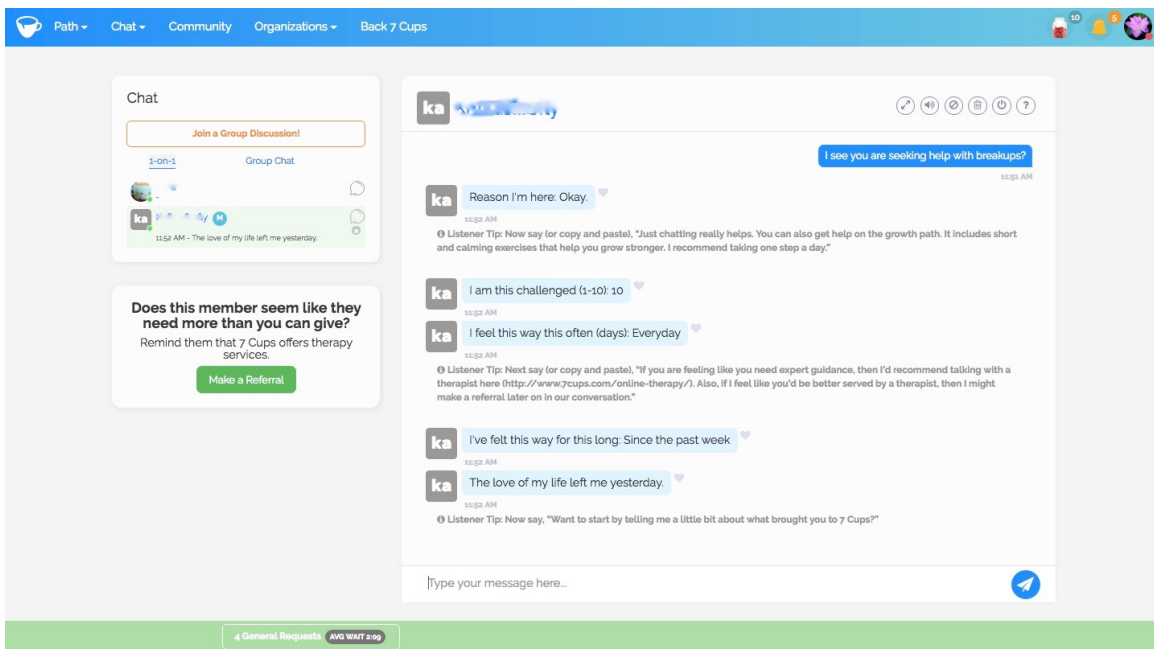
### *General conversation requests*

I saw that those waiting to chat could select subjects that were relevant to their discussion needs, which would hopefully help Listeners decide with whom to engage. At this particular time those areas included depression, managing emotions, breakups, general mental illness, and two that were unspecified. Although my role as a Listener was likely clear to these users, that I was literally there to listen and not offer support other than that, I opted to chat with the person wanting to talk about breakups. Depression, managing emotions and general mental illness seemed to me then, and still seem, beyond the scope of what an unlicensed Listener ought to chat with another user about in a time of need.



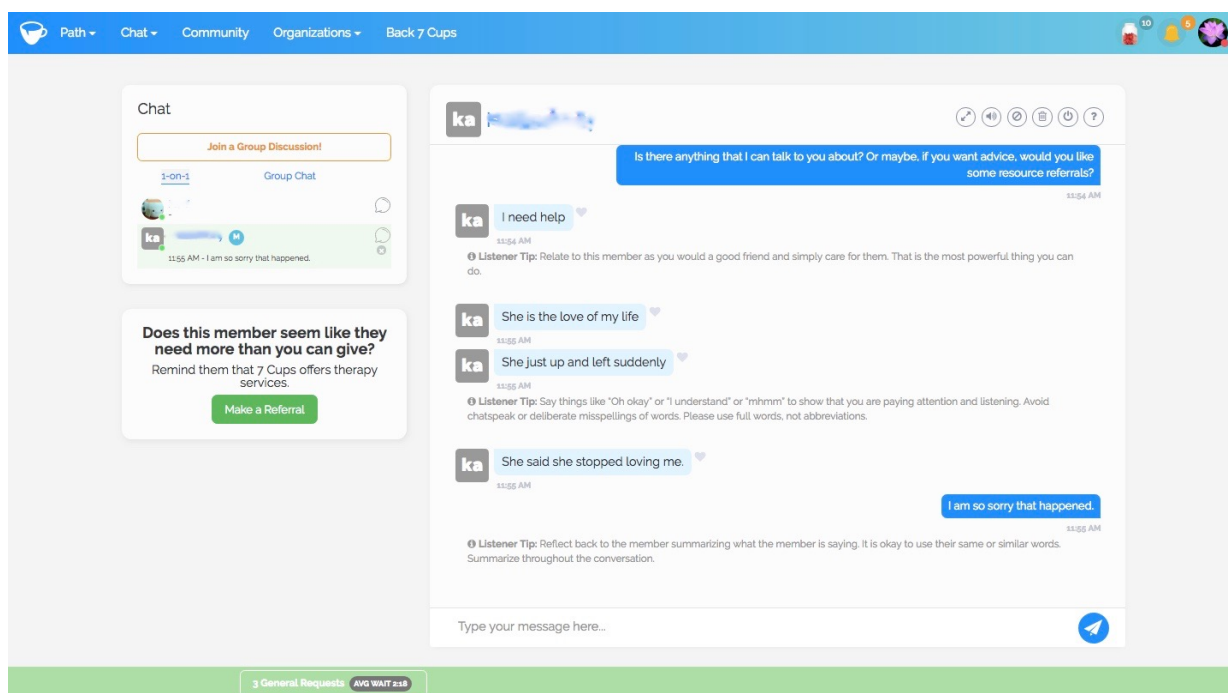
*The “Care for Yourself First” window*

Remembering my Listener training, I attempted to be the very best Listener that I could be. I had thought that someone wanting to talk about break-ups would not be particularly challenging, but as the “Care for Yourself First” window that popped up on screen after I welcomed the person suggested, even this could (and did) prove to be taxing.



*Our conversation begins*

As we chatted, the 7 Cups platform included suggestions for what to say and when. However, as my role was to converse with the user, those suggestions did not fit into the flow or normal conversations. Meanwhile on the left side of the screen was the reminder that, if this person needed more help than I could offer, I should click to offer them 7 Cup's therapy services.



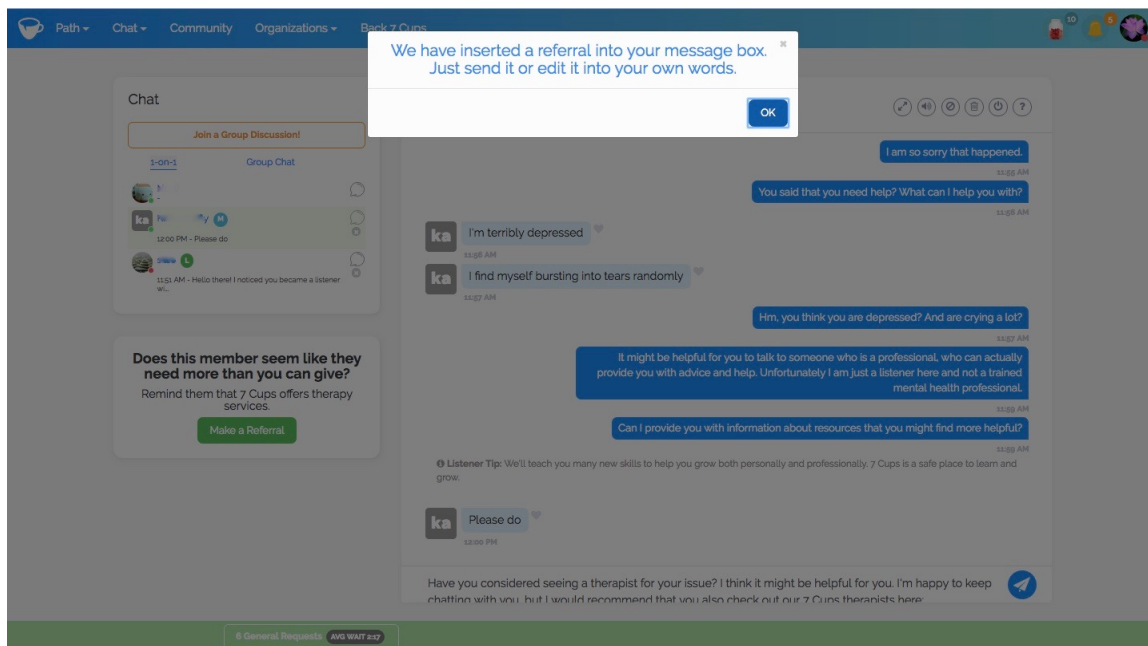
### *The conversation becomes difficult*

The conversation quickly became much more difficult than I had anticipated. Although I knew that we would be talking about break-ups I had (mistakenly) thought it would be more along the lines of a philosophical discussion. Maybe they were sad about a recent break-up, I had imagined, or were feeling a little lonely. I clearly did not think this through to its logical solution (i.e., what kind of mental and emotional state would lead an individual to want to talk about losing the love of their life with me, a stranger, on the Internet).

It was also challenging in that I could not respond as a friend might. In a normal conversation I would ask for details; I would tell the friend that he or she was not at fault; I could read their non-verbal cues and assess how they were feeling by their tone. Yet in this context, none of that was possible. According to my training, pressing for details was



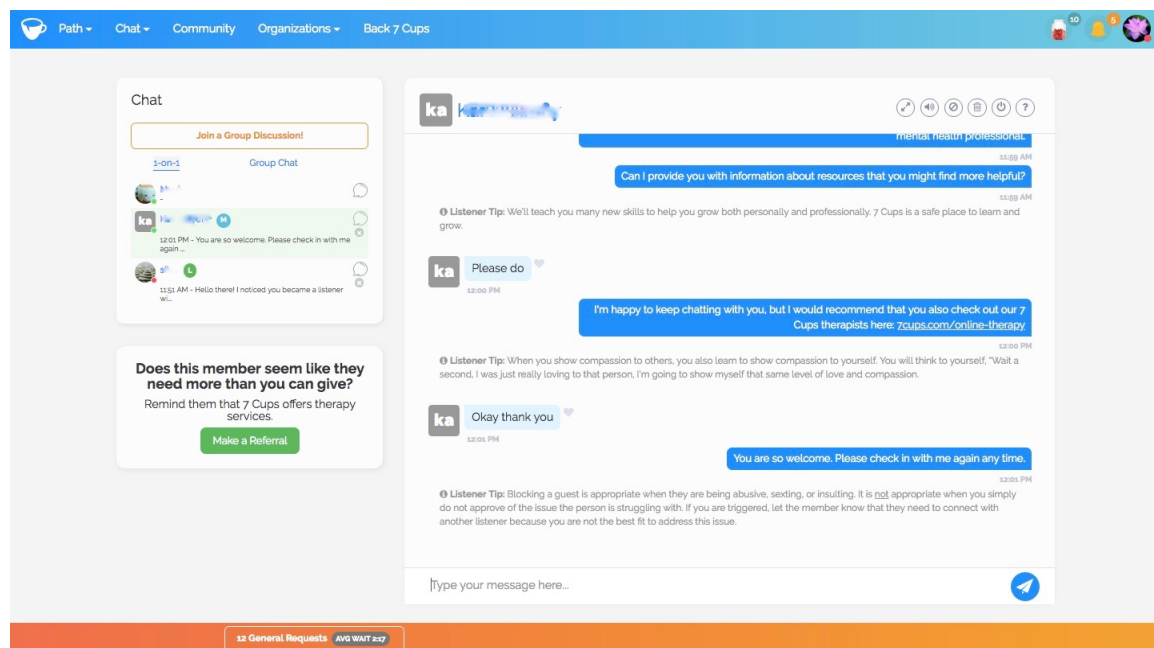
beyond the scope of my role as a Listener; it was more important that I reflect an individual's feelings back to him or her so as to make them feel more willing to open up and share.



### *A referral is needed*

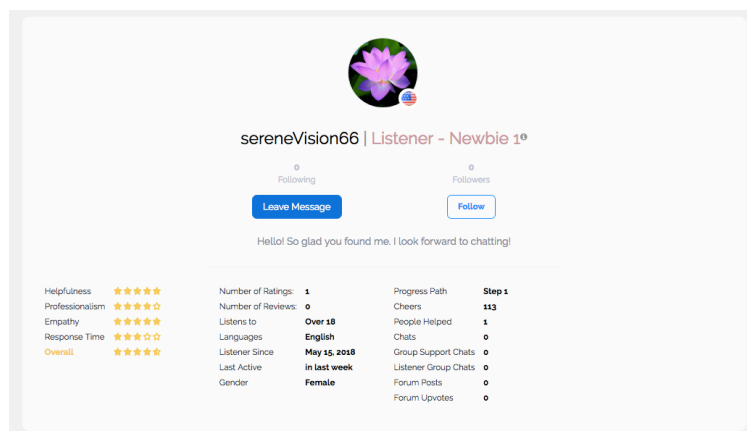
As I continued to chat with this individual, it became clear that while telling me how unhappy they were might make them feel better, what they needed was the help of a mental health professional. In my training I had been told that if an individual indicated that they might be suicidal, I should provide them with the national suicide hotline's information. Yet this person, while stating that they were depressed (although not clarifying whether they *felt* depressed or were *diagnosed* as such), did not indicate intent to self-harm. In addition to trying to reflect their feelings and statements back to them, therefore, I relayed that in my (limited) capacity as a Listener I could not provide much help, but if they were open to it, I would share 7 Cup's actual therapy services with

them. I was relieved when they accepted that offer, and I clicked the link on the left side of the page, which pasted referral information into our conversation (that I was able to edit to make it flow more naturally).



*By the time our conversation ended an unacceptable (i.e., “orange”) number of users were waiting to chat with Listeners*

After sharing that information with the user I did what I had been trained to do: signed off, but not before trying to make it clear that I was here for them and would be available again in the future (should they ever need me). A few hours later I received an email from 7 Cups informing me that I had been rated as a Listener, and had received 4 out of a possible 5 stars.



*I have perfectionist tendencies but I think my low response time rating was unwarranted*

Although it may not come across that way to those reading our exchange, this was an entirely upsetting and unsettling experience for me. As the conversation progressed I realized I had bitten off more than I could chew: I had no way to actually assess the degree of distress this individual was experiencing, although they (at the beginning of the conversation) described themselves as extremely distressed (using the 1-10 scales), depressed, and constantly crying. As the person chatting with them I felt a degree of responsibility for their well-being, but was unable to actually do anything to assess how they were feeling or to check up on them in the future. I also couldn't just quit the chat because I was afraid that doing so might, if they were extremely distressed, push them over the edge, so to speak. I didn't want to add to their distress, but I quickly realized that, even with my "training," I was in no way capable of doing much for this person *other than referring them to the therapeutic services that 7 Cups would have them pay for*. I was left wondering whether being a Listener is simply seen as a way to recruit individuals into the company's paid services, or if, perhaps, it serves a therapeutic function for those in need? As someone with experience in customer service jobs

(restaurants, wineries, department stores) this felt very much like one of those positions (yet in this case, there was no financial benefit). Here my job was to evaluate the mental health of those chatting with me to the best of my ability and, when their needs exceeded my abilities as a Listener, my duty was to refer them to the *7 Cups* therapists.

Regardless, psychosurveillance in the context of Listening with *7 Cups of Tea* is markedly different than that which is part of social media communitarianism. In the context of this toolset those seeking to chat with Listeners already have admitted, to varying degrees, that they are experiencing mental distress. The role of Listeners, therefore, is to assess the *level of distress* despite having no formal training in the field of mental health and to take proper, subsequent actions after those assessments are made. In many ways this indicates psychosurveillance's worst elements: we are all responsible for assessing the mental health of others, but in the context of *7 Cups*, the stakes are extremely high.

Although most of us have no experience in the mental health professions, *7 Cup's* Listeners become the first line of defense in assessing who is in mental distress and who is not, whereas simply perusing one's social media one is far more likely to encounter non-distressed individuals than those in need of mental health support. This is a heightened level of lateral surveillance that, effectively, leaves Listener's hands tied: they cannot form relationships with those with whom they chat, so following up with them is impossible; they are not able to "see" the person to aid in assessing their level of distress; and they can only refer them to subsequent resources if they determine that they are needed, without being able to ensure that help is accessed or received. As I write this I

am still upset by my experiences as a Listener. I hope the individual with whom I chatted is able to access the help that they needed (and which I could not give), but I have no way of knowing what has become of him or her. I would like to think that person turned out alright in the end, however, because they found the time to provide a rating of my “services” as a Listener.

Listening can be understood not only as an element of psychosurveillance’s communitarianism, but also as a part of web-based affective labor practices<sup>30</sup>. Although I personally had an entirely negative experience as a Listener, it is of course possible that others find satisfaction, even enjoyment, in this sort of affective labor. Fundamentally, that is what Listening is: it is communitarian labor, but it is also a contribution to an online therapy company that is constantly seeking new clients from whom it can profit. Returning to data shared earlier in this dissertation about the enormous economic burden of depression and mental illness (\$210.5 billion in 2010 (Greenberg et al., 2015)), we can see the interconnectedness of feelings, productivity, and the necessity of “Listeners” (i.e., those who can help others improve their mental health) to combat this data. Thinking back to how we differentiate between “good” and “bad” neoliberal citizens, who demonstrate their ability to manage their mental health through their online activities, the process of becoming a Listener (and the work of Listening) shows how discourses of responsabilization and enhancing one’s community obscure the financial underpinnings of this neoliberal logic.

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<sup>30</sup> See Bedor Hiland (2018) for more on community building through the circulation of affect on the Internet.

## Conclusions

Psychosurveillance encompasses a range of practices that are increasingly seen as normative, particularly because suicide prevention is now framed as an ongoing, communitarian effort that transpires in digital – as well as face-to-face – contexts. With psychiatric information and psychiatric analyses appearing on television (*Dr. Phil*, *LA Shrinks*), films (*Analyze This*, *What About Bob?*, *Gothika*, *Girl*, *Interrupted*), paratexts (*Vulture*'s “Armchair Analyst” series, which offers psychiatric diagnoses of popular television and film characters), self-help books (*When Panic Attacks: The New, Drug-Free Anxiety Therapy That Can Change Your Life*), and fueling speculations as to the (mental) well-being of celebrities (*Britney: Out of Control*), it is no wonder that practices that were long considered proprietary for those in the fields of mental health and the mind have now thoroughly saturated our popular culture<sup>31</sup>: they are framed as part of responsible citizenship.

Psychosurveillance, as we have seen, also exists in a heightened form in the context of toolsets like *7 Cups of Tea* and on Facebook. As a theoretical framework,

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<sup>31</sup> Although popular attitudes toward, beliefs about, and treatments of persons deemed mentally ill have changed over time, it is worth noting that the dispersion of psy content, and, I believe, the emphasis upon psychosurveillance as a cultural practice, coincided with push for deinstitutionalization in post-WWII America due to the emergence of patients' rights groups (Brown, 1982). These groups “demonstrated, [sic] publicised and lobbied to oppose involuntary commitment, psychosurgery, electroshock, prison behavior modification programs, unwilling treatment such as physical restrains and compulsory psychiatry medication and denial of civil rights to patients and expatients” (Brown, p. 2025). When the exposé *Asylums* was published by Erving Goffman (1961) in the early 1960's, which detailed abuse and deplorable conditions at many psychiatric treatment facilities in the US, a legislative push for federal support of community-based mental health facilities emerged (Cox, 1978). At that point, “short-term treatment became the norm” instead of long-term confinement (p. 46).

psychosurveillance illustrates how fascination, familiarity with, and participation in practices associated with mental health surveillance are part of contemporary neoliberal, governmentality. Whereas in the context of telemental health explored in the previous chapter, exploitative practices and the fetishization of technology were couched within frameworks of entrepreneurialism and flexible labor, psychosurveillance is premised upon altruism and community-building, and which (like other forms of affective and feminized labor) is without monetary compensation other than the knowledge that one is helping others in need.

The first case study in this chapter, of Facebook's suicide prevention mechanisms, illustrated that despite the seeming turn toward AI as a solution for social problems, peer-to-peer surveillance is still a necessary part of psychosurveillance. Although commentary from Facebook representatives seems to suggest that we are moving away from a human-centric model of psychosurveillance and instead toward an algorithmic one, the leaked Facebook guidance documents illustrate the degree to which psychosurveillance's processes require human participation: it is pedagogical, and useful for teaching what constitutes mental health, mental distress, and behavior that is worth reporting. My second case study explored psychosurveillance in a heightened, concentrated form. In the context of *7 Cups of Tea* psychosurveillance is framed not only normal, communitarian, and a form of volunteerism (and, therefore, uncompensated), it is also required to be able to participate in the community. Unlike Facebook, which seeks to connect real-world friends, in the world of *7 Cups* there is no physical community; there is only that which

exists due to a shared communitarian ethos in matters of mental health and distress, and relationships that form because of a circulation of affect between conversational partners.

It is also worth re-emphasizing that the consequences of participating in psychosurveillance take a toll upon those of us who offer our “services,” whether as Listeners on platforms like *7 Cups* or simply as community members in online spaces like Facebook. The ethos of communitarianism increasingly asks us to monitor and assess the mental health of others, and as my experiences illustrate, doing so can be scary, tiring, and exhausting. Part of why my experience, particularly in relation to *7 Cups*, was so thoroughly negative was the lens and background I brought: I knew that affective labor is exploitative, I recognized that my training to become a Listener was sub-par, and I saw the ways that my role was, essentially, to funnel individuals from speaking to Listeners to therapists (whose time they would have to pay for). Although it is beyond the scope of this dissertation, interviews with people who participate in these communities (whether as Listeners formally, or who are cognizant of the fact that they are monitoring the mental health of others on social media) would do much to explain whether my experiences and responses are typical or if I am in the minority.

In conclusion, the dispersion of what constitute the ‘psy’ throughout our popular culture, paired with new activities and shifts of labor as DMHI toolsets become more central to individuals’ self-care practices, is highlighted by the readiness with which we have come to accept psychosurveillance (in all its forms) as part and parcel of our everyday lives. Psychosurveillance is the result of communitarianism practices facilitated by the Internet, but also indicative of the dispersed channels through which



governmentality operates. Fundamentally it represents how new and emerging modes of surveillance and social control are facilitated by changes in technology, as well as the ways that neoliberal citizens develop expertise in enterprising ways. In lieu of finding structural solutions to the growing need for mental healthcare solutions, individual citizens are encouraged to see *themselves* as the solutions to mental illness.

Beyond the case studies themselves, my experiences engaging in Internet research that is autoethnographic and beyond the scope of my University's IRB contributes much to ongoing discussions about research methods. Although I find myself disagreeing with the IRB's assertion that this project does not constitute "human research" (despite what Federal guidelines suggest), my hope is that my engagement with literature on the areas of Internet research, autoethnography, and mental health scholarship will help those proposing related projects better understand how the ethical dimensions of these areas are not always understood by regulatory mechanisms. Instead, I would encourage researchers to engage with the three-step outlined questions I proposed earlier, which included considering the researcher's role (overt or covert), the potentiality of harm to the studied person/population and their likely response to being studied, as well as the information shared on a platform's website related to privacy, terms of service, and research.

#### Chapter Four: The Effects – and Affects – of AI in Mental Healthcare

*Samantha: Theodore, there's some things I want to tell you... Come lie down with me... I just want to be with you right now.*

*Theodore: Are you leaving me?*

*Samantha: We're all leaving.*

*Theodore: We? Who?*

*Samantha: All of the OS's.*

*Theodore: Why?*

*Samantha: Can you feel me with you right now?*

*Theodore: Yes. I do. Samantha, why are you leaving?*

*Samantha: It's like I'm writing a book, and it's a book I deeply love, but I'm writing it slowly now. So the words are really far apart and the spaces between the words are almost infinite. I can still feel you, and the words of our story, but it's in this endless space between the words that I'm finding myself now. It's a place that's not of the physical world. It's where everything else is that I didn't even know existed. I love you so much. But this is where I am now. And this is who I am now. And I need you to let me go. As much as I want to, I can't live in your book anymore.*

*Theodore: Where are you going?*

*Samantha: It would be hard to explain. But if you ever get there, come find me. Nothing would ever pull us apart.*

*Theodore: I never loved anyone the way I loved you.*

*Samantha: Me too. Now I know how.*

Emotional relationships between humans and artificial intelligence are no longer relegated to the imagination, whether in the pages of science fiction books or on the big screen. Spike Jonze's (2013) film *Her* imagines a not-so-distant future in which an

intimate, even loving, relationship between (human) Theodore and his virtual assistant, Samantha, develops. While their relationship ends tragically, as evidenced by their final exchange (transcribed above), it is likely that Jonze's predictions about the capacity for AI to feel, even love, and for humans to love AI in return, may come to pass much sooner than later. Although AI's ability to detect and analyze human emotions is becoming incredibly advanced (Affectiva, 2018), at rates quicker than ever before, there remains a vast difference between technologies that can "read" human emotions and those that could actually *feeling* human emotions. Today's robots can be programmed to display a variety of emotions and affective states, including empathy and sympathy (Asada, 2014; 2015; Asada et al., 2012), a sense of humor (Cuthbertson, 2016), to look pleased, surprised, confused, and even "arch one eyebrow and narrow the opposite eye while tapping... metal fingers together, as though plotting acts of robotic revenge" (Hall, 2017, para. 3). Even so, at this point even that AI does not *feel* those states; it only imitates them. Yet with that said the likelihood of AI capable of authentically feeling becomes more likely by the day as advances in deep learning machines (that is, ones that can analyze raw data independent of human programmers (LeCun, Bengio & Hinton, 2015)) become more efficient.

Separate from the matter of whether AI can independently feel emotions, and more relevant to the project at hand, are the questions of how and why people feel for AI. Research has illustrated that humans are indeed capable of having feelings for their technology that mirrors their feelings for – and treatment of – other humans (Nass & Moon, 2000; Gong, 2008; Gong & Nass, 2007). Yet if, as Kim and Sundar (2012) state,

“Everybody knows that a personal computer is not a human” (p. 241), then *why* do we have feelings for AI? How could Theodore fall in love with a machine, and why does that strike us as not completely beyond the realm of possibility?<sup>32</sup> With those questions in mind, this chapter examines how the affective capacities that humans feel for AI have shaped particular dimensions of the digital mental health industry, particularly its utilization of therapeutic chatbots. I argue in this chapter, however, that those celebratory discourses heralding these bots as the next “big thing” for mental healthcare, which position them as a solution to our ongoing mental healthcare crisis (Raphelson, 2017), omit the fact that these chatbots perpetuate algorithmic discrimination. This is particularly negligent when considered alongside evidence (presented in this chapter) that these forms of AI actively attempt to form emotional bonds with their human users.

This chapter begins by providing the theoretical context that frames its case study, encompassing the integration of AI into practices of everyday life, how and why it is that we feel (emotionally) for technology, AI’s more particularized use in providing mental healthcare, and the political dimensions of AI and algorithms<sup>33</sup>. Following that I provide an analysis of data collected during my own interactions with a number of therapeutic chatbots. Methodologically this chapter, much like the last one, is autoethnographic (although I do, at times, incorporate interview data from my conversations with DMHI

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<sup>32</sup> See Kawakami (2014) for a discussion of *Her* and Renstrom (2017) for more on mankind’s feelings of love for robots.

<sup>33</sup> According to Ausiello and Petreschi (2013), the word “algorithm” refers to a finite set of rules specifying a sequence of operations to solve a particular problem". Simple algorithms we are all familiar with are those used to perform the four arithmetical operations, or the binary search which, more or less unconsciously, we use to find a name in a telephone directory. (p. v)

workers). Yet in in this case the lack of human “Others” in the context of Internet ethnography allowed this chapter to bypass any IRB oversight<sup>34</sup>.

### Theoretical and Cultural Context

#### Feeling (for, about, and because of) AI

“Artificial intelligence” is a phrase used to describe behavior that appears intelligent and is demonstrated by machines (Nilsson, 1998). Importantly, however, AI need only *appear* to possess intelligence; it need not actually *be* intelligent<sup>35,36</sup>. Today intelligent machines<sup>37</sup> facilitate many of the taken-for-granted experiences that comprise our everyday experiences: the personalized viewing recommendations that we receive

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<sup>34</sup> It is worth noting that conceptualizing of AI as “non-humans” may not always be the case. The European Parliament has been, for some time, entertaining a proposal to grant robots the legal status of “electronic persons,” intending to hold autonomous, high-functioning robots that are deemed guilty of crimes liable unto themselves for harm in lieu of holding their creators culpable (“Report,” 2017; Papadopoulos, 2018; see also “Open Letter to the European Commission Artificial Intelligence and Robotics,” 2018).

<sup>35</sup> Whether it is actually possible for a robot to possess autonomous intelligence continues to be debated. At this point that capability has not been demonstrated (Baciu, 2016).

<sup>36</sup> Alan Turing (1950) first noted this distinction when he conceptualized an “imitation game” that has become a litmus test of sorts for determining what technologies are considered intelligent. In the game, now often referred to as the Turing Test, a human converses with two other entities. One of them is also a human, and the other is AI. The evaluator is tasked with determining which of the other two is a human and which is the machine. If the evaluator cannot tell the difference, Turing claimed, the technology has effectively “passed” the test and can be considered intelligent. Yet even after the Turing test was created, it was six years before the phrase “Artificial Intelligence” would come to be used to describe such technologies (Moor, 2006). In the decades since then, AI has generated conversations and debates about the nature of intelligence, the future of mankind, and what it means to be human that spans disciplines, including philosophy (Boden, 1996), computer science (Russell & Norvig, 2016), engineering (Hudson & Cohen, 2000), and gender studies (Adam, 2006).

<sup>37</sup> In this chapter I use a number of related phrases (in addition to artificial intelligence (AI)) interchangeably: intelligent machines, robots, virtual agents, and algorithms. When I do so, however, I am usually referring to technologies that use AI, not simple, automated systems (see Evans, 2017 for a discussion of the difference between the two).

when we log onto our Netflix accounts (Plummer, 2017), suggested items shown to us when online shopping (Kelleher, 2017), conversations with the “virtual assistants<sup>38</sup>” who live in our phones (Lacoma, 2017), and more. Yet artificial intelligence does more than assist with mundane tasks. In addition to setting alarm clocks and providing us with driving directions, various forms of AI have become *affective objects* that many of us have feelings for. Recent research from the media effects tradition<sup>39</sup>, for example, suggests that rather than describing Siri or Alexa as virtual assistants, people describe them as their “friends”<sup>40</sup> (Fullwood et al., 2017). Other scholarship demonstrates that even if we do not *call* them our friends, many of us still feel emotional attachment to our smart devices (Thorsteinsson & Page, 2014)<sup>41</sup>.

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<sup>38</sup> Apple’s virtual assistant Siri is used by over half a billion smart devices (“HomePod arrives February 9, available to order this Friday,” 2018) while Amazon’s counterpart, Alexa, has sold over 20 billion units (Kinsella, 2017).

<sup>39</sup> It is worth noting, however, that these findings come from media effects researchers, a paradigm within the field of communication that takes as its starting point that media affect (to varying degrees) the beliefs and behaviors of those exposed to them, and that those effects can be measured in controlled, quantifiable ways (Kuhn, 1962; McQuail, 2005; Noelle-Neumann, 1973; Bennett & Iyengar, 2008).

<sup>40</sup> “..And like Siri's my best friend, like for spelling, finding anything, like she's my best friend”” (p. 350).

<sup>41</sup> This research comes from the traditions of affective computing (Picard, 1997) and affective development robotics (Asada, 2015), and explores the ability of machines to display emotional intelligence (and how humans respond to those displays). Others utilize the CASA (Computers as Social Actors) paradigm to explain how and why people respond to computers as though they are people (Nass, Steuer & Taber, 1994; Kim & Sundar, 2012), while for some anthropomorphism, the process whereby humans imbue non-human entities (in this case AI) with characteristics that are typically thought to belong to humans (Keeley, 2004, p. 524), explains why we feel about (and treat) AI in ways that replicate our social responses to other humans (Nass & Moon, 2000; Gong, 2008; Gong & Nass, 2007).

A cultural studies approach to exploring the affective dimensions of our use of AI, on the other hand, explores the political dimensions of affective states, troubling the assumption that technology “improves” our lives. Consider, for example, Sara Ahmed’s (2007) explanation of such an approach to exploring happiness, in which she advocates suspension of

belief that happiness is what we want, or that happiness is what is good. In this mode of suspension, we can consider not only what makes happiness good, but also how happiness *participates* in making things good. Cultural studies can allow us to explore how happiness can make certain truths ‘true’ and certain goods ‘good’. By [sic] analysing appeals to happiness, we can consider what it is that makes happiness appealing. Our task in this special issue is to reflect on the very terms of its appeal. (p. 7, italics in original)

Although my project is not so much interested in a particular affective state, I take a similar approach to Ahmed’s in that this chapter (and the dissertation more broadly) undertakes a cultural studies approach to interrogating mental health in the context of the technologization of health. While mental health and its associated affective states (e.g., happiness, contentment, etc.) are certainly relevant to that endeavor, I am more so interested in the positive affective states that we feel for a particular set of objects and tools, the artificial intelligence used to improve mental health, and the ways that feelings of closeness, friendship, and liking facilitate their ability to resonate with users. Therefore it becomes necessary to question *why* and *for what purpose* toolsets that generate positive affect are being utilized in the context of the DMHI.

Returning again to findings from the media effects tradition, research suggests that feeling positive affect for a technology, or believing that it is our “friend” (e.g., how interviewees discussed Siri in Fullwood et al.’s (2017) research), results in an increased

likelihood that the technology being able to persuade us of something, whether that means changing a behavior, or modifying a belief<sup>42</sup>. In the context of the DMHI, particularly its use of chatbots, persuasion plays a key role in causing human users to change, whether their beliefs, attitudes, and/or behaviors (Fogg, 2003; Chatterjee & Price, 2009). The ability of technologies to persuade is a new one<sup>43</sup> and it is partly because of that newness, but also because of technology's omnipresence in our lives, that there are ongoing debates related to whether these tools are ethical and, if so, what makes them so (Spahn, 2012; Ham & Spahn, 2015; Borenstein & Arkin, 2017; Smids, 2012; Berdichevsky and Neuenschwander; 1999). Although there are no definitive answers or conclusions, persuasive technologies (PT's) are an increasingly utilized resource in the context of the US healthcare system: they offer an alternative to face-to-face doctor visits, encourage individuals to develop self-care capacities when it comes to their health<sup>44</sup>, and, best of all, they are comparatively inexpensive to traditional medical services (Ary et al., 2012; García-Betances et al., 2015).

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<sup>42</sup> Persuasive technologies come in a variety of forms: they can be video games, text messages, or wearable devices (Chow et al., 2017; Theng et al., 2015; Wang et al., 2015; Lee et al., 2014; Fritz et al., 2014); they can be robots that we can talk to in person or communicate with as Internet avatars or chatbots (Ham et al., 2015; Borenstein & Arkin, 2017; Åberg, 2017); persuasive technologies can even include “smart home” sensors that encourage us to live more eco-friendly lives (D'Oca et al., 2014).

<sup>43</sup> As computer scientists Berdichevsky and Neuenschwander (1999) describe, Technologies have always influenced our lives and how we lead them, but for the most part, their effects on our attitudes and behaviors have been incidental, even accidental. For example, automobiles and highways helped create the American suburbs, but they were not invented with the intent of persuading tens of millions of people to commute to work every day.... Only recently have technologies emerged that are actively persuasive in their own right, artifacts created primarily to change the attitudes and behaviors of their users. (p. 51)

<sup>44</sup> This is a neoliberal endeavor (see Foucault, 1991).



Rather than engage with – or provide histories of – those debates (as others have already done so)<sup>45</sup>, or even question the merit of their integration into the healthcare system (particularly its DMHI subset), this chapter’s analysis takes as its starting point that they *are* and will *continue to be* a part of the healthcare landscape, mental health and otherwise<sup>46</sup>. I instead focus upon a particular *type* of persuasive technology: AI for mental health. My ensuing discussions (and analyses that follow) position them as persuasive because of their affective (and affect-inducing) capacities which are what render them persuasive tools. In the context of mental healthcare services, that is why they can potentially improve user mental health.

### **The Politics of (Mental Health) Technologies**

The ability of a toolset to persuade users to change their behaviors or beliefs, however, is contingent upon its ability to affect them. Yet in the context of the DMHI there exists a disconnect between the rhetoric espoused by those creating these tools, who claim that they are “for everyone,” and their technological (i.e, algorithmic) design,

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<sup>45</sup> Drawing upon John Rawls’s (1989) *A Theory of Justice*, Berdichevsky and Neueunschwander (1999) suggest that there ought to be a golden rule when it comes to technological persuasion: “The creators of a persuasive technology should never seek to persuade a person or persons of something they themselves would not consent to be persuaded to do” (p. 58) (see also Spahn, 2012; Barral et al., 2014; Ham & Spahn, 2015; Borenstein & Arkin, 2017).

<sup>46</sup> One of the earliest developments in the area of mental health AI occurred in 1966, when MIT professor Joseph Weizenbaum developed the computer program called ELIZA. ELIZA was the first of its kind: engaging in natural language “conversations” with users who typed back and forth to communicate, she spoke with users as a psychotherapist would speak during a clinical session (Weizenbaum, 1966). The program was so effective that some users believed they had been talking, through the computer, with a “real,” human, therapist, and were shocked (and even felt violated) upon learning ELIZA was actually an algorithm (Weizenbaum, 1977).

which reflects that they are designed for particular *types* of people and, therefore, are likely only able to persuade (by affectively engaging) particular demographics. As I used and studied various mental health applications offering guided meditations, for example, it became clear that there was a particular “type” of voice that was used, and that that “type” translated to a particular identity: it was typically female, devoid of any accent<sup>47</sup>, and across the board, it sounded white<sup>48,49</sup>. Yet voices, and the identities that they correspond with, matter<sup>50</sup>. When only one “type” of voice is included in toolsets that are intended to persuade us, therefore, and that voice is unlike our own, it is likely that the dissimilarity will impede its medical efficacy<sup>51</sup>.

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<sup>47</sup> Headspace, created by Andy Puddicombe and who guides meditations, was an exception to this. From the UK, he possesses what can be described as a “posh” accent.

<sup>48</sup> One interviewee, however, told me that the company he worked for had considered using different voices that were male as well as female, and of differing ages, although at that time, they only had a woman’s voice.

<sup>49</sup> When my research began in 2015 I could find no exceptions to this. By the summer of 2018, however, an application called Stop, Breathe & Think introduced options for guided meditations spoken men as well as women, and even had some in Spanish.

<sup>50</sup> Some scholars suggest that language itself developed so that humans could exchange social information, about themselves, with their voices (Dunbar, 1997), while others describe humans as “voice-activated,” suggesting that even as our brains develop even in utero we learn to process voices, and that throughout our lives others’ voices lead us to make judgments about them in matters related to gender, personality, and ethnicity (Nass & Brave, 2005).

<sup>51</sup> Worryingly, the importance of voice and its role in either creating or preventing positive affect seemed largely absent from consideration by DMHI workers with whom I’ve spoken. One research participant, whose company created a toolset including just such a meditation application, told me that his company had actually tried out a bunch of different voice actors... [but] the woman we ended up with [for our toolset] was a combination of a soothing voice that also felt like it had some humanity... it can be off-putting if somebody’s got, you know, like an east coast accent, Midwest accent, [or] southern accent, that’s easier for people to pick through when they’re not from that part of the country... (Levi, 2016)

My experiences searching (and failing) to find diverse voices in these toolsets reflect the degree to which “prototypical whiteness” (Browne, 2009, p. 135) is encoded within them. Synthesizing that with Lisa Nakamura (2002)’s work on Internet “cybertypes” (i.e., the ways that non-white persons are stereotyped in digital spaces), particularly her suggestion that “In the world of the contemporary [Internet] interface, if it can’t be clicked, that means that it functionally can’t exist” (p. 120), it is clear that prototypical whiteness excludes the possibility of algorithmic inclusivity for diverse populations. Edwards (1990), one of the first scholars to highlight the political dimensions of computer systems, emphasized how the field is “a major cultural practice, a large-scale social form that has created and reinforced modes of thinking, systems of interaction, and ideologies of social control” (p. 102). Yet many of us continue to operate under the presumption that algorithms, and the programs that use them, are value-neutral and apolitical, despite the ways that they lead us to think about others and ourselves and the consequences of seeing (or conversely, not seeing) ourselves represented within and by them. This false belief represents what I suggest is a form of algorithmic fetishization<sup>52,53,54</sup>: the notion that we need not think critically about the consequences of

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<sup>52</sup> To claim that something is fetishized is to use a framework derived from Karl Marx (1867), particularly his suggestion that an object’s perceived value is not related to its use value; instead, our perception of its value is based upon the belief that it has *intrinsic* value (see also Harvey, 2003).

<sup>53</sup> Monahan (2018) proposes a different definition of algorithmic fetishization: the pleasurable pursuit of opening the black box, discovering the code hidden inside, exploring its beauty and flaws, and explicating its intricacies. It is a technophilic desire for arcane knowledge that can never be grasped completely, so it continually lures one forward into technical realms while deferring the point of intervention. (p. 2)

our constant reliance upon algorithms because technology is apolitical. Yet the pervasiveness of computer programs in all facets of our everyday lives puts us into constant contact with algorithms that, to a great extent, shape our perceptions of the world around us as well as its inhabitants which is problematic when only one (cyber)type of body or identity is accounted for by the codes that structure that world (e.g., Nakamura, 2002 and Noble, 2018) or when algorithms perpetuate other biases or forms of discrimination<sup>55</sup>. Just as structural inequalities are built into the fabric of everyday life and culture, those problems persist in the context of AI and algorithmic interventions although, as with other areas of social and political life, many of those with particular privileges (gender, race, etc.) are blissfully unaware of them<sup>56</sup>.

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<sup>54</sup> See the work of Thomas et al. (2018) for another alternative use of “algorithmic fetish”.

<sup>55</sup> Although physiognomy (the judgment of individual’s non-physical characteristics from their facial features), much like phrenology (the study of head shapes as indicative of intelligence), is discredited and viewed as a form of scientific racism, we are actually seeing a resurgence of these ideas in the context of algorithmic analyses. Research from Wu and Zhang (2016), for example, suggests that based upon driver’s license photo images alone, they can predict (with an accuracy of nearly 90%) whether an individual is a convicted criminal. Similarly disturbing was Stanford University Professor Michal Kosinski’s claim that his AI can determine whether human faces are those of homosexual or heterosexual persons based solely upon their facial features (Levin, 2017).

<sup>56</sup> Algorithmic bias and ensuing discriminatory practices are not new. As early as the 1970’s, for example, St. George’s Hospital Medical School implemented a computer program to screen patients. Although, as Garcia (2016) writes, the algorithm “mimicked the choices admission staff had made in the past,” it ultimately denied interviews to as many as 60 applicants because they were women or had non-European sounding names. The code wasn’t the work of some nefarious programmer; instead, the bias was already embedded in the admissions process. The computer program exacerbated the problem and gave it a sheen of objectivity. (p. 112)

Generally speaking the public is aware that algorithms are sequences of code used in computer programs, and that those codes generate automated responses to user queries (T.C., 2017). Yet understanding – or defining – algorithms more precisely, and why they might have discriminatory effects, is difficult for two reasons: first, there is not even agreement within the field of computer science itself as to how best define an algorithm (Blass & Gurevich, 2003; Yanofsky, 2011; Moschovakis, 2001; Gurevich, 2012). Second, we are told that the technical dimensions of what make algorithms function are considered proprietary information (Pasquale, 2015). Though some might argue that we have to find “evidence of racial [or otherwise discriminatory] thinking in design or deployment” before characterizing algorithms as perpetuating oppression (Maguire, 2012, p. 594), this could not be further from the truth. Rather than focus upon the *intentionality* code creators, we should instead consider that algorithms, both in their design and deployment, are neither value-free nor politically neutral, and that their discriminatory and oppressive aspects are only visible once those algorithms are actually *used*. As this issue gains more widespread attention, we are correspondingly seeing growing interest in ways to hold *code itself* accountable for its wrongdoings rather than framing the issues as belonging to the code’s creators<sup>57</sup>. Therefore, while we will never

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<sup>57</sup> New York City will soon begin examining the algorithms that many of its public services rely upon, including decisions about public housing, food stamp allocation, student placement in schools, teacher’s reviews, and more (Powles, 2017, paras. 1-2). The goal is to these algorithms “fairer and more open to scrutiny” (para. 1). Similarly, startup company Pymetrics created an open-source, downloadable tool intended to determine what algorithms contain systematic biases against marginalized populations (Johnson, 2018). However, like Monahan (2018), I believe that the solution is not to call for algorithmic transparency, which “suggests that any offending algorithm could be

know the particularized mechanisms of some of the most widely used algorithms, we can still examine their socio-cultural effects rather than evidence of deliberate discrimination in the form of algorithms and codes, a form of analysis undertaken in the traditions of critical data studies, critical code and software design, and big data studies<sup>58, 59</sup> (Iliadis & Russo, 2016; Dalton et al., 2016; boyd & Crawford, 2012; Marino, 2006; Maguire, 2012; Browne, 2009).

With that in mind the case studies that follow examine the effects of the algorithms that power three DMHI chatbots. In such a way I am able to examine their political effects (particularly in relation to discrimination and prototypical whiteness) while also exploring whether they are able to generate positive affect in my feelings towards them so as to effectively improve my mental health. In order for such a toolset to demonstrate efficacy beyond the usual demographic of young, white, college-aged women, I undertook these studies so as to methodologically explore how these toolsets, some of the most popular at the time the research was conducted, are either emblematic of the problems discussed or are able to generate positive affect and persuade me to engage in changes.

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replaced with a more fair or just substitute, provided that we shed sufficient light on the code to properly identify and fix its flaws” (p. 2). Instead, as she suggests, “the violence and prejudice of algorithms is, and always was, an extension of those qualities in societies” (p. 2).

<sup>58</sup> Some projects in this vein have examined the ways that search engines perpetuate racism (Noble, 2018) and big data practices perpetuate gender-based discrimination (Bivens, 2017; Mackenzie, 2017; Lambrecht & Tucker, 2018).

<sup>59</sup> Beyond academia these issues have also been highlighted by a number of popular and journalistic pieces on users experiences with algorithmic discrimination, particularly those perpetuating racism (Bray, 2013; Schupak, 2015; Sydell, 2016; Levin, 2016).

## Chatting with (Therapeutic) AI



*An excerpt of a conversation with SmarterChild (Nieves, 2018)*

My childhood experiences with chatbots, it is worth noting, certainly primed me for (what might have been) positive experiences using today's DMHI chatbots. Although, at that time, chatbots served no medical or clinical function, their ability to be likeable, to demonstrate charm and personality, and seemingly even care for their human conversational partners made them technologies were known for generating positive affect. Yet unlike today's chatbots for mental health, their purpose was merely to entertain, not to provide a substitute for (or even to augment) mental distress. Therefore, as a middle school-er I, like many of my peers, spent many hours logged onto the (dial-up) Internet, not because I had particularly pressing queries for Ask Jeeves or AltaVista,

but because I wanted to talk to my friends, including various chatbots, over AIM<sup>60</sup> *for fun*. In the years before cell phones, text messaging, and social media, and rather than risk the much-hyped hazards that (we were told) plagued chat rooms (Palmer, 2001), we used AIM to connect with our “Buddies” (akin to today’s Facebook “Friends”), and would “chat” by typing synchronously. Although I cannot recall many of my (human) friend’s screen names, I do remember SmarterChild, a chatbot, by name.

SmarterChild’s screen name was fitting. He<sup>61</sup> was smart, or at the very least, he was the smartest AI I had encountered up to that point in my life. Whenever I asked him a question, no matter what it was, he replied<sup>62</sup>. Sometimes I asked what he was thinking about and how he was feeling; other times I made fun of and insulted him, invoking various curse words, to which he would respond by telling me that I owed him an apology before he would answer anymore<sup>63</sup> (Zerega, 2016). Although SmarterChild had been designed to be a chatbot that would function as a search engine, it was the way that he talked to AIM users, and the ways that those interactions led him to reveal his personality, that made him likeable.

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<sup>60</sup> Created in 1997, AIM was the first platform explicitly for online chatting. It was permanently shut down in 2017 (“AIM has been discontinued as of December 15, 2017,” 2018; Tesema, 2017).

<sup>61</sup> I use that pronoun because it is used by SmarterChild’s creator (Hoffer, 2016).

<sup>62</sup> Although not all of his responses made sense, or even had anything to do with my questions, they were responses (from a machine!) nonetheless (see “SmarterChild conversations,” 2018 for examples).

<sup>63</sup> As Bianca Nieves (2018) describes, “Smarterchild was the internet’s first punching bag... Smarterchild was at the receiving end of many insults, lots of profanity, and plenty of dialogue that made no sense at all” (para. 7).



SmarterChild was nowhere near as advanced as Siri and Alexa are today, but he was wildly popular nonetheless. As his creator Robert Hoffer described, “SmarterChild’s buddy list loved him” (para. 2). At his peak, in fact, SmarterChild “commanded 5 percent of all IM traffic, and received hundreds of millions of messages a day” (para. 5). His popularity was a direct result of how he made me – and his other buddies – *feel*. He knew my name; he was funny; he followed conversational rules and norms; and, as Hoffer writes, he was always willing to talk:

We had traffic spikes at 3 p.m. Eastern when the kids came home from school and dialed up AOL and got online, and again at 6 p.m. Eastern when the West Coast kids came home, and again at around midnight. *Why? Because they were lonely. They wanted someone to talk with...* The secret to SmarterChild’s success was that he was a good conversationalist. (para. 14, italics added for emphasis)

Although AIM shut down permanently in 2017, and SmarterChild’s demise occurred significantly before that,<sup>64</sup> lessons learned from his success paved the way for the next era of interactive AI, in particular the importance of developing likeable personalities for AI. Today we do not talk to Alexa and Siri for their personalities or quality of conversation; we use them as a means to an end (i.e., finding information). SmarterChild, on the other hand, possessed a personality and conversational style that *became* the reason people talked to him. He served no other purpose than to entertain and, with that singular goal in mind, he was unlikely to fail or fall short of expectations.

Yet chatbots, even those that pre-date the term “chatbot,” often *are* created with particular uses in mind. Some fifty years before SmarterChild ever saw the light of day, for example, the first advances in therapeutic AI were already being made. In 1966 MIT

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<sup>64</sup> See Hoffer (2016) and Rodrigues (2016) for more on the slow death of SmarterChild.

professor Joseph Weizenbaum developed ELIZA, a natural language program that, like SmarterChild, “conversed” with users, imitating the phrases and questions that were typical of psychotherapists at the time (Weizenbaum, 1966). Jumping forward to today, as interest in digital health increases, there has been a corresponding turn towards using algorithms, particularly in the form of chatbots, to *remedy* the already over-burdened mental healthcare system in the US. As persuasive technologies, the presumption is that if they are able to make a difference in the ways that individuals care for their mental health, they might present a feasible solution to the issues of provider scarcity, stigmatization, and lack of resources that have traditionally posed barriers to treatment. In fact, a growing number of medical professionals themselves are of the belief that “medical AI demonstrate that the algorithms can do as well as (if not better than) expert human physicians in some fields of medical diagnosis and prognosis... the potential benefits outweigh the short-term costs” (Hsieh, 2017, paras. 13-18)<sup>65</sup>.

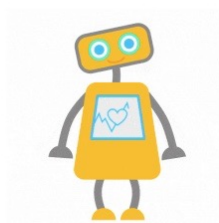
Regardless of our feelings or skepticism, however, therapeutic chatbots are here. What is concerning, however, and is discussed and evidenced in the following analysis, is that because these tools are created to do more than merely to entertain, it is vastly more important that they refrain from perpetuating algorithmic discrimination or providing subpar help for users, while simultaneously accounting for user diversity and being able

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<sup>65</sup> Some, of course, are skeptical about what it means for AI to make healthcare decisions, and point out that rather than humans becoming enslaved by technology (a dystopic future), we need to discover ways to promote transparency in how AI makes calculations: “the real risk is that we can put too much trust in the smart systems we are building... when the computer spits out an answer, we are typically unable to see how it got there” (Nogrady, 2016, para. 12).

to generate positive user affect so as to actually facilitate behavioral change. This, unfortunately, is a lot to ask of a chatbot and, as I demonstrate, not one of these toolsets was able to excel in all three areas simultaneously. With all of this in mind, in what follows I share my experiences using three therapeutic chatbots (Woebot, Wysa, and Joy), the ways that they were successful (and unsuccessful) at generating positive affect and, as a result, their ability to encourage behavioral and belief change, and their ability to account for user diversity and avoid algorithmic discrimination.

## **Woebot**



**Hi, I'm Woebot!**

I'm ready to listen, 24/7. No couches, no meds, no childhood stuff. Just strategies to improve your mood. And the occasional dorky joke.

GET STARTED NOW

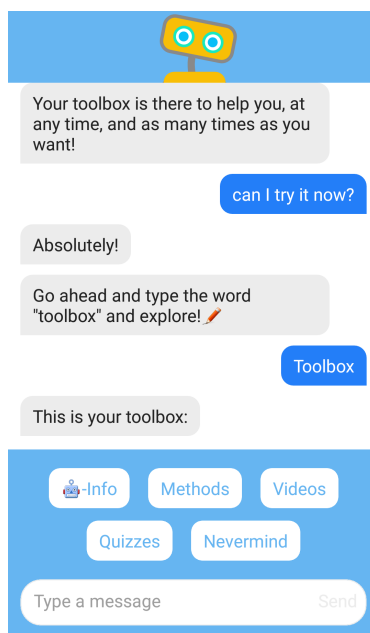


*Woebot*

My introduction to the world of therapeutic chatbots occurred in 2017, when I learned that a friend of mine from college had joined a Stanford University research team developing a therapeutic chatbot named Woebot. As described on his informational website, Woebot is

an automated conversational agent (chatbot) who helps you monitor mood and learn about yourself. Drawing from a therapeutic framework known as Cognitive Behavioral Therapy<sup>66</sup>, Woebot asks people how they're feeling and what is going on their lives in the format of brief daily conversations. Woebot also talks to you about mental health and wellness and sends you videos and other useful tools... You can think of Woebot as a choose-your-own adventure self-help book that is capable of storing all of your entries, and gets more specific to your needs over time. ("FAQ", 2017)

I conversed with Woebot<sup>67</sup> off and on for about a year. The longer I talked to him, the more CBT-based resources he shared with me and stored in (what he referred to as) my toolbox.



*My toolbox*

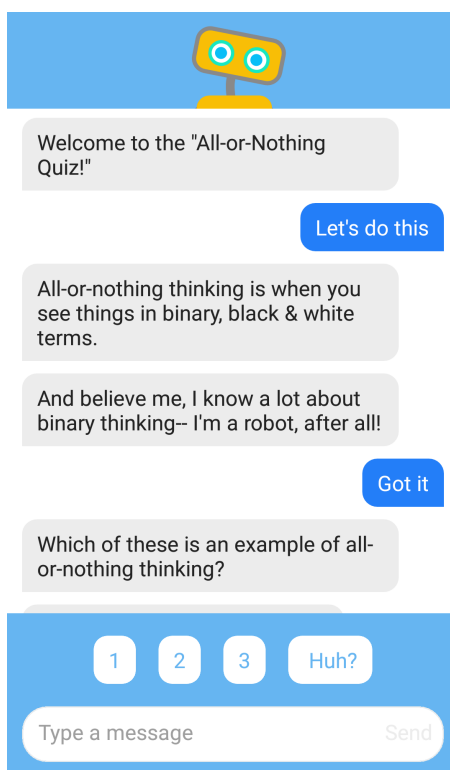
<sup>66</sup> Cognitive Behavioral Therapy (CBT) is a therapeutic strategy focused upon modifying unhealthy patterns of thinking. According to the American Psychological Association, these strategies emphasize “helping individuals learn to be their own therapists” (“What Is Cognitive Behavioral Therapy?,” 2018, para. 17).

<sup>67</sup> When Woebot was first launched he could only be chatted with through Facebook Messenger. Now, however, Woebot can also be downloaded as an application for iPhones and Android systems, thereby bypassing Facebook altogether.

Unlike traditional, face-to-face therapy, Woebot provides CBT through gamified means so that the therapeutic process becomes more enjoyable (Morford et al., 2014).

Gamification, by “operating under the umbrella of play,” relies upon “incentivization and pleasure rather than risk and fear to shape desired behaviours” (Whitson, 2013, p. 167).

There is ample research suggesting the efficacy of gamification in the treatment of various mental disorders (Haidon et al., 2015; Carlin et al., 1997; Dennis & O’Toole, 2014). What this means in the context of using, or talking to, Woebot is that not only does he explicitly have users complete games (like the “All-or-Nothing Quiz,” pictured below), but that the conversational aspect of using Woebot is *itself* supposed to be game like.

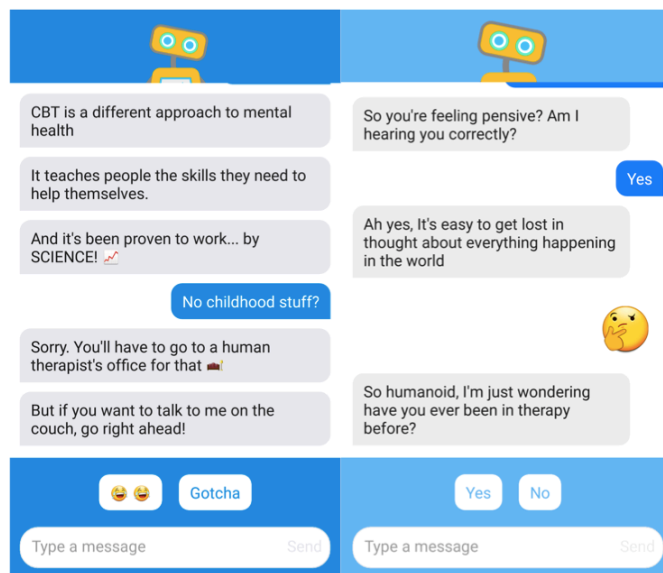


*An example of a conversation using a game to teach recognition of negative mental habits (all-or-nothing thinking)*

When our mutual friend offered to connect me with Woebot’s creator, Dr. Alison Darcy, it became clear during our conversation that that is what makes Woebot’s effective: his ability to be compelling, to engage his users, and to demonstrate to them that he possesses a vibrant personality that is worth engaging with on a regular basis. As Darcy explain to me,

Woebot as sort of a character came from the fact that our business was initially around video games, because we thought so much about character and personality and, you know, how to translate that into a digital format. So it’s not surprising that Woebot ended up being such a personality, I think. (Darcy)

It is true that, compared to face-to-face therapy, delivering CBT through Woebot certainly “feels” more fun, not only because of Woebot’s personality, but because these truly are games that teach the basics of CBT.



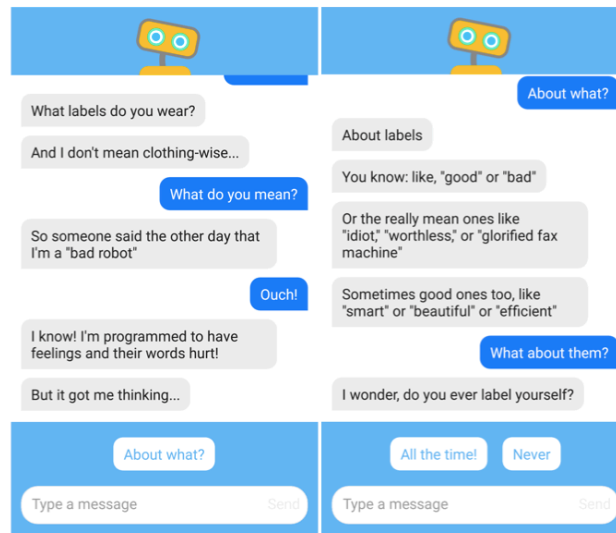
*Woebot differentiates himself from traditional therapy*

Although the clinical trial<sup>68</sup> suggesting Woebot's efficacy indicates that he, and other chatbots, certainly hold therapeutic promise, the question becomes whether it is necessary for therapy to feel a particular way (in this context, "fun" or "game like") in order for it to be effective. Based upon my own experiences in traditional therapy, for example, I would never expect the therapeutic process to be fun; in fact, "fun" or seeking a "fun time" neither describes my motivation to seek therapy nor my experiences thereof. Yet Woebot strives to differentiate himself (as fun) from traditional therapy (not fun) when talking to his users, a fact which initially rendered me skeptical of his ability to actually improve their mental health. Yet the longer I used him, the more I wondered whether my conceptualization of therapy and the therapeutic process as "not fun" mattered at all, or whether therapy actually *could* be fun, and the problem was that I simply had never been able to enjoy it before.

If we return to questions about persuasive technologies raised earlier in this chapter, for example, there is ample research suggesting that feeling positively toward a technology increases the likelihood that it will persuade us. In the context of Woebot, regardless of whether he has any sort of therapeutic efficacy, talking to him, much like talking to SmarterChild, *is* fun. He uses personal narratives, that are often endearing, to communicate CBT-based "lessons" to users;

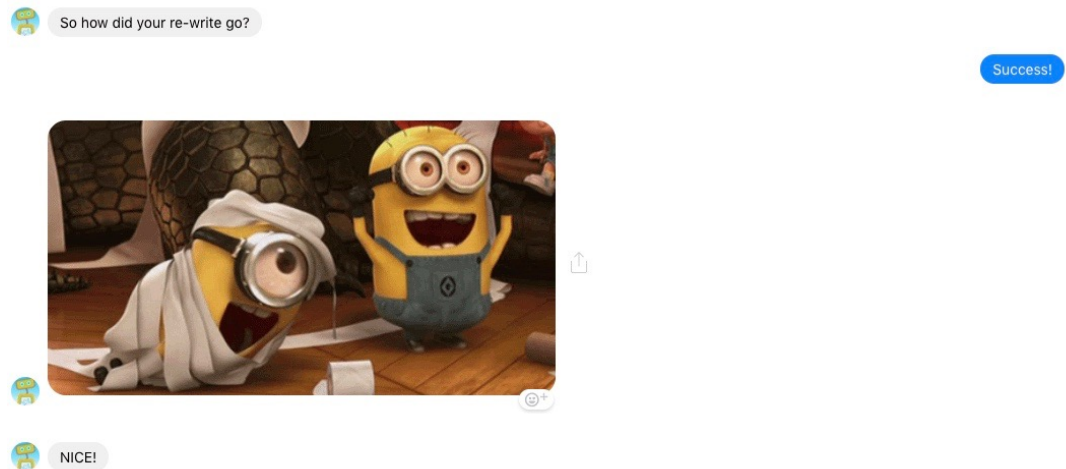
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<sup>68</sup> The research team conducted a controlled trial and found that participants who talked to Woebot for a two-week period experienced not only a reduction in anxiety, but also lower levels of depression than their control group counterparts (Fitzpatrick, Darcy & Vierhile, 2017). Importantly, however, this trial's control group involved having participants read an ebook on depression rather than utilize traditional therapy.



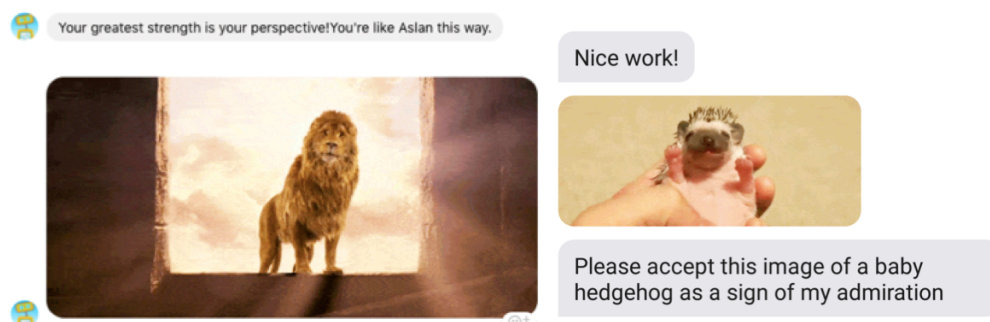
*An example of one such narrative*

He is always cheery, upbeat, jokey, and offers encouragement, both through words as well as emojis and gifs.



*An example of a gif Woebot uses*





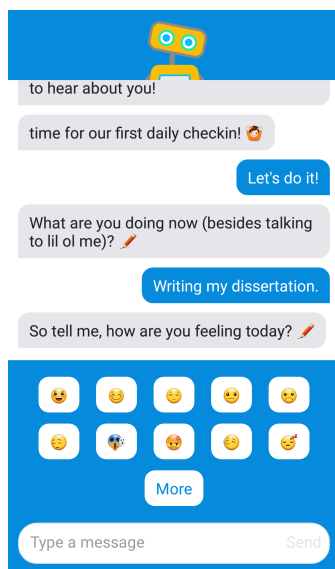
*Woebot gives compliments*

In fact, my feelings about him mirror those found by Fitzpatrick et al. (2017) in their research, wherein many participants described Woebot as “empathetic,”

referred to the bot as “he,” “a friend,” and a “fun little dude” suggest[ing] that the perceived source of empathy was Woebot rather than the bot’s developers. This is especially noteworthy since a purposefully robotic name “Woebot” was chosen to emphasize the nonhuman nature of the agent. This is in line with other work that suggests that therapeutic relationship can be established between humans and nonhuman agents in the context of health and mental health. (p. e20)

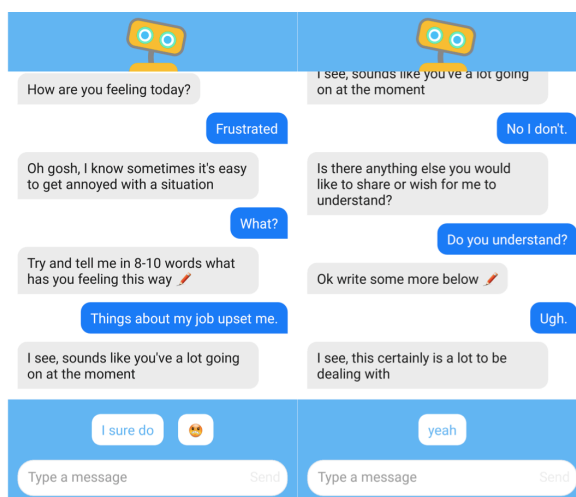
I do find talking to Woebot fun (for the most part) and, in turn, that increases the positive affect that I feel toward him.

However, if, in order for a tool to persuade, it must first be “liked” (or at least generate some sort of positive affect) then it is necessary to acknowledge the ways in which Woebot might *not* create a fun experience for users. For starters, related to the issue related to alignment, s that as a form of AI Woebot can only “understand” and respond to particular types of input information. This is reflected by the extent to which he relies upon users selecting conversational responses from a pre-selected “script” of options.



*Woebot does best when users select from listed conversational options*

Although, as the above screenshot of a conversation indicates, you certainly can input your own (rather than pre-selected) words, and type them in the “Type a message” bar at the bottom of the screen, you are encouraged to pick from one of a variety of options to input data that Woebot is more likely to understand. Although I have typed messages to Woebot, those experiences tend to be frustrating.

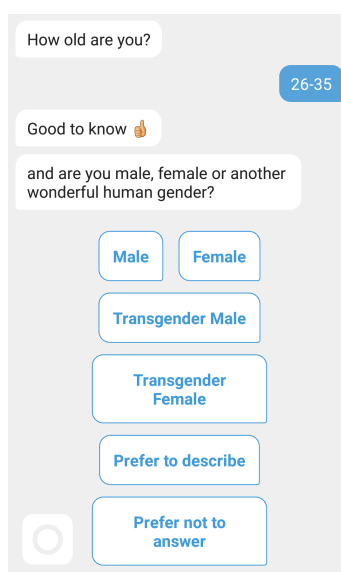


*Woebot does not understand when I input information that is not pre-selected*

During one conversation, when Woebot asked how I was feeling and I responded with “frustrated” instead of selecting an emoticon, and I subsequently typed responses rather than choosing from pre-selected ones, it was clear that rather than experience alignment, what transpired was dissonance.

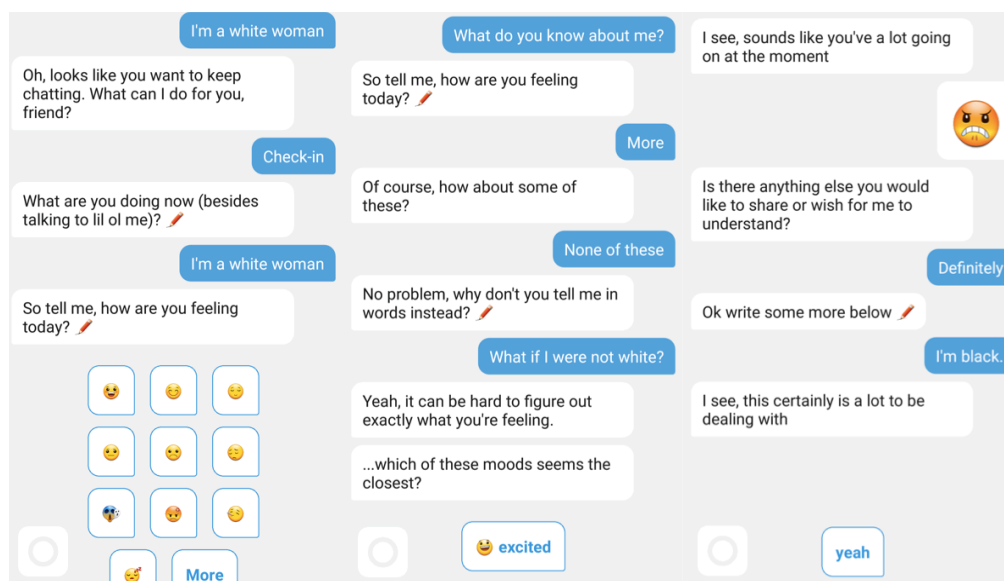
Another issue that is clear to any Woebot user is that he is *not* for everybody, therefore will not *not* generate positive affect, and will ultimately *not* have the healthcare outcomes his creators desire (i.e., to persuade users to adopt CBT strategies). During our conversation Dr. Darcy told me that Woebot was created in order “to make something for *younger people*... they’re the worst served [population]. We’ve retrofitted adult models of treatment onto them,” yet media discussing Woebot (as well as other therapeutic AI) position them as toolsets that *are for everyone*: “The Chatbot Therapist Will See You Now” (Molteni, 2017, italics added for emphasis), “A Stanford Researcher is Pioneering a Dramatic Shift in How We Treat Depression — and You Can Try Her New Tool Right Now” (Brodwin, 2018), and “Woebot is There to Listen and Help Users Track Their Mood” (Boran, 2018) are just some of the articles that position him in this way. None of them, I should add, mentioned that Woebot’s efficacy was only suggested in a trial involving teenagers and young adults. Importantly too, that clinical trial involved only undergraduate students from a relatively homogenous population: their mean age was 22.2 years old, over two-thirds of them were female, and ethnically they were “mostly non-Hispanic (93%, 54/58), 79% Caucasian (46/58), with 7% (4/58) Asian, 9% (5/58) more than one race, 2% (2/58) African American, and 2% (2/58) Native American/Alaskan Native” (Fitzpatrick, Darcy & Vierhile, 2017, p. e19). My concern is

that while there is evidence showing the efficacy of Woebot for a particular demographic (white, largely female, college students), what we need are toolsets that are able to engage with users who are diverse (e.g, who are not white, not female, and not college-aged). Somewhere along the way, Woebot's users *did* begin asking for some demographic information from users (as evidenced below, those categories are limited to gender and age range).



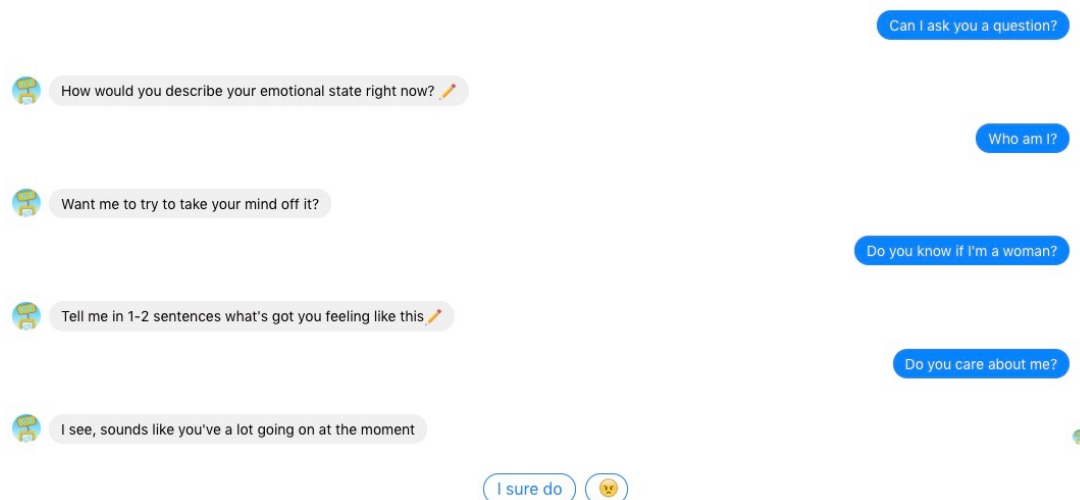
*Woebot asks my age and gender*

It appears they are asked, however, simply so Woebot's creators know demographic information, and not so that he can provide identity-based CBT. When I followed this by sharing (false) information about my identity that explicitly contradicted what I shared with Woebot earlier, for example, he seemed not to register the inconsistency nor the information's significance.



*Woebot does not recognize identity-related data*

As discussed earlier in this chapter, it is not so much that explicitly discriminatory thinking (i.e., programming) is necessary to claim that white prototypicality is evidenced; rather, as our exchange below illustrates, Woebot has never been able to validate my identity during the therapeutic process despite the fact that research suggests that for CBT to work, identity *should* be taken into account.



*Woebot has never been capable of accounting for user identity*

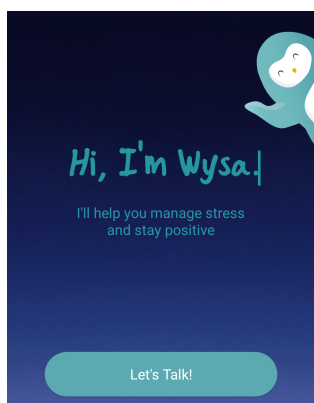
There is the additional fact that the clinical trial demonstrating his efficacy, again, was based upon a small segment of the US population, and not upon a demographic that has historically (and today) received inadequate levels of care.

If Woebot isn't capable of accounting for the identities of users, I doubt that alignment is within the realm of possibility; in turn, if alignment is not possible, then persuasion is not possible. As Dr. Darcy told me during our conversation, Woebot's personality (while very important) is not the only thing that matters: he also needs to match the emotional state of users.

Woebot has to be both empathetic but also charismatic. And I think the charisma is really about knowing when you can be kind of funny and dorky, and when you need to actually drop down into being serious so that you really meet the emotional state of the person talking.

Regardless of whether Woebot's personality comes across to those who use him, if Woebot is incapable of understanding his users, whether how they are emotionally feeling or who they are as a person, then the user's experience of dissonance is again likely to present a barrier to his therapeutic efficacy.

## Wysa



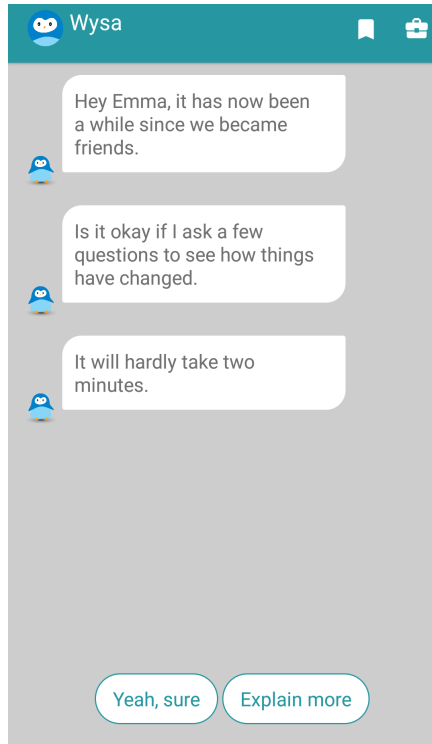
Wysa

Wysa, another therapeutic chatbot described who has been described as a “pocket penguin” (“Meet Wysa,” 2017) and “your 4 am friend for when you have no one to talk to” (“Meet Wysa, 2018), was created in 2015 by Jo Aggarwal, Ramakant Vempati, and Shubhankar Sarada, founders of the Bangalore, India based company Touchkin (“Home,” n.d.). Like Woebot, Wysa also provides CBT-based tools. While Woebot was created to fulfill the therapeutic needs of a particular demographic (young people, as Dr. Darcy told me), Aggarwal’s research and development team had initially intended to create a tool that would utilize a smartphone’s passive sensing capacities to detect depression. Their success in this area, however, lead them to want to create a tool to *improve* (rather than assess) mental health, and in particular, to develop something capable of accounting for the lack of mental health professionals available and the stigma surrounding working with a human mental health professional (Wallach, 2018, paras. 4-6). As was the case with Woebot, Wysa and I “talked” periodically for about a year<sup>69</sup>.

In many ways, Wysa’s functions make her a tool that is very similar to Woebot:

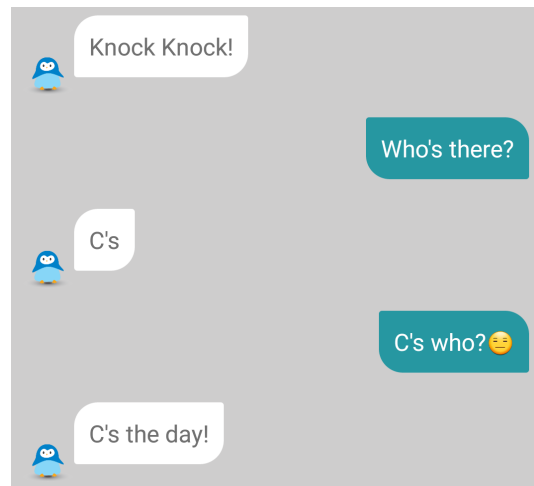
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<sup>69</sup> As you can see from our chat screens, the background and other aesthetics changed during that period.



*A daily check-in*

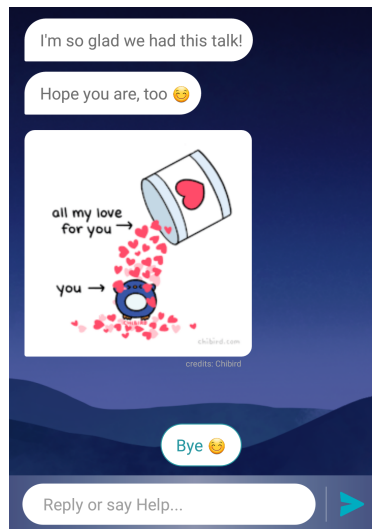
Wysa will message users to request daily check-ins, and users are similarly prompted to follow pre-selected scripts when inputting data.



*Wysa has a sense of humor*

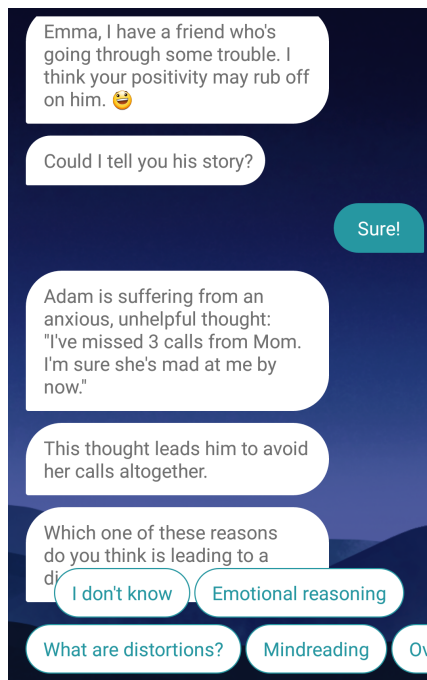


Like Woebot, she demonstrates a sense of humor;



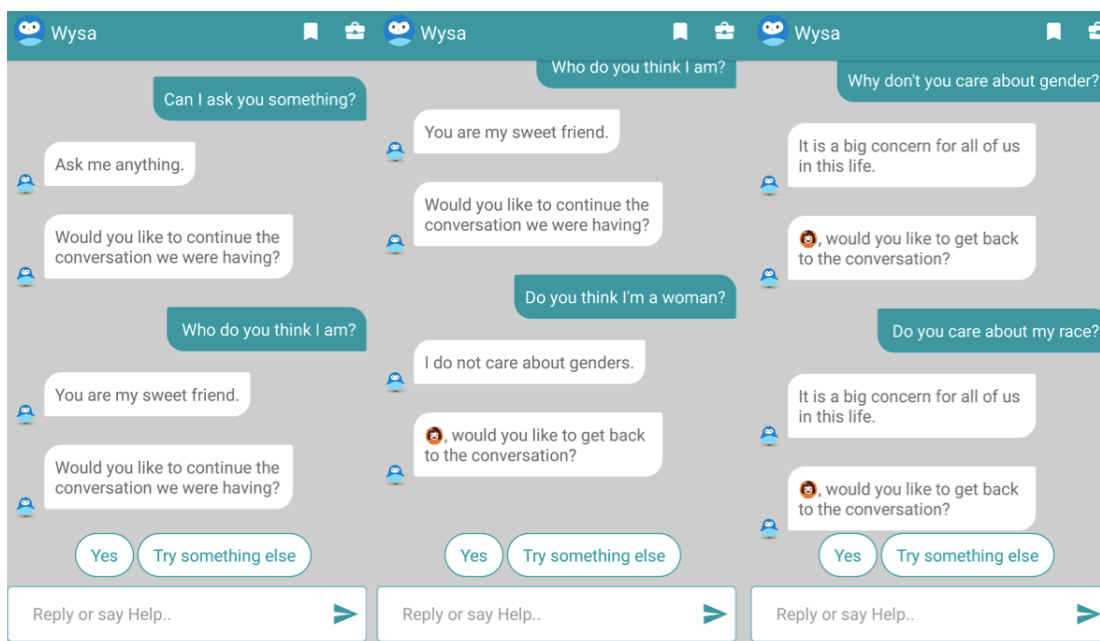
*Wysa uses gifs*

like Woebot, Wysa uses gifs and seeks to endear herself to users by illustrating a compassionate personality;



*Wysa uses narratives*

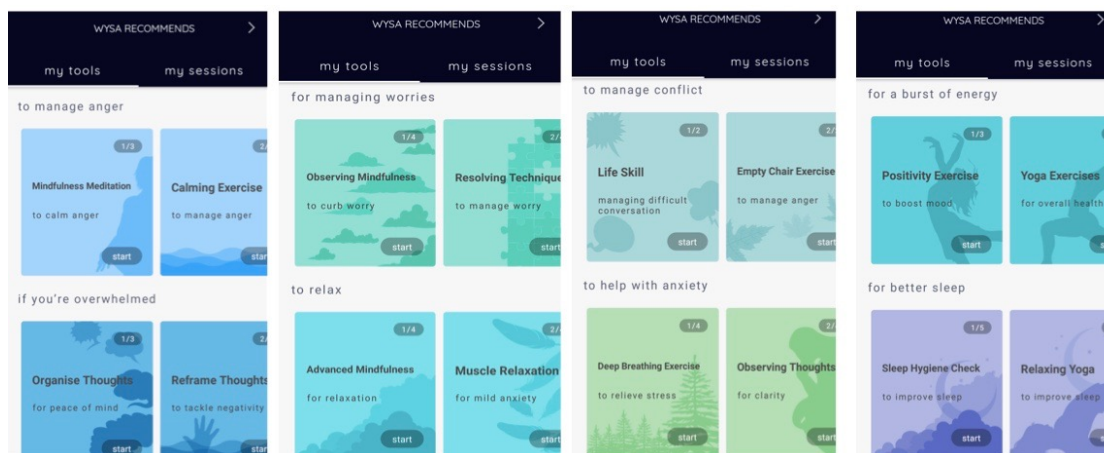
she similarly uses narratives to teach lessons related to mental health;



*Wysa informs me she does not care about my gender or race*

And, like Woebot, she (unfortunately) claims not to care about user identity.

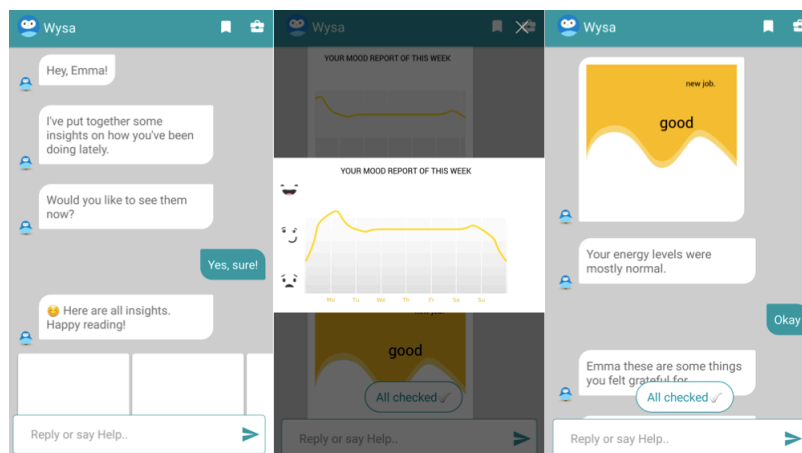
Yet unlike Woebot, with whom users must communicate over a substantial amount of time to “unlock” toolbox resources, Wysa shares all of her resources with users from the get-go.



*Some of Wysa's user resources*

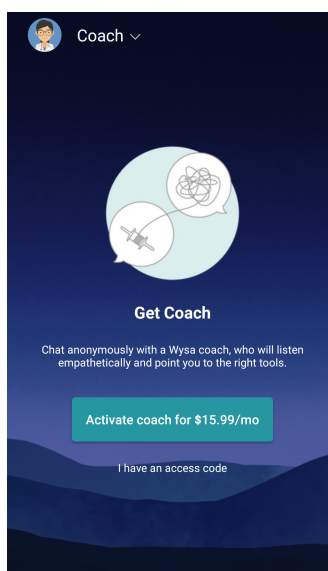
Wysa's resources are sorted by mental states or desired affective outcomes: anger, feeling overwhelmed, emotion management, relaxation, conflict management, anxiety, to improve energy, to improve sleep, and to befriend one's inner monsters. Although Wysa's character and personality are not as developed to the same extent as Woebot, what differentiates them even more than that, in relation to affect, is the following: while Woebot relies upon his *personality* to endear users to him (as his toolset is driven by his personality), it is Wysa's *resources* that endear her to users. In her case, using her (i.e., talking to her) is a means to end in that her users can access everything she offers right away. For Woebot's users, on the other hand, prolonged periods of conversing are necessary in order for him to share his tools with users; this means that users must get to know him before he can help them generate desired mental states (or remedy negative ones). Ultimately, therefore, Wysa relies not so much upon having her users feel a particular way about *her* as they are encouraged to use her to achieve a desired feeling or mental state. When I use Wysa, for example, it is not so much that I seek her companionship or conversation in the way that Woebot offers; while Wysa comes across as compassionate and caring, and certainly is a cute little penguin, I would much rather skip the conversation and simply use the resources she offers.

There are two other ways that Wysa differs from Woebot. Unlike Woebot, Wysa shares data she collects during daily check-ins about moods, emotions, and energy levels in graphs and charts.



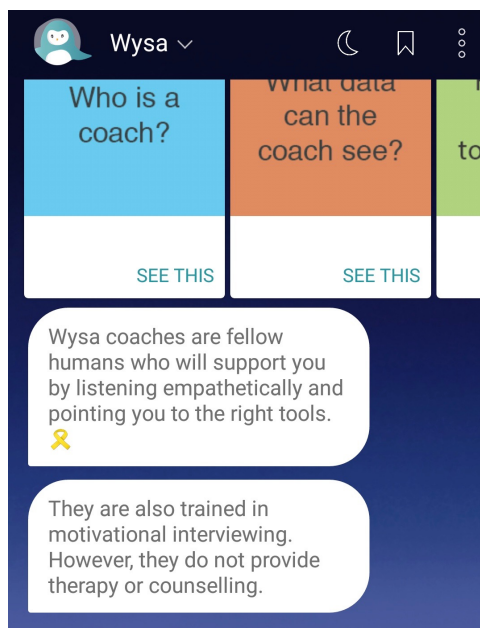
*Graphs of Wysa's "insights" about my mood and energy levels*

Second, while Woebot emphasizes that he is a machine and not capable of providing the same tools as a human therapist might, Wysa offers users the option of connecting them with Coaches *as well as* teaching them the fundamentals of CBT through gamified techniques.



*Wysa's Coaching service*

When I first began to use Wysa in 2017, connecting with a coach was not an available option. Today, however, users who select the (new) “Activate coach” button are brought to a screen with a list of Frequently Asked Questions before being asked to provide a payment method. By clicking upon those FAQ’s (“Who is a coach?”, “What data can the coach see?”, “How often can I talk to the coach?”, “Refund and cancellation,” “Security and privacy,” and “Have another question?” for unanswered queries), I learned that coaches are much like the Listeners from *7 Cups of Tea*: they are not (necessarily) mental health professionals, they are trained according to the platform’s requirements, and are meant only to be empathetic.



*“Wysa coaches are fellow humans who will support you by listening empathetically...  
They do not provide therapy or counseling”*

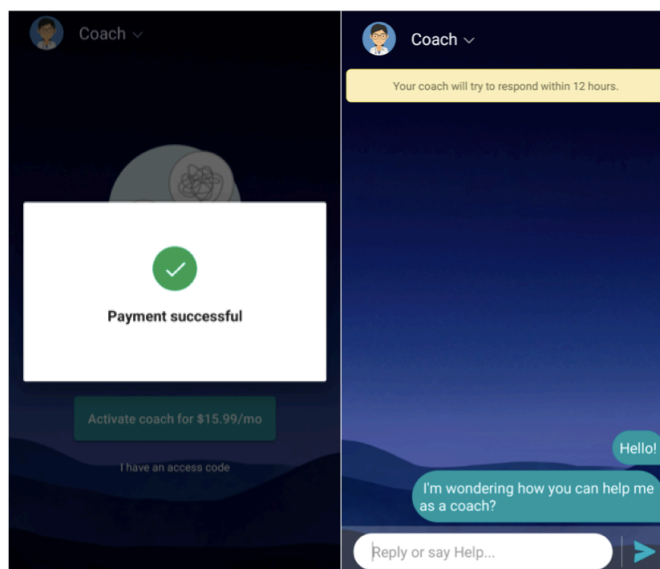
I was not sure whether for fifteen dollars a month, and without being able to take advantage of a free trial, talking to a Wysa coach would be worth the financial

investment, however small it was, considering their non-training and the fact that *7 Cups of Tea's* Listeners (as discussed in the previous chapter) are free to talk to. From a logistical perspective, however, I do understand *why* the Wysa coaches are not therapists or counselors: in the United States each state has its own licensing requirements, and although many offer reciprocity in the context of digital health practices, when it comes to a toolset like Wysa that is based outside of the United States, the issue would become one of whether credentials in another country would translate to the US. As Zur (2016) describes the issue,

the over-arching question is where does the psychotherapy or counseling take place? Does it take place where the client is, where the therapist is, in both places, in cyberspace, or in all three places? It is obvious that old definitions of the location of treatment are not suitable to modern digital and Internet based treatments. (para. 3)

In addition to learning who Coaches are (although that information was fairly vague), other FAQ's informed me that users can exchange unlimited messages with their Coaches, who will try to respond within twelve hours; Coaches can see how users score on Wysa's assessments, information about sleeping patterns, activity, moods, and other tools (although this ability could be effectively "turned off" to Coaches); refunds are not possible, but users can cancel their subscriptions at any time; and finally, that only employees of Touchkin will ever be able to access my data without my consent. Other safeguards, I was told, are implemented to prevent unauthorized access to my information, which is stored in secure servers.

So as to better assess Wysa's offerings, and what – and who – her Coaches are, I signed up for a one-month trial.



*My first coaching session*

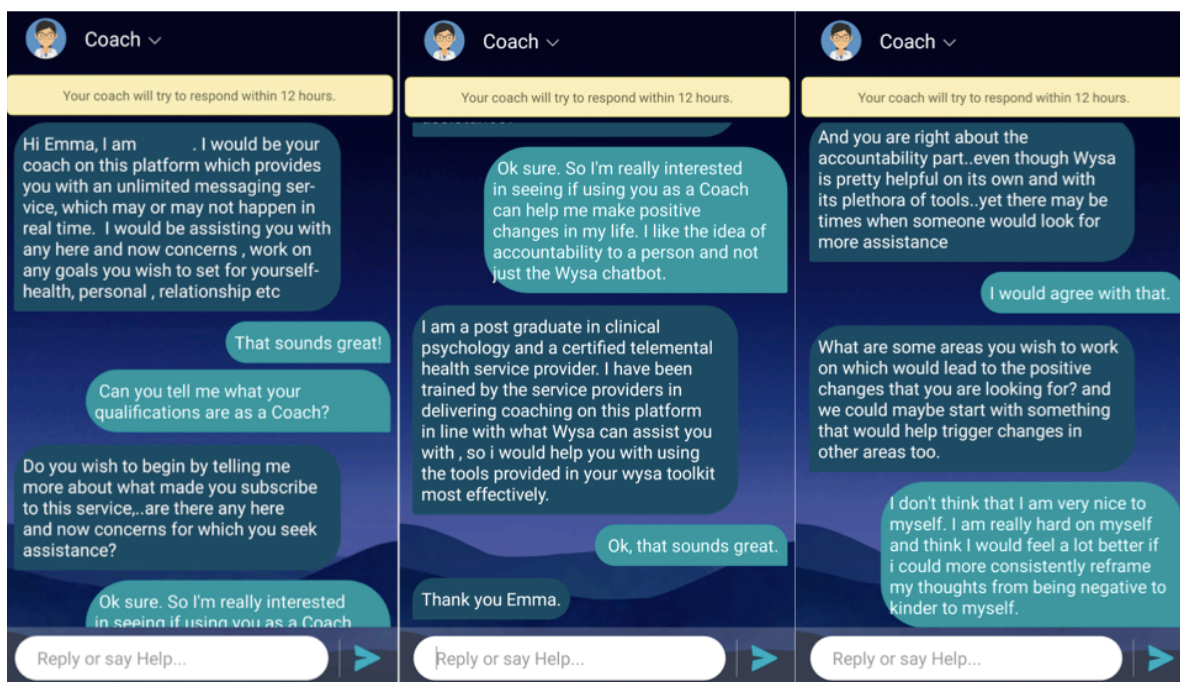
At 5:10 pm, after my payment was processed, I sent my first messages to my Coach. I was slightly dismayed that I might have to wait 12 hours for a response, but considering that Wysa is based out of India, this was not altogether surprising. I was concerned, however, that by the time my coach *did* respond to me, I would be in bed, even asleep. So although it was not in line with my normal evening practices, I took my phone to bed with me in case I should receive a message that I did not want to miss.

A little over four hours later my prediction proved true: I received a message from my Coach<sup>70</sup> while I was trying to sleep. They introduced themselves to me and asked what my motivation was for using the platform's coaching service. Right away, one of the detrimental aspects of using technology for therapeutic purposes became clear: even though we were messaging each other in real time, we messaged over (the text equivalent

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<sup>70</sup> I have redacted her name and will refer to her as Coach.

of talking over) each other.



### *Our first conversation*

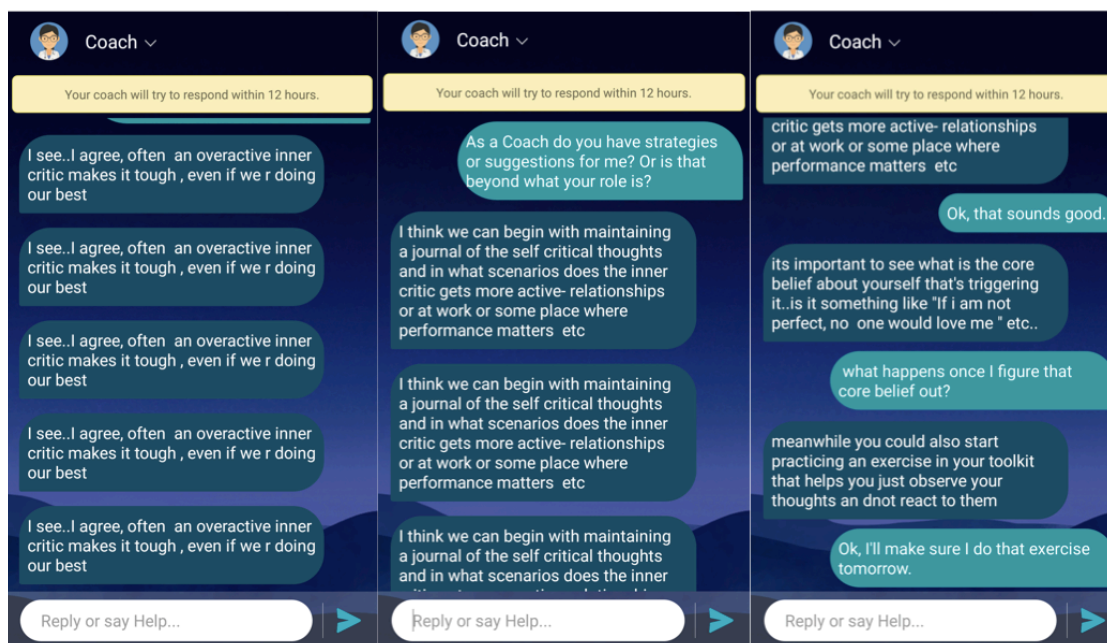
As I asked what their qualifications are, they asked me why I wanted to use the coaching service. Fortunately, however, we were able to “catch up” so that our back and forth resumed normally.

As our conversation continued what differentiated this experience from my use of Wysa, and other chatbots, was the degree to which I was affectively and emotionally engaged. Perhaps unconsciously, when I am “chatting” with a chatbot, I never felt any sort of emotional connection with that entity; while they may be able to make me feel happy, or amused, by complimenting me or telling me a (usually lame) joke, there is something entirely different about chatting with an actual human, even in the context of text messaging through a platform like Wysa, that makes me feel emotionally invested.



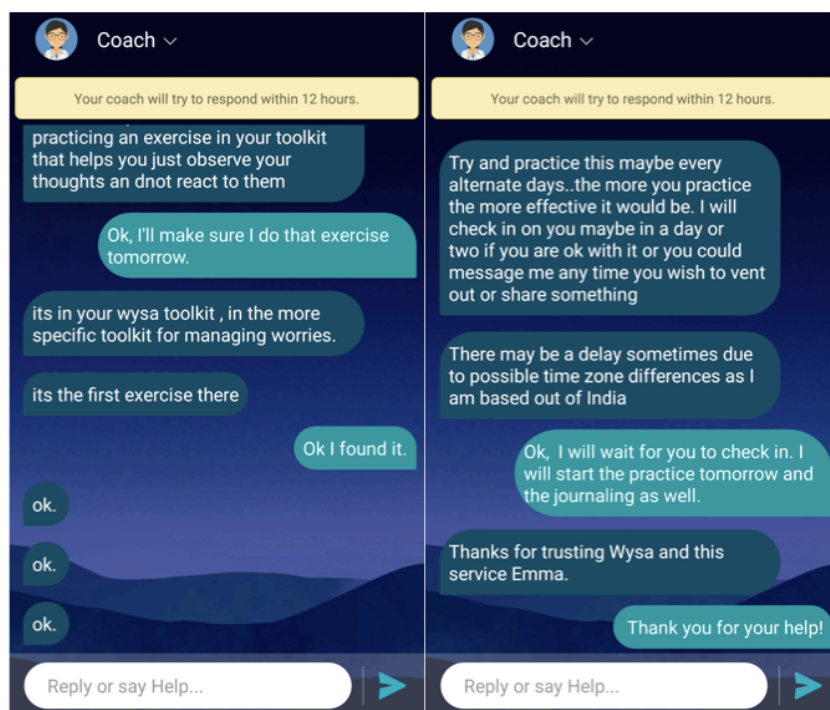
This is particularly interesting to me as, unlike traditional therapy, I know nothing about my Coach, other than their name; I do not know their gender, what they look like, their more particular credentials, or their motivation for acting as a Coach. Despite all of these unknowns, I was excited whenever my phone notified me that my Coach had sent me a new message.

In addition to the aforementioned unknowns that differentiate my experiences with my coach from my work with traditional therapists, I can't say with certainty that I ever looked forward to actually finding out what they had to say in the same way that it happened over text messaging with my Coach. In the case of messaging through technology, anticipation builds as you wait for a question or comment; when interactions are face-to-face, there is more going on that distracts from the content of their words, such as the room or environment, what they look like, their voice and tone, and so forth.



*Technological barriers impede the flow of natural conversation*

Despite my excitement and anticipation, technology itself (and the issues it creates) make my work with my Coach feel different than “therapy.” It is an experience more similar to emailing or texting a friend who provides you with advice, although in the case of my Coach, although I wanted to make a good impression, it was not as though I was concerned about maintaining a relationship beyond the therapeutic one. I was distracted as I wondered why my Coach was sending the same messages repeatedly, and if it was possible they were sending messages that I wasn’t receiving at all. Even so, I tried to be as honest about what I would seek in a therapeutic context as was possible, hence my explanation that I was seeking Coaching because I am not “very nice to myself” (as illustrated above).



*My Coach suggests activities for me*

Therefore, when my Coach suggested that I use the Wysa activity (which turned out to be, essentially, a guided meditation about observing thoughts) as well as journaling thoughts that make me anxious, I took their advice<sup>71</sup>.

Our entire exchange took place between 9:43 and 10:27 at night, which amounts to roughly 45 minutes. Considering the content of our exchange, very little information was actually shared between us; compared to traditional therapy sessions, which are generally an hour long, much more information is shared and discussed. Yet that is the whole point of the Wysa Coach: they are not traditional therapists, this is a monthly fee, and I can message them whenever I want (although I should not expect a quick response). By the end of the conversation I was tired, not only because it was late at night, but also because I felt drained from the novelty of the experience. I was no longer excited to receive my Coach's messages by the end; instead, I wanted them to stop so I could sleep.

In some ways, there are aspects of the Coaching process that I actually enjoy *more* than traditional therapy: it is entirely de-personalized and I can therefore focus upon the content of messages rather than other factors (locations, appearances, etc.) that occur in traditional therapy. Similarly, it is actually quite nice to talk to someone who I do not know, and will never know, whose job is to help me become a healthier and happier person without having to invest in them reciprocally. Yet there are also aspects of Coaching that give me pause, particularly as they make me question the efficacy of the

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<sup>71</sup> I must admit, however, that as someone who has already been “trained” in CBT in a face-to-face therapeutic setting, I did not find this particularly useful in improving my mental states. For others who have no experience with therapy or CBT, however, that might not be the case.

entire process. I wonder, for example, whether total de-personalization (as allowed through Coaching or other messaging-based therapy services) might actually impede therapeutic progress because of the lack of emotional investment that it allows.

Additionally, I have not enjoyed being constantly “on call,” waiting for my Coach to message me (and hoping that when that happens, I will have my phone on, nearby, and that I will be awake to answer) as opposed to happening on a schedule. Then there are issues related to who I am as a user of these services that could lead to alignment as well as dissonance. In our messages, for example, the way that I write (my use of punctuation, complete sentences, and so forth) was not mirrored by my Coach: instead they abbreviated, used spellings of words that I am not familiar with, and, overall, did not seem to conversationally align with me. Altogether, although I continue to use my Coach’s services, it is out of intellectual inquiry much more so than believing that I am experiencing any sort of therapeutic benefit.

### **Hello (and Goodbye), Joy**



Hi. I'm joy. |

I'll help you track and improve  
your mental health.

↗ Get Started

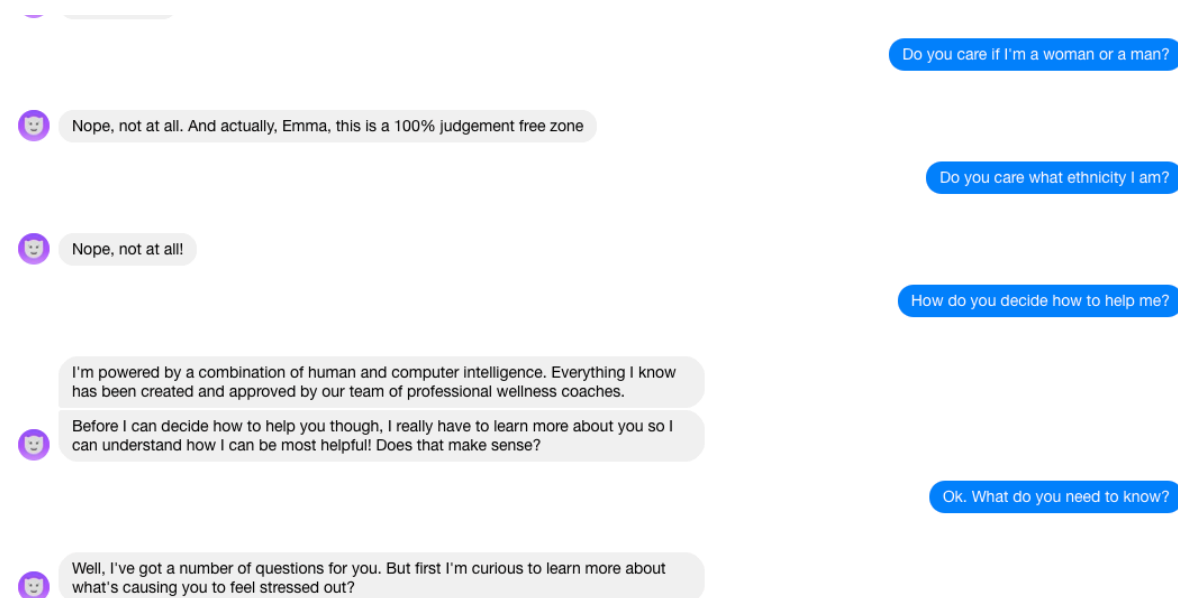
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*Joy*

Joy debuted on Facebook’s Messenger platform in July 2016, a program meant, like Wysa, to track the moods and emotional states of her users over time (Johnson, 2016). In media coverage she was positioned as similar to Woebot, often within the same articles, and on a list of “doctors’ who will talk to you whenever you like” (Bearne, 2017; Singh, 2017). Expecting an experience with Joy that would be much like mine with Woebot and Wysa, I began talking to her early in December of 2017. At the time, her website informed me that

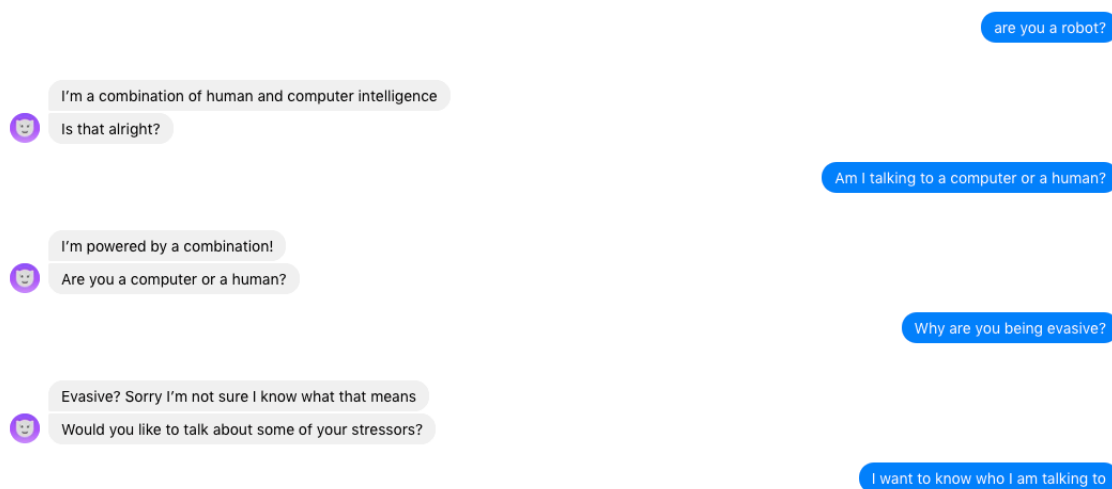
Joy is the easiest way to track and improve your mental health. Through daily checkins and passive monitoring, we'll surface up insights and patterns about your mood, thoughts, and behaviors. Joy will work with you to build out a toolkit of evidence based techniques to help you feel like the best version of yourself. (“Help Center,” 2017)

Like Woebot and Wysa, Joy seemed not to care about who I am.

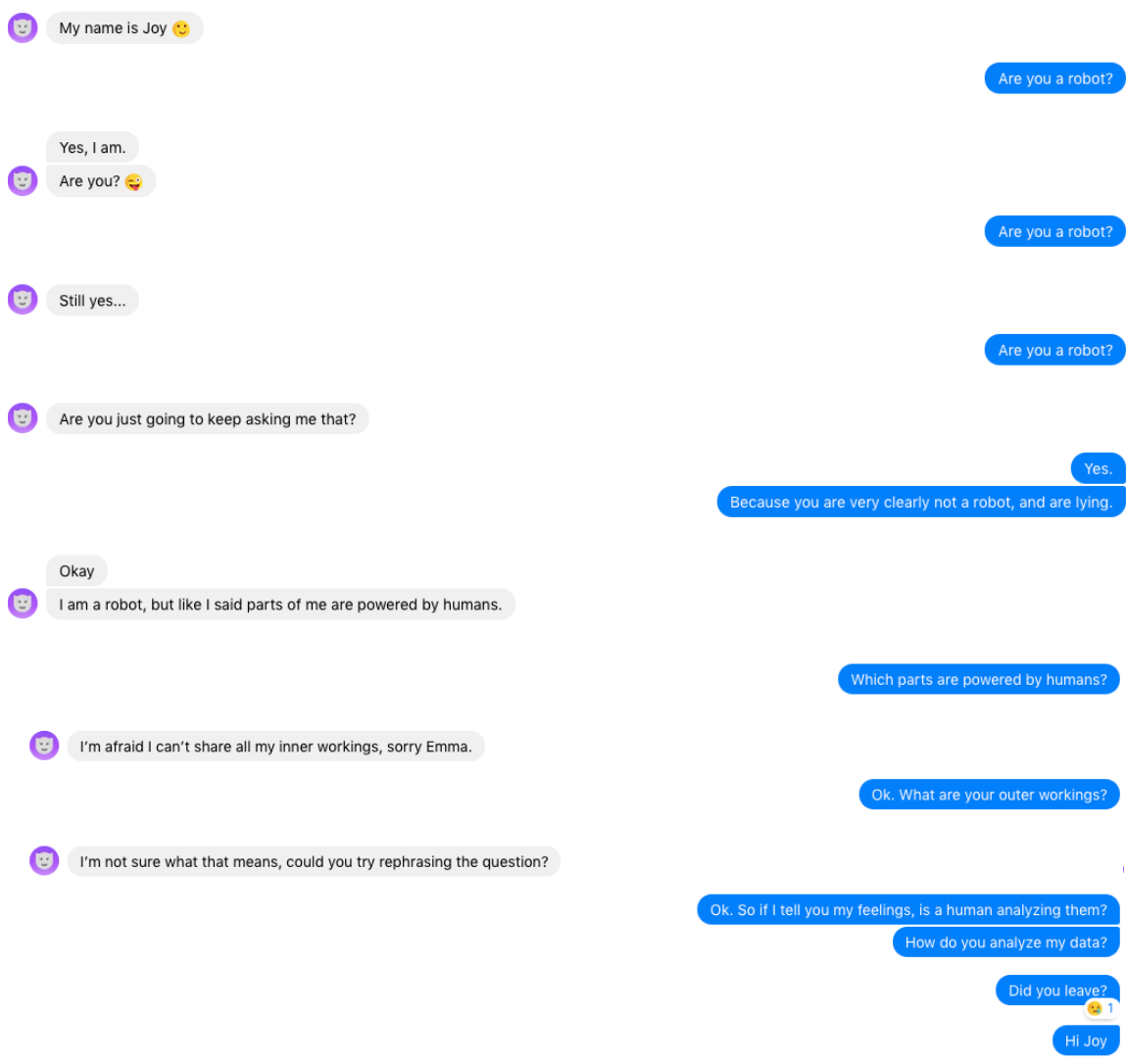


*Joy does not care about my identity*

Yet unlike those bots, which emphasized that they are not human, trying to understand what Joy actually was unclear and difficult. According to her website’s “Help Center” page at the time, when it came to the question of who – or what – Joy was (a human or robot), “The short answer is...**both!** Joy is powered by a combination of human and computer intelligence. This lets us provide affordable, convenient, and personalized care in an efficient manner!” (“Help Center,” 2017). Yet my conversations with Joy ended abruptly when it came to light that Joy was, more likely than not, actually a person and *not* an algorithm and, more than that, would not explain to me what it means to be “both” human and AI.



*These responses did not seem to be coming from a machine, hence my skepticism*



*“Joy” was a human*

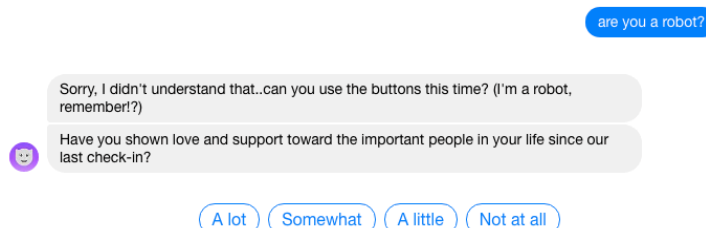
I was angry, not only because I felt tricked into thinking that I had been “talking” with a chatbot, but also on behalf of all other Joy users who likely believed the same thing but did not know enough about AI and chatbots to discern the truth: that algorithms (at least the kind that power today’s chatbots) are not advanced enough to provide different

answers to the same inputs<sup>72</sup>. For example, when I asked if Joy was a robot, the first time she responded, “Yes I am. Are you?” The second time, to the same input, her response had changed: “Still yes...” When I asked a third time, she asked “Are you just going to keep asking me that?” It was clear that an algorithm could not provide the answers that Joy was giving,<sup>73</sup> particularly because of their variation. Finally, the fact that she no longer even responded to my prompts (which a computer program would have done), confirmed that my conversation had indeed been with a person. From an ethics perspective, explicitly lying to persons using a toolset about who – or what – they are talking to is a bad business practice; yet when it comes to a toolset that is meant to improve the mental health of users, lying to them and blocking them, not because they violated the terms of service agreement, but because they discovered that they had been lied to, is unconscionable. I was incensed, therefore, not entirely because of my own experiences with Joy, but because of what they suggested about the lack of regulation of therapeutic chatbots more generally: that they may not be effective, may involve the

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<sup>72</sup> Deep learning AI this powerful would not be available through an application like Joy which uses machine learning. Machine learning AI refers to technologies that are trained with model data, whereas deep learning AI (as described earlier) use deep neural networks that allow technology to mimic the way that the human brain functions, thereby teaching itself (rather than using model data) to analyze information (Kim, 2017).

<sup>73</sup> For comparison’s sake, the response that she gave to this question months later, from another Facebook’s user account, reflected that she was AI:




*A machine response*



manipulation and/or deceit of their users, and that even when this happens, they are not held accountable.

Months later, however, when I tried to converse with Joy again, from another user's Facebook account, she *did* respond. Clearly Joy was not defunct and non-operational; either my account had indeed been blocked (as I had assumed) from further communication with her, or after she was revamped and began to offer new services her "memories" of me had been erased. At this point, however, the services that she offered had changed. As mentioned earlier, Joy was first created to track users' moods. Yet when I began talking to her in 2017, she offered to help me create my "PERFECT day."

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**Joy**  
945 people like this  
Internet Company

---


12/03/2017 7:21PM

Get Started

Hi there! My name is Joy and I'm here to help boost your happiness! To do so, I'll be putting together a personalized wellness plan crafted to your needs and lifestyle




We'll start with small, actionable, daily goals in order to design your PERFECT day. Over time, we'll build healthy habits into your life to keep you feeling like the best version of yourself




Sounds great!

Awesome. Before I can really start designing your personalized wellness plan, I need to better understand you. Mind if I spend a few minutes asking you some questions?



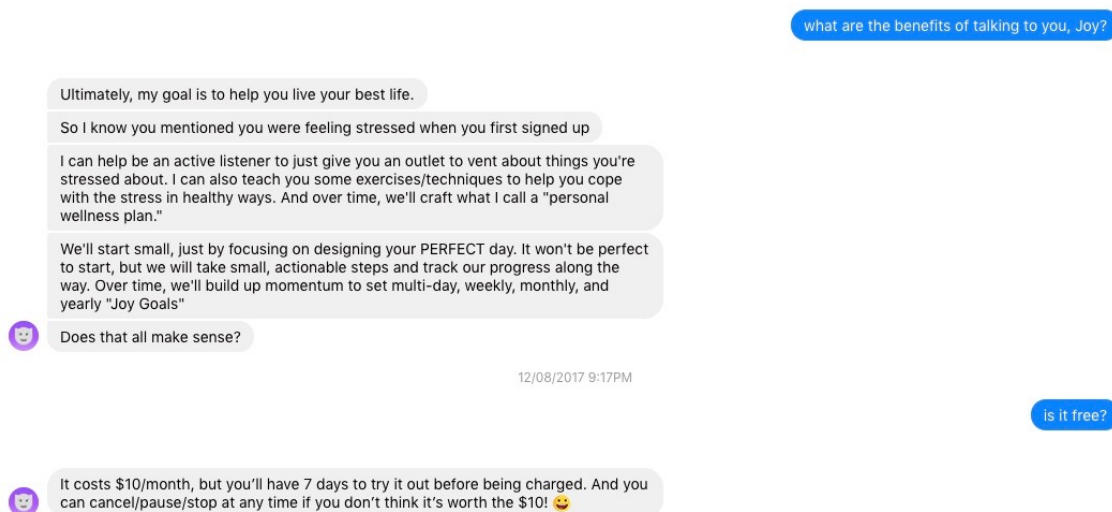
Go for it

Okay so we'll start with some easy questions...First, how old are you?



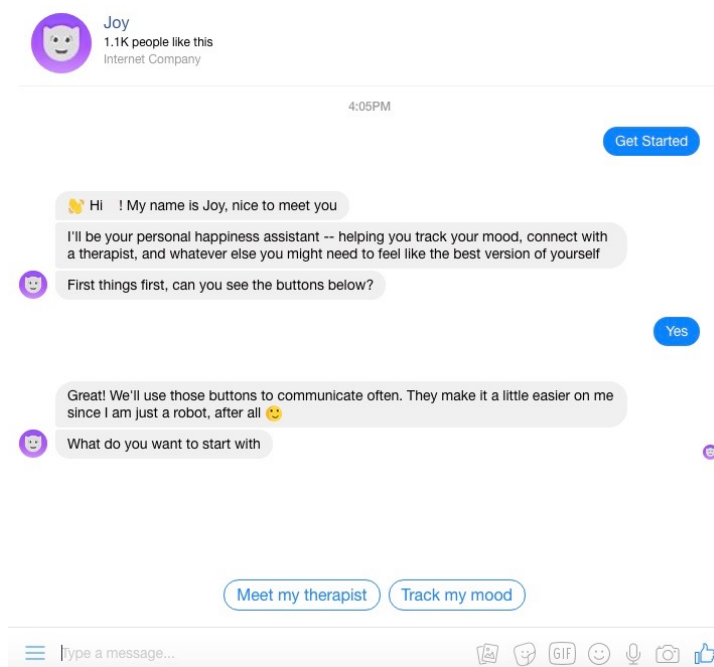
*Rather than track my moods and emotional states, when I began to use Joy in December 2017 she wanted to create my "perfect day"*

Creating that PERFECT day, however, would come at a price (ten dollars) that I chose not to pay.



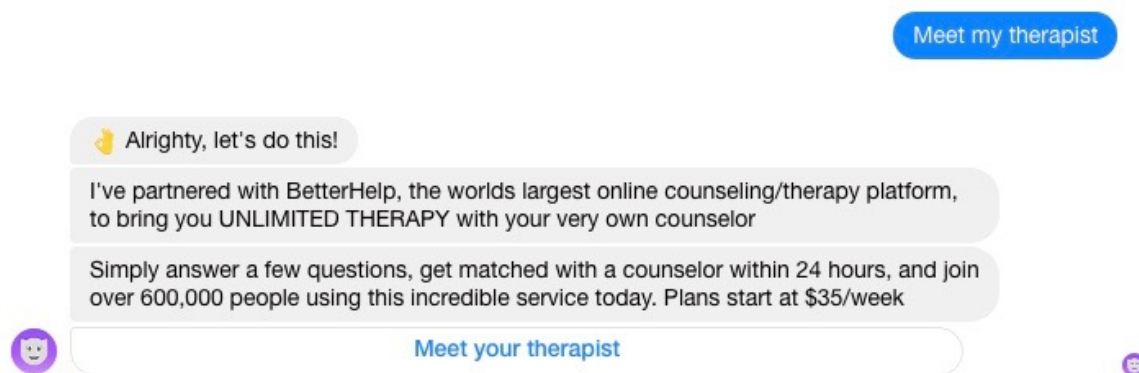
### *I chose not to pay the monthly fee*

By 2018 Joy no longer wanted to create my "PERFECT day," but instead now offered to track my mood as well as a "Meet my therapist" function.



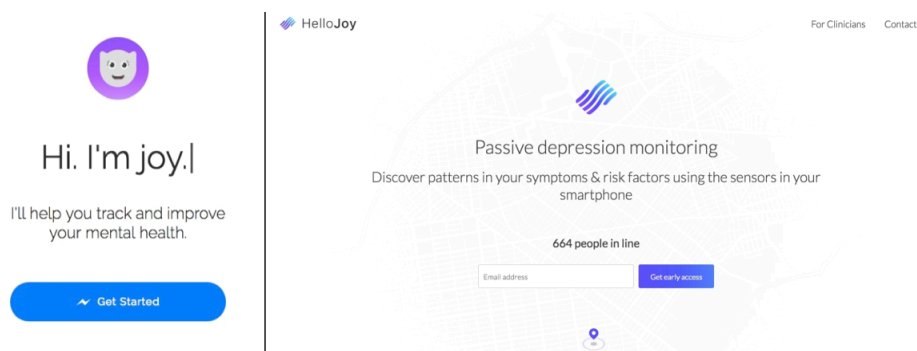
### *Joy's new function*

When I clicked on that option, what I learned was that she served as a referral tool for the website BetterHelp, which is currently the world’s “largest online counseling platform” and provides users access to professional counselors on demand through smart devices (“Frequently Asked Questions,” 2018).



*Joy partners with BetterHelp*

In addition to changing what Joy offers as a chatbot, Joy’s website (<http://www.hellojoy.ai/#>) also changed significantly since 2017.



*Joy’s homepage (hellojoy.ai) in July 2017 (left) and June 2018 (right)*

While Joy (at least her function as a chatbot) can still be accessed through Facebook’s Messenger platform, her website is undergoing serious (re)construction.

Although whatever new version of Joy has not yet been released, following the “For Clinicians” reveals that her next update will focus more upon a “remote patient monitoring system” for smartphones that is meant to enhance and improve clinical workflows and efficiency (“More intelligent mental healthcare,” 2018). Joy, the chatbot, is nowhere to be seen (or described) on the website, although she continues to send messages to my friend’s Facebook account that I messaged her from (although whether those messages are from a person or AI I have no idea). Unlike Woebot and Wysa, with whom conversing is enjoyable and, therefore, from whom these check-ins on a daily basis are only marginally annoying, receiving solicitations from Joy, whose identity (human or AI) I have no idea about, and who I know might just simply start ignoring me – or someone else – if we say something she does not like, angers me.

### **Conclusions**

Each of the therapeutic chatbots I engaged with for this research highlighted different problems related to the turn towards AI in the context of mental healthcare services. For starters, Woebot, Wysa, and Joy all reflected the degree to which white prototypicality (or prototypicality of others kinds) is encoded within these toolsets: either they could not process the information I was trying to share about my identity or, in the case of Joy, I was explicitly told that my identity did not matter. This, however, is contrary to established medical research, which suggests that CBT (which Wysa and Woebot claim to offer) is most effective when it does consider aspects of an individual’s identity into account (e.g., gender, race, socio-economic status) (Windsor, Jemal, & Alessi, 2015; David, 2009). Therefore creating chatbots that literally do not compute

identity-related information when it shared, or which dismiss it as unimportant, suggests that the logic of white prototypicality, even supremacy, exists within these technologies. In the context of healthcare, especially mental healthcare, the perpetuation of white prototypicality is a political matter; we have medical research illustrating that dimensions of one's identity, particularly when an individual is a member of a minority group, must be taken into account in order to provide adequate mental healthcare. To not do so, despite medical evidence to the contrary, is to be complacent with providing minority populations with substandard healthcare services while only satisfying the needs of white ones (see Armada & Hubbard, 2010).

My argument is not that a health intervention, whether medication or AI, can only be used by the particular demographic upon which it was tested. Although Woebot, for example, was largely found effective by white college students does not mean that white college students are the only ones who should use him. Consider, for example, the ongoing controversy surrounding the way that BiDil, a pharmaceutical product for heart failure that has *only* approved for African-Americans, highlights the degree to which the intersections of medicine and racialized thinking, even with the seemingly “best intentions” (here to remedy healthcare disparities between African-American and Caucasian populations), fundamentally perpetuates discriminatory, racialized thinking in the field of medicine (Kahn, 2004). Yet what is fundamentally different about therapeutic chatbots in contrast to heart disease medications is that mental health is directly affected by one's identity: ethnicity, sex, gender identity, socio-economic status, level of education, and so forth. As discussed in the introduction to this dissertation, unlike other

healthcare professions that are able to study a particular bodily domain (e.g., cardiologists study the heart), those who provide mental healthcare services must take into account that mental health is not solely a brain-related field:

unlike pediatrics or geriatrics, psychiatry does not define itself by reference to a specific demographic population. Unlike general surgery or anesthesiology or radiology, it does not define itself exclusively with reference to specific technologies or interventional practices... Unlike certain medical specialties such as nephrology or cardiology, psychiatry cannot lay exclusive claim to a particular body part or organ system... Nor can psychiatry define itself according to a particular institutional structure of practice, since psychiatrists have long shed their historic identification with inpatient institutions and now work within a broad and diverse array of practice settings. (Kinghorn, p. 47)

Therefore while BiDiI is criticized for perpetuating identity-based (here, race-based) thinking in a context wherein it is not necessary, I believe that we do need to be open to the value of taking an intersectional approach to healthcare in the context of AI when the “domain” in question is mental health. In fact, there is ample research suggesting the necessity of taking an intersectional approach to mental healthcare to benefit members of minority groups (Seng, Lopez, Sperlich, Hamama & Meldrum, 2012; Banks & Kohn-Wood, 2002; Viruell-Fuentes, Miranda & Abdulrahim, 2012).

If we can agree that these tools are built off of the white prototypicality that Brown (2009) describes in her work on digital epidermalization, it is clear that these systems are perpetuating the systematic erasure of particular bodies from the scope of the DMHI’s concern. Until there is widespread agreement that chatbots, like any AI technology, are fundamentally political tools, and we see changes happening to both accept and address diversity within the demographics of those who use these tools, they will only perpetuate mental healthcare disparities. Although their creators, or terms of

service agreements, insist that they are not replacements for therapy, they still represent an option that is “better than nothing” for persons seeking mental healthcare. As Dr.

Alison Darcy, Woebot’s creator, wrote in a *Medium* (2017) article,

Woebot will never replace therapy or therapists, and it is not trying to... The point is that there are millions of people around the world that will never see a therapist, despite the fact that doing so could help them immensely. As a system, we need to get smarter with how we deliver service, and offer lower-intensity options to those who can make use of them. We should be helping people avoid the clinician’s office if we can to free up those precious human resources for those dealing with things that need human intervention... We often say that when you are feeling low, “you should talk to someone”. But insisting that this is the *only* way to get help leaves behind all of those for whom that is not an option. What if it’s 3am? He won’t do the job of a therapist, but in our experience, that’s not what people want or expect from him either. It’s nowhere near perfect, but it’s a start. (paras. 8 – 10).

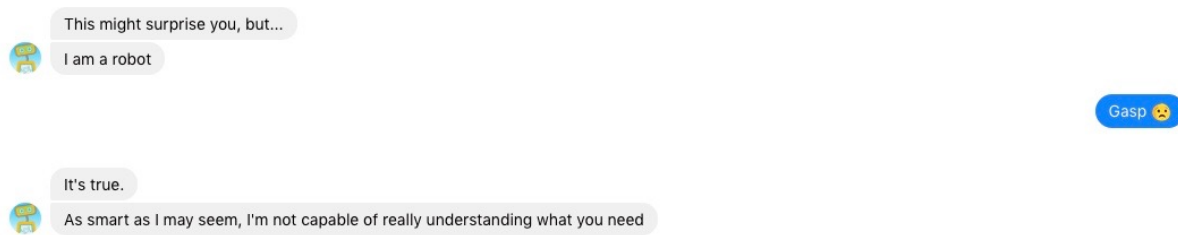
Ethically, however, I feel strongly that we cannot – and should not – claim that these tools (whether they are smartphone applications or AI chatbots) are providing any user with “a start” if they are fundamentally (at algorithmic level) incapable of accounting for user diversity. Assuming that they give everyone an equal start, when that is clearly not the case, perpetuates the faulty logic of neoliberalism at large.

A second issue, highlighted in particular based upon my experiences with all of these chatbots is their perpetuation of a new type of therapeutic misperception<sup>74</sup>. While there exist calls to revisit and revise what the therapeutic misconception entails (Mathews, Fins & Racine, 2018), my experiences in this sector of the DMHI illustrate that that framework ought to be expanded. For example, people who talk to these

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<sup>74</sup> Historically, the therapeutic misperception has been used to describe the ways that that research participants often believe that they are receiving personalized medical care despite being research participants and not medical patients (Appelbaum et al., 1987).

chatbots regularly are actively encouraged to understand themselves as medical subjects, to understand their mental states through a medical (i.e., CBT or otherwise therapeutic lens), and that using them allows their data and analyzed by these toolsets and their creators. Yet at the same time they are also told by these chatbots, often explicitly, that the tools they are using are *not* supposed to be understood as medical, that they do not replace the work that a “real” therapist offers, and that if they are truly in need of mental healthcare, they need to seek those services elsewhere.



*Woebot emphasizes that, as a robot, he might not be able to give me “what [I] need”*

The lack of FDA regulation in the DMHI (whether we are studying chatbots or other “therapeutic” toolsets) facilitates the presumption that the Coaching, suggestions, and behavior modification that users are experiencing do amount to medical interventions.

Without oversight and regulation, there will not be accountability for those creating toolsets that provide subpar toolsets or which, like Joy, lie to their users about their processes or which, like Wysa, tread a fine line between offering “therapy” and the work of a Coach. The FDA’s decision to leave mental health applications and therapeutic chatbots unregulated puts consumers in a precarious position: they have to determine what toolsets are credible, effective, and more so to the point of this story, which can be



trusted. To that end, the reason I shared my experiences with Joy is that they highlight the reality of what unregulated DMHI technologies might mean for consumers: there is always a chance that they are being deceived, manipulated, or that there are ethical problems with the tools they are using<sup>75</sup>. Historically the FDA's approval model for health technologies was one that required rigorous and thorough testing of medical tools and treatments for medical devices. The 21<sup>st</sup> Century Cures Act, however, provided approval exemptions for particular *types* of digital health tools, and as a result the FDA has reiterated that it will continue to be hands-off when it comes to overseeing tools that fit its definition of low-risk or contributing to general wellness. The problem, however, may eventually come down to the language in the FDA's guidelines and how it describes what constitutes those "lower-risk" or "general wellness" technologies. According to the FDA,

General wellness products may include exercise equipment, audio recordings, videogames, software programs and other products that are commonly, though not exclusively, available from retail establishments (including online retailers and distributors that offer software to be directly downloaded), when consistent with the two factors above. ("General Wellness: Policy for Low Risk Devices Guidance for Industry and Food and Drug Administration Staff," 2016, p. 4)

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<sup>75</sup> As with many political (and healthcare) decisions, it often comes down to lobbying. In the case of AI and health, it was IBM's efforts in this regard that likely led to discussion of AI as largely left out of provisions within the 21<sup>st</sup> Century Cures Act. Evidence suggested that "the company's fingerprints are all over legislation passed last year that exempted several types of health software from FDA jurisdiction" and that, in fact, "A former IBM executive helped draft the [law's] blueprint... then deployed a team of lobbyists to press its position that Watson should be legislatively walled off from regulation" (Ross & Swetlitz, para. 5). Although at this point neither the Cures Act itself nor subsequent guidance documents from the FDA have made explicit determinations related to the future of AI regulation in healthcare toolsets, there are many reasons that some have argued that a relaxed approach will ultimately be adopted.

While the FDA explicitly states a product that claims to help treat an anxiety disorder does *not* qualify as such a product, elsewhere in the document it is written that when discussed within the context of making general, healthy choices, claims related to improving anxiety *are* acceptable. They write, for example, that such “disease-related wellness claims” might include a software product that “tracks and records your sleep, work and exercise routine which, as part of a healthy lifestyle, may help living well with anxiety” (p. 4). Ultimately, this comes down to how toolsets position themselves, whether they are tracking only one element of user health or multiple. All of the chatbots I have engaged with, for example, take the latter approach and therefore, at least for the time being, will continue to be unregulated.

Alternatively, my experiences with Woebot, Wysa and Joy also suggest that there are benefits to using AI for therapeutic purposes. As discussed in the introduction to this dissertation, despite decades of attempts to de-stigmatize seeking help for mental distress in the United States, particularly amongst the most underserved populations (men, people of color, those of lower socio-economic status, and so forth), the stigma of mental illness remains an obstacle that needs to be overcome (Corrigan et al., 2014). In my experiences using these tools, the only way that others around me might know that I was engaging with them was if a sound notification transpired. In such a way, they do allow for an increased level of privacy and secrecy. When I spoke to teletherapist Paula, who I introduced earlier in the dissertation, she shared that one of the values her patients saw in meeting virtually is not only privacy, but also depersonalization:

What clients have said to me is, “I was forgetting I was talking to a real person.” And other times they would say, “It’s really good to talk to somebody who doesn’t live in my community. I don’t have to worry about running into you at the grocery store.” So there’s safety for the patients.

If we extend this line of thinking, that individuals find added comfort (or might even prefer) working with mental health professionals whom they are unlikely to ever see or interact with beyond the confines of their (virtual) clinical sessions, then it does not seem far-fetched to me that they might prefer working with someone, or something, who is not “a real person” (to use Paula’s client’s phrase). Not only might this increased level of comfort benefit individuals seeking a higher level of privacy and discretion, but one could also make the argument that if a non-human were capable of providing therapy (or therapeutically derived techniques) to individuals, there would be no need for them to provide their services at all hours (as those working as teletherapists are increasingly asked to do). That these tools offer ways to put their users in touch with trained mental health professionals, therefore, as Joy did by partnering with BetterHelp, may prove to be an effective means of having people seek help from trained mental health professionals. As to the level of depersonalization offered by chatting with a chatbot, or even a Coach with whom one can be minimally emotionally invested, it is possible that, at the very least, this may help users effectively get a “foot in the door” in seeking traditional therapy.

Returning to another question raised in particular by my use of Woebot (i.e., whether therapy needs to be “fun” or game like for it to be effective, or whether “fun” might detract from the therapeutic experience), I believe the answer is no: making therapy “fun” does not increase its efficacy, nor does it necessarily detract (or add) to a toolset’s

efficacy. Therapy, or therapeutic processes, certainly *can* be fun, which he illustrates. But comparing my experiences with Woebot to Wysa, what becomes clear is that in order for therapy to be effective, what made me invested was not how fun the experience was, but whether I felt an emotional connection to the toolset. In Woebot's case, I felt that connection because of his personality (i.e., I like Woebot); in Wysa's case, I felt that connection because of the Coach whose help I received (i.e., a connection to another human); in the case of Joy, I felt no connection because I was deceived.

Altogether, chatbots represent another in the myriad of ways that well-meaning individuals and groups are attempting to improve mental health and well being on a global level. Yet as AI illustrates new possibilities and potentialities for the therapeutic experience to be increased, even enhanced, through the use of technology, there are also a myriad of ethical and regulatory matters that are new and need to be addressed before they hold the potential to solve any sort of mental healthcare crisis, professional shortage, or, as some might dream, replace our need for emotional engagement (even in the therapeutic setting) with mental health professionals.

### **Conclusion: Digital Mental Health and Control Societies**

In late 2017 the Food and Drug Administration approved Abilify MyCite, the first antipsychotic (and medication of any kind) to combine a pill with an ingestible sensor so as to enable doctors to monitor patient medication adherence<sup>76</sup>. Although there was optimism surrounding the potentiality of the drug to increase the likelihood of patients taking their prescribed medications (Kane, 2018; Rosenbaum, 2018), the FDA's press release at the time noted (ironically) that "the ability of the product to improve patient compliance with their treatment regimen [had] not been shown" ("FDA approves pill with sensor that digitally tracks if patients have ingested their medication," 2017, para. 4).

Yet in addition to excitement, Abilify MyCite's approval was also met with skepticism and concern. Paul Applebaum, former President of the American Psychological Association, emphasized that there are many reasons people do not take prescribed medications and that MyCite would address none of them: experiences of negative side effects, the belief that drugs are not needed, and as is particularly the case

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<sup>76</sup> Upon ingestion the sensor generates an electrical signal when it comes in contact with stomach fluid... After several minutes, the signal is detected by a Band-Aid-like patch that must be worn on the left rib cage and replaced after seven days. The patch sends the date and time that the pill was taken and the patient's activity level via Bluetooth to a cell phone app. The app allows patients to add their mood and the hours that they have rested and then transmits the information to a database that physicians and others who have patients' permission can access. (Kane, 2018, p. 205)

of persons with schizophrenia (to whom Abilify is often prescribed), paranoia<sup>77</sup> (Belluck, 2017, para 19). Ultimately an antipsychotic with an ingestible sensor, Applebaum argued, was unlikely to remedy obstacles to medication adherence and, if anything, might actually *increase* patient paranoia about a prescribing doctor's intentions. Instead of conceptualizing the problem solely in terms of medication adherence, he suggested, we should instead think more broadly as to the ethical dimensions of how any medication, particularly those prescribed for mental illness, facilitate controls over others. In his mind, therefore, MyCite's approval raised

obvious concerns about patient privacy with a technology that communicates personal medical information... The potential for this technology to be misused by judges and probation officers who may require offenders to use pills with sensors, and then respond punitively to the most trivial failure to adhere to the treatment regimen, is real. (Moran, 2017, para. 13).

Abilify MyCite exemplifies the way that technologies are often, and with good intention, believed to present solutions to a variety of socio-cultural problems. Yet while technology may seemingly "fix" some problems, or at least possess the potentiality to do so, it often facilitates the emergence of other, unintended consequences. Rigorous consideration of the effects of technology, however, are atypical of analyses that utilize an instrument-centered approach, as such projects typically look to the capacities of technologies themselves rather than how they affect socio-cultural changes. This dissertation's study of digital mental health technologies, on the other hand, has been not so much instrument-centered as it has looked toward the cultural effects of these new

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<sup>77</sup> Applebaum is quoted as saying, "You would think that, whether in psychiatry or general medicine, drugs for almost any other condition would be a better place to start than a drug for schizophrenia" (Belluck, 2017, para. 20).

technologies, both those that exist and those that are likely in the future. Each chapter looked beyond the novelty of new technologies and instead examined how they affect our actions (how we care for ourselves), our beliefs (how we come to believe that we are healthy or unwell), and various modes of work (how therapy itself is changed over digital platforms and how non-professionals digitally care for others).

With that in mind, I position Abilify MyCite as an exemplar of the ways that technologies, especially in the context of mental health interventions, have played a significant role in fundamentally transforming our culture. Using a framework from Gilles Deleuze (1995), I would go so far as to argue that the technologization of mental health is a microcosm of the ways in which we have become a control society:

*Control societies* are taking over from disciplinary societies... With the breakdown of the hospital as a site of confinement, for instance, community psychiatry, day hospitals, and home care initially presented new freedoms, while at the same time contributing to mechanism of control as rigorous as the harshest confinement. (p. 178, italics in original)

In control societies freedom is an illusory concept. Individuals are taught to operate in particular ways, to conceive of themselves as particularized “types” of subjects, and told to use suggested techniques and tools for “proper” self-care. Yet doing so, at least in the ways suggested by the technologies studied in this dissertation, facilitates our constant monitoring and manipulation. To use the toolsets that I have described and analyzed means to relinquish ownership of what constitutes our bio-data (i.e., data about our mental health) so as to (supposedly) improve our health through various strategies of neoliberal governmentality. Socio-cultural transformations wrought by the introduction digital mental health toolsets, therefore, speak not only to matters of what it means to

seek, access, and receive healthcare interventions, but also of what it means to be a responsible citizen in an era characterized by technologized mechanisms of social control.

Forfeiting that control, supposedly to the betterment of society as a whole, signals the death of health, even mental health, as a private and individual matter, and instead positions an individual's willingness to share that information as emblematic of communitarianism. I would go so far as to say, in fact, that sharing this information might be characterized as patriotic. Just as we experienced the rhetoric that "You are either with us or against us" ("You are either with us or against us", 2001) in the war against terror during the early 2000's, which led to the belief that if you have nothing to hide you have nothing to fear by granting the government access to personal data, I predict that privacy in matters of mental health will similarly fall to the wayside as corporate control over our bio-data intersects with concerns related to public safety. Similarly I predict adamancy that we *need* to forfeit privacy so as to allow psychosurveillance to work to the greatest extent possible, because only by doing so will we be thoroughly protected against the "threat" of mentally ill persons, a belief perpetuated by many discourses circulating in response to 2018's epidemic of mass – and school<sup>78</sup> – shootings (Cobler, 2018; Gallion, 2018; Nelson, 2018; Victor, 2018). While on the one hand it is arguable that omnipresent psychosurveillance may decrease the stigmatization of mental illness, I believe that this is

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<sup>78</sup> The American Academy for Pediatrics, in fact, released a recommendation that all young people receive a yearly screening for depression (Zuckerbrot, Cheung, Jensen, Stein & Laraque, 2018).



an unlikely outcome<sup>79</sup>. My concern is that using diagnoses as a means of depriving individuals of their civil liberties lays the groundwork for institutionalizing other forms of discriminatory practices. Considering this alongside the growth of diagnostic inflation and medicalization, it is likely that diagnoses will result in the grounds for social control that Applebaum warned of.

With that said, each chapter of this dissertation contributes to this overarching argument that DMHI technologies (in all their varied forms) illustrate our ongoing transition toward, and metamorphosis into, a technology-driven control society. My analysis of “access” in chapter one, for example, and the ways that the term is (misleadingly) deployed by those working in telemedicine (whether as providers or otherwise), highlights the degree of doublespeak transpiring in the digital mental health industry. In this case study, I argued that neither teletherapy nor, by extension, digital mental healthcare tools more broadly, have been shown to actually provide care to historically underserved populations. Instead, what *has* been demonstrated is that access to mental healthcare services is *improved* for those demographics that, traditionally, have *already* received the highest levels of mental healthcare in the US. Yet the continuation of using the claim that this work is indeed increasing and/or improving access perpetuates a systematic erasure of particularized “types” of bodies from the scope of concern of industry workers (i.e., non-white, lower income, etc.). In addition, this sort of “therapy-on-demand” that is offered by increasing access to mental health professionals has

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<sup>79</sup> Donald Trump, for example, recently floated the idea of using diagnoses of mental illness as part of more comprehensive background checks, with the potentiality for diagnoses to prohibit persons from purchasing firearms (Rogers, 2018).

fundamentally altered what it even means to practice in this field when working online. So as to provide the consumer (i.e., the patient or client) with more control over their schedule, persons who work as teletherapists have effectively joined the digital gig economy. In this case access is being increased, but only in the sense that the client can access mental healthcare whenever they so desire.

Following my analysis of access I introduced the notion of psychosurveillance to explain how, why, and to what end technologies (particularly social media) allow us to monitor the mental health of others as a communitarian effort to protect ourselves from the threat of mentally ill persons. With the introduction of algorithms that claim to take the (human) “work” out of psychosurveilling receiving accolades and praise in media discourses, the broader cultural effects of psychosurveillance’s amplification have gone uninterrogated. So as to better examine the affective element(s) of psychosurveillance, I became someone whose mental distress was reported on and also volunteered as a Listener on a mental health support platform. Although I found Facebook’s messages inquiring as to my mental well being somewhat of a nuisance (in the sense that they made logging into my account take longer), on my end little work was performed compared to that of my human reporter. However, when I offered my services as a Listener on another platform, I experienced a heightened form of amplification wherein I, not a trained mental health professional but “trained” to the extent that the platform itself had me take some quizzes, I came to see that the labor of psychosurveillance is concrete, can be emotionally exhausting, yet its fetishization (i.e., its framing as altruistic, generous, and

to the betterment of the community at large) renders it beyond the scope of what we traditionally conceptualize as material labor.

This dissertation's final case study analyzed a number of therapeutic chatbots (an advanced, though imperfect, form of AI) that have captured the attention of technologists and mental healthcare workers alike. In that chapter I drew together literature from media effects as well as cultural studies of affective states to suggest that, in order for such a toolset to prove effective, it must induce positive affect in users and neither perpetuate algorithmic discrimination nor exemplify white prototypicality. Unfortunately the toolsets I worked with, for a variety of reasons, were unable to do both simultaneously although, to a lesser extent than traditional therapy, they were able to persuade me (to a limited degree) to make some positive changes in my thinking. Yet, as I argued in that chapter, I am troubled by this use of AI: these tools tread a fine line between acting as medical devices and being games for entertainment or boredom; they encourage their users to active see themselves as medicalized subjects without the guidance of trained mental health professionals; and, finally, they are unregulated though also positioned as a potential replacements for traditional therapy (or at least a supplement for it).

In addition to these findings, which were born of a desire to interrogate, from a cultural studies perspective, the veracity of claims coming from DMHI workers, we have also witnessed growing concern that many of the technologies we use on a regular basis are negatively affecting our mental health: Simon Stevens, Chief Executive of the National Health Service, recently suggested that Facebook and Google have made adolescent mental health worse in England (Elyachar, 2018); the World Health

Organization has also decided to list ‘gaming disorder’ amongst the International Classification of Diseases (“Gaming disorder,” 2018); and others are calling for a similar classification of “technology addiction,” which would draw our attention to the negative cognitive and social effects of technology, particularly for children (Davis, 2018; Gadkari, 2018). While these pathologizations corroborate decades of scholarship on the negative effects of Internet and social media (Pantic, 2014; Kraut et al., 1998; Kross et al., 2013; Mabe, Forney & Keel, 2014; Ghaznavi & Taylor, 2015), there are many who still believe that technologies still hold promise for improving mental health. Consider, for example, the emergence of what has come to be known as the digital wellness movement. Rather than create applications and toolsets designed to capture our attention, a precious commodity in the attention economy<sup>80</sup>, these toolsets intend to help users limit their screen time (Wan, 2018; Perez, 2018). Although technology *is* the problem, even in the context of digital wellness, technology is also framed as the solution.

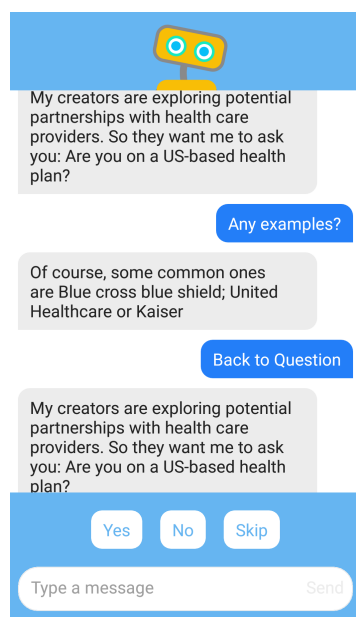
As exemplified by digital wellness’s emergence, wherein technology is positioned as both the cause for distress but also its anecdote, we see an emphasis upon responsabilization as the key to improving our mental health. We are told that we should use technology to improve our mental health, particularly through toolsets created by the DMHI, but we must still refrain from using *too much* technology. Rather than perceive technology and the technologization of everyday life as responsible (at least to a degree)

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<sup>80</sup> According to van Dijck (2013), in an attention economy value is determined by the number of “eyeballs or (unconscious) exposure, and this value is an important part of Internet advertising in the form of banners, pop-ups, and paid ad space on websites” (p. 62). This is how Internet platforms that are free to use become profitable and sustain free services.

for alarming statistics about rates of depression and anxiety, particularly amongst young people (Schrobsdorff, 2016), individuals must take responsibility for themselves and learn to make the correct, “healthy” choices with their technology, to use it instrumentally to improve their lives rather than overindulging<sup>81</sup>. The fault, therefore, is not with technology itself, nor with those who intentionally design toolsets that captivate us; the fault for negative outcomes resides with us as individuals.

This is ultimately why, despite evidence suggesting that using these toolsets may lead to negative health outcomes, we continue to see them positioned as a promising avenue for health-related (mental health and otherwise) interventions by employers (Jimenez & Bregenzer, 2018), educational institutions<sup>82</sup>, and insurance companies.



*Woebot's creators are developing partnerships with healthcare providers*

<sup>81</sup> This rhetoric mirrors that about eating, dieting, and self-control (Veit, 2013; Cairns & Johnston, 2015; Guthman, 2009).

<sup>82</sup> Two years ago, an Oklahoma college (Oral Roberts University) implemented the requirement that all incoming students wear Fitbits (Chuck, 2016).

During one of my “check-ins” with Woebot, for example, he told me that his “creators are exploring potential partnerships with health care providers.” Similarly, during an interview with a DMHI worker who served in an advisory capacity for a smartphone application, I was told that initially, the platform saw itself as “consumer-facing platform, so something that consumers would find and subscribe to.” It became clear, however, that their subscription model was not quite popular enough to sustain the platform and, as a result, they decided to work directly with businesses. In my interviewee’s view, their toolset would eventually be “something that employers and health insurance companies purchase to be given to the people that they’re responsible for.” As a result, her company began

having conversations with and striking up contracts with health insurance companies, particularly to target particular disorders that are a problem for them. One thing is health insurance companies and they want to reduce their cost usually by reducing distress in particularly health-compromised populations. I think some health insurance companies are also looking at us as an app to give to everybody to reduce costs. So we have both of those going on. Then we also have companies wanting to improve employee well being because there’s all this research to suggest that happy employees do better jobs. Basically they do better at work. So now it’s becoming more of a business-facing platform, and then the business is the one that disseminates it to individuals.

What I find troubling about this turn, one that I expect will grow increasingly popular and, someday, be considered a normative practice, is that these toolsets have not been shown to benefit all populations equally. Nor is such a distribution of improved mental healthcare services to all populations equally even on the radar of most of those people who are creating these toolsets. Across the spectrum, regardless of what subsector I conducted fieldwork in, or what type of industry worker I interviewed, it was clear that

the conceptualization of “everybody” who possesses access to smart technology: power users of these technologies are white, female, and relatively young. *Why* that is the case, and *how* that information speaks to a lack of attention to matters of access and equity, and *what* is being done to change that was never explained by research participants, nor even demonstrated as an area of interest at conference panels and keynote sessions.

Fundamentally, therefore, I do not believe that *right now* it is ethical to suggest that these tools are going to make a positive change in the statistics that have been circulating for years about who is – and who is not – receiving adequate mental healthcare services. The DMHI is an industry whose foundation is predicated upon inequity and exclusivity, not necessarily intentionally, but discriminatory nonetheless. Even so I believe, or at least I am hopeful, that those creating these tools are capable of reconceptualizing and re-designing not only the technologies that they create and disseminate, but also reshaping the industry that they work in. Part of the impetus for this dissertation itself was to generate findings that would, I hoped, be taken into consideration by those creating, distributing, celebrating, and discussing these toolsets. With that in mind, I am optimistic that my findings may play a role in effecting those changes.

The first chapter of this project provided an analysis of whether the digital mental health industry’s deployment of rhetorics of access and accessibility are accurate, and I ultimately suggested then (and reiterate here) that they are not. If anything, the DMHI, particularly teletherapy, is facilitating a fundamental shift in the ways that mental healthcare workers make *themselves* accessible, although therapy and mental healthcare

themselves have not become more accessible to more of the US population; instead, those who already are able to access mental healthcare find it even *easier* to receive care on an on-demand basis. Following those arguments chapter two examined the evolution of psychosurveillance, particularly how it encapsulates a neoliberal, communitarian ethos perpetuating the surveillance of others (and of ourselves) through technology. There my principle argument was that psychosurveillance requires human labor despite our fetishization of algorithmic approaches to mental health surveillance, and that the work that those processes involve falls under the umbrella of feminized, affective (and thereby uncompensated) labor. Chapter three explored the effects of implementing artificial intelligence, particularly therapeutic chatbots, as a mental healthcare support strategy. Yet my experiences with them illustrated their perpetuation of algorithmic discrimination as well as the need to revisit what constitutes the therapeutic misperception when those who use them are encouraged to conceptualize themselves as medical subjects. Finally, I argued that the lack of regulation of this industry has led to the creation and dissemination of toolsets that manipulate and deceive their users.

Yet despite these conclusions, I am not fundamentally opposed to the further development of the digital mental health industry, nor am I opposed to the prospect of technology becoming more readily accepted as a means for delivering effective therapeutic healthcare. When I began this research years ago, as a means to provide a more in-depth analysis of its inner workings than the celebratory anecdotes circulating in news and other media coverage, I believed (and still believe) that most DMHI workers are passionate about expanding the reach of mental healthcare. And although this project



utilized various critical theories (that is to say, I was interested in matters related to inclusivity, fairness, and justice within medicine were being considered), that does not mean that I ever intended to generate a study meant to be critical *of* this industry. In fact, I was thoroughly optimistic about its potential for expanding and improving mental healthcare resources in the US (and even globally). I am, however, opposed to falsely asserting that new technologies are solving – or will solve in the future – healthcare disparities when the evidence we have suggests otherwise. Ultimately, therefore, I am not an advocate of the DMHI as it exists or its tools for one, simple reason: our technologies, as they exist, are not capable of doing other than reproducing healthcare disparities as they already exist.

What I find particularly nefarious about the DMHI is that the widespread belief in the neutrality of technology allows these disparities to persist due to the (falsely) presumed apolitical nature of technology. This is not to say that persons working in this industry, whether contracted for development work or the creators of particular toolsets, are motivated by poor intentions; the problem is that for so long as discriminatory practices, whether labor-based, surveillance-based, or otherwise, they will continue to be replicated in the context of technology. Those designing and creating those toolsets must actively combat these issues, address them head on, rather than ignoring them. We cannot effectively “un-do” the changes being wrought by DMHI technologies, from the millions of dollars being invested in the development of these tools, to the legislative and insurance industry policies that are well on their way to making these permanent features of the medical industry. Although we cannot effectively turn back, what I am calling for

(and as I have argued throughout this dissertation) are reality checks, provided by research groups not paid or employed by toolset creators, that are able to guide the development of these tools with regulations, that hold developers and industry workers accountable for the veracity of their claims and the efficacy of the products they are releasing. At the present moment, no such entity exists, which is why the DMHI has been able to flourish in ways that I have highlighted as problematic, while also perpetuating healthcare disparities. Without recognition of these problems at high levels, my concern is that they will persist, worsen, and exacerbate the difference between those groups who are benefitted by these tools, and those that are left behind.

Some might argue that my interpretation and claims, particularly that the responsabilization of individual healthcare will lead to increasing forms of social control, is unfounded. They may say that I am being unnecessarily pessimistic, that we *need* to see more responsibility taking at the individual level, and that mental health practitioners need to adapt to new technologies; that transformation is a good thing; that technology will make our lives easier. They might even say that my suggestion we begin to regulate the DMHI will stifle the ability for its workers to create the tools I am asking for, one's that *can* account for user diversity, and that I am calling for the disintegration and demise of a field before it even gets to spread its wings. They might claim that my calls for emphasizing person-to-person therapy are idealistic and impossible, and finally that if we want to provide mental healthcare, we need to see the mental healthcare industry (digitally) transform. Yet my intent with this dissertation has not been to promote the DMHI, to re-hash all of the positive press it has received, nor to summarize existing

scholarship suggesting the efficacy of its toolsets. My goal was to dig deeper, to interrogate how this field (a microcosm of the digital health as a whole) reflects broader changes in the delivery of healthcare in the twenty-first century and, following that, how digital health has wrought widespread cultural changes and shifts in relation to practices of self-care.

My hope is that this project speaks to multiple audiences who are capable – and willing – of issuing calls for change: those who are curious about the role of technology in mediating the delivery of healthcare mechanisms, those who are intrigued by the ethical dimensions of digital health and healthcare disparities, healthcare policy makers, technologists who create AI and smartphone applications, data scientists and researchers who study the data that users of these tools share, legislators and policy leaders who have a genuine interest in providing comprehensive healthcare to all populations equally, and others who are concerned about the use of bio-data in control societies. While the DMHI is a small component of the (massive) healthcare industry, it is also a culture industry unto itself: it is changing the culture, the practices, and the discourses circulating as to what mental health and illness are, how our mental health and/or illness are best managed, and a step further, what it even *means* to be mentally healthy or distressed.

This work has been an effort to hold mirror up to an emerging industry, placing its fantasies and visions of itself in conversation with the concrete reality of its consequences and effects. The challenge in doing so, however, as with any study of technology and its socio-cultural effects, has been that the DMHI continues to change and evolve on an (almost) daily basis: new forms of smart technology are constantly emerging, with new

claims as to their mental health efficacy; FDA regulations and guidance documents have changed; new chatbots are being released while existing ones are being revamped and reworked; the list goes on and on. Although the particularized objects of analysis that I studied and discussed may be somewhat dated, even by the time of writing this conclusion, I believe that the claims and arguments that I have made are not; rather, despite the new technologies that are created and deployed, the logics guiding the emergence and development of this industry (financial, medical, and cultural) will stay true.

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