

**DIGITALLY-MEDIATED MOTHERING:  
AN ETHNOGRAPHY OF HEALTH AND PARENTING GROUPS ON FACEBOOK**

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## Abstract

Research over the last several decades offers clear evidence that mothers experience considerable pressure in carrying out the expectations of contemporary mothering, including expanded responsibilities relating to child and family health (Hays, 1996; Wolf, 2013). While we know that these pressures produce negative impacts, we know less about the strategies and tools mothers use to cope with these anxieties as they try to "do it right" (Villalobos, 2014). At the same time, research suggests that mothering is increasingly digitally-embedded, as mothers look to the internet and social media for information and support (Schoppe-Sullivan et al., 2017). This study thus explores how mothers use Facebook groups to inform health and parenting decisions.

Drawing on data generated through a digital ethnography incorporating 18 months of participant observation, discourse analysis, and interviews with 29 mothers across two sets of divergent, specialized sets of Facebook groups (focusing on "evidence-based" and "natural" health and parenting), I advance three key, interconnected arguments. First, I apply theories of boundaries and *boundary-work* to show how specialized Facebook groups become persuasive ideological spaces for mothers who seek certainty around their healthcare beliefs and decisions. Next, I apply the concept of echo chambers to argue that mothers involved with these specialized Facebook groups engage in *siloed health learning* that shapes health beliefs, decisions, and even conversations with healthcare providers. Finally, I show how mothers engage in a form of *digitally-mediated emotion management* by turning Facebook groups that confirm their parenting ideology in order to alleviate anxieties associated with neoliberalism and individualist parenting, and to feel better about their maternal performance. I ultimately conclude that the turn to digital platforms for certainty, reassurance, and good feelings is both a logical expression and a reflection of the latest wave of maternal responsabilization.

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## Chapter 1: Introduction

An 18-year-old from Ohio who famously inoculated himself against his mother's wishes in December says he attributes his mother's anti-vaccine ideology to a single source: Facebook.

Ethan Lindenberger, a high school senior, testified Tuesday before the Senate Committee on Health, Education, Labor and Pensions, and underscored the importance of "credible" information. In contrast, he said, the false and deep-rooted beliefs his mother held — that vaccines were dangerous — were perpetuated by social media. Specifically, he said, she turned to anti-vaccine groups on social media for evidence that supported her point of view.

In an interview with *The Washington Post* on Tuesday, Lindenberger said Facebook, or websites that were linked on Facebook, is really the only source his mother ever relied on for her anti-vaccine information.

Most importantly, Lindenberger said, was the impact Facebook's anti-vax communities had on his family.

"I feel like if my mom didn't interact with that information, and she wasn't swayed by those arguments and stories, it could've potentially changed everything," he said. "My entire family could've been vaccinated."

-*The Washington Post*, March 5, 2019

Facebook is the most popular social media platform in the world, with over 2.5 billion users worldwide in 2019 (Statista, 2020). Providing not only social networking, but also news, user-generated content, multimedia, and community-driven interest groups, people now view the platform as a means to obtain news and information on a wide range of topics (Bakshy et al., 2015; Wilson et al., 2012; Zhang et al., 2013). Cases like Ethan Lindenberger's, viewed in the context of a growing global anti-vaccine movement, have raised concerns around the potential for Facebook and other social media technologies to influence health beliefs and decisions (Smith & Graham, 2017).

Yet, Lindenberger's case, mediated through news stories such as the excerpt by *The Washington Post* (Brice-Saddler, 2019), does not simply diagnose Facebook or social media as

the problem. Rather, the narrative frames Lindenberger's mother as suffering from a case of motivated reasoning, at best, and as a naïve "dolt" (as noted in the article comments), at worst. The story thus reflects the intersection of three major themes of this dissertation: first, that Facebook is increasingly solicited as a source of information about health and parenting; second, that Facebook groups are persuasive social collectivities; and third, that maternal decisions are increasingly scrutinized under contemporary ideologies of mothering. In this dissertation, I explore these themes, drawing out their various dimensions, addressing them empirically, and situating my findings within the sociological literature. In drawing from qualitative data generated through a multi-sited digital ethnography incorporating observation, discourse analysis, and interviews with members across contrasting sets of divergent Facebook groups, this research brings a novel methodological approach to the study of mothering, social media, and health, and the manner in which these concepts intersect in ways that both reflect and constitute changing social and cultural realities.

Building on the substantial existing scholarship on mothering, I view participation in health- and parenting-related Facebook groups as part of the contemporary repertoire of strategies relating to ideologies of "intensive mothering" (Hays, 1996). Yet it is not simply ideologies of mothering that propel mothers toward such "digital entanglements" (Ouellette & Wilson, 2011). Research indicates that families across North America are experiencing greater economic, health, and political anxieties related to neoliberalism (Reich, 2014; Watson, 2016; Villalobos, 2014). Since mothers are frequently considered health managers for their families, they are often charged with the responsibilities of nutrition, hygiene, and the mitigation of health risks (Bird & Rieker, 2008; Wolf, 2013). For mothers, these anxieties are compounded by the "ratcheting up" of neoliberal responsabilization – the downloading of responsibility from the

state or community to the individual. This adds to the weight, creating what Villalobos (2014) terms “the motherload”.

While women’s social media use is frequently framed as a form of leisure or entertainment (Bidmon & Terlutter, 2015; Valtchanov et al., 2016), some scholars have argued that digital interactions are part of an “ongoing mundane regimen of self-empowerment that does not intensify the pleasure of the text as much as it intensifies and extends a ‘second shift’ of familial and affective labour historically performed by women in the home”, which includes mental, emotional, and economic work (Ouellette & Wilson, 2011, p. 556). I argue that health- and parenting- related Facebook groups are therefore a contemporary, technologically-mediated means by which some mothers negotiate and inform their affective and instrumental roles. Specifically, when it comes to health and parenting matters, the mothers in this study use Facebook groups as a means by which to locate certainty about their decisions and reduce anxieties around their performance of the maternal role.

In this chapter, I provide an overview of the study, including a review of the pertinent literature, an introduction to the research questions, a discussion of the research methods, as well as an overview of the format of the thesis. Because this thesis proceeds as a series of journal articles instead of a traditional monograph, discussion of theory and methods is included within each chapter, as is the convention for this style of dissertation (MacKendrick, 2011). Considering the novelty of the methodology, I do, however, take time to reflexively expand on the design of the study in the introduction.

## **Context and Background: Neoliberalism, Health, and Mothering**

Presently, both Canada and the United States have taken up aspects of the “neoliberal mind set” by participating in the global economy in ways that largely reflect principles of liberalism and free trade (McGregor, 2001). Associated with Milton Friedman and the Chicago school of economics, neoliberalism can be traced to the 1970s as a theory advocating for reductions in the role of the state in addressing social welfare needs. Neoliberal structuring and restructuring of economic and social policies were said to increase reliance on citizen responsibility as a purported means to create greater efficiencies at the level of the state and in financial markets (McGregor, 2001). According to neoliberal theory, individuals collectively acting in their own self-interest yield economic benefits for all. Yet, while both the United States and Canada have seen their GDP grow under the neoliberal model, empirical research demonstrates a range of adverse impacts, most notably in terms of rising inequality in both countries (Conference Board of Canada, 2013).

When it comes to healthcare (and access to healthcare), neoliberal shifts, especially in the U.S., have led to the weakening of social security and social services, replacing centralized programs with privatized options. While Canada has maintained its commitment to a universal healthcare system, researchers have documented a “privatization creep” in some areas of the public system; for example, clinicians charging patients for services that are otherwise covered under a provincial medical services plan (Forbes & Tsang, 2012, p. 4). The expansion of the healthcare marketplace is also linked to the growth of complementary and alternative medicine (CAM) in both the United States and Canada (Canizares et al., 2017; Timmermans & Oh, 2010). While such shifts are frequently framed as increasing consumer choices (Lupton, 1997; Wiese et al., 2010), research indicates that access is constrained by the ability to pay, particularly in in the

U.S., where basic medical care is privatized. While little data has investigated access to CAM, we would expect that since most services are generally not covered (or are only minimally covered) by the public system or private insurance, that access is limited to those who can pay their fees out of pocket. Thus, neoliberalism has brought a paradoxical set of changes, both expanding choices for healthcare consumers, while also constraining their ability to access these options (Agency for Healthcare Research and Quality, 2018; Timmermans and Oh, 2010).

Cultural understandings of health have also been affected. In the neoliberal context, the achievement and maintenance of health is framed as an individual responsibility. This shift calls upon individuals to be hyper-aware of their own health status, as well as any potential health risks to which they might be exposed, and to manage those risks appropriately. According to Ulrich Beck, risk, individualization, and reflexivity are key characteristics of modern living (Adam et al., 2000; Beck, 1992). People living in the “risk society” face both new risks (produced by and through modern technological developments) and also newly identified risks (as a result of more rigorous scientific practices). Beck also suggests that the process of reflexivity involves the incorporation of different forms of knowledge and different ways of knowing outside of science, which may help to explain the growing popularity of CAM (Beck, 1992, p. 5). Taken together, these shifts mean that in the current context, citizens are expected to both know more and do more in managing their health and the health of their families. As Clarke et al. (2010) explain, “It is no longer necessary to manifest symptoms to be considered ill or “at risk”... everyone is implicated in the process of eventually “becoming ill”...it is impossible not to be “at risk” (Clarke et al., 2010, p. 172). Put simply, the contemporary health project is fragile and never complete; it requires constant policing of individual decisions and behaviour.

The ideology of individualism has also influenced visions of parenting in North America, shaping both practices as well as sensibilities. While many still cite the popular adage: “It takes a village to raise a child”, few in Canada and the US experience true community-driven child-rearing. As Plantin and Daneback (2009) note, mothers today have become more “isolated” and have, “to a great extent, lost the daily support that they previously received from their families and other close relations” (p. 3). Instead, families are expected to operate relatively independently – and asking for help may be perceived as shameful. In 2019, this issue took centre stage in the media when an expectant couple from Philadelphia received vicious backlash after posting on a neighbourhood website to ask for help with cleaning and meals once their baby arrived (Collie, 2019). An “etiquette expert” interviewed in the media commented that such a request might be perceived as “entitled”, and that people should not assume that friends, family, or neighbours will help them. Instead, she remarked, “Any support that they do receive is a gift that they should feel very fortunate to receive” (Collie, 2019).

This sort of rigid individualism is unsurprising in the neoliberal context, which promotes the idea that people are only responsible for themselves, and that success is achieved through hard work and determination. These individualist values are increasingly applied to cultural understandings of parenting, and inform contemporary parenting ideologies including “concerted cultivation” and “intensive mothering”. Concerted cultivation, a term coined by Annette Lareau (2003), describes a style of parenting whereby middle-class parents work to “cultivate” specific skill sets and behaviours in their children through the structuring of their time and behaviour through planned activities, meant to foster and develop their unique talents. Lareau contrasted concerted cultivation with the “natural growth” style of working-class families, who felt that children grew up best when their time was unstructured. While Lareau suggests that middle-class

children experience some advantages as a result of cultivation, she observed the anxieties of parents as they shuttled their children from activity to activity (Lareau, 2003).

Not unlike Lareau's concept of cultivation, Sharon Hay's (1996) term "intensive mothering" describes the contemporary mothering ideology in which: "(1) Mothers are the ideal, preferred caretakers of children; (2) expert-guided, emotionally absorbing, and labor-intensive child rearing is best; and (3) children are sacred - "their price immeasurable" (Hays, 1996, p. 54). For Hays, the ideology of intensive mothering and its selflessness is a "cultural contradiction" when considered in the context of an economic system that emphasizes self-interest (Hays, 1996). Empirical research supports Hays' model, and has highlighted the many ways in which mothering has indeed "intensified" in the last 40-50 years, as women are increasingly expected take on a wide range of roles and responsibilities both inside and outside the home (Damaske, 2013; Hochschild & Machung, [1989], 2012).

It should be noted that Hays' study focused primarily on the experiences of white, middle-class mothers (Hays, 1996). As such, some have speculated that intensive mothering is really a white, middle-class phenomenon (Walls et al., 2013). Indeed, as Collins (2016) points out, much scholarship on mothering that sees the role as part of a patriarchal, nuclear family both distorts and erases the experiences of women in alternative family structures with "quite different political economies"; for instance, contexts in which mothers have always worked outside of the home (p. 46). The data on the pervasiveness of intensive mothering across divergent groups is mixed, with some studies showing that Black and single mothers are less likely to endorse these views (Henderson et al., 2016) and other research demonstrating that intensive mothering ideals persist across racial and class lines (Elliott et al., 2015 and McCormack, 2016). In light of such evidence, some have proposed that intensive mothering is really a form of "privatized

mothering” that has varying impacts on different groups. For instance, intensive mothering beliefs among white, middle-class mothers seem to lead to negative mental health impacts (Rizzo et al., 2013). Yet, as Elliot *et al.* (2015) point out, the experience is different for low-income Black mothers. For them, intensive mothering “increases their burdens, stresses, and hardships even while providing a convenient explanation for these very difficulties: mothers are to blame” (p. 367). Thus, for mothers of colour, failure to live up to the expectations of intensive mothering may inform experiences of mothering and also racialization (Elliott et al., 2015).

When it comes to maternal labour within the family, research indicates that women from across all groups still take on the bulk of domestic activities, not only terms of instrumental tasks, but also in terms of mental and emotional work. For instance, women may spend more time thinking about and processing information about raising children (Walzer, 1996), take efforts to ensure that the home is emotionally pleasing for family members and guests (Hochschild, 1983), or work to instill mental and emotional fortitude in their children to “insulate” them from “historic and ongoing racial discrimination” or other “bad things in the world” (Elliott & Reid, 2016, p. 50; Villalobos, 2014, p. 143). Many mothers do not recognize this disproportionate mental load, seeing it as “part of being a parent... or of being a wife” (DeVault, 1994, p. 11). At the same time, mothers are increasingly expected to, and indeed, *want to* contribute to the stability and well-being of the household through paid labour activities (Wilson and Chivers Yochim, 2015). Competing messages thus tell mothers that they can “have it all” while simultaneously reinforcing the need to “give it all”, and mothers work relentlessly work to live up to societal expectations both at work and at home (Hays, 1996; Gross, 1998; Slaughter, 2012). But the costs of not fulfilling their maternal obligations are high, especially for mothers of colour. The mythology of the “bad mother” persists, functioning as a cautionary tale

about the many ways it is possible to fail (Elliott et al., 2015; Villalobos, 2014). As Gross (1998) explains, some mothers may feel their sense of accomplishment in other areas of life, such as work outside the home, undermined by “chronic ambivalence about the morality of their choices and the adequacy of their mothering.” She notes that for them, ““Am I doing the right thing?” becomes an anguished mantra” (Gross, 1998, p. 270).

Ana Villalobos (2014) links the intensification of motherhood to the economic and sociocultural shifts discussed here, noting that the perception of high insecurity, high stakes, and high responsibility “can conspire to create anxiety and a somewhat desperate attempt to practice “correct mothering” (Villalobos, 2014, p.11). In this context, children are viewed as fragile and susceptible to long term damage, and mothers are charged with safeguarding all aspects of their existence, including their social, physical, emotional, and mental well-being (Villalobos, 2014; Wolf, 2013). Put differently, some mothers find themselves in the epicentre of neoliberal responsabilization. It is unsurprising, therefore, that many mothers come to see themselves as the “security solution” for their families (Villalobos, 2014).

### **Concurrent Shifts: The Internet, Mothering and Health**

In addition to the aforementioned shifts related to the spread of neoliberal policies and ideology, the last three decades are marked by the rapid spread of Information and Communication Technologies (ICTs); most notably, the internet. The expansion of the internet is linked to two additional shifts important to this research.

First, the internet has led to substantive changes in the ways that people access information, including both health- and parenting-related information. In particular, the emergence of social networking sites (SNS) such as Facebook have opened up new pathways for

social support, allowing individuals to acquire an online "village" in lieu of, or in addition to, their offline support networks (Pedersen, 2016; Plantin & Danebeck, 2009). Today, Facebook reports having over 2.5 billion users (representing about a quarter of the world's population), and over 75% of parents use Facebook daily (Duggan et al., 2015; Statista, 2020). Mothers, in particular, are reported to use SNS more than fathers, and are also more frequently active on Facebook than any other form of social media (Duggan et al., 2015). Mothers, more than fathers, report stumbling across useful parenting information on the internet. This is unsurprising given the maternal mental load (Walzer, 1996) alongside the fact that much parenting material is geared towards mothers rather than fathers (Plantin & Daneback, 2009). When it comes to social support on social media, mothers report asking more parenting-related questions and are more likely to report receiving emotional support than fathers (Duggan et al., 2015). Mothers also look to the internet for validation (Dworkin et al., 2013; Zaslow, 2012). For example, maternal use of Facebook has been found to increase in the transition into parenthood, as mothers look to the platform "to seek support for their mothering activities and as a platform to show the world that they are fulfilling their maternal roles" (Schoppe-Sullivan et al., 2017, p. 277).

Research also suggests that what first brings parents to parenting websites is a search for medical or health information (Plantin and Daneback, 2009). When it comes to the internet and health, approximately 70-80% of North Americans report using the information to search for health information, and women are marginally more likely to report using it for this purpose (Pandey et al., 2003; Larsson, 2009; Rice, 2006). Online health communities have emerged as an important avenue for health information, and have been found to positively impact health, primarily through social and emotional support (Colineau and Paris, 2010, p. 144). Research seems to suggest that while information gleaned online may influence decisions (Lagan et al.,

2010), it is frequently considered in conjunction with other sources of information, including health professionals, family, and friends (Rice, 2006; Kivits, 2009; Colineau and Paris, 2010). Generally speaking, users feel good about the health-related information and social support they receive on the internet (Moorhead et al., 2013; Foster, 2016). Key concerns relate to the quality of information and the potential for information overload (Moorhead et al., 2013), the potential to increase patient anxiety, as well as the risks associated with receiving inaccurate and potentially harmful information (Foster, 2016).

The appeal of the internet is clear. In its ability to surmount geographic constraints, the internet facilitates connection with like-minded people who might not otherwise find themselves in close proximity. Research shows that the advent of social networking sites (SNS), in particular, encourage connection between people who share similar attributes, especially those who share the same values and beliefs (Bakshy et al., 2015; Boutyline and Willer, 2017). In addition, the costs of using internet, in contrast to other forms of research, such as purchasing books, or hiring a consultant, are low. Further, unlike pediatrician offices, the internet is always available, with feedback at the ready (Plantin & Daneback, 2009). The asynchronous nature of social media interactions, which can typically be carried out using a mobile device, may be convenient for mothers as they wake in the middle of the night to feed or comfort their children. A mother can ask for advice on their baby's fever at three o'clock in the morning, and – depending on the networks with which she's connected – might receive near-instantaneous responses.

Scholars have begun to recognize the extent to which maternal experiences are internet-entrenched. In their study of 29 mothers in the United States, Wilson and Chivers Yochim (2017) describe how digital media now “hum in the background” as a “machinery” of everyday life (p.

16). They describe mothers' online networks and interactions as "digital entanglements", arguing that they are "where sensibilities are shaped, worked on, intensified, assuaged, and attenuated" (Wilson and Chivers Yochim, 2017, p. 17). According to the authors, mothers look to "stabilize" their families through their digital entanglements, by posting cheerful photos and stories, practicing digital couponing, and engaging in digital entrepreneurship (Wilson and Chivers Yochim, 2017). Thus, the internet, and particularly social networking sites, are attractive resources for mothers looking to accomplish privatized, achievement-oriented intensive mothering. With easy access to boundless information on health and parenting, as well as connections with like-minded others for advice, social support, and even income-generation, mothers' heavy use of the internet simply makes sense. Yet, despite abundant evidence suggesting that maternal work is increasingly internet-entrenched, research and public discourse frequently frame maternal social media use as leisure or entertainment (Valtchanov et al., 2016; Bidmon & Terlutter, 2015) or as frivolous and full of "cattiness" and "drama" (Davies, 2017).

Given stories like Ethan Lindenberger's illustrating the potential for online interactions to shape and influence important health-related decisions, the dynamics of maternal internet use deserve serious attention. Recent headlines reinforce the need for this work, showcasing horror stories about Facebook groups where mothers have been encouraged to feed their children bleach as a cure for autism (Zadrozny, 2019), or to "free birth" at home, with devastating consequences (Zadrozny, 2020). Indeed, there have been few empirical investigations around how maternal use of Facebook for health information influences health-related beliefs and behaviour. This study addresses this gap, while also exploring the social dynamics that make Facebook groups persuasive for mothers.

## **Facebook, Echo Chambers, and Polarization**

### *A brief history of Facebook*

Facebook was created in 2004 by then Harvard student Mark Zuckerberg and three friends. Initially the platform was open only to college students, but by 2006, the platform opened up to the public and had over six million monthly users (Hall, 2019). Today, Facebook is the most popular social networking platform in the world, with over two billion users worldwide (Statista, 2020). The appeal of Facebook relates to its many integrated features including a “news feed” with friends’ photos, status (text) updates, and links to outside media; private messaging; and the option to create and participate in “Facebook groups”.

Facebook began as a private enterprise, but in 2012, filed to become a public company, with a business model that relies on the sale of advertising space, like other media platforms (Hall, 2019). However, unlike traditional media, Facebook offers its advertising clients a highly refined experience, allowing businesses to target potential markets by tapping into sociodemographic data, as well as user interests. This “refining” became highly controversial when Facebook revealed in 2014 that it had tweaked the news feed of over half a million users for a period of one week in order to explore whether receiving more “negative” or “positive” content in their feeds would influence user emotions, measured through the “tone of posts the recipients then wrote” (Goel, 2014). Through this psychological study, researchers discovered that users who were shown negative content responded by creating more negative posts, and that users who were shown more positive content created more positive posts (Kramer et al., 2014). Thus, the researchers concluded that “moods were contagious” (Goel, 2014; Kramer et al., 2014). The revelation prompted massive public outcry against Facebook for carrying out a

psychological study without participants' consent, leading to demands that the platform become more transparent about its terms of service (to which all users must agree) (Goel, 2014).

Although Facebook promises not to sell user data to third party data brokers, advertisers, or monetization services, the Cambridge Analytica scandal (2014 - 2018) revealed that third party developers, who build apps that integrate with the platform, have been able to “scrape” user data for unauthorized purposes (Granville, 2018). In 2014, a researcher from the University of Cambridge provided over 50 million “raw profiles” to Cambridge Analytica, a political data firm hired by U.S. president Donald Trump’s election campaign. This data was used to “map personality traits based on what people had liked on Facebook, then used that information to target audiences with digital ads” (Granville, 2018). In doing so, Cambridge Analytica violated Facebook’s terms of service and manipulated users, who thought they were only sharing their information as part of a fun online quiz, when in fact, that information had been used to help elect Donald Trump. These scandals, among others, drew attention to the potential of technology to covertly map user demographics with their likes, dislikes, and interests in order to shape emotional responses of users and streamline the delivery of persuasive messages.

These contentious uses of Facebook also partly explain how the platform became an important and controversial actor in facilitating the growth of the anti-vaccine movement. In 2019, Larry Cook, the leader of a major anti-vaccination movement, posted that his Facebook videos were reaching over 100,000 viewers per day, bragging, “This is how we reach parents!” (Caron, 2019). Cook’s point was substantiated by scholarly research linking the global anti-vaccine movement to the platform (Smith & Graham, 2017). The resultant outrage against Facebook for failing to take action against the spread of misinformation led U.S. Representative Adam B. Schiff to write to Zuckerberg to inquire about what Facebook was doing to curb

potentially harmful content (Caron, 2019; Garcia, 2019). Facebook responded by noting that it would not remove anti-vaccine content, but would aim to reduce its reach by removing it from search results, thereby making it more difficult to find. Using artificial intelligence, Facebook would flag posts for review by someone at the company. Only false statements – those which were disproved by scientific research – would be removed. Other, unproven anti-vaccine content would be moved “lower” in user news feeds. However, as some critics pointed out, these moves could only be moderately successful. When users visit Facebook groups or Facebook pages, the posts would still appear. In addition, critics suggested that anti-vaccine groups would become “craftier”, finding ways to post that would subvert AI measures (Caron, 2019); for instance, typing “va((ine” instead of “vaccine”. The efficacy of such changes remains to be seen.

### ***Filter Bubbles, Echo Chambers, and Polarization***

An additional area of public scrutiny relates to the tendency for social media platforms like Facebook to contribute to the formation of what have been termed “filter bubbles” and “echo chambers”. *Filter bubbles* describe the ways in which internet algorithms tend to “filter” content in order to show users content they are likely to be interested in, based on previous online behaviour (Bakshy et al., 2015). These algorithms are employed “to give [users] more of what [they] want so that [they] spend more time using the service – thus seeing more of the ads that provide most of the company’s revenue” (Goel, 2014). The *echo chamber* effect describes the combination of both the filter bubble (algorithm) effect, alongside the tendency for users to consume content that matches their interests (Sunstein, 2007; Bruns, 2017). However, while filter bubbles essentially push specific content towards its likely consumers (sometimes crowding out alternative views) echo chambers involve users’ active (and sometimes conscious)

*exclusion* of alternative views through “severed” connections (that is, cutting off information and people who hold contradictory views) (Bruns, 2017). Since Facebook provides its users with a high level of customization, including the ability to tweak news feed preferences (to include more or less of certain people, groups, or pages), while also relying on algorithms, we can conclude that it facilitates the formation of echo chambers over filter bubbles.

There are a number of potential consequences to the formation of echo chambers, including processes of “disintermediation”, whereby information that would have previously been mediated through a third party (for instance, journalists, teachers, and physicians) is brought directly to individuals. This leads to the tendency for information to be “flattened” and oversimplified (Del Vicario et al, 2016). Echo chambers also tend to be ideologically polarized. Since individuals can customize their Facebook experience, they tend to consume content and join groups that confirm their beliefs (Del Vicario et al, 2016). Experimental research has showed that in echo chambers, “confirmatory information gets accepted even if containing deliberately false claims, while dissenting information is mainly ignored or might even increase group polarization” (Del Vicario et al, 2016, p. 1). Ultimately, as Sunstein (2018) notes, social platforms like Facebook “make it easier for people to surround themselves (virtually) with the opinions of like-minded others and insulate themselves from competing views” (p. 71).

The majority of research on ideological polarization on Facebook has tended to take a macro-level approach. Through computational and quantitative approaches, researchers have been able to describe when and where echo chambers form, and how they change over time (Del Vicario et al., 2016; Quattrociocchi, 2017). While these studies provide empirical support for the existence of echo chambers, they are limited in their ability to describe the micro-level processes that enable the formation and maintenance of such spaces. Specifically, such studies are unable

to capture individual motivations, participation, and moderation strategies that contribute to the formation and expansion of echo chambers. In bringing ethnographic data to bear on these quantitative findings, my project explores these micro-processes to examine how and why mothers join certain groups, what occurs inside groups (in terms of member and moderator behaviour), group ideological polarization, and how these groups impact their members.

### **My story**

Like many scholars, my research was inspired by my own personal experiences. My journey into the world of online mothering communities started out in 2011, when I unexpectedly found myself pregnant. A first year PhD student, I was shocked, and scared, but slowly became excited at the prospect of bringing a baby into the world. Needless to say, it came as a great surprise and a huge disappointment when, at 12 weeks along, my ultrasound showed nothing but an empty sac. I grieved that pregnancy as if I was grieving a person I already knew.

Over the next three years, I experienced four more miscarriages. We had moved to a remote community, and I was working from home. I had few local social connections, and with the exception of my husband's support, I struggled through my miscarriages alone. For me, hope came in the form of internet research. I thought, if I could just discover the reasons behind my miscarriages – if I could just find the panacea that would allow me to carry to term – then everything would be okay. I cannot even begin to count the number of times I fell asleep in bed, bleary-eyed after hours of reading on my phone.

As I grieved my miscarriages and attempted to research myself into fertility, I stumbled upon an online forum, where women like me shared their experiences of recurrent miscarriages and navigating the medical system. For the first time, I didn't feel alone. I eagerly read their

stories as if I were wandering the beach with a metal detector, looking for any tip or trick that might help me have a baby. Eventually, I joined these forums, and shared my own story, and found a supportive, and loving community of other women who shared the ups and downs of the journey to having a baby.

In January 2014, I managed, by some miracle, to successfully carry a baby to term. My pregnancy was filled with anxiety, and I looked to online groups – most of which had since moved over to Facebook – for information and advice on everything from birth, to breastfeeding, to safe sleeping, and infant feeding; really, any information that would help me to keep my baby alive. I gave birth to my daughter in mid-January 2014, during a windstorm.

I had thought that once I gave birth, all of my anxieties would just disappear. But the reality was very different. Suddenly, I was aware of everything that could possibly go wrong. It felt as though she had been safer *inside* my belly than outside of it. From concerns about not making enough milk, to the chemicals in diapers, to the best way to meet her emotional needs, my brain was spinning with questions and worries. I worried that she wasn't eating enough; that her poop was too runny. I worried that I was going to sabotage breastfeeding if I didn't co-sleep, and I worried that I'd roll over her in bed if I did. I didn't know how to make sense of everything that I was reading and hearing. I didn't know how to prioritize the advice that seemed to come from all directions.

So, I did what had helped me get through an emotionally tumultuous time in the past. I turned to groups on Facebook to help me sort through the noise. Those groups became a lifeline for me. Without family or close friends around, the mothers in my Facebook groups helped me navigate that first month of a living with a newborn, which, coloured by sleep deprivation, felt like a waking dream. I remember posting photos of my baby's diaper in the middle of the night

from my phone (probably disturbing everyone in the group who saw it) and just praying that someone would respond soon with reassurance so I could get back to sleep. I remember sitting up in bed in the morning for hours, nursing and holding my sleeping baby in my lap, with my phone in one hand, and a coffee in the other. This precious time spent, just me, my baby, and my phone – which was really a window to the outside world, and a whole community of other mothers – helped me to settle into my new role as a mom.

As I grew more comfortable in this new role, I began to expand my online social circles, and joined groups related to anything and everything that I was interested in. I joined groups about “Baby-Led Weaning”, and quickly implemented their advice when it came time to introduce my baby to solids. I joined cloth diapering groups, which were instrumental in showing me how to get the “barn smell” and ammonia buildup out of my diapers. I joined babywearing groups, and soon found myself spending inordinate amounts of money, on handwoven cloth baby wraps, which, I admit, became somewhat of an obsession for a time.

Yet, amidst all of this sort of “fun” information, I also noticed new content coming up in my Facebook groups. Specifically, content around vaccines. I noticed mothers that I had really trusted and respected sharing posts that railed on the dangers of vaccines. As a staunch vaccine supporter, I was surprised to find myself getting nervous about my daughter’s immunization appointments. It was only when I was faced with a view that did not match my own beliefs about vaccines – and started to consciously recognize how it had created new anxieties about something that had never worried me before – that I started to reflect on how the stuff I was seeing on Facebook was impacting me and forging new pathways for insecurities. I began to look back on the choices I had made as a parent, and was almost embarrassed to think that so

many of my decisions had been shaped or influenced in some way by my use of Facebook. I couldn't help but think: *It can't be just me who is doing this.*

And so, when I decided to come back to my PhD after taking a break for over three years, I knew that I wanted to change my research to focus on how mothers use Facebook to talk about parenting and health. I wanted to know why mothers turned to Facebook, what they found, and how it impacted them. I wanted to explore how Facebook shapes not only the experiences we have, as mothers, using Facebook, but also the decisions that we make, for both ourselves and our families. Thus, this research was born.

### **General Research Questions**

The current sociopolitical moment, characterized by neoliberal shifts, intensified parenting, and technological advancements, represents a unique opportunity to explore how and why health and mothering are increasingly digitally-mediated. In seeking to understand these complex interconnections, my study was designed to investigate the overarching question: *How do online health and parenting groups work, and what are their impacts on participants?* Taking an inductive, exploratory approach inspired by grounded theory (Glaser & Strauss 1967), I identified three guiding questions, which were used to shape the research methods, analytical strategy, and synthesis of findings:

RQ1: *How do online health and parenting groups work?*

RQ2: *What are the impacts of participating?*

RQ3: *How and why do mothers use these groups?*

## **Methodology: Digital Ethnography**

In considering the research objectives and the exploratory nature of this study, I determined that a digital ethnography would be the ideal method for this project. Digital ethnography (also known as internet ethnography) is a relatively new qualitative approach to understanding internet-based social life, and definitions and methods vary, but generally seek to mimic the same methods used in offline ethnographic research (Boellstorff et al., 2012; Hine, 2017). Ethnographic approaches can comprise a range of methods, with the key component being participant observation (Boellstorff et al., 2012). In contrast with some other approaches, ethnography as a methodology provides several advantages for understanding culture, including longer-term involvement, immersive participation, and triangulation through the incorporation of other methods such as interviews and discourse or artifact analysis. Through immersion and description, ethnographic approaches enable “an understanding of the cultural contexts in which human action takes place” (Boellstorff et al., 2012, p.16). It allows us to get to the “heart of meaning”, and understand how participants make sense of their everyday lives (Hine, 2015, p.1).

Ethnography is typically carried out as an investigation of only a few cases or even one case (Suryani, 2008). Importantly, this means that the research findings cannot be extrapolated beyond the study setting. Moreover, as Suryani (2008) points out, scholars cannot even assume that what they observed during their study of a particular context is *always* true of that context *all the time* (Suryani, 2008). Ethnographic insight is therefore focused on garnering a deep understanding of specific cases, with the goal being discovery, interpretation, and analytical insight rather than prediction or generalization (Boellstorff et al., 2012, p. 31; Shuval et al., 2012). Thus, it is important to keep in mind that the findings of this study are context specific, and therefore *cannot* and *should not* be interpreted as speaking to the experiences of *all mothers*.

### *Selection of the cases*

As a mother who was also a regular Facebook user, I decided to look to my own group memberships as a starting point in selecting the cases for the research. I had joined dozens of health- and parenting-related Facebook groups in the years leading up to this study, although I was relatively inactive in most of them.

After spending time reviewing the groups, I selected one group to research, which I call “**the natural group**”. This group had over 6,000 members, was based out of North America, frequently featured parenting-related posts, and was created to support its members in “natural health” and “natural living”. However, in the first two months of my research, during which I was spending dozens of hours on Facebook every week, I observed a stark contrast between this group and other groups that I was a part of that focused on “science-based” parenting. I narrowed my focus to one group in particular, because it seemed comparable to the natural group in size, North American focus, and emphasis on health and parenting, and began to casually observe it. I noted that the natural and science groups seemed to exist in opposition to each other, and sometimes it seemed as though they were speaking either to each other or about each other (usually in terms of criticism of the ‘other’ perspective, without being aware that they were in conversation). For example, members in the natural group would often avoid drugstore remedies or express disgust at the chemicals present in medications and vaccines – products that were promoted as standard fare, and even the ideal, in the science group. At the same time, members in the science group would post stories, memes, and jokes that teased or ridiculed the perspectives I saw reflected in the natural group (for example, anti-vaccination sentiments). Thus, the groups appeared to be in a sort of dialectic struggle with no productive outcome. At that point I decided to formally incorporate the science-based group (“**the science group**”) into

my study to elucidate the other side of this latent dialectic. I describe both groups in detail in Chapter 2 (“Taking Sides”).

It should be noted that while these groups certainly represent divergent perspectives on health, wellness, and some aspects of parenting, the selected groups are not precisely oppositional. It is possible to pursue “natural living” while simultaneously “believing in science”; for example, by composting, growing your own foods, or prioritizing organic produce. Yet, the tendency to oversimplify and “flatten” complex issues (Brunson and Sobo, 2017), means that public debates around some of the most controversial health issues (such as vaccination, breastfeeding, and genetically modified organisms) tend to present these perspectives as simple binaries (for example, as a conflict between what is natural and what is synthetic), and as polarized (either pro- or anti-) rather than as nuanced (Brunson and Sobo, 2017). For example, vaccines, formula, and GMOs have been framed or discursively constructed as “against nature” (Dubé et al., 2015, p. 415; Kwiecinski, 2009; Martucci & Barnhill, 2016; Reich, 2016b; Wynne, 2001). Thus, while “natural” and “science” are not inherently in opposition, the tendency for public discourses to frame them as binaries provides a useful starting point for examining diverse perspectives around health and parenting.

### *About the groups*

The purpose of **the natural group** is to help people who are interested in living more “naturally,” defined by participants as eating organically, choosing “natural” household products, reducing waste, growing or foraging for food, and making nature a part of the family lifestyle. Although the group is open to anyone, the majority of members are white, English-speaking mothers from Canada, with a smaller number from the United States. Most of the posts tend to

relate to health matters, with a smaller proportion dealing with parenting concerns and other lifestyle-type questions, such as gardening, foraging, and reducing waste, among others. Health-specific posts cover a wide range of topics including questions about natural remedies, diet, boosting the immune system or other medical concerns; advice for locating a health care provider or dealing with doctors; and the occasional question about other matters such as genetic testing and protection from electric and magnetic field radiation. Ideologically, discussions in the group tend to appeal to nature, with the overwhelming message being that what is “natural” is better in terms of food, health interventions, medicines, and child-rearing.

**The science group** identifies itself in its description as an “evidence-based” parenting group, viewing parenting as something that ought to be informed by scientific and/or peer-reviewed research. The majority of members are mothers, but the group administrators state explicitly in the group rules and announcements that they are inclusive of fathers, transgender, and non-binary parents. Although the group is more racially diverse than the natural group members, they are still predominantly white, from Canada and the United States. Questions from the group tend to be evenly split between parenting (e.g. children’s book recommendations or dealing with tantrums) and health (e.g. information on fluoride, dealing with allergies or experiences with genetic testing), although specific medical advice is strictly prohibited. Ideologically, the group gives primacy to scientific knowledge and also favors the advice of medical authorities, such as the US Center for Disease Control (CDC) and the American Academy of Pediatrics (AAP).

## *Methods*

I carried out the research in two primary phases. Phase 1 entailed 18 months of participant observation that began in the two selected Facebook groups. Phase 2 took the form of in-depth qualitative interviews with members (“key informants”) from the selected groups, and mothers recruited from two external, comparable (natural and science) groups. My analysis included both discourse analysis as well as thematic and inductive coding.

### *Phase 1: Participant Observation*

My observation period was carried out over 18 months in both the natural group and the science group, from January 2018 to June 2019. During the observation period, I took up an “active membership” status, which allowed me to relate to the membership in a personal way while also providing a measure of ideological distance (Singleton and Straits, 2010, p. 379). During my observation period, I visited the groups nearly every day, recording my observations of what was taking place in the group, including descriptions and theoretical memos (Charmaz, 2006). My observations were made synchronously (in real-time) as much as possible, but also involved looking back at posts I had missed over the last 24 hours since I could not be online at all times. This continued throughout Phase 2, and I ceased formal observation around the time I completed my interviews in June 2019.

Because I did not want to influence the trajectory of conversation, my engagement with the group was one of limited participation. Specifically, I avoided commenting on threads that met my inclusion criteria (posts and comments by mothers on health-related issues) but participated freely in conversations that did not relate to my study (for example, discussions about gardening, recipe ideas, and so on). In this way, I was able to build rapport and “experience” the group, but

avoided the potential ethical issue of using information in the study that had been given to me in my role as group member. For an example of a reflexive ethnographic vignette written during my observation of the natural group, see Appendix F.

During this phase, I also undertook five months of “intensive” daily logging in each group during which I catalogued relevant posts by copying and pasting them into Microsoft Word (for later analysis). The goal of the data logging was to get a representative sample of a “slice” of group life over a period of time, with no expectation on how long this daily logging would continue – I would stop when I had reached data saturation (redundancy) (Saunders et al., 2017). Since my research sought to examine discussions of health and parenting, I developed inclusion criteria to keep the logging focused. To be included in my daily log, posts were required to include a discussion of health (loosely defined), science, or medicine, and had to be made by a mother, or include the contributions of mothers. I determined whether or not someone was a mother on the basis of their comments or by getting to know them through their continued participation in the group. When a conversation could conceivably include or impact mothers (for example, a post from someone looking to get pregnant and wanting advice on a supplement), it was also included. I included the entire post and related comment thread, regardless of who commented or the contents of the comments. After five months, I determined that I had reached data saturation (Saunders et al., 2017), where no new ideas or patterns emerged.

### *Discourse Analysis*

After reaching data saturation, I conducted a critical discourse analysis (CDA) on the logged discussions. In general, CDA emphasizes the relationship between discourse, social actions and social institutions, and analysis often moves between these components. From a CDA

perspective, discourse is understood as “language conceived as social practice” (Fairclough, 2010, p. 97). The primary technique that CDA researchers use in their analysis is to identify discourse, ideologies, and practices that have been naturalized to the point that they go unquestioned. Thus, critical discourse analysts often attempt to “make strange” things that most people take for granted, in order to create social change. By “making things strange”, or questioning why “things are the way they are”, researchers can draw attention to areas that do not, or no longer make sense as part of a society that values principles such as justice, equality, or freedom, for example (van Dijk, 1993; Bloor & Bloor, 2007; Fairclough, 2010).

One of the ways in which researchers can “make strange” is to engage in a process of deconstruction. Thus, a text may be deconstructed through analysis of the grammar, language, and choice of words which “reveal the undercurrents of association and implication” (Bloor & Bloor, 2007, p. 11). Additionally, analysts may consider how speech events play out, with particular attention to context and observing not only actors’ language use but also their physical bodies and ways of interacting (Bloor & Bloor, 2007, p.101). Evidently, this is not possible in online groups; however, through an examination of “reactions”<sup>1</sup>, the use of images, memes, and other nuances of interaction (for example, interpretive elements such as tone, sarcasm, jokes, and so on), the researcher can still engage in deconstruction. This method of analysis builds upon Goffman’s symbolic interaction theory, which suggests that individuals act according to their definition of the situation (Goffman, 1967). Context is a key component of discourse analysis, and includes not only the physical setting, but also “what has been previously said and done by those involved in the communication; any shared knowledge those involves have, including a

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<sup>1</sup> Facebook allows users to “react” or “comment” on posts and other comments. At the time of writing, there is a fixed set of reaction options, which include a thumbs-up (“Like”), a heart (“Love”), a laughing face (“Haha”), a shocked face (“Wow”), and a red, angry face (“Angry”).

shared cultural knowledge” (Gee, 2011, p. 6). Given the emphasis on context, this method is an excellent complement to ethnography.

### *Phase 2: In-Depth Interviews*

The second major phase of the research involved interviews with group members. The goal of the interviews was twofold. First, I wanted to triangulate my observational findings through hearing members speak directly about the groups of interest. Second, I wanted to ask pointed questions that allowed me to delve deeper into some of the issues that had emerged during the observation period and discourse analysis. A copy of my research instruments, including the call for interview participants, recruitment letter, interview and quotation consent forms are included in Appendices A, B, C, and D. A copy of the interview guide is included in Appendix E.

To recruit from the groups, I initially planned to solicit approval from the group administrators to post the call for participants. I approached an administrator from the science group with my request, and she consulted with the other moderators, who agreed that it would be fine to post the call for participants. The call was well-received in the science group, and initially I had a strong response, although as I made my way down the list, interest seemed to wane. I had some cancellations and some no-shows. I received a rather different response when I approached the administrator of the natural group. The group administrator reviewed my request, discussed it with one other moderator, and declined my request, noting that “there is a war out against natural remedies/alternatives” and that they thought the call would not be well-received by group members. Needless to say, this was a major disappointment, and for a brief time I questioned whether the project would be feasible.

I decided to navigate this hurdle by approaching members of the group directly to ask if they would participate, leaving it up to individuals to decide for themselves. I did so by following the rules of the group, which state that you must ask publicly if you want to send someone a private message. I reached out to members who I had seen participating in the group regularly. This approach was moderately successful, although many who granted public approval to receive a private message from me never responded to my request for an interview. I attempted snowball sampling among those who did agree, but among those recommended to me, only a few responded to my messages. Thus, it was considerably more difficult to recruit from the “natural” group. I noticed that members who voiced more “extreme” views (for example, ardent anti-vaccinators) in the group were less likely to respond to my invitation than those who took up more moderate positions. This is a limitation of the research, but also an important finding, because it speaks to the reticence and possible suspicion among this particular population around scientific research.

When an individual agreed to participate in the research, I sent them the formal invitation and consent form. Once I received a signed copy of the form, we scheduled the interview around the participant’s availability. Since the members of both groups were located in a wide variety of locations across Canada and the US, the majority of interviews were conducted by phone. I had explored the option of video-calling, but experienced frequent connection problems. Two respondents requested to complete the interview by typing out their responses. One mother expressed social anxiety and a strong dislike for talking on the phone, but still wanted to participate. The other mother, who was experiencing severe pregnancy nausea, said she would prefer to participate by text so that she could stay reclined and also avoid the issue of her toddler grabbing the phone and interrupting the call. Given that the research examines computer-

mediated interaction, I felt it would be appropriate to accommodate these requests. The first mother completed the questions via e-mail, after which I responded with several probing questions, resulting in a back-and-forth e-mail exchange. The second mother asked if she could complete the interview via Facebook messenger (chat). We conducted the interview in real-time through a synchronous message exchange.

The interviews were semi-structured and in-depth, lasting anywhere from 1-1.5 hours. Most respondents participated while at home, although a few switched to a headset during the call while they drove home from work or went to pick up their children from school. Several of the mothers were interrupted by their children and by pets during the interviews. A few of the mothers put on a television show or a movie to get some “quiet time” to talk on the phone. One mother put her daughter in the bath and stood in the bathroom doorframe during our conversation, then managed to wash her child, get her dressed, and feed her a snack while answering more questions. Reflecting on these interviews, it is easy to see why mothers whose lives are filled with responsibilities (working, cooking, driving, raising children and pets, driving to work, driving to school, picking up children, bathing their children, and completing their own post-secondary studies, etc.), might prefer to communicate asynchronously through online platforms.

In addition to completing the key informant interviews with members from the primary natural and science groups, I also recruited from two other, comparable Facebook groups. I did so by looking to other science and natural groups where I was already a member, selecting additional cases, and then following the same approach as in the science group (reaching out to administrators, posting a call for participants, then following up with those who volunteered). This broadened my overall sample and provided some indication of the typicality of the

experiences of my key informants. I also elected to include a pilot interview I conducted at the beginning of the study, since the participant and her membership in a natural group met my inclusion criteria and because the interview guide did not change substantially following the pilot. Thus, interview respondents were drawn from a total of five (n=5) groups: the two primary groups (science and natural), the two external groups (science and natural), and a fifth comparable (natural) group. The interviews were transcribed and coded as described in the following sections.

### *Description of sample*

Beyond the selection of the groups, I relied primarily on convenience sampling for the recruitment of participants. Only in one case (the natural group) did I rely on purposive sampling to reach out to specific group members, since I was not allowed to post the call for interview participants there. It should be noted that sampling was inherently constrained by the demographics of the selected groups as well as the willingness of mothers to participate. As I note in the chapters, the majority of people in both groups appeared to be white mothers, although it is difficult to state this with certainty, since I could not survey all members.

In total, I interviewed 29 mothers. Of these, 22 (75.8%) self-identified as white; two identified (6.8%) as South Asian; two identified as Ashkenazi Jewish (6.8%); one as Black (3.5%); and one (3.5%) as Native American. The median age was 35. A study by the Pew Research Centre indicates that while Facebook use in the United States is fairly equal across racial groups in general, the *parents* who are most likely to use Facebook are white mothers between the ages of 30-49 (Duggan et al., 2015). There is no comparable data for Canadians. Based on the information available, the demographics of my sample seem to roughly match the

population I sought to research, although with a notable lack of ethnic and racial minorities. The study findings need to be considered in light of both the method as well as these demographic limitations and not be construed to speak to the experiences of all mothers (from any group), and especially not to the experiences of racialized or minoritized groups, as they are clearly under-represented here.

Within my sample, 12 mothers (41.4%) worked full time, six mothers (20.7%) worked part time, 10 (34.5%) were stay-at-home mothers, and one (3.5%) was unemployed. It is worth noting that nearly all of the mothers who worked part-time were self-employed, which speaks to the trend towards flexible “mamapreneurialism” as a contemporary strategy for economic security (Wilson and Chivers Yochim, 2015). Those who worked full-time tended to work in higher status occupations (for example, as a lawyer, counsellor, doctoral student, in data science, and so on). Considering this information, we might reasonably conclude that the mothers in this sample are predominantly middle-class.

Because of the format of this dissertation as a thesis-by-articles, reporting on the participants varies across the chapters according to the journal requirements. However, a complete table of participants including this information is available in Appendix G.

### *Coding and analysis strategy*

The grounded theory approach (Charmaz, 2006), commonly used in qualitative and ethnographic research, views theory development as an iterative process that unfolds during the conduct of the research, rather than after it. While I did not follow grounded theory to the letter, the general, inductive approach of my methods might be described as “inspired” by grounded theory.

Although I coded and analyzed the discussions first (as the research was ongoing), the general process of coding the discussion, observation, and interview data was the same across all phases.

The first stage of coding consisted of exploring in the data the major themes identified in my research proposal (specifically, discussions of health, science, and medicine) (Braun & Clarke, 2006). The second stage involved an inductive reading of the data in order to identify and code relevant and emergent patterned behaviours, themes, concepts, and ideas. I refined the codes as I went through the process, comparing and contrasting coded segments per the “constant comparative approach” (Charmaz, 2006) and adding codes as needed. My preference was to code entire comments and their full threads rather than focusing on specific “chunks of words”, which might be more appropriate to content analysis (Singleton and Straits 2010, p. 396). Doing so enabled me to look back at an entire conversation or quotation to understand the context in which a comment or account was provided, which is an important element of discourse analysis (Cortazzi, 2001). In the third stage, I spent time categorizing and grouping the codes into thematic “clusters”, which became my high level (major) codes (Madison, 2005). Through constant comparison, I revisited, reorganized, and refined the associated (axial) codes. I used Nvivo and MaxQDA for this process, which further enhanced my ability to visualize codes and to see the ways in which they link and overlap.

Thus, my coding schema involves high level (major) codes as well as varying levels of associated (axial) codes. For example, a conversation about vaccination would be coded with a high-level code of “vaccination”, but may also include associated concepts (axial codes) such as “consent”. I coded each community’s data separately using this approach. Since the coding was inductive, the coding trees for each group were distinct. Once each group’s coding was completed, I returned to my list of codes to refine and organize the coding guides for each group.

I also made use of data analysis tools in Nvivo and MaxQDA to enhance the analysis process<sup>2</sup>. I have included a sample coding tree in Appendix G.

### *Ethical considerations*

The issue of consent in digital ethnographies is a contentious and evolving issue. In general, researchers and Research Ethics Boards (REBs) seek to find a balance between necessary disclosure and the nuances of research and knowledge generation, which might constrain the nature and degree of researcher openness. I reviewed the extant literature on digital ethnographies and found that there are a number of approaches that have been taken by researchers in exploring virtual environments that can be conceptualized along a continuum of participatory/non-participatory approaches as well as along a continuum of covert/overt approaches (Brotsky & Giles, 2007; Gavin et al., 2008; Paechter, 2012). Consent in online spaces is very much a “grey” area of social research, and the resounding advice seemed to be that each project should be considered in its own right and incorporate provisions that meet its unique concerns.

The general position amongst most researchers is that online groups, populations and spaces are “fair game” if they can be publicly accessed, and this includes groups that require membership (or “sign up”) to join (Calvey, 2017, p. 157). In preparing my REB application, I met with the University of Ottawa Research Ethics Coordinator to discuss the project. I was advised that because of the size of the groups (>6,000 members each), and because the groups were available for anyone to join, there was no reasonable expectation of privacy. Thus, informed consent was not required for the observation component. Because I anticipated

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<sup>2</sup> In NVivo: Query, Coding stripes, Hierarchy Chart; in MaxQDA: Coding Query, Lexical Search, Compare Groups.

resistance from the natural group (which is more skeptical of research and science in general), I did not declare my status as researcher during the observation. However, as noted, when it came time to recruit for the interviews, I informed administrators from both groups that I was conducting the study. Thus, my study can be considered partially covert.

As a final note on this matter, I wish to point out the fact that whether a study is overt or covert is not a shortcut to determining if it is ethical. McKenzie (2017) astutely observes that even overt research frequently involves some level of deception and also has the potential to result in negative outcomes for participants. It is helpful to recall that when considering issues of both “depth of consent” as well as “breadth of consent”, alongside the challenges of conducting observational research in public (or populated) spaces, almost all ethnographic research “will contain a degree of covertness, because of the difficulties of revealing [the researcher’s] status to all subjects at all times” (McKenzie, 2017, p. 5.15; Roulet et al., 2017). I took several steps to protect the groups and their members, as discussed in the following section.

### *Privacy and Confidentiality*

I incorporated a number of measures to protect member privacy and confidentiality. The “real world” group names are never used in this project and were not revealed to anyone in my personal life. Given the myriad of Facebook groups that exist on subjects related to natural and science-based living, it is highly unlikely that external readers would be able to identify the specific groups under analysis from any of my write-ups. I also use pseudonyms in place of member names. So, while those interviewed are aware that I recruited from their group, the use of pseudonyms helps to protect the identity of individual participants. Thus, the write-up of the

research involves the use of pseudonyms for quotations from both the observation and interview components, and obscures any identifying or personal details from quotes.

To further protect group members from the possibility of being identified by their statements in the group, I minimize the use of direct quotations. Instead, in the reporting of findings, I aim to draw quotations primarily from interviews. In some places in the dissertation, I rely on “generic” quotes to describe sentiments expressed in the group. Generic quotes are statements that are not attributable to a specific person, are not particularly unique or context-specific, and could be said by anyone<sup>3</sup>. I received express permission from the University of Ottawa REB to use generic quotations without consent. In other places, I rely on paraphrasing to maintain the sentiment of the quote, but modify the precise wording to prevent members from being identified by their statements. In some cases, when a direct quotation was optimal, I attempted to contact the member for permission by sending them a private message, debriefing them on the research, and making the request. No one who responded declined to provide consent. When individuals did not respond, I excluded or paraphrased the statement.

It is important to point out that the fact that Facebook groups must be “joined” builds an additional layer of protection into the study. That is, in order to be able to locate a specific comment or the person who made it, a reader would need to first join Facebook, identify the correct group, join the group, and then search the group for that particular statement. With my approach of assigning pseudonyms to the groups and their members, paraphrasing, and limiting the use of direct quotations drawn from the groups, the chance that a particular quotation could be linked to a specific person is significantly hampered.

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<sup>3</sup> For instance: “I am so sorry that happened to you”; “I’m so thankful for this group!”; “The vaccination debate has gone too far”; “When did schools start asking for vaccine records?” are examples of generic quotes that echo sentiments that came up frequently in the groups.

## Structure of this Dissertation

This dissertation takes the form of three journal articles (a thesis-by-articles), supplemented by an introduction and conclusion to synthesize the overall arguments. Each chapter addresses a distinct, yet interrelated aspect of maternal participation in Facebook groups, delivering independent, yet complementary insights to answer the project's general research questions<sup>4</sup>. As such, it is important to point out that the research objectives noted within each article do not directly correspond with these general research questions for the thesis as a whole. However, considered together, the articles answer the questions thoroughly and effectively.

As the first of the series of articles, Chapter 2 (“Taking Sides”) plays an important role in providing a rich description of the groups under consideration. Here, I analyze the groups using theories of boundaries and “boundary-work” (Gieryn, 1983). I compare and contrast factors including group epistemology, culture, participation, and administration strategies, arguing that through the construction, maintenance and extension of boundaries, groups become attractive sites for mothers. Linking my findings to the literature on the political economy of the medical profession, I argue that group dynamics reveal how occupational struggles for power, authority, dominance, and legitimacy in healthcare have been downloaded to individuals, who look to online collectivities for certainty around their choices. This article reveals how the groups work and why mothers are drawn to these groups (RQ1 & RQ2).

In Chapter 3 (“Siloed Health Learning”), I move on to explore how maternal participation in the groups influences health-related beliefs and decisions. I find that mothers acquire specific and limited (exclusive) information about health and the healthcare system in these groups to the

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<sup>4</sup> RQ1: *How do online health and parenting groups work?* RQ2: *What are the impacts of participating?* RQ3: *How and why do mothers use these groups?*

extent that the groups ought to be considered “echo chambers”. I identify several mechanisms through which participation in such spaces frequently impacts mothers’ ideological views around health-related matters, arguing that participation shapes not only beliefs, but also decisions and behaviour. I advance the concept of “siloe health learning” to describe the nature of learning that takes place inside of these echo chambers. This article demonstrates the siloe nature of health discussions in the groups, and shows that participation has tangible impacts on maternal health beliefs and behaviour (RQ1 and RQ3).

In Chapter 4 (“Just to keep my thoughts good”), I review my findings around the emotional impacts of participation in the groups. Here, I apply and extend Hochschild’s (1983) concept of “emotion management” to show how mothers strategically use Facebook as a tool to bring their emotions closer into alignment with the “feeling rules” of idealized mothering. I show that mothers experience emotional benefits by participating in these groups – but only when the groups support their version of “correct” mothering. I interpret these patterns as reflective of mothers’ desires to locate good feelings in a context that is otherwise frequently marked by anxiety. This article therefore provides insights into both the emotional appeal and the impacts of participating in these groups (RQ2 and RQ3).

In Chapter 5 (Conclusion), I reflect on my findings as a whole, addressing all three research questions, while reviewing the study’s limitations, contributions, and proposing future research directions. In the appendix, I present several products of the research, including: (1) Call for Participants (Appendix A); (2) Recruitment Letter (Appendix B); Interview Consent Form (Appendix C); Quotation Consent Form (Appendix D); Interview Guide (Appendix E); Sample Ethnographic Vignette (Appendix F); Sample Coding Tree (Appendix G); Table of Interview Participants (Appendix H); (4) “Social Media #SelfCheck”, a social media literacy tool

that I have produced for distribution (Appendix I); and (5) “Messages to Mothers”, collection of quotations from interview participants, who felt compelled to encourage other mothers through their own wisdom and experiences (Appendix J).

Ultimately, I wish to show that Facebook groups are not simply places where mothers gather to share recipes or photos of their children. Rather, they are also contemporary spaces through which mothers navigate information, decisions, emotions, gender roles, parental responsibilities, personal challenges, ideological conundrums, and the anxieties of living in a neoliberal risk society. Thus, while popular punchlines about Facebook “mom groups” centre on the drama and frivolousness of these presumably superficial relationships (Davies, 2017), this dissertation reveals the subtle power implicit in maternal collectivities. While these groups may be intangible, they are far from inconsequential.

## **Chapter 2: Taking Sides: Consumer boundary-work around biomedicine and CAM on Facebook**

### **Abstract**

In this paper, I apply sociological theories around boundaries and boundary-work to an internet ethnography of two contrasting Facebook groups – one focused on “science”, and the other focused on “natural” living – finding parallels between occupational boundary-work in medicine and the everyday boundary-work of healthcare consumers. I argue that in specialized online groups, members work to construct, maintain, and extend group boundaries in ways that mirror the historical and contemporary power dynamics of the medical profession. Specifically, I show that science boundary-work seeks to protect and expand the jurisdiction of evidence-based biomedicine, while natural boundary-work seeks to maintain freedoms associated with Complementary and Alternative Medicine (CAM). I therefore argue that consumer boundary-work online reproduces, rather than challenges, broader power dynamics. Linking my findings to neoliberal health reform and intensive mothering, I theorize that in joining and participating in bounded ideological collectivities, mothers can both locate and produce certainty around healthcare decisions in such spaces.

## **Introduction**

Healthcare in North America is largely understood as occurring in a “marketplace” in which individuals, conceptually framed as healthcare consumers, can “shop around” to make healthcare choices (Lupton, 1997). This market context has been argued as one in which “interdependent yet distinct” parties compete for “resources, favorable public opinion, territory, and control” (Light, 1995, p. 26; Timmermans & Kolker, 2004, p. 180). Two of the major players in this contest are biomedicine (otherwise known as Western or conventional medicine) and Complementary and Alternative Medicine (CAM), which covers a plethora of practices that fall outside of the scope of scientific medicine (National Center for Complementary and Integrative Health [NCCIM], 2018). While occupational boundary tensions and power struggles between biomedical professionals and CAM practitioners have been well-documented (Mizrachi et al., 2005; Shuval & Mizrachi, 2004; Shuval et al., 2012) little research has investigated the extent to which healthcare consumers engage in this debate and/or take up this work. In this article, I explore this question by asking: How do healthcare consumers engage in boundary-work online?

Drawing on 18 months of qualitative research from an internet ethnography, I argue that healthcare consumers – primarily mothers – come together on the internet to construct, maintain and extend group boundaries in ways that mirror the broader power relations between CAM and biomedicine. This research addresses a critical gap in the literature on boundary-work in medicine; specifically, the dearth of research on boundaries and boundary-work amongst healthcare consumers (Phillips, 2019). Ultimately, I argue that while online boundary-work contributes to discursive debates around biomedicine and CAM, these interactions do little to mitigate broader tensions. Rather, this study suggests that occupational power struggles are reproduced, rather than challenged or ameliorated, at the level of the consumer. Yet, such work

may serve an additional purpose, particularly for mother-members operating under the pressures of contemporary ideologies such as intensive mothering: such groups are sites whereby members can both locate and produce certainty around their healthcare choices.

## **Context**

It is widely agreed that biomedicine, otherwise known as Western, conventional, or allopathic medicine, retains cultural authority in the provision and management of healthcare in North America (Timmermans & Kolker, 2004). Epistemologically, biomedicine draws from the natural sciences, and is characterized by "rationality, objectivity, positivism, determinism, universalism, and linearity" (Shuval et al., 2012, p 1318). Biomedical notions of health are rooted in the belief that diseases of the body have a specific etiology, and that they can be managed or cured by treating the specific ailment or issue (Morreim, 2003; Shuval et al., 2012). Complementary and alternative medicine (CAM) describes a variety of diverse practices and systems for health and wellness that are generally not considered to fall within the scope of conventional medicine (NCCIH, 2018). Practices used in conjunction with biomedical care are considered "complementary", and those used in place of biomedical care are considered "alternative" (NCCIH, 2018). While the biomedical approach tends to emphasize the management of individual health conditions, CAM tends to take a more "holistic" perspective that acknowledges the intersection of biological and social factors, including aspects of "individuality, interpersonal interaction with patients, subjectivity of experience, feeling, energy balance, and preventative lifestyle behaviors" (Ho, 2016; Shuval et al., 2012, p. 1319). As such, biomedicine and CAM constitute diverse paradigms that rely on different ways of identifying, interpreting, and solving problems. These views are so distinct that some have called them "fundamentally contradictory"

(Coulter, 2004, p. 103); however, growing consumer interest in CAM has led to efforts to “integrate” these approaches through coordinated, patient-centred care that links biomedicine and CAM in the management of certain health conditions (NCCIH, 2018).

Despite this, biomedicine has retained dominance as the standard of healthcare in North America, albeit in a context of power struggles (Timmermans & Kolker, 2004; Timmermans & Oh, 2010; Wiese et al., 2010). Following the medical profession’s “golden age” in the 1960s and 70s, when it was at the height of its professional power, the flow of “gold” from third party investors transformed medicine into a for-profit enterprise in the US (McKinlay & Marceau, 2002). This “consolidation of power” led to a counter-reaction driven by factors such as heightened costs, increasing barriers to access, and the emergence of patient health movements (Brown & Zavestoski, 2004; Timmermans & Oh, 2010, p. S97). Publications during the 1980s cemented the notion of “patient-qua-consumer”, encouraging patients to “shop around” and compare providers (Lupton, 1997, p. 374). Taken together, these factors laid the groundwork for a growing public distrust in medicine, and a burgeoning interest in CAM during this period is interpreted as an indication of this loss of trust (Timmermans & Oh, 2010).

Evidence-based medicine (EBM) as a clinical practice framework was introduced in 1992 with the goal of establishing guidelines for physicians (Mykhalovskiy & Weir, 2004; Sackett et al., 1996). The introduction of EBM was initially met with a great deal of enthusiasm, particularly in its framing as a form of “third-payer pushback against professional power” (Timmermans & Oh, 2010, p. S98). Through the establishment of clinical guidelines based on the “best evidence”, EBM would, in theory, reduce the problem of practice variation (that is, doctors who made clinical decisions based on their own clinical experiences and personal judgment) while also providing assurances to patients, insurers, and regulators, that clinical decisions were not only

consistent, but also of high standards (Timmermans & Mauck, 2005). Evidence-based medicine was thus framed to not only solve problems of practice inconsistency and efficiency, but also as a solution to waning public trust in medicine. As such, EBM conferred not only service value, but also rhetorical value (Derkatch, 2008). Despite these benefits, many physicians have been reluctant to embrace EBM (Timmermans & Oh, 2010). Yet, the valorization of the EBM model has meant its widespread adoption as an evaluative framework. The shift to a knowledge system based on clinical trial evidence generated a new “clinical gaze”, emphasizing quantitative results from randomized clinical trials (RCTs) over individual experiences (Timmermans and Kolker, 2004, p. 184).

These tenets of EBM contrast sharply with the theoretical and practical attributes of CAM, which emphasize the whole body and view individuals as unique and in need of customized care (Wiese et al., 2010). These differences mean that many CAM modalities are difficult, if not impossible, to measure through EBM-standards of evidence. This lack of clinical “evidence” is therefore a critical barrier preventing the medical legitimation of CAM practices (Derkatch, 2008). Yet, ironically, most biomedical practices are not actually backed by RCT evidence. As Morreim (2003) points out, any effort to “throw out or discredit CAM on the grounds of scientific inadequacy is sure to toss out large portions of conventional medicine alongside. To ‘hold’ both to ‘the same’ standards appears to bode far worse for medicine than for CAM” (p. 228).

Despite the fact that CAM has generally failed to establish “evidence” of its efficacy, its popularity continues to grow, particularly among women (Canizares et al., 2017; Clarke et al., 2010). Research suggests that consumer interest in CAM may be linked to increasing internet use, which enables online research, “shopping around”, and the creation of “expert patients”

(Canizares et al., 2017, p. 2; Fox et al., 2005). The internet was once speculated to serve as a great “leveler” between communities of advantage and disadvantage because of its ability to equalize access to information; however, these results have scarcely been realized (Hampton, 2010; Kreuger, 2002). Yet the growth of the anti-vaccine movement, linked to social media, compels us to consider how the internet might leverage marginalized health-related perspectives (Smith & Graham, 2017). In addition, the ideologies of “total” and “intensive mothering”, which frame mothers as central in the provision of social, emotional, mental and physical health for their families, might also help to explain increased CAM uptake (Hays, 1996; Wolf, 2013). These ideologies, which grew out of the “scientific motherhood” model promoted in the nineteenth century, encourage mothers to exhaust their resources in learning about science, medicine, and all potential risks to their children’s well-being (Apple, 1995; Wolf, 2013). Mothers are compelled to “work harder” and to become “literate” consumers of both products and services for their families (MacKendrick, 2018, p. 142). The growth of the anti-vaccine movement is frequently linked to mothers, the internet, and the valorization of alternative and holistic health (Dubé et al., 2015; Reich, 2016a; Smith & Graham, 2017).

Thus, while some research has explored the intersection of the internet, CAM, and mothering (see Canizares et al., 2017; Nichol et al., 2011), little research has turned analytic attention to whether and how consumers engage with EBM ideology, despite its prominence. This is surprising, considering the extent to which EBM is promoted as valuable to consumers, and its resonance with other dominant ideological models, including the “scientization of society” as well as scientific motherhood (Apple, 1995; Clarke et al., 2010). This study addresses this gap by examining, through naturalistic inquiry, how groups of citizens – primarily mothers –

“take up” and mobilize ideological viewpoints that roughly correspond with EBM and CAM, the two major “sides” of contemporary healthcare.

### **Theoretical Framework**

Social theorists have long been interested in the objective and subjective boundaries within and between groups, and the ways in which such boundaries contribute to inequalities and the exercise of power (Lamont et al., 2015). As symbolic "lines", boundaries function to include some groups of people while excluding others. Such symbolic boundaries may be expressed through a wide range of social behaviors including "normative interdictions (taboos), cultural attitudes and practices, and patterns of likes and dislikes", and even cognitive distinctions (Lamont et al., 2015, p. 850; Shuval et al., 2012). For Durkheim (1995 [1912]), symbolic boundaries function to build and maintain community cohesion. Through shared definitions of what distinguishes the "sacred" from the "profane", alongside "similar rules of conduct and a common compliance to rituals and interdictions", groups define, construct, and maintain their internal bonds (Lamont et al., 2015, p. 850). Weber (2019[1922]) saw boundaries as implicated in the struggle for scarce resources, viewing them as instrumental in limiting access for some groups while facilitating access for others. It is generally understood that symbolic boundaries are a “necessary but insufficient” condition for the production of social boundaries (Lamont & Molnár, 2002, p. 169).

Contemporary sociological research on boundaries has investigated boundary activities across a wide range of social and cultural phenomena including studies of race, class, occupations, gender, and citizenship (Lamont and Molnár, 2002). In his study of assimilation and exclusion, Alba (2005) introduced the concept of “bright” versus “blurred” boundaries. He notes

that some social boundaries are “bright” insofar as “individuals know at all times which side of the boundary they are on”, while others are “blurry”, and involve “zones of self-presentation and social representation that allow for ambiguous locations with respect to the boundary” (Alba, 2005, p. 22). More recent work has highlighted how boundaries play an important role in communities, particularly those which transcend geographic boundaries via the internet (Smithson et al., 2011). Many internet-based collectivities reflect value homophily over status homophily, in that members share achieved status identities, interests and/or values rather than ascribed characteristics such as race, class, gender, citizenship or geography (Henri & Pudelko, 2003; Lamont & Molnár, 2002; McPherson et al., 2001). Given growing concerns about political polarization facilitated by the internet (Sunstein, 2018) the construction of symbolic and social boundaries online thus represents an important and under-studied problem for sociological investigation.

With respect to occupations, scholars have argued that boundaries are a means through which professionals gain social closure in order to maintain power or to expand their jurisdiction (Abbott, 1988; Witz, 1990). Gieryn (1983) advanced the notion of “boundary-work” to describe the rhetorical strategies used by scientists to distinguish authoritative science from non-scientific activities. In his analysis, Gieryn demonstrates how scientists draw and re-draw boundaries to favourably frame science in contrast to alternatives in order to maintain cultural authority (Gieryn, 1983). Allen (2000) and Shuval et al. (2012) expand Gieryn’s definition, which is primarily discursive, to include behavioral practices. Contemporary understandings of boundary-work therefore include both rhetorical and behavioral tactics used to define and differentiate (Lamont et al., 2015).

Several studies have explored how boundaries play out in the healthcare field. These studies tend to examine medical professionals as drawing and re-drawing boundaries in the continued jostling for power and authority in a wide range of healthcare contexts, but particularly in response to the “intrusion” of CAM into the domain of biomedicine. As Wiese et al. (2010) note, the relationship between CAM and biomedicine “has had a long and contentious history, ranging from tolerance through hostility to a grudging acceptance of the existence of other forms of health care” (p. 327). Pushed by growing consumerism in healthcare, biomedicine’s blatant hostility towards CAM in the 1970s evolved into the acknowledgement, selective acceptance, and occasional endorsement of specific CAM therapies (Wiese et al., 2010). This shift has been interpreted as a means by which biomedicine appropriates CAM in order to maintain its stronghold in the healthcare market (Mizrachi et al., 2005).

While such studies provide insight into the construction and negotiation of professional boundaries, there is a dearth of research investigating how such “turf wars” are taken up by healthcare consumers. Specifically, scholars have not yet attended to the ways in which everyday interactions amongst individuals might reflect broader debates about biomedicine and its alternatives, nor how such ideological and discursive debates might influence consumer preferences. As such, an examination of how consumers engage in boundary-work around biomedicine and CAM can reveal much about the extent to which the struggles for power, authority, dominance, and legitimacy in healthcare have been downloaded to individuals.

## **Methods**

This article draws from data gathered as part of an 18-month internet ethnographic study that investigated maternal participation in online health-related groups. Internet ethnographies are

qualitative approaches to understanding internet-based social life. Definitions and methods vary across approaches, but generally incorporate, at a minimum, extensive observation and the study of internet-based artifacts (Boellstorff et al., 2012; Hine, 2017). This study took a similar approach as that taken by Fox et al. (2005), by triangulating observation with discourse analysis and interviews with members. The study was approved by the University of Ottawa Research Ethics Board (REB) in November 2017. The research proceeded inductively, inspired by ethnographic and grounded theory approaches (Charmaz, 2006; Glaser & Strauss, 1967).

The study focused on two key Facebook groups: one that promotes natural living (natural group), and another that promotes science-based parenting (science group). The “natural group” identifies itself as a place for people who are interested in living more “naturally”, although the specific meaning of natural is not defined in the group description. Participants are interested in activities such as eating specific foods (including organic, vegetarian, and gluten-free), shopping for “natural” household products, reducing waste, growing food or foraging, and making nature a part of their lifestyle. The group is open to anyone, but most members are white women from Canada and the United States. The majority of posts deal with health matters, with a smaller proportion addressing parenting concerns and other lifestyle questions. The “science group” identifies itself in its description as an “evidence-based” parenting group. Most members are mothers, but the group moderators state explicitly in the group rules and announcements that they are inclusive of fathers, transgender, and non-binary parents. Though the group is more racially diverse than in the natural group, they are still predominantly white. Topics discussed in the group tend to be split between parenting concerns and health-related matters, although specific medical advice is strictly prohibited.

These contrasting cases were selected for several reasons. Methodologically, the practice of sampling from diverse cases – generally known as variation sampling, or the cross-contextual approach – is argued to produce more generalizable findings than analyses of homogeneous cases (Robinson, 2013). The grounded theory approach suggests that sampling from diverse cases may also be fruitful for theory development (Charmaz, 2006; Timonen et al., 2018). Although “science-based” and “natural” are not truly oppositional concepts, public discourse around contemporary health controversies (including vaccination, breastfeeding, and genetically modified organisms) tend to present health-related products of science and medicine, including vaccines and formula, as “artificial” or “against nature” (Dubé et al., 2015, p. 415; Martucci & Barnhill, 2016; Reich, 2016b). Given recent concerns about the expansion of anti-vaccine ideology across the globe (Smith & Graham, 2017), it seemed prudent to explore spaces that reflect these divergent views. These contrasting cases also reflect tensions between EBM and CAM, which makes them ideal for investigating consumer-level boundary-work related to health and medicine.

I carried out the research in the two primary groups over a period of 18 months between January 2018 - June 2019. The groups were open for anyone to join, and each had over 6,000 members at the time the research began. In Phase 1 of the research, I engaged in daily participant observation, reading dozens of posts each day, taking notes electronically and by hand. To more closely examine the linkages between discussions in the space and overarching ideologies and discourses (van Dijk, 1999), I also conducted a critical discourse analysis of 308 posts sampled from a 5-month period across the two groups, which I ceased once data saturation (informational redundancy) was reached (Saunders et al., 2017). Only posts related to health were collected, and I abstained from participating in these threads. Using NVivo, I coded discussions inductively

using thematic and constant comparative approaches (Braun & Clarke, 2006; Charmaz, 2006). In total, I collected and analyzed over 3,000 typed and handwritten pages of data. In this phase, I employed a retroactive consent process, which can be justified in minimal risk internet research (Eysenbach & Till, 2001). Although advance consent is preferable, obtaining complete, informed consent in fluid, densely populated online spaces (6,000+ members) is both impractical and virtually impossible (see the American Sociological Association Code of Ethics, 2018). When it was desirable to use a direct quotation or a story that could be attributed to a specific person, I attempted to contact the person by private message to debrief them on the study and request written consent. No one declined to provide consent. Where consent was not obtained due to non-response, the quotation was either excluded, paraphrased, or summarized. I took several additional measures to protect confidentiality, including assigning pseudonyms, obscuring the names of the groups, and excluding information that could be used to identify either the groups or their members.

In Phase 2, I conducted in-depth interviews with 29 mothers (science members n=14; natural members n=15) from Canada and the United States, who were recruited from the two primary groups as well as from three external, comparable groups (also categorized as either “natural” or “science-based”). I recruited participants through moderator-approved posts in the groups, and through direct messages to active members asking if they would like to participate. Information about the project was provided through the official invitation, consent forms, and through question and answer with prospective participants. All participants provided written consent. Interviews were conducted primarily over the phone and typically lasted 1-1.5 hours. The interviews were transcribed, then coded and analyzed in MaxQDA using a thematic approach and constant comparison (Charmaz, 2006). I ceased recruitment once informational

saturation was reached and coding categories were well-developed (Saunders et al., 2017). In this article, I draw examples from interviews with the 19 participants recruited from the two primary groups of interest (science members n = 9; natural members n =10). However, it should be noted that my findings are stable across the comparable groups, enhancing the external validity of the study's conclusions.

## **Findings**

In the following section, I detail my findings around boundary-work in the groups of interest. Through analyses of group dynamics, behavior, and quotations from members, I argue that online groups construct, maintain, and extend symbolic and social boundaries. Specifically, I show that boundaries in the science group work to protect and extend the authority and dominance of biomedicine, while boundaries in the natural group seek to primarily maintain existing freedoms relating to complementary and alternative approaches to health and medicine. While boundaries in the science group are more “bright” (dense and rigid, with clear expectations for membership), boundaries in the CAM group are more “blurred” (permeable, fluid, and sometimes ambiguous) (Alba, 2005). I argue that such boundary presentations reflect the power dynamics of CAM and biomedicine at large, with biomedicine looking to protect and expand its jurisdiction, and CAM as a marginalized collective seeking to maintain its existence in the broader system.

## ***Boundary construction***

### *Organizational boundaries*

Although the Facebook groups considered here do not meet the criteria to be considered formal organizations, the groups construct and maintain organizational boundaries that play a critical role in establishing membership, culture, and behavioral expectations. Organizational boundaries are a form of social boundaries which comprise “formal and informal regulations and determine who is in and who is out of the organization as well as obligations of members and potential members” (Shuval et al. 2012, p. 1323). While they transcend the spatial-temporal limitations of face-to-face organizations, Facebook groups have clear lines – boundary contours – that delineate "inside" from “outside” (Shuval et al., 2012). The groups are established digital spaces that one must “visit” in order to join. The groups develop their own names as well as a public description, which typically sets out the group goals or purposes as well as basic ground rules for participation. Managing each group is a set of administrators, who have the highest level of oversight and authority, as well as a set of moderators, who have some authority in managing membership and moderating discussions. I refer to them jointly as the “admin team”.

In order to become a group member, Facebook users must submit a request to the group admin team. While the natural group had open membership at the time of my joining (meaning that I only had to submit a request and was then quickly approved), over the course of the research, they gradually added in screening questions. In the natural group, the screening question was simply: "Do you agree to be kind and follow the group rules?" The science group, in contrast, had always included screening questions, which asked members "Do you agree to read and follow the group rules?" and "What does pseudoscience mean to you?" Such screening questions typically have two purposes. The first is to screen out robots and other "fake accounts"

that join groups to share “spam”. The second is to alert prospective members to the group rules and expectations for behavior in the group. The admin team decides whether or not they are accepting new members, what constitutes acceptable responses to the screening questions, and who ought to be admitted. Unlike entry into formal health-related organizations, credentials or other "proof" of identity is not required. Regardless, the admin team plays a critical role in the construction of organizational boundaries, serving as gatekeepers – the legitimate authorities who make decisions on the contours and permeability of group boundaries. While these structural elements are built into Facebook, the admin team decides on the contours of group boundaries by naming the group, defining its purpose, laying out the ground rules, and managing the membership. These contours set the stage for the development and maintenance of group boundaries and behavioral expectations.

The natural group welcomes members from a wide variety of perspectives and encourages members to share their knowledge with one another, as long as this is done so "respectfully". This closely reflects the position of CAM as it operates adjacent to, or on the edges of, biomedical practice. Research by Shuval et al. (2012) found that in biomedical settings attempting to integrate CAM, CAM practitioners were largely marginalized but accepted their subservient position. Likewise, the natural group supports integration by welcoming biomedical practitioners and respecting their expertise. Interviews reflected that the membership tended to see CAM and biomedicine as complementary and useful in different ways or circumstances. In contrast, the science group is uninterested in integration, and actively works to exclude CAM and all forms of "pseudoscience". This exclusion is enacted even in the joining process as members must answer screening questions that demonstrate that they share in the group's ideas around what constitutes "pseudoscience".

### *Epistemological & Cognitive Boundaries*

Epistemological boundaries in these contexts are those “normative axioms and theories” that provide a shared understanding for the basis of the “practice” of both healthy living and proper parenting (Shuval et al., 2012, p. 1321). Similarly, cognitive boundaries are the “types of practice and knowledge” that are viewed as legitimate (Shuval et al., 2012, p. 1321). In the science group, notions of “health” reflect biomedical understandings. The group has fully embraced evidence-based medicine (EBM), and the admin team occasionally describes and share graphical depictions of the hierarchy of evidence (with RCTs at the top). Like biomedicine, the group favours rationality, positivism, and objectivity in the production and consumption of scientific evidence, and uses these elements as criteria through which to evaluate the claims of alternative practitioners and even medical doctors whose recommendations do not match with the "evidence" (see Chapter 3, “Siloed Health Learning” for more on this). The science group also views parenting as an activity that ought to be informed by scientific and/or peer-reviewed research. As such, scientific evidence is used to inform both health decisions and parenting decisions, and the group gives primacy to scientific knowledge and guidelines from scientific or medical authorities, such as the US Center for Disease Control (CDC) and the American Academy of Pediatrics (AAP).

For the science group, "absence of evidence" is "evidence of absence", and a lack of evidence for a specific health protocol, treatment, or practice (for example, homeopathy) is enough for moderators to label such practices as "pseudoscience". A member of the admin team explained in interview: “Pseudoscience is anything that does not have peer-reviewed research backing it. Anything that is predatory, or claims to be natural or the best.” In other words, if no peer-reviewed evidence exists to support a specific treatment's efficacy, then that treatment is

labelled as "pseudoscience". Some of the primary problems identified with CAM and related practices centre around safety concerns, a lack of regulation, and "predatory" behavior from people who promote and sell pseudoscientific products and services. The science group members acknowledge that there are problems with medicine, too, but see it as the best option available. One member explained: "As a whole I think the medical industry is an industry, and is not particularly trustworthy or necessarily helpful. But, I use it because... it's useful." The focus on EBM is framed as a form of quality assurance, and the problems with medicine are largely viewed as problems with the "fallible" people who practice medicine, rather than problems with science and/or scientific medicine itself. A member of the science admin team explained: "The science is there, but the people cannot do it quite right." In this way, the science group engages in what Derkatch (2008) calls "method as argument", reflecting the position that scientific evidence is the ultimate form of knowledge and is thereby the best criteria from which to evaluate health and parenting practices. CAM is marginalized on the claim that it lacks "evidence", but the fact that many medical practices are not supported by high quality evidence receives little attention.

In contrast, the natural group is less specific in its concepts of health and well-being, supporting a broader concept of health that is less prescriptive. Health is largely viewed as comprised of a constellation of factors including physical health, mental health, emotional and spiritual health, which can be influenced by food, supplements, a wide range of holistic therapies, and a nature-based lifestyle, among other factors. A member of the admin team explained: "Health is about much more than what we do or don't put in our bodies." Discussions in the group tend to appeal to nature, with the overwhelming message being that what is "natural" is best in terms of food, health interventions, medicines, and practices. There is little

attention paid to the recommendations of authoritative bodies such as the AAP. The group description states that the goal is to help members live more "naturally", but notes that this is different for every person and that not everyone has the same goals.

A divergence in member beliefs sometimes became a point of contention in the natural group, with some members feeling that the culture was too extreme, while others felt that it was not "crunchy"<sup>5</sup> enough. When these issues emerged in discussion, the admin team and other members often played a role in reassuring members that everyone was welcome and that all ideas could be shared as long as they were shared in a respectful manner. Two interview participants who held strong convictions about living "naturally" noted that they did, in fact, feel that members were not "crunchy enough" for them, and both described finding other groups where they felt more comfortable in their beliefs. One mother explained:

I don't believe for example that vaccines are natural because of the ingredients and side effects/adverse reactions. So to me and other moms that left the group, we couldn't understand how one can be using essential oils, natural cleaners, eating organic, using natural vitamins, etc. but then put their kids and themselves on a strict vaccine schedule...that's what made another mom leave and make her own group, and a small handful of us followed.

On the other hand, some members felt that the group was too extreme. One participant explained that even though she considers herself "crunchy" she also believes in science, and that the group was not inclusive enough of science-based views: "I'm very science-based, like the way that I think has to be science-backed... I never say that on the [natural] page, because people on [there] are VERY against vaccinations, and not even open to a proper discussion about it." In contrast to the science group, the natural admin team makes no demands for evidence at any time. As such, in discussing their experiences or making recommendations to one another, members often share personal stories or anecdotes to support their claims or suggestions.

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<sup>5</sup> "Crunchy" is another word for natural, and alludes to crunch, natural "granola".

In the natural group, there is a recognition that CAM cannot always be measured in ways that are acceptable under the biomedical or scientific model. One member explained:

I feel like there's a lot of facets to natural healing that really can't be contained. It really can't be laid out the way that Western medicine can. Because I think it allows for other options, that allows for other aspects of health, that can't really be measured the way that simple, like pure physical health can be, or pure science can be, I guess.

Thus, a lack of acceptance by the “mainstream” was occasionally framed as rooted in a lack of understanding. It is precisely this lack of evidence and measurement that marks CAM as unacceptable in the science group. As one science member noted, “I think it's a Tim Minchin quote that ‘alternative medicine is medicine that has not been proved to work.’ I think that's it... It's all pseudoscience unless it's proven and then it becomes mainstream medicine.” The criteria for legitimacy in the science group is therefore clearly established as a firm, “bright” symbolic boundary. In contrast, cognitive legitimacy in the natural group is more fluid and open to individual interpretation, resulting in boundaries that exist, but are “blurred”.

### *Boundaries of Identity*

Research on boundary-work has been remarkably consistent in its identification of mechanisms for the production of symbolic and social boundaries related to identity and the social construction of communities and/or collectivities. Specifically, the tendency for individuals and groups to define themselves in contrast to others has proven durable across multiple and varied contexts (Lamont & Molnár, 2002, p. 171). Tilly (1998) found that the employment of a rhetoric of dichotomy – what he calls “categorical pairs” – is a practice used by dominant groups to marginalize other groups and block their access to resources (p.8).

This sort of rhetorical categorization was employed in both groups. In the science group, all forms of non- evidence- or science-based activities, therapies, or medications were abhorred. Phrases such as: “it’s a choice between dangerous and safe”; there’s “science- and there’s pseudoscience”; “it’s either proven or unproven” were employed to dismiss all activities and products lacking sufficient evidence, even those yet unstudied. Identity was frequently defined through “othering”: crunchy folks were framed as “woo-filled” (that is, believing in pseudoscience) or “not science-based”; “obnoxious”, “rude”, “pearl-clutching”; “elitist”, “classist”, “privileged”, and focused on “status symbols”; “fearful” and “paranoid”. The choice to use conventional medical and consumer products was therefore framed as reasonable, science-based, and for “regular people”. In contrast, discussions in the natural group frequently centred around the classification of products, activities, or therapies as either “crunchy/not crunchy” or “natural/not natural”. Processes of “othering” were less overt. While the science group had a clearly defined pseudoscientific “other” (that is, believers in CAM and its analogues), the natural group addressed decisions made by a more generalized “unhealthy other” (Attwell et al., 2018).

Across both groups, members refined their identities as “crunchy” or “science-based” through their participation in the groups, where they received advice and encouragement for following the group’s approach. Questions soliciting advice were abundant, as members looked to the groups as trusted sources of information to guide them in their mission to “live naturally” or parent in an “evidence-based” way. Groups encouraged members to make decisions about products, healthcare practitioners, and health issues that participants said they otherwise would not have made if they had not been members of the groups. Such decisions were celebrated; for example: “Good job mama, you made the right choice!”. Together, these dynamics frequently reinforced and strengthened member beliefs (see Chapters 3 and 4 for more on this). Thus, in

delivering a sustained system for promoting and rewarding desirable behaviors, such “grooming”-type strategies engender member devotion to symbolic boundaries, providing cognitive closure by minimizing uncertainty and confirming member choices as the “right” ones.

### ***Boundary maintenance***

#### *Boundary enforcement*

One of the more striking structural distinctions between the groups is the differences in their moderation scheme, which directly relates to their moderation strategy. The natural group, which holds over 9,000 members at the time of writing this article, has an admin team of only three people. In contrast, although the science group holds approximately 2,000 fewer members than the natural group, it has a large admin team of approximately 20 members, who operate on a schedule to ensure that there are always moderators "on duty". In both groups, members generally seem to understand the behavior expected of them and conform to group social norms. For example, when asked what advice they would give to new members, participants from both groups frequently suggested that new members should "observe" the group for a while or “use the search function” before making their own post, in order to get a sense of the group culture and rely on previous knowledge. This awareness of an acclimatization period indicates that members understand that different groups have distinct social and cultural expectations for their members, and that acculturation is best to avoid embarrassment and possible stigmatization.

In the science group, boundaries are vigorously enforced through the routine production of stigma (Goffman, 1967). Members are prohibited from suggesting or promoting any form of CAM or from sharing "pseudoscience confessions", and are expected to provide evidence for any claims they make that fall outside the normal scope of group recommendations. When members fail to provide "evidence", they are quickly "called out" by the admin team, and members enjoy

participating in a "pile-on" in which the person is teased or otherwise lambasted by multiple members for their position. If the offending person does not appease the admin team's demands for evidence (which must meet EBM criteria) the moderators do not hesitate to apply penalties, including short-term "mutes" (which prevent the member from making additional comments for a period of time determined by the moderator), or permanent removal from the group. The rationale for the aggressive moderation strategy is rooted in the belief that pseudoscience is not only "unproven", but also "dangerous". These strategies, which ultimately serve to embarrass the offending member, make the group an intimidating and unwelcome place for people who have a different belief system or who might straddle the line between approaches, while also discouraging dissent. The intentional production of a homogenous behavioral and epistemic environment further strengthens group boundaries by making clear group expectations for participation, behavior, and epistemic legitimacy.

Because it has a weaker moderation scheme, the natural group has a correspondingly weaker moderation strategy. The group is more prone to debates and disagreements, which likely occur not only because they have fewer moderators, but also because they are more open to diverse and alternative viewpoints. The openness to diverse views reflects the blurriness of group boundaries, and the moderation strategy does little to clarify them. Involvement from the admin team is limited, and is typically done in ways that conceal evidence of conflict. For example, moderators typically delete "unkind" comments rather than address them through overt, public disapproval and/or sanctions to offending members. Unless the viewer is watching the conversation unfold in "real time" (which is possible on Facebook), they are likely to see an abbreviated version. This gives the appearance that the group is diverse but able to "keep the peace", although that may not always be the case. Unlike in the science group, where boundaries

are enforced through the production of stigma, the deletion of comments ultimately enables continued participation from those who hold divergent views. Only repeated abusive behavior or violation of other group rules will result in removal from the group. Thus, the boundaries of the natural group remain soft, with a variety of views allowed to permeate and percolate.

### *Social policing*

In both groups, members also take up the working of maintaining and enforcing group boundaries through working as “citizens on patrol” on the lookout for perceived infractions to established group rules. In the science group, I regularly observed members reminding others, particularly new members, about the importance of evidence: "This is an evidence-based group. Do you have a citation for that?" In the natural group, members remind one another: "[Multi-level marketing] posts are not allowed here."

Members also engage in social policing through rhetorical boundary-work. In the science group, rhetorical boundary-work flowed directly from admin-created epistemic and cognitive boundaries. The admin team established definitions and frequently served as arbiter in determining what counts as "science" and what forms of "evidence" are acceptable. These definitions and expectations are regularly stated and re-stated through several strategies, including announcements reminding members of the rules, sharing infographics with the rules; posts reminding members of specific rules, and the mobilization of stigma (publicly making fun of rule-breakers). Members frequently re-stated such rules to each other, participated in pile-ons, and “tagged” moderators by typing their name into a comment. This practice, which sends the moderator a notification, effectively “calls them in” to formally uphold group rules.

In the natural group, rhetorical boundary-work was rarely taken up by the admin team but was frequently marshaled by members. For example, in one post in the natural group, a mother asked for advice about using Baby Vicks, a menthol-based decongestant ointment marketed for use on babies. Another member replied, "Baby Vicks isn't natural." Such categorizing statements occasionally provoked disagreement. The admin team typically did not intervene in these conversations, upholding their stance that "natural" can mean different things to different people. The presence of rhetorical debates around what is "natural" or "crunchy" suggest that definitions for these anchoring concepts, and others (for example, "healthy", "clean", "holistic"), which are central to the group's cognitive position, are frequently defined and redefined, with little clarity for members. The lack of a firm group stance of what constitutes "natural" is further evidence of blurry group boundaries.

### ***Boundary extension***

#### *Offline extension*

Members of the science group engaged in activities that extended the online production and mobilization of symbolic boundaries into offline spaces, a process I term boundary extension. Frequently, such activities involved the translation of symbolic boundaries into social boundaries. For example, it was not uncommon to see posts in the science group seeking advice on how to interact or deal with family members or friends who did not vaccinate. Since the group is explicitly pro-vaccine, it was often suggested that members take a strong stance against people who did not vaccinate, and provided sample scripts for them to use in drawing boundaries. Parents (typically mothers) were given scripts on how to be clear about their expectations ("We expect all people who want to visit with our new baby to ensure they are up to date on their

vaccinations’’) and to communicate boundaries with non-compliant contacts. On the mild end was advice about boundaries during visits (‘‘Have them visit, but make sure they wash their hands and wear a face mask’’) while on the more extreme end were boundaries that restricted access altogether (‘‘Tell them, ‘Since you have chosen not to vaccinate, we have decided to postpone our visit with you until the flu season is over. We look forward to seeing you in the spring at which time you will be able to meet our new baby.’’’) Similarly, on one thread, where a member explained wanting to avoid taking her newborn into public places occupied by anti-vaxxers, a member shared her tactic of avoiding people whose babies wear amber teething necklaces. Here, the necklace is interpreted as a symbolic marker for people who believe in pseudoscience. Boundary extension thus involves the conversion of group-generated symbolic boundaries into explicit social boundaries.

In contrast, very few members of the natural group engaged in overt boundary extension. While many felt comfortable communicating issues like dietary restrictions to friends and family, they were less likely to translate their views into social boundaries. Instead, most members seemed focused on maintaining their lifestyle without interference from others. They sometimes described their beliefs as ‘‘unpopular’’ and expressed nervousness about sharing them over fear that they might start conflict. In interview, one member noted, ‘‘I’ve just learnt my opinion is one people don’t want to hear.’’ In discussing her stance on vaccines, she explained, ‘‘I try to be more open minded and not just push my personal agenda, too much. But just allow room for conversation on that topic.’’ Group members intermittently posted about feeling isolated because of their ‘‘natural ways’’, and lamented the fact that so few people in their offline social circles ‘‘shared their values’’. One member expressed, ‘‘sometimes I just want to ‘drink the fluoride’ and bury my head in the sand.’’ In response, members generally encouraged each other

to keep to themselves and not to worry about others. Members sometimes expressed hope that people might start to make changes in their own lives after witnessing the “benefits”.

### *Boundary expansion*

In his study of scientists’ rhetorical strategies, Gieryn (1983) used the term expansion to describe the genre of boundary-work practiced by scientists in order to gain authority or expertise in domains occupied by other occupations or professions (p. 791). In the science group, members described how their views and beliefs were reinforced through their participation in the group, and some members said they felt more confident advocating to others about parenting and health issues from an evidence-based perspective. One member explained, “I think that [participation] just really made me feel stronger in my decisions and given me the ammunition, the information I needed.” She later noted, “it’s given me a backing to sometimes stand up to things.” Members often looked to the group for evidence-based information that they could use in advocating to others and/or winning debates with others, both in person and online. Some members described visiting pages or articles presenting alternative viewpoints (for example, anti-vaccine) to “stand up for science”. One member of the science group said she had joined a few anti-vax groups “because it was fun” to argue with them, and didn’t mind getting “kicked out” for starting trouble. Another member described her advocacy as a matter of conscience:

For me, safety is one of those paramount things that I actually don't have qualms making enemies, because my conscience won't allow me to let things like that slide. I know my husband's like "Why do you keep getting involved? Why do you keep saying stuff?" But, I'm like "How can I go to bed at night knowing that this one person who lives, like maybe five streets over from me might be putting her child in danger unknowingly?" I can't do that. I can't sleep at night knowing that I had an opportunity to provide safe information for someone.

In these cases, advocacy for “science” and “evidence” represents a means by which members of the science group expand the jurisdiction of their epistemic boundaries. By drawing attention to the existing evidence and contrasting it against “unsafe” practices, members reaffirm the superiority of evidence-based health and parenting choices.

Activism in the natural group was generally oriented to the goal of maintaining existing rights and freedoms, rather than expanding them. For example, members shared information and documentation that supported vaccine refusal (including links to forms, legislation, and petitions to uphold the right to “choose”). In another case, a member posted a link to a local homoeopath’s page and encouraged members to support their business. She described how the homeopath had been fighting to keep homeopathic and natural supplements on the shelves. These conversations tended to draw much attention as members described a “war on natural medicine” and efforts by regulators (including the US Food and Drug Administration and Health Canada) to “go after” practitioners and their products. Thus, while the science group aggressively seeks to protect and expand the jurisdiction of “science” and “evidence”, the natural group’s boundary-work focuses on maintaining existing rights and freedoms.

### ***Discussion***

On the surface, the groups portray two distinct visions of what healthy living looks like, primarily constructed through organizational boundaries that set out the goals and scope of the groups. Viewed in isolation, each group gives the impression of a level of internal consistency, further buttressed by behaviors by both group moderators and members. A new member is likely to infer that group members have consistent beliefs about what is the “right”, or superior pathway to health and well-being. Indeed, this research reveals that both groups employ strategies to

create a cohesive member culture that supports their broader epistemological, cognitive, and social ideas of what health ought to look like. The net surface result is that the groups appear to be somewhat polarized/extreme manifestations of their ideology.

Yet, examined more closely, several important differences emerge. Boundaries in the science group, supported by clear definitions of “science” and “evidence” are “bright” and firm, constructed through strict rules and screening practices. These boundaries are largely constructed around the premise that science and evidence take epistemic priority over other forms of knowing. Symbolic boundaries reflecting this view are firmly established with clear definitions for what ideas, practices, and behaviors are included/excluded, valid/invalid. The boundaries are protected and maintained by a comprehensive administration strategy and the routine production (or threat of) of stigma. Social boundaries limiting access to the group, and extending outward into members’ offline lives reflect the salience of symbolic boundaries inside the space. Interviews with members revealed that they are often extended into offline environments, and expanded through advocacy-type work in other online and offline spaces. Thus, for the science group, social boundaries flow from the strength of symbolic boundaries.

In contrast, boundaries in the natural group are more “blurred” – permeable, fluid, and sometimes ambiguous. While the symbolic goals of the group are articulated, a lack of clear definitions for its anchoring concepts (such as “natural”, “healthy”, “crunchy”) set the stage for a correspondingly soft set of symbolic and social boundaries. Members hold multiple definitions of these ideas, leading to some confusion and inconsistency around expectations for behavior and practices. Boundary maintenance similarly suffers. With a lack of cogent shared meanings and expectations for members that fall from those meanings, the group is permeated by a wide range of members with divergent views, and members are sometimes unsure where they stand with

respect to the boundaries (Alba, 2008). Members report feeling marginalized, isolated, and/or criticized by others. Boundary extension is subsequently tempered by a fear of conflict or rejection, and boundary expansion primarily focuses on maintaining existing freedoms, rather than enlarging them.

Thus, through descriptive illustration of boundaries and boundary-work in the science group, I have aimed to show how boundaries in this space are constructed, maintained and extended in ways that mirror the boundary-work of the medical professional more broadly. Specifically, I showed that boundaries in the science group work to protect and extend the authority and dominance of biomedicine, while boundaries in the natural group aim to maintain existing freedoms. While members of the science group engage in explicit expansion activities that directly reflect that societal power of medicine, members of the natural group take up a subordinate position that largely reflects the societal power of CAM as a marginalized actor in the medical profession. This research therefore demonstrates how boundaries that reflect broader rhetorical and power dynamics in the medical profession are constructed, maintained, and extended in and beyond Facebook groups of healthcare consumers.

### ***Conclusion***

This study reveals how some healthcare consumers are leveraging the affordances of the internet to create health-related collectivities where they can both locate and produce certainty around their healthcare choices. Considered more broadly, the appeal of such spaces may be symptomatic of neoliberalization of health in North America, in its downloading of responsibility to individuals. This is epitomized in the science group, where members felt they needed to learn the tenets of the scientific method and evidence-based medicine in order to

become informed healthcare consumers. In a market and information ecology that is complicated by power struggles and a myriad of choices, individuals are left trying to navigate what has evolved into a complex and muddled information economy. Their challenges in navigating this landscape may indeed lead them to spaces, such as online groups, where the answers seem “clear”. Through the construction, maintenance and extension of boundaries that directly flow from the formation of ideological collectivities, healthcare consumers receive guidance about what is good/bad, right/wrong, healthy/unhealthy, for example. Bright boundaries can indeed lead to clarity.

On the surface, the fact that these two divergent groups exist might be taken as evidence of the “levelling” qualities of the internet. Certainly, the emergence of a diversity of online spaces addressing a variety of health positions might indeed empower consumer health movements. For example, scholars have argued that the contemporary global anti-vaccine movement gained traction on the internet (Smith & Graham, 2017). Yet, we ought to view alarmism about the internet’s role in expanding alternative movements with some skepticism. At least in this study, the character of boundaries seemed to reflect, sustain, and possibly even reinforce existing broader power imbalances between biomedicine and CAM.

This study also reveals that some consumers are taking up some of the work of protecting, defending, and expanding biomedical boundaries. In their study of health care phone lines, Goode and Greatbatch (2005) found that shifting professional boundaries between healthcare staffers “create a space within actual call interactions into which service consumers can move to shape the nature of the service provided” (Goode & Greatbatch, 2005). Further research might probe the extent to which engaging in such boundary-work might garner consumers more power in shaping their healthcare. For example, does participation in such bounded, ideological spaces

impact cognitive boundaries for patients as they negotiate their care? These questions are especially compelling given a growing body of research on internet-informed expert patients.

That the majority of group members in both groups are mothers also warrants further investigation. The growing moralization of mothering has been well documented, and mothers are increasingly held to impossible standards for childrearing, captured by extensive empirical work documenting the rise of intensive mothering (Elliott & Bowen, 2018; Hays, 1996; Wolf, 2013). Research that shows that mothers are more likely to look to the internet for information about health and parenting, and the use of online groups such as those considered may indeed be a contemporary security strategy to alleviate the strains of intensive mothering (Johnson, 2014; Schoppe-Sullivan et al., 2017; Villalobos, 2014). Choosing “a side” and connecting with others who support and encourage their choices is one way in which mothers can feel assured that their choices are the “right” ones.

Finally, considering the critical role epistemologies of ‘natural’ versus ‘science-based’ might play in shaping parental decisions, it is important to consider the broader impacts of any group or discourse which asserts itself as authoritative. The possibility that evidence- or science-based knowledge could be myopic or even ethnocentric are scarcely considered by the groups themselves. It seems prudent here to challenge the notion that there is a unitary model of childrearing or health that is “best”, and to reiterate how myriad structural considerations including race, gender, class, alongside other factors including individual experiences, health conditions, personality, and culture (among others) might also play a role in shaping child health and parenting outcomes (Arendell, 2000; Collins, 2016).

While the operation of these processes in internet spaces may seem benign, it has been argued that more durable inequalities can stem from the cumulation of individual and seemingly

invisible group processes (Tilly, 1998). Considering the impact that such spaces have on members, which include the transformation of group-generated symbolic boundaries into social boundaries, particularly around issues such as vaccination, it stands to reason that this is an area in need of further investigation. Future research should therefore explore how boundary extension and expansion legitimize and affirm “ways of doing” health, and the extent to which social and symbolic boundaries cumulatively impact health behavior. As a persuasive social lever that can generate both cohesion and division, health-related boundary-work in online spaces deserves further examination.

### **Chapter 3: Siloed health learning: Examining the influence of Facebook “mom groups” on maternal health beliefs and behaviour**

#### **Abstract**

Mothers are increasingly turning to online communities for social support and information on parenting and health, yet little research explores how participation in such spaces influences health beliefs and behaviour. Drawing from qualitative data from an 18-month internet ethnographic study incorporating participant observation, discourse analysis, and interviews with 29 mothers from diverse “mom groups” on Facebook, this article shows that immersion in online “echo chambers” impacts maternal health beliefs and behaviour. By participating in echo chambers, mothers acquire specific information about health and the healthcare system that aligns with group ideological focus while also receiving social support and validation for their views and choices. Combined, these processes, which I term “siloed health learning”, frequently impact mothers’ ideological views around health-related matters, shaping not only their beliefs, but also their decisions and behaviour. These findings have both promise and pitfalls: While social support and information from online groups have the potential to empower mothers, they may also encourage them to challenge or circumvent medical advice and authority; for example, among vaccine-hesitant mothers. In addition, by promoting a consumerist approach to health, these groups add additional work to an already heavy “motherload” (Villalobos, 2014).

## **Introduction**

Over the last several decades, scholars have argued that mothering has grown more demanding and is largely informed by ideologies of “intensive mothering” (Hays, 1996; Villalobos, 2014). Intensive mothering draws heavily on the neoliberal narrative of personal responsibility, and positions mothers as accountable for “anticipating and eradicating every imaginable risk to their children” (Wolf, 2013, p. 72). Accordingly, mothers frequently take up the role of health manager within their families, and find themselves charged with the responsibilities of nutrition, hygiene, and the mitigation of health risks (Bird and Rieker, 2008; MacKendrick, 2018; Reich, 2016a). To quell their anxieties, many turn to the internet, which is both free and readily available, to give and receive health-related advice and social support (Schoppe-Sullivan et al., 2017; Zaslow, 2012). While scholars have speculated on the impacts of social sites such as Facebook on health-related beliefs and decisions (Hoffman et al., 2019; Schmidt et al., 2018), little research has empirically investigated this relationship. In addition, the emergence of “echo chambers” online raises questions about how polarized social spaces might circulate ideologically charged information. We know little about their impacts on health matters.

In this paper, I ask: How does maternal participation in polarized Facebook groups influence health-related beliefs and decisions? To answer this question, I draw on qualitative findings from an 18-month study involving two sets of mothers belonging to groups with distinct, contrasting ideologies – one set focused on “science-based parenting”, and the other focused on “natural living”. I find that in participating in these groups, some mothers experience “siloes health learning” that influences their health-related beliefs and decisions, even shaping the way they interact with healthcare professionals. Yet, while most mothers feel positive about their involvement in the groups, ideological shifts inspired from such contexts may have broader

consequences. Using vaccine hesitancy as a case example, I show how participation in polarized social spaces can encourage mothers to challenge or circumvent medical advice, while simultaneously reinforcing their decisions as the "right" ones.

This study offers important insights into our understanding of several contemporary concerns. Although scholars have speculated on the potential impacts of social media use on health beliefs and behaviour, little research has empirically investigated this relationship. While the political effects of internet echo chambers have been thoroughly investigated, there is a dearth of research examining their impacts on health. In addition, while we know that mothers are heavy users of the social media, limited research examines how mothers' online experiences come to bear on medical decisions, such as vaccination. In showing how groups equip mothers with information, social support, and advocacy tools, this research provides insight around how mothers may come to negotiate and advocate for their beliefs in medical encounters. Finally, the study shows how, despite empowerment benefits, online groups perpetuate a consumerist model of healthcare that creates "more work" for mothers (MacKendrick, 2014).

### **Healthcare, Internet, and Mothering**

Neoliberal restructuring of healthcare in Canada and the United States over the last several decades has reinforced the notion that health is an individual responsibility (Light, 2000; McGregor, 2001). The ideology of "healthism" extends this problem, situating the failure to attain health as both individual and moral failure (Crawford, 1995). Some have argued that in this context, health has come to be seen as a commodity under consumer control (Lupton, 1997). Here, the "patient qua consumer" becomes empowered to evaluate physician services, negotiate their care, and "shop around" when the product is unsatisfactory (Lupton, 1997, p. 373; Lupton

and Jutel, 2015, p. 129). The rise of complementary and alternative medicine (CAM), popular among women, is argued to be symptomatic of increasing patient consumerism alongside a loss of public trust in medicine (Coulter & Willis, 2004; Timmermans & Oh, 2010). To counter the loss of trust, the practice of evidence-based medicine (EBM), which sought to set clinical standards for practice, was largely embraced but remains problematic, with many physicians reluctant to prioritize clinical guidelines over their own experience and expertise (Timmermans & Mauck, 2005).

Amidst such changes, the growth of the internet has further enabled consumers to negotiate their care, providing easy access to health information (Kata, 2011; Kivits, 2009; Timmermans & Oh, 2010). Using the internet for health information has an overall positive effect on users, who generally report feeling empowered (Moorhead et al., 2013). Concerns around using the internet for health information typically relate to the quality of information, the potential for information overload, increased patient anxiety, and risks associated with receiving inaccurate information (Foster, 2016).

Online communities have emerged as an important source of health information and support. Users consider the information they receive there to be reliable, and generally trust people who have similar experiences as their own (Brady et al., 2016; Colineau and Paris, 2010). Online health support groups have been found to confer a number of benefits including increased feelings of connectedness, belonging, and strategies for coping with daily challenges (Naslund et al., 2016). They are also an important source of “tacit healthcare knowledge”: the “how to” information that may help patients navigate the healthcare system and negotiate relationships with medical professionals (Foster, 2016). Studies have found that information found online may influence decisions, but that people generally evaluate this information in conjunction with other

sources, including advice from health professionals, family, and friends (Colineau and Paris, 2010; Kivits, 2009; Lagan et al., 2010; Rice, 2006).

Given that mothers are generally charged with responsibility around health matters in their families, it is unsurprising that they are among the heaviest consumers of health information online (Johnson, 2014; Pandey et al., 2003; Rainie, 2013; Rice, 2006; Zadoroznyj, 2001). In addition, mothers increasingly look to the internet for validation (Dworkin et al., 2013; Schoppe-Sullivan et al., 2017; Zaslow, 2012). Use of Facebook, in particular, has been found to increase in the transition into parenthood, as mothers look to the platform “to seek support for their mothering activities and as a platform to show the world that they are fulfilling their maternal roles” (Schoppe-Sullivan et al., 2017, p. 277).

Mothers’ increasing reliance on the internet can also be linked to intensive mothering beliefs, which create pressures for mothers, even if they do not personally subscribe to them (Henderson et al., 2016). While well-documented among white and middle-class mothers, narratives of intensive mothering appear across divergent racial/ethnic and social class backgrounds (Elliott et al., 2015; Ishizuka, 2019), and have been evoked around health-related issues including infant feeding (Afflerback et al., 2013; Lee, 2007; Wolf, 2013); children’s physical activities (Stirrup et al., 2014); vaccination (Reich, 2016a); and even prenatal chemical exposure (MacKendrick & Cairns, 2019). The moral dimensions of maternal decision-making have been well-documented, and the failure to do things “correctly” is frequently conflated into maternal failure (Hays, 1996). Paradoxically, while such pressures on mothers have been found to negatively impact mental health (Rizzo et al., 2013; Villalobos, 2014) mothers often receive encouragement for these individualist strategies (Reich, 2016a, p. 18). This positive

reinforcement functions to reassure them that they are, in fact, making the “right” decisions (Hays, 1996, p. 75).

In sum, we know that mothers are held responsible for their family’s health, are major consumers of health information online, and frequently participate in online support groups. These use patterns are frequently associated with positive experiences, including feelings of support and patient empowerment. However, the question of whether and how participation in such groups might come to influence health-related beliefs and behaviour remains under-investigated.

### **Facebook and Health**

The growth in anti-vaccine sentiment around the globe, which is frequently linked to maternal views on immunization (Gross et al., 2015; Reich, 2014), is a case study in how mothering, health, and the internet have become increasingly intertwined. In March 2019, the case of Ethan Lindenberger garnered the attention of senators in the United States, as the 18-year-old was called to testify about his decision to be vaccinated as an adult. Lindenberger explained that his mother had obtained vaccine information from only one source – Facebook. He noted during his testimony, “I feel like if my mom didn’t interact with that information, and she wasn’t swayed by those arguments and stories, it could’ve potentially changed everything...My entire family could’ve been vaccinated” (Brice-Saddler, 2019).

Facebook is the most popular social media platform in the world, with over 2.3 billion users worldwide in 2019. Anti-vaccine activists are active on social media, and platforms such as Facebook have been identified as key avenues through which anti-vaccine messages and misinformation are distributed (Kata, 2011; Smith & Graham, 2017). One possible explanation

for the surge in vaccine-related misinformation relates to the formation of “echo chambers” online, which have been well-documented around political interests (Schmidt et al., 2018). The echo chamber thesis suggests that polarized groups form when users consume information that aligns with their beliefs while ignoring dissenting views, and that algorithms intensify this effect by driving users to content that they are more likely to consume (Del Vicario et al., 2016). While echo chambers have been speculated to have widespread political effects, including deepening users’ political views (Sunstein, 2018), some have questioned their real impact, arguing that people consult a wide range of sources to inform their political opinions (Dubois & Blank, 2018). When it comes to health matters, however, echo chambers remain notably under-researched.

Studies of Facebook and health are also limited. It has been argued that because of its network structure and the ability to send targeted messages to specific users, Facebook could be a valuable tool for health promotion (Capurro et al., 2014). As a result, many public health organizations now use Facebook to share messages (Kite et al., 2016). Despite this, little research has investigated how consuming health-related information on Facebook impacts beliefs or behaviours. Studies of the vaccination issue have speculated that Facebook groups could lead to shifts in beliefs (Hoffman et al., 2019; Schmidt et al., 2018); however, most research on this topic tends to rely on unobtrusive methods (such as content analysis and sentiment analysis), which are unable to validate the experiences of users or assess impacts on “offline” decisions.

Despite a lack of scholarly evidence on this matter, Facebook has faced criticism for “enabling the anti-vaxers” (Garcia, 2019), and subsequently took measures to prevent anti-vaccine advocacy in early 2019, including limiting the appearance of anti-vaccine groups in the search feature as well as restricting their ability to advertise (Facebook, 2019). However, these

measures cannot address the sharing of anti-vaccine content in other ways, such as through the sharing of links, images, or stories on individual pages or in Facebook groups, in comments, discussions, or private messages.

To my knowledge, there are no existing studies examining the health-related impacts of Facebook use that compare observational findings with user experiences. Therefore, in combining ethnographic observations with discourse analysis and interviews, this research represents a novel methodological approach to this problem, providing important data for scholars, showing how participation in groups influences maternal health beliefs and decisions.

## **Methods**

This research draws from 18 months of internet-based ethnographic research that explored discourses of health, medicine, and science among mothers in diverse online spaces. Internet ethnography is a qualitative approach to understanding internet-based social life, and definitions and methods vary (Boellstorff et al., 2012; Hine, 2017). This study took a similar approach as that taken by Fox, Ward and O'Rourke (2005), by triangulating observation data with discourse analysis and interviews. The study was approved by the University of Ottawa Research Ethics Board (REB) in November 2017.

The study focuses on two key Facebook groups: one that promotes science-based parenting, and another, that promotes natural living. These were selected for several reasons. First, these groups roughly correspond to broader discursive debates around evidence-based medicine (EBM) and complementary and alternative medicine (CAM) (Timmermans & Oh, 2010). Second, although “science-based” and “natural” are not necessarily oppositional concepts, public debate around more controversial health issues (such as vaccination, breastfeeding, and

genetically modified organisms) tend to present what is “natural” in opposition to what is “artificial” (Brunson and Sobo, 2017; Reich, 2016b). Vaccines and formula, for example, have been presented as “against nature” (Dubé et al., 2015, p. 415; Martucci & Barnhill, 2016). Thus, while “natural” and “artificial” are false dichotomies, the tendency for public discourse and maternal narratives to view them as binaries, particularly with respect to the vaccination debate (Reich, 2016b), provides a useful starting point for examining diverse perspectives around health, medicine, and science. Third, in their promotion of specific information (either “science-based”, or “natural”) to the exclusion (or contempt) of alternative views, the primary groups examined may be considered internet echo chambers, formed around shared ideological interests. Finally, practice of sampling from contrasting or diverse cases, generally known as variation sampling, or the cross-contextual approach, is argued to produce more generalizable findings than analyses of homogeneous cases (Robinson, 2013).

I carried out the research in the two primary groups over a period of 18 months between January 2018 - June 2019. I was already a member of the groups prior to planning the research. The groups were open for anyone to join, and each had over 6,000 members at the time the research began. I engaged in daily participant observation, reading dozens of posts each day, taking notes electronically and by hand. Only posts related to health were collected, and I abstained from participating in these threads. Using Nvivo, I coded field notes and discussions thematically (Braun & Clarke, 2006) and inductively as inspired by grounded theory (Charmaz, 2006). To more closely examine the linkages between discussions in the space and overarching ideologies and discourses (van Dijk, 1999), I also conducted a critical discourse analysis of 308 posts sampled from a 5-month period across the two groups, which I ceased once data saturation (informational redundancy) was reached (Saunders et al., 2017).

In Phase 1 of the research, I employed a retroactive consent process, which can be justified in minimal risk internet research (Eysenbach & Till, 2001) and was supported by my institution's REB. Although advance consent is preferable, obtaining complete, informed consent in fluid, densely populated online spaces (6,000+ members) is both impractical and virtually impossible (see the American Sociological Association Code of Ethics, 2018, Section 11.1(c)). When it was desirable to use a direct quotation or a story that could be attributed to a specific person, I attempted to contact the person by private message to debrief them on the study and request consent. No one declined to provide consent. Where consent was not obtained due to non-response, the quotation was either excluded, paraphrased, or summarized. I took several additional measures to protect confidentiality, including assigning pseudonyms, obscuring the names of the groups, and excluding any identifying information that could be used to identify either the groups or their members.

In Phase 2, I conducted in-depth interviews with 29 mothers (science mothers n=14; natural mothers n=15) from Canada and the United States, who were recruited from the two primary groups as well as from three external, comparable groups. Participants were recruited through administrator-approved posts in the groups as well as direct messages to active members asking if they would like to participate. Information about the project was provided through the official invitation, project overview and consent forms and through question and answer. All participants provided informed consent. Interviews were conducted primarily over the phone and typically lasted 1-1.5 hours. The interviews were transcribed, then coded inductively and thematically, using a grounded, constant-comparative approach (Charmaz, 2006). I ceased recruitment once theoretical saturation was reached (Saunders et al., 2017). It should be noted that while the interview focused on their involvement in the science and natural groups where

they were recruited, mothers were also encouraged to discuss other Facebook groups. In the write-up, mothers are identified by a pseudonym, their age, self-reported ethnicity, country of residence, and recruitment group (from either a science group or a natural group). A full table of participants is included in Appendix H.

## **Findings**

Analysis revealed that mothers participating in these groups reported shifts in their beliefs and behaviour around four key areas: (1) health-related knowledge, (2) trust in the healthcare system; (3) health-related advocacy; and (4) vaccine decisions. Generally speaking, mothers belonging to natural groups saw their views and behaviour shift towards more “natural approaches”, while mothers belonging to “science-based” groups often saw their beliefs in science and medicine strengthened, supporting echo-chamber polarization theories (Sunstein, 2018). To explain these shifts, I introduce the concept of “siloes health learning”, which captures the ways in which both the content and the social nature of such spaces shape maternal health beliefs and behaviour.

### ***Health-related knowledge***

Generally speaking, mothers view Facebook groups as useful sources of information about health. Of the 29 mothers interviewed, 28 (97%) reported or described learning health-related information in Facebook groups. This was true regardless of whether they were “lurkers” or regular participants. Further, mothers expressed learning information that aligned with the group’s ideological focus. Mothers belonging to natural groups were more likely to report learning about alternative medicine, therapies, and treatment options, and to emphasize natural products, food, and home-cooked meals. Jen, a 32-year-old white mother from Canada (natural group) explained that she had learned “lots of things”: “I’ve learned information about

vaccines.... I've learned just about different books... recipes and health... I've learned about like products like food, cleaning products and body care products.” Likewise, members of the science group reported learning information that was primarily “evidence-based”. Nina, a 37-year old Jewish mother from the United States (science group), explained that she had learned a wide range of health-related information, including information about vaccines, childhood illnesses, insect repellent, and when to use fluoride. She described these as “very practical things, but from a very evidence-based stance.”

Mothers from science groups did not report learning any “natural” health information, and mothers from the natural groups rarely reported learning “evidence-based” information (with some exceptions, discussed below). This is unsurprising given that both groups regularly disparage contrasting approaches. In the science group, “natural” approaches to health and parenting were frequently criticized and even ridiculed. This kind of overt derision was not present in the natural group, but specific practices (such as vaccination and the use of pharmaceutical products), were treated with both subtle and blatant disapproval. The normative nature of polarized online spaces is an important element in the social shaping of siloed health learning in the groups.

In addition to general health knowledge, mothers also described learning “tacit healthcare knowledge”; that is, information on how to navigate the healthcare system and negotiate relationships with doctors and other healthcare providers (Foster, 2016). This, too, was shaped by the group’s ideological focus. In the science group, evidence-based medicine (EBM) was valorized, and the group frequently discussed evidence-based health guidelines and strategies for locating providers who practice EBM. In contrast, posts in the natural group frequently valorized complementary and alternative medicine (CAM) practitioners while denigrating or criticizing

“mainstream” or “Western” medicine. While “regular” doctors were sometimes framed as “necessary”, members often expressed reluctance about seeing them, and were encouraged to shop around for alternative practitioners. Rose, a 37-year-old white mother from the United States (natural group), explained how the group had reinforced the idea that she ought to try natural approaches before looking to medicine: “It's definitely changed my views on seeking Western medicine help before trying some type of a natural remedy first.”

Despite the denigration of contrasting approaches, the majority of mothers interviewed felt positive about information they had learned in the groups. Several reported a sense of empowerment in making certain choices or in advocating for their views. Kathleen, a 35-year old white mother from the United States (science group) explained that she learned evidence-based guidelines for managing polycystic ovarian syndrome. In doing so, she was empowered to seek out a second opinion when a physician offered her advice that was not evidence-based:

It's actually made me a calmer and happier person. Actually, probably because of the group, I am much better at advocating for myself in healthcare situations, because I have that source of information, I can go to, or I can talk about it, and I know that I can advocate, I can ask for things to be done differently.

In providing mothers with a continual stream of “natural” or “science-based” information, supplemented by normative framings, groups offer mothers specific and ideologically shaped siloed health information. While mothers generally find this information empowering, their learning in these spaces is limited and shaped by discourses in the group that valorize certain approaches while denigrating others. In emphasizing one approach over another, groups encourage consumerist approaches that compel mothers to “do their research” and “shop around” until they find a practitioner that aligns with their ideological position. The additional time and energy spent information-seeking and “shopping around”, which adds to mothers’ already heavy “load”, is scarcely discussed (Villalobos, 2014).

### *Trust in the healthcare system*

“Shopping around” for a healthcare provider is not uncommon. People often look to CAM when they are dissatisfied from the care they receive from “mainstream” medicine (Fox et al., 2013). However, mothers in this study, namely those in natural groups, shared stories about how groups caused them to lose trust in the medical system. This is unsurprising given that in the natural group, it was common for members to frame mainstream medicine as untrustworthy and motivated by profit, with individual physicians frequently portrayed as dismissive, pushy, or incompetent. While the general stance in the natural group was that medicine “has its place”, members occasionally encouraged one another to disregard medical advice. For example, a thread on children’s diet was met with statements such as “doctors aren’t trained in nutrition”. As one mother noted, “part of living naturally is not always listening to medical professionals blindly and seeking better opinions.” In such cases, alternative practitioners were often framed as “better”, less “pushy” and more “holistic” than medical providers.

Jen (natural group) explained how the group had caused her to question the medical advice she received around her anxiety diagnosis:

I just feel like before I just kind of went with whatever the medical care system would tell me to do. You know, I trust my doctor. But being on that group has kind of actually lessened my trust in the healthcare system. And it's been a good thing and a bad thing. I kind of learned that it's not always the end. Whatever the doctor said, that's not always the end of it. Like you don't have to keep suffering. You can keep digging. And sometimes you can find resolution through going the natural route and seeing a naturopath. So, it's benefited me in that way. But then it's also disadvantaged me because it's made me have less trust in the doctors.

As she spoke about her experiences, Jen seemed to wrestle with the idea that if she had trusted her doctors, perhaps she would be feeling better:

I think that if I had just trusted my doctors, I probably wouldn't be this deep in my anxiety...But because I have this lack of trust in the healthcare system now, it just gives me a lot more anxiety. Because I feel like I'm not taken care of. Like I have to advocate for myself, and that's kind of scary.

Describing the experience as “overwhelming” and “stressful”, Jen’s account reveals how the discourses of lack of trust in the healthcare system alongside consumerist approaches that advocate that patients “keep digging” may add both time and emotional work for mothers.

Likewise, Victoria, a 44-year old white mother from Canada (natural group), who struggled with Lyme disease, described how her views of medicine had been “sour” by the group:

It's hard not to join the discontent about how Lyme patients are treated, specifically in Canada. So unfortunately, [the group] has enhanced my level of sour because I've heard so many stories from people who've been totally stonewalled and ridiculed and harassed, and I haven't had those really really negative experiences, but I've heard it now so many times that it sort of reinforced my thinking that Lyme patients just really get the short end of the stick.

It is interesting to observe that Victoria felt her views shifting even though she had not personally had this experience. Simply hearing about others’ negative experiences was enough to “sour” her towards the medical system.

Conversely, in the science group, members generally saw their beliefs in science and medicine strengthened; however, this was generally tempered by the recognition that the practice of medicine has its fair share of problems. Specifically, members discussed issues of sexism and discrimination in medicine, as well as the occasional tendency for doctors to practice in ways that were not “evidence-based”. Unlike in the natural group, problems with individual doctors were not understood as symptomatic of the failure of the system as a whole. In interviews, several members expressed ambivalence about the medical system. Breanna noted, “I have mixed feelings about it. I'm glad that it exists. I am glad that many of the tools that we have exist that have come out of it. I think that it is often discriminatory and I think it's deeply problematic how profit-driven it is in the United States. But, like I said, I tend to try to treat it as a tool.”

Elizabeth, a 30-year old white mother from the United States, similarly pointed out, “the ideas

and concepts behind Western medicine are good, but the practice isn't always perfect...People are fallible. The science is there, but the people cannot do it quite right”.

Within both groups, mothers seemed to recognize, at least to some extent, that they joined these groups because they were, perhaps, seeking information to validate their own experiences with the healthcare system. Siloed health learning, which proffers both informational and social support, reaffirms that mothers are doing it “right” (Hays, 1996, p. 75). As Lisa, a 37-year-old white mother (natural group) explained,

I think [the group] probably reaffirms my views as one of those selective attention bias type things, where I feel kind of skeptical and dissatisfied with the medical system and the knowledge of western trained medical professionals in general. And so, being in that group kind of affirmed that, ‘Oh yeah, I'm not the only one who feels that way.’

### ***Health-related advocacy***

The potential for social spaces to erode member trust in medicine has real consequences in shaping how patients interact with medical professionals. The acquisition of information and social support for advocacy in medical encounters emerged as another theme indicative of siloed health learning. This frequently took the form of information, coaching, and scripts.

Several mothers reported bringing information from Facebook groups into their medical appointments. Denisha, a 27-year-old black mother from the United States (natural group), described learning about birth-related practices in the group, and how her learning had shaped conversations with her doctor about her birth plans. Similarly, Adhira, a 34-year old South Asian mother from the United States (science group), explained that she had sought out a specific group for children with clubfoot to help learn about her son’s condition. In doing so, she came across articles that she would bring to her doctor’s appointments: “Sometimes I happen to see an

article [in the group] that [my son's doctor] hasn't seen yet and I'll share it with him and we'll talk about it, what it could mean for my son's treatment.”

In some cases, members used information learned in groups to challenge their physicians, particularly when medical advice did not align with EBM or authoritative guidelines. Amna, a 36-year old South Asian mother from Canada (science group), explained that she had learned in the group that three different doctors had given her incorrect advice about her son's reflux condition. After the group members had provided her with reports from the American Academy of Pediatrics (AAP) and the Canadian Pediatric Society (CPS), Amna recalled feeling frustrated and resistant, even getting into an argument with the group moderator about the issue: “I'm like ‘Well, I had three pediatricians, are you telling me they're all wrong?’ How could they be wrong? They're my doctors. Then, meanwhile, I see the data myself, I read the guidelines, and I'm like oh, shit, they were all wrong. All three of them.” In using the science group as a resource for evidence-based guidelines, Amna was empowered to hold her physician accountable and demand evidence-based care. Similarly, Nina (science group) described how she had learned that her pediatrician had provided her with “wrong” advice about safe sleep. Using information from the group, Nina “confronted” her pediatrician about it: “She looked at us like we were crazy.” They found a new physician.

Mothers from the natural groups also occasionally relied on authoritative or evidence-based guidelines to advocate in medical encounters, but only when it supported their ideological stance. Evidence on the effectiveness of vaccines, for example, was frequently ignored and/or superseded by non-evidence-based sources (for example, anecdotes, YouTube videos, memes, and blog posts). Yet, when such information could be used to support “natural” parenting practices, it was sometimes espoused. Valerie, a 37-year old white mother from the United States

(natural group), described how she had used information from a Facebook group to “educate” her physician, who attempted to retract her child’s uncircumcised penis. She explained, “I told her no. Please don’t do that. I encouraged her to go read the new information released from [the AAP] because they are not pushing for retraction.” This strategic use of clinical and/or EBM guidelines reflects the recognition, even amongst some natural-minded mothers, that appeals to evidence-based authorities are effective in the negotiation of medical care.

In addition to being supplied with health-related information, members were also empowered by coaching-type advice (“Here’s what you need to do...”) as well as scripts (“Just say...”) to be used during medical interactions, which often relied on a rhetoric of “consent”. I witnessed several occasions in the natural group where members provided coaching and scripts geared towards the parent’s “right to choose” about vaccines. This was supported by participants’ accounts. Connie, a 36-year-old Native American mother from the United States (natural group), shared:

I read a little bit of one [post], and the question was vaccination: “I feel like I was fear-mongered. I feel like I was bullied into giving my baby shots. What do I need to have next time I present at the doctor’s office so that they know I’m serious and I don’t want my baby to have shots?” And there were all these women that came in and said, “This is the form you need,” or, “Talk to your pediatrician about this,” or “Tell me where you are, I may know of a pediatrician that’s more holistic or can put you on a schedule that would put your mind more at ease.”

Here, the mother received validation for her experience, as well as information, advice, and coaching to help her avoid vaccination for her child.

Similarly, in the science group, a member asked for suggestions on how to approach her OB-GYN about a tubal ligation. She explained that the physician was previously unwilling to discuss it and suggested her husband should have a vasectomy, instead. While vasectomies are generally understood as less invasive (White et al., 2006), the science group emphasizes bodily autonomy. A member replied:

Don't be afraid to push for what you want. Yes, vasectomies are less invasive, but that isn't your body or your decision [sic] to make. State that to the doctor if they try that route. Tell them that you only have the right to make decisions over your own body and this is the decision [sic] you are making. If they try to bring in shit about partners or more children just keep saying, "This is my body and my decision."

Through coaching and a script, the member was empowered to enter into a new discussion with her doctor about her goals, and emerged successful in arranging a tubal ligation.

Thus, both sets of groups offer information, coaching, and scripts for members to be used in negotiating medical care. This combination of social and informational support is distinct from information available on general websites (such as MayoClinic, WebMD, etc.). These tools are therefore an important part of the package of siloed health learning that can, and does shape the trajectory of medical encounters and decision-making.

### ***Vaccine information & advocacy***

The potential for siloed learning to shape health beliefs, decisions, and advocacy is clear when exploring mothers' experiences around vaccination. In the science group, mothers often felt that discussions in the group reinforced their belief in the importance of immunization. Lee, a 36-year-old white mother from the United States (science group) explained, "If anything it's really confirmed or made [my belief in vaccines] stronger." The strengthening of these beliefs, in conjunction with information about immunization schedules, affirmed the importance of keeping up to date on vaccines, and occasionally prompted mothers to have their children vaccinated early. Jocelyn, a 28-year-old white mother from the United States' (science group), became concerned about the measles outbreak in early 2019: "I went to my doctor and I said, "Hey, this measles scare going around in Portland, do I need to vaccinate early? I saw on this group that I could do that."

In the natural groups, however, mothers were more likely to report a shift towards vaccine hesitancy and uncertainty, and frequently drew on their learning in Facebook groups in explaining this shift. Rose, a 37-year-old white mother from the United States (natural group) explained how her changes in her beliefs on vaccines were spurred by her participation in a natural birthing class and its corresponding natural mothering Facebook group:

Being in that natural mom group and birthing class...everyone was talking about [vaccination] and questioning it more and more...They were discussing everything from not vaccinating at all and using homeopathic remedies to vaccinate with...We all started talking more and more and then that led me to joining other groups...and through those groups I was introduced and given tons and tons of articles and documentaries to watch and to get more information from and to educate myself.

Using information from the groups, Rose brought an alternative vaccination plan to her medical appointments and negotiated a delayed vaccine schedule for her child. Likewise, Valerie (natural group) also described how she had learned in the natural group that her daughter's eczema might have been exacerbated by vaccines: "I presented that information to the doctor about possible the ingredients inside the vaccine as what is causing an exaggerated immune response. We both decided, I convinced her, and she signed off on it... that she was going to be delayed vaccine."

Mothers also drew on coaching and scripts to help them advocate for their vaccine beliefs. Amanda, a 34-year-old white mother from Canada (natural group), joined the natural group in order to learn how to "do better" for her daughter. In doing so, she regularly witnessed discussions in which members questioned the manufacturing, administration, and safety of vaccines. Gradually, she saw her own views changing, and while she had vaccinated her daughter up until 18 months, eventually decided to abstain from future vaccinations. Amanda described how her decision to stop vaccinating her daughter had been a stressful one for her. Even though she felt that not vaccinating was "protecting" her child, she often second-guessed

her choice and felt she had to “defend” it to others. She explained that being a part of the natural group had empowered her to know that she was not alone in this decision, since others were also avoiding vaccines: “I feel comfortable knowing that I don't have to vaccinate my daughter if I don't want to.” In addition, members provided her with scripts and coaching, which were helpful in avoiding conversations about vaccines and limiting criticism from others. I asked Amanda what she liked about one of the scripts, and she explained:

It just was really empowering. And it was just no nonsense, “This is none of your business. You don't need to ask me. This is what's best for me and my family.” And so, hearing people talk like that really makes me feel a lot more empowered to be, like, “You know, it really isn't any of your business. And I don't need to get into it.”

## **Discussion and Conclusion**

The current moment demands that mothers are increasingly attuned to all aspects of their children’s social, emotional, and physical well-being. At the same time, parenting has become a more individualized project, which means that mothers often feel alone when it comes to knowing what to do. While the mothers in Hays’ (1996) study turned to friends, family members, pediatricians, caregivers, and books about child-rearing, today’s cohort of mothers incorporate the internet and online groups as sources of information and support. Faced with increased pressure amid a “landscape of choices” (Reich, 2016b, p. 109), the internet is an appealing and readily-available source of information and advice for navigating parenting and health-related matters. Online, mothers find solace in Facebook groups of like-minded people, where they receive information and social support that reassures them that they are doing things “right”.

Most mothers I spoke with feel positive about their involvement in Facebook groups, empowered in their connection to like-minded mothers who frequently validate their choices. In

contrast to strictly informational online platforms such as WebMD, social spaces simultaneously fulfill the need for mothers to receive reassurance about their views while also providing customized information to support health-related decision-making. In serving as a source of social, emotional, and informational support, these groups may indeed dampen some of the anxieties of intensive mothering.

However, when mothers join Facebook groups that are selective, ideologically oriented “echo chambers”, they may be exposed to siloed health learning – ideologically-driven information and social discourses – that can shape their beliefs and decisions. In this study, mothers belonging to natural groups come to valorize natural approaches and CAM, learn methods for “living naturally” and see problems with the medical system spotlighted. In contrast, mothers belonging to science groups learn evidence-based clinical guidelines and see CAM derided. In delivering a continuous stream of ideologically driven information and social support (including coaching and scripts), such groups encourage mothers to make ideologically driven healthcare choices. In doing so, they reinforce mothers’ beliefs and affirm to them that these decisions are the “right” ones, even if, perhaps, they are not. Furthermore, while both groups empower members to ask questions and make demands of healthcare providers, they also increase demands on mothers by promoting a consumerist, individualized approach to healthcare, adding work to an already heavy “motherload” (Villalobos, 2014).

To be clear, I agree with Hays (1996) that mothers are agents, not easily influenced “automatons” (Hays, 1996, p. 95). Rather, I suggest that the social and persuasive nature of such spaces, in conjunction with the selective, ideologically charged information they offer, render them highly influential for *some* users, albeit in different ways. While nearly all participants reported some level of health-related learning, not all experienced dramatic changes in their

beliefs. Most commonly, mothers in this study felt that the views they already held were simply strengthened by their participation in such spaces. This supports Hays' (1996) assertion that "in order for advice to serve successfully as reassurance, it must to some degree match the practices and beliefs of the advice-seeker" (p. 75). However, I argue that the patterns observed here do reflect contemporary, digital methods through which mothers "sort through the mail of available child-rearing ideas" (p. 95) to confirm what they believe to be the "correct" way of doing things, and in doing so, are empowered to make decisions that they might have not otherwise.

These findings reveal a great deal about how participation in Facebook groups can shape healthcare beliefs and decisions. In a climate of increasing vaccine hesitancy, this research helps us to understand the mechanisms through which internet activity informs and shapes medical interactions and decisions. Given this, health and internet researchers should continue to unpack the nature of siloed health learning online and its impacts on health beliefs and behaviours more broadly; for example, incorporating questions probing involvement in online groups in health-related surveys. Future research should consider how participation in echo chambers might scale up epidemiologically in the "social shaping" of population health (Link, 2008). These findings implore us to develop tools and standards for a new social media health literacy, which can be applied by users to reflexively consider how they use groups and consume information on the internet. While, due to space constraints, this paper cannot address issues of health-related misinformation on social media, recent research (Wang et al., 2019) suggests that this very real and related problem also warrants further attention. Finally, although popular narratives tend to treat echo chambers and "mom groups" with skepticism and derision (Strauss, 2018; Zadrozny, 2019), scholars would do well in turning towards these groups analytically as major players in the contemporary "information ecology" (O'Neill, 2017).

## **Chapter 4: “Just to keep my thoughts good”: Digitally-mediated emotion management and ideological reinforcement among mothers on Facebook**

### **Abstract**

While the psychological impacts of “intensive mothering” are well documented, we know less about the technological strategies contemporary mothers use to cope with these anxieties as they try to “do it right”. Drawing on qualitative data collected through 18 months of digital ethnographic research, including observation and interviews with 29 mothers, I argue that mothers in this study engage in digitally-mediated emotion management by strategically using Facebook to alleviate anxieties relating to the performance of their maternal role. In joining groups that make them feel good and leaving groups that make them feel bad, these mothers “orchestrate” their Facebook experience in order to maximize positive feelings. I argue that this strategy brings mothers’ emotions closer into alignment with cultural expectations about how mothering “ought” to feel, while also contributing to ideological reinforcement around what it means to mother “correctly”.

## **Introduction**

Research on mothering has rapidly expanded over the last several decades, offering clear evidence that mothers experience considerable pressure in carrying out the expectations of contemporary mothering. Scholars have identified that cultural ideals around "intensive mothering" (Hays, 1996) negatively impact mothers, even if they do not personally subscribe to them (Henderson et al., 2016; Rizzo et al., 2013). While we know that these pressures produce negative psychological and emotional impacts, we know less about the strategies and tools mothers use to cope with these anxieties as they try to "do it right" (Hays, 1996). At the same time, research suggests that mothering is increasingly technologically-embedded, as mothers look to the internet and social media for information and support (Schoppe-Sullivan et al., 2017). In this article, I bridge these intersecting interests to ask: How do mothers use Facebook to cope with the anxieties of mothering?

Drawing from 18 months of digital ethnographic research, including participant observation, discourse analysis, and interviews with 29 mothers, I show that mothers in this study strategically seek out Facebook groups to ease anxieties related to the performance of their maternal role. In these groups, mothers receive information that supports their ideas of "correct" mothering while also receiving validation for making the "right" choices. I argue that in seeking out online groups that make them feel good, and avoiding groups that make them feel bad, mothers engage in a form of digitally-mediated emotion management (Hochschild, 1983). I posit that these tactics are part of the praxis of a digitally-embedded, contemporary iteration of intensive mothering, in which mothers look to Facebook for not only information and social support, but also as a tool to shape their emotional experiences.

## **Background**

### ***Intensive Mothering***

Nearly 25 years after Sharon Hays' (1996) foundational study, the ideology of "intensive mothering" continues to garner scholarly attention across a variety of disciplines. According to Hays, intensive mothering describes a vision of maternal care which sees it as child-centered, emotionally absorbing, time consuming, financially expensive, and views the mother as the ideal and primary caregiver (Hays, 1996). Increasingly, the "doing" of mothering also means working outside the home, with a substantial increase in the percentage of American mothers in the labour force, from 51% in 1968, to 72% in 2018. Despite such demographic changes, mothers are also spending more time than ever with their children (Damaske, 2013). Cultural pressures encourage middle class mothers, in particular, to practice a "concerted cultivation" approach to parenting, which sees the parental role as critical in fostering children's skills and aptitudes (Lareau, 2003).

Yet, scholarly research consistently finds that mothers' ability to enact intensive mothering is constrained, particularly for those marginalized by race and class (Elliott et al., 2015; McCormack, 2016). However, while experiences of motherhood vary widely according to divergent maternal standpoints, research indicates that ideologies of intensive mothering remain remarkably consistent across racial and class lines, to the extent that even mothers who do not personally subscribe to intensive mothering beliefs often feel pressured to conform to them (Chae, 2014; Elliott et al., 2015; Henderson et al., 2016; McCormack, 2016). Other research has found that mothers may modify their endorsement of these beliefs according to their ability to attain these ideals (Walls et al., 2013). Regardless, it is clear that intensive mothering remains the dominant ideological model in North America, exerting strain on mothers, even when they reject its tenets (Henderson et al., 2016).

Part of this strain is linked to the expanded realm of maternal responsibility. In the context of neoliberal reforms and the advent of the ‘risk society’ (Beck, 1992), maternal responsibilities have widened beyond the basic duties of healthy child-rearing to include the management of long term social, emotional, and economic outcomes, and to anticipate and mitigate children’s exposure to a wide range of political, economic, health, and environmental risks (MacKendrick, 2018; Reich, 2016a; Villalobos, 2014). Recent work has identified discourses of intensive mothering in empirical work on diverse topics including infant feeding (Afflerback et al., 2013; Lee, 2007; Wolf, 2013); children’s physical activities (Stirrup et al., 2014); vaccination (Reich, 2016a); and even prenatal chemical exposure (MacKendrick & Cairns, 2019). Scholarship in this area emphasizes the moral dimensions of these decisions, where the failure to do things “correctly” is frequently interpreted as wholesale maternal failure (Lee, 2007). Paradoxically, while such pressures negatively impact mental health (Rizzo et al., 2013; Villalobos, 2014) mothers often receive encouragement for such individualist strategies (Reich, 2016a, p.18). This positive reinforcement reassures mothers that they are, in fact, making the “right” decisions (Hays, 1996, p. 75).

### ***Mothering and the Internet***

One of the ways mothers attempt to discern “right” from “wrong” is by investing massive amounts of time and energy into “doing research” (Hays, 1996). In Hays’ study, mothers looked to experts, media, and face-to-face reference groups for indicators on what constitutes “good” and “bad” mothering (Hays, 1996, p. 88). Subsequent research has identified that ideologies around what makes a “good” mother are often shaped by historical and social position (Elliott et al., 2015; Johnston & Swanson, 2006; Rippeyoung, 2013). Yet, a growing body of research

indicates that mothers increasingly now look to the internet for guidance on how to raise their children (Dworkin et al., 2013; Lagan et al., 2010; Pandey et al., 2003; Zadoroznyj, 2001; Zaslow, 2012) as well as for validation of their maternal performance (Chae, 2014; Schoppe-Sullivan et al., 2017). Use of Facebook, in particular, has been found to increase in the transition into parenthood, as mothers look to the platform “to seek support for their mothering activities and as a platform to show the world that they are fulfilling their maternal roles” (Johnson, 2014; Schoppe-Sullivan et al., 2017, p. 277).

The appeal of the internet is clear. Unlike pediatricians or other childrearing experts, the internet is always available. The costs of using internet, in contrast to other forms of soliciting expertise, are low. Social Networking Sites (SNS), which enable the formation of "online communities", are particularly attractive for mothers, opening up new pathways for social support and allowing mothers to acquire an online "village" in lieu of, or in addition to, their offline support networks (Pedersen, 2016). Their structure typically encourages connection between people who share similar attributes, especially those who share the same values and beliefs (Bakshy et al., 2015; Boutyline & Willer, 2017). Some have raised concerns that internet algorithms, alongside user preferences, have led to the formation of online “echo chambers” (Sunstein, 2007), where users are selectively exposed to content that they agree with to the exclusion of alternative perspectives. The risks of echo chambers include the spread of misinformation as well as ideological polarization, which can have a wide range of consequences for matters of health and politics, among other realms (Del Vicario et al., 2016; Schmidt et al., 2018).

Despite these potential challenges, the role of the internet seems firmly entrenched in the lives of North American mothers. Wilson and Chivers Yochim (2017) propose the concept of the

“digital mundane” to describe how digital media “hum in the background” as a “machinery” of everyday life (p. 16). They describe how “digital entanglements” are “where sensibilities are shaped, worked on, intensified, assuaged, and attenuated” (Wilson & Chivers Yochim, 2017, p. 17). In providing social support, digital entanglements can be considered affective networks that can be “profoundly comforting” to mothers. Evidently, such digital entanglements offer many informational and emotional benefits to mothers. Yet it is unclear how, exactly, mothers leverage these platforms to reap such benefits, particularly given broader concerns about the potential negative social and psychological impacts of social media.

### ***Internet, Mental Health, and Emotions***

Despite the fact that research findings are overall mixed, media attention on social media tends to focus on the negative impacts of use. A cursory news search will yield headlines that explicitly proclaim their negative impacts; for example: “Six ways social media negatively affects your mental health,” and “New studies show just how bad social media is for mental health”, yet the evidence is more nuanced. Generally speaking, research suggests that the impact of social networking on mental health seems related to both the quality and the quantity of usage (Baker & Algorta, 2016). When it comes to the *quality* of use, studies indicate that although casual or “routine use” is associated with positive mental health, a stronger “emotional connection” to one’s social media use (that is, fear of missing out, feelings of withdrawal and sadness, and so on) is linked to adverse mental health outcomes (Bekalu et al., 2019). Several studies have noted that the tendency to engage in social comparison is linked to depression symptoms, as are other specific behaviors that lead to “rumination” (Baker & Algorta, 2016). In terms of the *quantity* of use, studies have found that more time spent on SNS is associated with symptoms of depression

and anxiety (Baker & Algorta, 2016). However, it is speculated that this is because people with social anxiety may use the internet as an alternative to face-to-face interaction (Caplan, 2010).

When it comes to emotions, research using sentiment analysis has shown promise in identifying patterns in mood changes among SNS users. One study examining Twitter posts was able to identify mothers at risk of PPD with 70-80% accuracy (De Choudhury et al., 2013). Researchers have also mapped the movement of emotions within and across social networks. Bollen et al. (2011) found that social media posts accurately and almost immediately reflect changes in “public moods” that relate to social, political, cultural and economic events. Brady et al. (2017) found that emotions, particularly those related to moral issues, spread rapidly across in-group ideological networks more than out-group networks. Similarly, in a controversial, covert emotional manipulation experiment by researchers at Facebook, it was discovered that “emotional states can be transferred to others via emotional contagion, leading people to experience the same emotions without their awareness” (Kramer et al., 2014, p. 1). Few studies have investigated the extent to which users *strategically* use social media to manage their emotions. Those that do have tended to focus on “problematic” or “pathological” internet use individuals who might otherwise be conceived of as “Internet addicts, computer-mediated communication addicts, and computer junkies” (Beard & Wolf, 2001, p. 378; Caplan, 2002). Such research has found that individuals with poor emotional regulation abilities (“deficient self regulation”) may turn to such platforms as a means to regular their mood; that is, to “cope with or escape from problems or feelings” (Caplan, 2002, p. 568).

In sum, the research on SNS use, mental health, and emotions is promising, but gaps and weaknesses remain. Specifically, studies tend to frame emotionally affected users as unaware, and even pathological in their use. Given the extent to which digital entanglements come to

shape maternal realities (Wilson & Chivers Yochim, 2017), should mothers be considered “pathological”? On the contrary – we must be careful in applying findings drawn from pathological populations to describe maternal experiences. Research seems to suggest that when new mothers participate in virtual communities, they experience an increase in social capital through emotional support, the provision of information, and community-building (Drentea & Moren-Cross, 2005). This is likely due to the fact that early motherhood is a time when many mothers experience high levels of social isolation. As such, SNS might serve different purposes during the years of early motherhood than they do for other users. This study provides insight into the specific tactics some mothers use to leverage their Facebook use in order to strategically shape their emotional experiences.

### **Theoretical Framework: Emotion Management**

It is broadly recognized that maternal work involves not only the accomplishment of gendered tasks, but also “emotional work” around the maintenance of a happy household (Arendell, 2000; Collins, 2016; Hochschild, 1983). For instance, despite the fact that empirical research suggests that family life is increasingly fraught with guilt, stress, and anxiety (Gunderson & Barrett, 2015; Henderson et al., 2016), a mother is expected to “cheerfully” meet the needs of her children – “even when her mind tells her otherwise”, and to be “strong” and foster mental and emotional resilience in her children to protect against racism and other “bad things” in the world (Elliott and Reid, 2016; Hays, 1996, p. 56-57; Ruddick, 1995; Villalobos, 2014). In the neoliberal context, the maternal propensity to create good feelings extends into other realms, when mothers take on the “intimate work” of “quelling” anxieties in the family unit and emotionally “protecting” their families from economic, social, and political insecurity (Villalobos, 2014;

Watson, 2016). As Ouellette and Wilson (2011) aptly note, “Women may now be addressed as equal – and equally accountable – citizens, but they are still called upon to ‘naturally’ perform the affective labour that holds families together and makes strategic individualism possible” (p. 556). Popular self-help texts and gurus, such as Dr. Phil, seek to “empower” mothers, directing them to make “small, deliberate modifications in the way [they] live” as part of the “self-work” towards the achievement of stable marriage and family life (Ouellette & Wilson, 2011).

Affective, or emotional work, is part of this maternal labour.

Sociological theories of emotion work tend to rely on two primary definitions. The first, spearheaded by sociologist Arlie Russell Hochschild (1983), locates emotion work in processes of managing the emotions of "self". According to Hochschild, individuals engage in *emotion management* by adjusting their feelings to match the "feeling rules" (that is, social norms about emotions) expected in a given situation. In adjusting their feelings, individuals may engage in surface acting (putting on a "happy" face), or deep acting (adjusting one's thinking, body, or outward expression so that emotions feel true) (Hochschild, 1983). When, in the context of paid work, employees are expected to engage in surface or deep acting, emotion management may be conceived of as *emotional labour* (Hochschild, 1983). Scholars have also argued that we also ought to consider how individuals manage the emotions of "others" through processes of *interpersonal emotion-management* (Thoits, 1996).

In this study, I am concerned specifically with *emotion management* as it relates to the maternal role. While Hochschild's (1983) study focused primarily on the internal, cognitive strategies to manage emotions, this research argues that emotion management is a process that can be externally mediated by digital technologies. I argue that mothers strategically use Facebook as a tool to locate good feelings, bringing their mood to match the feeling rules of

idealized mothering. I argue that doing so is another way in which mothers “stabilize” their families in a context of relative insecurity (Wilson & Chivers Yochim, 2017).

## **Methods**

This research draws from 18 months of qualitative data collected from January 2018 to June 2019 as part of a digital ethnography investigating maternal use of Facebook use for health information. The study was approved by the University of Ottawa Research Ethics Board in November 2017. The research focused on two groups which present divergent perspectives on mothering and health: one group self-identified as a “science-based” parenting group, while the other as a “natural” parenting group. These are described in the proceeding section.

The data were generated and analyzed in two primary concurrent phases, inspired by a grounded theory approach (Charmaz, 2006). In Phase 1, I engaged in daily observation in the groups over a period of 18 months. I recorded notes electronically and by hand, leading to over 3,000 typed and handwritten pages from thousands of posts across the two primary groups. To investigate the link between group discussions and overarching discourses, I conducted a critical discourse analysis (van Dijk, 1999) on five months of discussions in the two groups (n=308), ceasing once data saturation had been reached (Aldiabat & Le Navenec, 2018; Saunders et al., 2017). Given the minimal risk nature of the research, I elected to seek consent retroactively, since complete advance consent would be impractical (see the American Sociological Association Code of Ethics, 2018, Section 11.1). Respondents were contacted privately to be debriefed on the research and to request consent when it was desirable to use a direct quotation in the research. No one declined to provide consent; however, I interpreted non-response as non-consent and therefore excluded, paraphrased, or summarized any text for which I did not have

affirmative consent. To further protect confidentiality, pseudonyms were assigned to participants, and any potentially identifying information (including group names) was changed or withheld in reporting.

The second phase involved in-depth interviews with members of the two primary groups (n=19) and ten members from external, comparable natural and science-based parenting groups (n=10) for a total of 29 participants. Mothers were recruited through administrator-approved posts from the two main Facebook groups and through direct messages to active members asking if they would like to participate. Information about the study was shared through the official recruitment letter, consent forms, and question and answer. All participants provided written consent. Interviews typically lasted 1-1.5 hours and were conducted primarily over the phone. The semi-structured interview guide focused on their views on parenting and health, as well as their involvement in the two main groups, although participants were encouraged to discuss other groups. Interviews were transcribed and analyzed thematically using the constant comparative approach (Charmaz, 2006). Pseudonyms are used in the presentation of quotes.

### **About the groups**

The groups present distinct ideas around what it means to mother “correctly.” The purpose of the natural group is to help people who are interested in living more “naturally,” defined by participants as eating organically, choosing “natural” household products, reducing waste, growing or foraging for food, and making nature a part of the family lifestyle. Although the group is open to anyone, the majority of members are white, English-speaking mothers from Canada, with a smaller number from the United States. Most of the posts tend to relate to health matters, with a smaller proportion dealing with parenting concerns and other lifestyle-type

questions, such as gardening, foraging, and reducing waste, among others. Health-specific posts cover a wide range of topics including questions about natural remedies, diet, boosting the immune system or other medical concerns; advice for locating a health care provider or dealing with doctors; and the occasional question about other matters such as genetic testing and protection from electric and magnetic field radiation. Ideologically, discussions in the group tend to appeal to nature, with the overwhelming message being that what is “natural” is better in terms of food, health interventions, medicines, and child-rearing.

The science group identifies itself in its description as an “evidence-based” parenting group, viewing parenting as something that ought to be informed by scientific and/or peer-reviewed research. The majority of members are mothers, but the group administrators state explicitly in the group rules and announcements that they are inclusive of fathers, transgender, and non-binary parents. Although the group is more racially diverse than the natural mothers, they are still predominantly white, from Canada and the United States. Questions from the group tend to be evenly split between parenting (e.g. children’s book recommendations or dealing with tantrums) and health (e.g. information on fluoride, dealing with allergies or experiences with genetic testing), although specific medical advice is strictly prohibited. Ideologically, the group gives primacy to scientific knowledge and also favors the advice of medical authorities, such as the US Center for Disease Control (CDC) and the American Academy of Pediatrics (AAP).

## **Findings**

Overall, I find that most mothers in the study engage in a conscientious and strategic use of Facebook in order to alleviate maternal anxieties and the pressure to “do it right”. I show how the production of good feelings among mothers on Facebook emerges when and where they receive validation that they are mothering “correctly” (Villalobos, 2014). Specifically, I find that the

primary factor in shaping whether or not mothers feel good about themselves is whether or not they are able to successfully locate groups that align with their views. When mothers find groups that support their beliefs and ideas about parenting, they feel good; or at least, better. In contrast, when mothers spend time in groups with divergent beliefs or ideas about parenting, they feel worse. Thus, most mothers in this study strategically configure their Facebook in ways that minimize bad feelings and maximize good feelings.

### *Anxiety and the pressure to “do it right”*

By and large, mothers in this study see parenting as a challenge. Talk of anxiety is a regular feature of discussions in both groups. The majority (19 out of 29; or 66%) of mothers interviewed described feelings of anxiety or a diagnosis of another mental health issue such as depression or post-traumatic stress disorder (PTSD). As discussed in the literature review, there are several possible explanations for these high rates of reported mental health issues (for example, that people with anxiety prefer online communications to face-to-face interactions). It is also possible that mothers use the term “anxiety” colloquially to describe the stresses of parenting. Regardless of how “anxiety” is interpreted, however, it is clear that the mothers in this study experience a great deal of strain in their lives.

One cause of maternal anxiety is the perceived pressure to make the “right” choices. Notably, mothers see a distinction between “good” and “correct” mothering. When asked, “What does a good mother look like to you?” participants were generally reluctant to be specific. Rebecca (37, natural group) remarked, “There is no one type of ‘good mother’ in my opinion.” Lauren (36, science group), responded, “There's a lot of wiggle room for what a good mom looks like.” When participants did choose to describe “good mothering,” they did so in ways that reflected

dominant understandings of mothering per intensive mothering and concerted cultivation. For instance, Vanessa (22, natural group) explained, “A good mother to me is someone who is involved and would do anything for their kids.” Yet, while mothers resisted making a value judgement on what constitutes “good” mothering, many noted that there were “right” and “wrong” decisions, and expressed distress in attempting to make the “right” choices. Erin (33, natural group), explained her difficulty in deciding on a vaccination plan for her premature daughter: “It's hard. And it's hard to know what the right answer is. It's like that with parenting in general, though, right? You make what you hope is your best-informed decision for your kids and you just don't know if it's the right decision.” When asked what her greatest concerns are, Naomi (42, natural group) replied: “That I'm screwing it all up. That I'm just doing everything wrong.” Many mothers felt that the challenges of parenting were accentuated by the barrage of information and advice they received online, a finding consistent with exigent research (Johnson, 2014). Lee (36, science group), linked maternal anxiety to information overload, noting:

I think parenting is really hard and I think parenting in this sort of internet age is even harder. There's so much information out there and I feel like that can make a lot of parents feel like they're doing something wrong because they're not doing it a certain way.

As with Hays' (1996) research, mothers in this study put immense pressures on themselves to locate, weigh, and assemble information in making decisions for their families. Yet, while information online helped them to sort out what “correct” parenting looked like, mothers also expressed frustration over the expectation that they ought to be “experts”. When asked how she feels when making health care decisions for her family, Heather, (33, science group), responded: “I am glad you're asking this, because I have a very strong feeling, which is I feel very burdened.” She explained:

It feels to me very burdening that I can't just take a doctor and listen to them. I have to do all this research because somebody is always going to tell you, "Hey, did you know that you're ruining your child because you're doing..." whatever. And now I'm like, I have to go look this up now? This is so stupid! But [sighs], I don't want to ignore it, or because I see my friends doing things, and I'm like, well, I need to go research this because this seems really dangerous...I don't know how this falls on me, but I feel that burden.

In interviews, mothers sometimes described how they fell short of their own expectations. Amna (36, science group), had a successful career in scientific research prior to having children. She explained that when she had her child, she did not do the kind of research she expected of herself: "For whatever reason, the whole parenting thing was either too overwhelming with all the information, or perhaps, it was just like, well, you had your baby, go home now." She spoke aloud as she pondered why she had failed, in her view, to adequately research her son's reflux issue: "Maybe it was just so much noise. It was so overwhelming. You look for something, you get like, 10 different KellyMom sources, or Doctor Oz sources, whatever. Random person sources. You need to sift through all of that." For many mothers in the study like Heather and Amna, mothering is a "demanding and complex enterprise requiring high levels of knowledge and skill" (Hays, 1996, p. 159). The pressure to sort through the glut of information as part of "doing research" was sometimes overwhelming, and added to maternal feelings of strain.

### ***Facebook groups as a source of information on "correct" parenting***

In the context of information overload, connecting with like-minded others in Facebook groups is one way to ensure that mothers have access to the "correct" information, enabling them to make the "right" choices. Elizabeth (30, science group), explained that, "Parenting, you're trying to do your best for your child and you have 18 different sources telling you 18 different things, and it's so hard to try to focus in and find exactly which one's right." For Elizabeth, finding a

group that she could really connect with was a relief: “You come to this group and they've already kind of weeded through everything and guide you in the right direction.” Erin (33, natural group) explained: “It's good to have the group to kind of fall back on to know for me, that that's a good thing that I'm doing, it's the right thing that I'm doing.”

Connecting with others who validate their concepts of “correct” mothering can help to ease maternal anxieties. Mothers in the study explained that they tended to rely on the groups more heavily during periods of higher stress; for example, while their children were newborns, or while making choices around feeding, vaccination, and other more moralized issues. Jen (32, natural group) noted that she used the natural Facebook group more frequently when her children were younger. When asked why that might be, she responded:

Probably because I had more anxiety about doing the right thing back then. Yeah. I was more anxious. I was just like, oh my gosh. Like all these like chemicals in the environment and vaccines and pesticides and like, shampoos. And you know it made me really nervous, like, to make the wrong choice. So I would post more.

Thus, for mothers experiencing anxiety around the transition into their maternal role or other parenting decisions, groups can serve as a critical source of social support to both guide and reassure anxious new mothers on how to make the “right” decisions.

### ***Joining groups that produce good feelings***

In looking to Facebook as sources of information and social support, mothers in this study see the platform as flexible and customizable. Many described configuring their Facebook experience to maximize good feelings and interactions, and tweaked in order to minimize undesirable feelings and interactions. In doing so, the mothers in this study were generally conscious users, carefully selecting which groups to join, which to leave, and cognizant of the ways in which various groups impact their mood or feelings. Erin (33, natural group) explained

that she had “orchestrated” her Facebook to control what appears in the app when she uses it, noting that she wanted to see more from friends and family, rather than from strangers in groups.

The view of Facebook as customizable is extended to mothers’ behavior patterns in joining and using groups. Mothers in this study freely join and leave groups in response to changing interests or negative emotional experiences. Aware of limits to their time and energy, many mothers are uninterested in joining groups that do not bring a benefit to their lives. Laura, (34, natural group), said: “I feel like my life is so full... That I just don’t...my eyeballs don’t want to see that... Like it has to be beneficial to my life in some way.” When asked “What’s important in choosing which groups to join?” Mallory (24, science group), explained:

That they interest me, first and foremost. But that they align with my opinions and how I feel and what I strive for. I don’t spend a lot of time on Facebook, so when I am there kind of want to get sense of what I need, or what I want, or what I’m interested in.

The groups mothers join – and stay in – are those that match with their beliefs about what it means to parent “correctly”. Most shared stories of finding groups that “made sense” to them, and frequently, the extent to which the group’s discussions resonated was directly related to the extent they supported mothers’ concepts of “correct” parenting. Elizabeth (30, science group) noted, “I prefer for [groups I’m in] to be as evidence-based as possible. There has to be kind of a like-minded idea on the healthiest way to raise children.” Nina (37, science group), shared a similar view:

At one point, I tried to join every evidence-based group I could find, because I felt like all the local groups I was in were a catastrophe, and I just couldn’t bear to read all the crap that moms were writing. And I wanted some place that made sense to me, so I looked for every possible group I could find.

Being in groups that validate a mothers’ concept of “correct” parenting is not only about access to the “right” information, but also about emotional rewards. Mothers find groups that

align with their views to ease both daily stresses and anxieties as well as more general concerns about whether or not they “doing it right”. When asked about her use of the science group, Dana (39), noted, “I’ll spend a few minutes every day on it decompressing.” Similarly, Denisha (27, natural group) explained:

I pretty much use it, sometimes just for advice or if I need, say for instance, a break from the day that I’m having or something, I always just go there. And sometimes you just be inspired and like, you’re not the only mama that’s going through maybe a rough day.

Corissa (35, science group), who described her favorite group as a “drama free happy zone,” explained that the science group made her “a much more calm mom” in general. She noted, “I find I don’t worry about things the way I would if I didn’t have this plethora of information and people that I know have my back.” Jocelyn (28, science group) explained how she had initially joined a natural group, but then switched to a more science-focused group, which helped her feel better about vaccines: “It just helped to settle my anxiety about it.” For Mallory (24, science group), the group helped confirm that she was “on the right track” with mothering in general:

The [science group] makes me feel like I’m on the right track when I’m having a bad day, I guess. Or I feel like I’m on the right track when I see a majority of people who understand where I’m coming from, or understand my views.

Thus, mothers in this study tend seek out groups that alleviate anxieties and make them feel better. Frequently, these are the groups that reinforce their specific concept of parenting and provide reassurance that they are “on the right track.” Mothers not only want to “do better”; they also want to “feel better” about their choices, and groups that support their version of “correct” parenting help them to manage both daily stresses as well as more general anxieties around their fulfillment of the maternal role.

### *Avoiding groups that produce negative feelings*

Once mothers find groups that meet their needs, they often remove themselves from groups that do not. Mallory (24, science group) explained that she had previously been a part of several local groups, but was “blown away” by the amount of “misinformation” they shared. When someone shared a link to the science group, she thought, “That’s my kind of people,” She explained, “Since then I’ve pretty much deleted any other Facebook group that doesn’t align with my views on parenting.” Corissa (35, science group) explained that if she had to give someone advice on using Facebook groups, she would say, “Don’t get bogged down by any negativity and don’t interact in the threads that don’t bring you anything but happiness. If the thread stresses you out, just don’t engage in it. It’s not worth it.”

When mothers described negative experiences in groups, they frequently related to the extent to which they violated mothers’ beliefs around how to parent “correctly”. Vanessa (22, natural group), who did not vaccinate her children, explained that she avoids “groups that aren’t what I believe in.” For Vanessa, the prospect of being “attacked” for her beliefs was an incentive to leave the group completely: “I have anxiety too. So even reading moms being attacked, I just feel sick. I didn’t want to put myself into that situation...My husband was actually telling me to leave the group 'cause he noticed it was affecting me.” Breanna (31, science group) similarly explained: “If I feel like consistently judged in choices that I am making by the posts that people make, that would prompt me to leave the group.” Thus, if discussions in groups produce negative feelings – for instance, reading about what they perceive to be the “wrong” ways of parenting, or material that causes them to feel judged or to question choices they have already made – mothers are unlikely to stick around. Likewise, Rebecca (37, natural group), explained that she would avoid “mainstream parenting groups,” “because I find many mainstream parenting practices

quite upsetting to hear about.” When probed further, she explained that techniques such as “shaming, demanding obedience, using isolation as a punishment, threatening or actually throwing away toys, physical punishment” make her “physically ill to read about.” She noted, “I don’t want to engage with people that think they are okay.”

The tendency for mothers to leave groups that make them feel bad indicates that strategic use of Facebook is a form of emotion management. Jocelyn (28, science group), described wanting to avoid groups where parents make different parenting decisions (for example, choosing not to vaccinate) – because it “stresses [her] out”. She noted, “I just try to not really engage with things like that just to keep my thoughts good.” Breanna (31, science group), explained her thought process on leaving groups:

Sometimes I'll sign up for a group and be like, ‘Oh, this, no... I shouldn’t. That was silly. Why did I do that? I'm unsigning up for this.’ Because like, because it affects the content that I see in my feed, which I look at every day. So it sort of affects what daily experiences and communications I’m having.

Breanna, noticing that her participation has created an undesirable feeling state, reminds herself that she can make a different choice to manage not only her feelings, but also the nature of her “experiences and communications” with her family. Avoiding groups that challenge their beliefs and decisions may indeed be a means by which mothers protect themselves from criticism or experiences that would produce a feeling state – that is – stress, insecurity, and other negative feelings – inconsistent with idealized mothering.

### ***Validation and reinforcement of maternal beliefs***

When mothers felt insecure about their decisions, they explained that they could look to their chosen groups for reassurance that they were making the “right” choice. Dana (39, science group) noted:

In general, it has made me feel validated for the choices we've made as parents, and validation is, I think, something that is crucial for everyone, and can be very hard to come by. Especially when you are choosing to parent differently than you yourself were parented, or than people around you are parenting.

For Dana, the science group functions as an online reference group, where she can receive not only information, but also social support and validation. Lauren (36, science group) described how the groups made her feel better about her decisions: "I definitely brought up my issues to all the people in my group and they were all like, "Yeah, you're making the right choice," so I felt reaffirmed that I wasn't doing something stupid." Jocelyn (28, science group) explained:

They actually make me feel like oh, thank god...It's okay to not feed your kid all organic things that you grow and make from scratch," and things like that. So it's kind of like, "Ahh...", it gives you relief almost, or gave me relief. Like I'm not going to mess up my kid.

Mothers used the groups as resources to not only inform their decisions prior to making them, but also to validate decisions they had already made. Some mothers admitted that they approach the group with questions when they already have made up their mind about something.

Nina (science group) told me:

Sometimes I'll already have my mind made up when I pose a question, but I just want some additional confirmation, or just to see if somebody will pose a new perspective on something. And, when, they're like, "Yep, no, that's right, that's right. You shouldn't do this, or whatever." Or, "I wouldn't do that either." I always feel like, "Okay, that was just a little bit of affirmation for me." So, I guess in that way, that makes me feel like a good mom because I respect other things that they've posted.

Hearing that their choices were the "right" ones makes mothers feel good. In receiving validation that they are fulfilling their maternal role appropriately, They can "cheerfully" go on with their day, knowing that they are, at worst, not going to "mess up" their kids, and at best, that they are "doing it right" (Hays, 1996; Ruddick, 1995).

The validation mothers received in spaces that aligned with their views of correct parenting frequently reinforced mothers' ideologies of "correct" parenting. Deborah (41, natural group), explained, "[The group] probably just reinforces my decisions and choices. When I can go on, and search, and find somebody saying something that I already think I know. Then, it's just reinforcement to carry on with that." The mechanism for ideological reinforcement seems linked to the emotional rewards of participating. Positive reinforcement by members with similar ideas makes mothers feel good. These positive feelings encourage mothers to return to the group for continued validation, and sometimes to participate in processes of validating others, creating a sort of positive feedback loop. Once they had participated for a while, mothers explained that they often enjoyed sharing their knowledge with others in the groups. Kathleen (35, science group) explained:

Sometimes if I'm in a good mood and I have a rare time [laughs] where my toddler's asleep and I can just be on Facebook I'll just read through and offer support to other moms too, because I think it's important for that, you know, that sense of community, just to give support back.

Heather (33, science group) noted, "I feel like I'm more one of the teacher-moms in the group". Having been in the group for a while, and having dealt with raising her two children, she felt confident sharing her knowledge with others.

Some members were acutely aware of this tendency, describing the ideological reinforcement as contributing to an "echo chamber" effect (Sunstein, 2007). Breanna (31, science group) explained: "I tend to choose groups that reinforce the choices I already want to make [laughs]. I mean, it is Facebook after all, the whole polarizing, echo chamber, bubble, whatever, thing." Yet, they did not see this as a bad thing, particularly when the ideas presented in the group were perceived as "healthy". Elizabeth (30, science group) noted:

My partner tends to call it an echo chamber, which is accurate I would say, because we all agree on the same things and we give each other feedback that we agree on the same things. But, it's a very healthy environment as opposed to some other parenting communities online where you know that the children are not thriving because of the information being given in the group.

Thus, the mothers in this study do not generally see informational selectivity as problematic when the information in the groups supported their idea of “correct” parenting. On the contrary, mothers recognize that they are emotionally and ideologically rewarded by returning to groups that make them feel good about their decisions and support their views about parenting and health and avoiding groups that make them feel bad about themselves.

## **Conclusion**

A breadth of research indicates that mothers have internalized the principles of intensive mothering, which negatively impact them, even when they do not subscribe to them. In addition, a compendium of pressures emerging from social, cultural, and political shifts (including neoliberalism and the risk society) increasingly see mothers as central figures in stabilizing their families. As part of this work, mothers are called upon to serve as emotional anchors for their families, making home and family life comforting and stable. Although maternal participation in the labor market has changed substantially, framing mothers as political and economic “equals”, mothers are still uniquely expected to sustain cheerfulness in the performance of their maternal role. The cultural discourse of maternal “empowerment” serves to crystallize the imperative for mothers to “work on themselves” so that they can become “active participant[s] in the creation and maintenance of [their] own well-being and that of [their] loved ones” (Ouellette & Wilson, 2015, p. 552, quoting Dr. Phil). With the recognition that maternal activities are increasingly technologically-embedded, this study set out to explore how mothers use social media platforms

as a tool in this emotion work. Research on social media and mental health is mixed, but seems to suggest that mothers find unique benefits through their use of such platforms. As such, this research investigated the tactics that mothers use in order to reap benefits from their participation in SNS; specifically, Facebook. Through 18 months of digital ethnographic research including observation, discourse analysis and interviews with 29 mothers from divergent groups, I found that indeed, mothers in this study were both conscientious and strategic about their use of Facebook.

The research indicated that many of these mothers experience a great deal of anxiety around their maternal role and responsibilities. Considered in conjunction with the insecurities that accompany the current sociopolitical moment, this finding is unsurprising. However, what emerged from the study was the finding that mothers turn to Facebook as a means to alleviate some of their anxieties. Specifically, these mothers sought out and joined specific Facebook groups that aligned with their view of “correct” parenting. These groups often presented a clear-cut concept of “correct” mothering, and helped to facilitate mothers’ access to information and social support that aligned with their views. Mothers reported that exposure to divergent/contrasting parenting ideologies and practices were frequently a source of anxiety or other bad feelings. As such, they conscientiously “orchestrated” their Facebook experience in order to minimize exposure to content that generated negative feelings, and to maximize exposure to content that generated more positive feelings. Once mothers located groups that were an ideological “match” to their concept of correct parenting, they frequently left other groups. Through this strategic joining/leaving behaviour, which shapes the digital content to which they’re exposed, mothers exert a measure of control over their emotional state. Frequently, this

strategy pays off: mothers find that the information and social support in their chosen groups made them feel “calm,” like a “good mom,” and that they were doing it “right”.

There are several points worthy of discussion. This research indicates the extent to which some mothers may strategically and conscientiously utilize Facebook as a tool for managing their feelings about their maternal performance. As I have noted, much of the existing research on technologically-mediated emotion regulation tends to implicitly frame users as pathological/addicted or oblivious to its impacts. This study suggests that on the contrary, mothers are taking an active role in examining the impact of their digital entanglements on their emotional experiences, and making reflective and conscientious changes in order to produce certain emotional results. This novel finding not only identifies mothers as reflective and conscientious consumers of digital content, but may also help to explain why they frequently derive emotional rewards from their participation. The research also indicates that the tendency for mothers to seek out and stay in groups that reinforce their ideological views likely represents a sort of positive feedback loop, where mothers receive additional emotional rewards by supporting others with the same advice they received. This may contribute to an “echo chamber effect” (Sunstein, 2007). Scholars have highlighted the problematic nature of echo chambers, which may contribute to ideological polarization and the spread of misinformation (Del Vicario et al., 2016). Yet, for better or for worse, this study shows that belonging to echo chambers may be a rather comfortable and emotionally rewarding experience.

Although the findings suggest that the mothers in this study may be emotionally “empowered” by managing their emotions through strategic social media use, it is important to consider the fact that the narrative which empowers them is the same one that simultaneously burdens them. The literature is clear that while the realities of mothering are complex,

challenging, frustrating, and involve a swath of emotional experiences, idealized concepts of mothering still frame mother love as existing in a space of nurturing cheerfulness that demands that mothers manage their emotional state for the well-being of not only themselves, but the family unit as a whole. Considered in this light, the turn to digital platforms such as Facebook for emotional reassurance around maternal performance represents a contemporary tactic for locating good feelings in a context of relative insecurity. By affirming to mothers that they are “doing it right”, this strategic use of Facebook not only alleviates some of the anxieties of intensive mothering, but also brings mothers’ feelings closer into alignment with dominant expectations about how idealized mothering "ought" to feel. By carving out spaces where they can cultivate positive feelings about themselves and their maternal performance, these mothers find solace in a sociopolitical context that may otherwise feel overwhelming or out of their control.

## Chapter 5: Conclusion

The vast literature on mothering is clear that while the realities of mothering are complex, challenging, frustrating, and involve a swath of emotional experiences, idealized concepts of mothering still frame mothers as the central figure responsible for health, well-being, and emotional well-being in the family unit and in society at large. This framing has remained steady despite tumultuous social, economic, political and technological changes over the past fifty years. At the same time, research demonstrates that mothering activities are becoming increasingly internet entrenched, and many have speculated on the consequences – for example, a growing global anti-vaccine movement, facilitated through Facebook.

This dissertation research was designed to explore the intersection of maternal responsabilization, health, and online groups. I asked: *How do online health and parenting groups work, and what are their impacts on participants?* Taking a grounded approach to the study, I identified three additional specific lines of inquiry addressed in three empirical research articles. In this chapter, I offer a final summary of my findings with respect to these questions, along with a discussion of the research limitations and future directions.

### **How do online health and parenting groups work?**

Chapter 2 (“Taking Sides”) addresses the question: *How do online health and parenting groups work?* Through an analysis of community dynamics using theories of boundaries and boundary-work, I describe the nature of group epistemology, culture, participation activities, and administration strategies to compare and contrast the two groups. The article situates group behaviours in the broader socio-historical context, revealing how boundary dynamics that regulate and shape regulate group environments can make Facebook groups persuasive

ideological spaces, particularly for mothers, who may face anxieties and sociocultural pressures around health-related decisions. Bringing my findings to the literature on the political economy of the medical profession, I find parallels between occupational boundary-work in medicine and the everyday boundary-work of individuals in the groups. Specifically, I find that Facebook groups essentially construct, maintain, and extend group boundaries in ways that mirror the historical and contemporary power dynamics of the medical profession. I argue that this finding is further evidence of health-related responsabilization, as mothers are left trying to negotiate and advocate for one approach over another. Despite this, I posit that participation in such groups may offer benefits to mothers; namely, a sense of certainty around their health-related beliefs and decisions.

### **What are the impacts of participating?**

In Chapter 3 (“Siloed Health Learning”), I focus on the *health-related impacts* of participation; namely, specific health learning and patient empowerment. In applying concepts of “echo chambers”, I show that in these groups, mothers learn specific and limited health-related information, which I describe as “siloed health learning”. This content is persuasive and sometimes influences maternal health beliefs and behaviour, even shaping the conversations they have with healthcare professionals. In learning this specific information and finding groups where they are supported in their views, mothers are frequently empowered to better advocate for their healthcare interests. For instance, I show that mothers learn “scripts” in the groups which they later employ in encounters with healthcare professionals and with others. These findings show that participation in specialized Facebook groups can have a tangible impact on health beliefs, behaviour, and outcomes, as mothers find themselves better informed and more

able to advocate for their views. However, I suggest that enthusiasm over this finding ought to be tempered given concerns about misinformation online.

In Chapter 4 (“Just to keep my thoughts good”), I focus on the *emotional impacts* of participation. Drawing on Hochschild’s (1983) concept of “emotion management”, I argue that contemporary mothers use Facebook as a tool to alleviate anxieties related to their performance of the maternal role. In finding and joining groups that support their ideas around “correct” mothering, mothers feel better about themselves. Once mothers find groups that make them feel good, they frequently leave groups that make them feel bad. Thus, I argue that many mothers in this study are conscientious, intentional Facebook users who “orchestrate” their Facebook in order to maximize positive emotional experiences and minimize negative experiences. This sort of careful configuration of Facebook may help to explain how and why mothers frequently seem to benefit from their online interactions, compared to experiences of other internet users. However, while mothers feel better in organizing Facebook in such a way, I point out that this tendency also leads to ideological reinforcement around what it means to mother “correctly”.

### **How and why do mothers use these groups?**

All three articles offer complementary findings to answer this question. Ultimately, this research shows that mothers are drawn to participate in these groups because they provide an accessible, ever-ready, flexible, customizable, and persuasive source of information and social support that helps mothers feel better about themselves, their decisions, and their performance of the maternal role. Yet considered in the broader socio-historical context, the appeal of such groups is likely not only a *pull* toward helpful information, but is also a *push* from the context of anxiety and insecurity generated through intensive mothering and neoliberal responsabilization.

As I have shown, when mothers configure their Facebook use, they frequently do so in a way that both reflects and addresses these push and pull factors. For example, many mothers reported being stressed or overwhelmed by social and cultural pressures around mothering. Feelings of anxiety or stress among the participants did not seem to correlate with mothers' ideological views or their parenting philosophy. This supports the findings of other scholars who show that ideologies of intensive mothering affect even those who do not support its tenets (Henderson et al., 2016). Such external pressures may *push* mothers towards Facebook as a platform through which they can “know better and do better”, and as I have also shown, feel better. At the same time, the formation of specialized Facebook groups means that mothers can easily locate specific information that matches with their ideologies of health and parenting. The availability of specialized information is appealing to mothers, who may be drawn towards groups and spaces that reflect their belief systems (as they are simultaneously repelled by groups and spaces that do not). When mothers participate in groups that align with their beliefs about health and parenting, they experience positive emotions that help them feel better about their accomplishment of mothering.

Through these push/pull dynamics, mothers gain information that matches with their belief system, experience positive emotional benefits, and bring information gleaned from the groups into their everyday experiences. For example, when mothers join groups that reflect their beliefs, they often trust the information that is shared, and sometimes mobilize their learning to better advocate for themselves and their families. Facebook groups therefore represent very real sources of maternal empowerment around health, parenting, and everyday emotional experiences. However, as I have also shown, these tendencies, alongside persuasive boundary-work within the groups, may lead to ideological reinforcement and homogeneity in member

beliefs and perspectives within each group. This is not necessarily a bad thing when mothers feel supported and the information can be used to attain better health and parenting outcomes.

However, this reinforcement effect increases the likelihood that mothers will not only learn poor quality information, but that they will believe in it, act on it, and share it with others. Given concerns about the spread of misinformation (*unintentionally incorrect information*) and disinformation (*intentionally misleading information*) on the internet, these are very real concerns with potentially broad consequences. Indeed, the findings from this study help to explain broader observations around ideological polarization on the internet (Del Vicario et al., 2016; Schmidt et al., 2018; Sunstein, 2018).

### **Contributions**

This research both extends and innovates theorizing in a number of sociological subfields. In Chapter 2 (“Taking Sides”), I bring sociological concepts of boundaries and boundary-work to the digital realm, exploring and analyzing how interaction dynamics make Facebook groups persuasive ideological spaces. My analysis reveals how groups *construct* and *maintain* boundaries in ways that mirror the broader power dynamics in the healthcare landscape; that is, with the science group reflecting the power status and power plays of biomedicine (and EBM) by fiercely guarding its terrain and advocating against “pseudoscience”, and the natural group reflecting the more open, collaborative, survivalist strategies of CAM. I also advance the concept of *boundary extension* to describe how science group members convert group-generated symbolic boundaries into offline spaces as social boundaries. I argue that the extent to which online groups come to mobilize these ideologies through boundary-work is symptomatic of how

both healthcare decisions *and* healthcare debates are downloaded to healthcare consumers; in these spaces, namely mothers.

This study also is innovative in the application of the concept of emotion management to online behaviours. By bridging the concept of emotion management with the literature on social media, emotions, and mothering, I frame the experiences of mothers in my study as one in which Facebook becomes a tool for managing feelings around the performance of the maternal role. I show how mothers use Facebook strategically to mediate their emotional experiences. Specifically, in seeking out groups that affirm that they are making the “right” choices, mothers feel better, and their feelings are thus brought closer into alignment with the feeling rules of idealized motherhood. This represents an innovative application of Hochschild’s original concepts that is particularly relevant for our increasingly digitally entrenched lives (Hochschild, 1983).

Empirically, this dissertation sheds much-needed light on the inner workings of echo chambers. As noted, existing studies of echo chambers have been primarily quantitative, revealing the existence and formation of echo chambers, but not unpacking the role that users play in shaping group culture, ideology, and group dynamics. All three chapters show mechanisms through which members take up (and sometimes promote) specific ideological positions, while actively working to exclude alternative perspectives. For instance, Chapter 1 shows that echo chambers may be constructed and fiercely guarded through social and symbolic *boundaries*. Chapter 2 shows the *social and informational appeal* of echo chambers, where members can glean information that aligns with their views and receive encouragement for their choices. Chapter 3 reveals that echo chambers may have *emotional appeal* insofar as they create

a relatively comfortable place for people to receive affirmation for their views – so long as they toe the group line.

Relatedly, the research also reveals the sort of impact echo chambers may have on health beliefs and behaviour. While studies have examined the political impacts, fewer have focused on health-related impacts. Some have speculated that echo chambers could influence health beliefs, but there have been few empirical investigations into this matter. This research clearly demonstrates that echo chambers do in fact shape health-related learning for some members. Frequently, participation led to benefits for mothers in terms of health-related empowerment and the generation of good feelings. However, there are potential drawbacks when misinformation is shared or when mothers are encouraged to disregard sound medical advice. Given existing research demonstrating the emergence of the “expert patient” (Fox et al., 2005) and the increasing tendency for individuals to use the internet as a tool for health-related information (Rice, 2006), as well as the power of peer-level narratives in swaying decisions (Haase et al., 2015), this represents an important area for future investigation. While no one in my study shared the same sort of extreme stories as those that receive media coverage (for example, feeding children bleach or free-birthing), the findings support the assertion that Facebook groups can encourage mothers to make decisions that they otherwise would not make.

Empirically, I show how the work of mothering is both digitally entrenched and digitally-mediated. Membership in Facebook groups is increasingly normalized among mothers, and belonging to groups focused on specific interests (such as natural living or evidence-based parenting) may indeed shape the style, nature, emotions, and experiences of mothering, as well as decisions around health and healthcare. Bringing mothers’ own words into an analysis of their

Facebook use reveals how and why they look to specific online groups, and why they look to some, and not others.

The extent to which mothers' digital entanglements bleed into their everyday experiences suggests that participation in Facebook groups is no small matter. In fact, my research suggests that the nature of mothers' digital activities constitutes a form of maternal labour – specifically, digital labour. To seek, locate, and participate in online groups to inform parenting and health practices is work – work that is specifically oriented towards maternal activities like caregiving, family-related service utilization, and emotion work in the family context. This digital labour both reflects and represents the latest wave in maternal responsabilization, and is propelled by ideologies of intensive mothering. We know that responsabilization that relates to children's physical, mental, social, and emotional health tends to fall to women, and this research illustrates the depth and complexity of the work that mothers do in the digital realm as they take up these expanding obligations. This digital work thus represents an ongoing disparity that is scarcely discussed and is frequently undermined by framings of maternal social media use as leisure or entertainment.

### **Limitations**

One important limitation of this study relates to its lack of generalizability, which, as noted, is a well-known drawback of ethnographic and case study research. I have been quite clear in stating that the findings should not be extrapolated beyond the specific cases explored here. That is, while it is tempting to draw conclusions about Facebook-using mothers in general, my findings cannot be seen as representative of all mothers, all mothers engaged in online communities, or even all mothers in the specific groups of interest. These findings are restricted to the context I

observed during the period of my observation, and were, of course, subject to my own interpretation as researcher.

Further, I want to make explicit that the data were collected from two primary cases that were selected purposively according to their contrasting ideological positions, and because I was an existing member of both groups. As noted, the majority of mothers who participated in my study were white, middle-class mothers, who seem to represent the general demographic of the groups I selected. Indeed, my group memberships likely reflect my own identity features as a white, middle-class woman. It is possible that other groups, with perhaps different ideological views, different demographic distributions, and different cultural configurations might have led to different comparisons and, therefore, to different findings. While my choice to recruit from multiple groups representing heterogeneous cases enhances the ability to generalize (Robinson, 2013; Timonen et al. 2018), I must emphatically state that I am not comfortable drawing conclusions beyond the groups considered in the research. In addition, I want to restate that the goal of this methodology is not generalization, but theoretical development (Shuval et al., 2012).

Nevertheless, to address issues of validity and reliability in my analysis, I employed a number of techniques to ensure that I was accurately interpreting the data (Guba, 1981). First, by using contrasting cases, the study design improved external validity, by ensuring that no one particular “echo chamber” was used to represent all Facebook groups. This was further enhanced with the inclusion of additional interviews with mothers from external, comparable groups, beyond the two main groups studied. Finally, for both the interview data and the content collected from within the groups, I regularly checked with the members involved to validate my interpretation and understanding of individual comments and community dynamics. I clarified informant comments, repeated their responses back to them along with my interpretation, and

used them as resources to investigate “hunches” that emerged in the research (Charmaz, 2006). I also checked my hunches against the data by examining negative cases. Though these results cannot be tested for reliability or internal/external validity in the way that can be done for inferential statistical work, this study is rigorous according to well-respected standards of practice in qualitative research (Guba, 1981).

On a related note, I want to address my positionality as researcher. While my identity (white, mid-thirties, middle-class, mother, member of science and natural Facebook groups) benefited the study in providing me “insider status” and a measure of connection with the majority of participants, it is possible that my interpretations were impacted by my own thoughts and experiences. To minimize the possibility of centering my own views over those of my participants, I avoided any kind of leading questions or discussions, kept my own health and parenting views private (revealing only after an interview, if and when participants inquired), and as noted, relied on extensive member checks throughout the study to ensure that my interpretations were accurate. Since it is impossible to completely extract the researcher from any study, and particularly a study of this nature, I accept that my findings in some way likely reflect my own experiences. Ethnography cannot exist without the researcher; in fact, no study can.

### **Future Directions**

The limitations of this study create space for future areas of investigation and elaboration. As noted in the articles, the majority of participants were white, middle-class, North American mothers, so interviews with mothers from a range of socioeconomic and ethnic backgrounds within the groups would help to flesh out differences in maternal experiences with Facebook. More interviews, and/or the development and administration of a survey tool could examine the

extent to which the findings noted here can be observed across a larger population and/or locate patterns in beliefs and behaviours. Doing so would open up the possibility of investigating the extent to which the findings are observed along racial and class lines. Further, the ethnographic investigation of additional health and parenting groups would enhance the study's reliability and support the development of additional or more comprehensive theories around group dynamics. Empirically, a fascinating line of inquiry might investigate how online social boundaries and/or boundary work shape and impact offline social relationships.

Given the observed impacts on mothers in this study, researchers might consider incorporating questions about digital entanglements when investigating issues such as health beliefs and behaviour. Healthcare practitioners might also consider tactfully discussing issues of social media and science literacy with their patients. The use of a scientific and/or a social media literacy tool, handed out by healthcare professionals at regular appointments, could help to encourage reflexive internet use. In the interest of advocating for conscientious social media use, I have created a social media literacy tool (see Appendix I) that can be used directly by individuals, or could be provided by third parties (such as physicians or teachers) to encourage reflection around how we use social media and its influence on us. The tool guides users through a number of questions to support them in reflecting on their use (frequency, purpose), the impacts (on their decisions, mood, offline life/relationships), while also encouraging critical thinking about the information shared in groups. The questions are inspired by the findings of this study, which highlighted the ways in which our social media use can have an impact on our emotions, decisions, time, and relationships.

On a different note, very few – likely less than 5 percent – of participating group members in the case studies examined in this research were men<sup>6</sup>, even though neither of the two primary groups were gender-exclusive. It is my view that the absence of men in these spaces is a finding on its own, and one that merits further examination. Certainly, the data suggests that women do use social media more than men (Duggan et al., 2015), but given fathers’ increasing involvement in domestic tasks (Ishizuka, 2019), we might expect to see a corresponding increase in their use in social spaces oriented towards parenting in particular. However, the absence of men in these spaces seems to suggest that the work of researching health and parenting information – at least through Facebook groups – still remains a maternal domain, perhaps representing another way that women’s workloads increase in the transition to parenting (Yavorsky et al., 2015). It would be worthwhile to investigate fathers’ use of the internet for health and parenting information in a similar study, to compare and contrast experiences.

Researchers have struggled to measure the invisible “mental” work that mothers typically take on in caring for their families (Walzer, 1996); indeed, it is challenging to tabulate how much time one spends thinking about, worrying about, or researching related to their parental role. However, that these activities are increasingly digitally-mediated means that we might be able to put data behind these claims. For example, we might measure some of this work by examining parents’ digital records. Technology giants such as Facebook and Google sit upon a wealth of data that could help to translate mothers’ invisible work into measurable units. How many parenting-related Google searches did mothers conduct in 2020? How much time did they spend visiting the links that showed up in their search results? How many articles did they send to

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<sup>6</sup> I make this estimation based on profile information as well as posts where fathers identified themselves. I cannot recall coming across any parenting groups oriented toward fathers, although it is possible they were not shown to me because of algorithms.

themselves, or their spouses? How many times did mothers visit parenting-related Facebook groups? How much time did they spend reading posts in parenting groups? How many notifications from their parenting groups did they check during the day? These points represent just a small slice of the data that could be collected to validate and reify some of this otherwise “invisible” work.<sup>7</sup> It is high time that we leverage technological advances to not only describe, but also quantify this very real form of labour.

### **Concluding Remarks**

Neoliberalism has coloured many aspects of our social worlds, including healthcare and mothering. The emphasis on individualism and the responsabilization of every aspect of parenting and healthcare has produced new anxieties for contemporary mothers. At the same time, the advent of the internet has created new possibilities for mothers to learn information to inform their health and parenting decisions. Expanding opportunities for participating in social networks, alongside a growing tendency for the formation of specialized Facebook groups, have facilitated the connection of like-minded individuals. Considered in the context of intensifying pressures around mothering, it is unsurprising that mothers look to such groups for both information and social support as they navigate the challenges of parenting.

In these spaces, mothers not only learn information that can inform their health and parenting decisions, but they also receive social and emotional rewards for participation. By joining groups that reflect their beliefs and views, mothers receive affirmation for their choices. By strategically configuring Facebook to maximize positive, affirmative interactions while minimizing experiences that lead them to question their decisions or feel insecure, mothers

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<sup>7</sup> It should be noted that accessing someone’s personal data in this manner would require a stringent and transparent ethical protocol.

engage in a form of digitally-mediated emotion management, bringing their feelings closer into alignment with the dominant expectations for mothers. This study therefore indicates that our entanglements with Facebook groups can impact us in myriad ways, shaping the relationships we build, our entrenchment with various ideologies, our health-related beliefs and decisions, as well as our emotions.

The findings from this research show that the compulsion to participate in Facebook groups can be understood as stemming, at least partially, from a desire cope with the collective anxieties that are downloaded to mothers. In an age characterized by economic and social insecurity, information overload, countless choices, and a cacophony of voices telling them what “correct” mothering looks like, mothers seek validation and guidance in Facebook groups as a way to ensure that their choices are the “right” ones. The conscientious choices of mothers who look to Facebook as a tool to inform and improve their decisions and their feelings indicate that this time spent is not simply a form of leisure or entertainment. Rather, maternal Facebook use is strategic, conscientious, and consequential – it is work.

What seems clear is that when mothers turn to online groups, they are doing it because they want to feel better. However, this leads to a broader sociological question: Why do mothers want to feel better? Perhaps mothers are engaged in a strategic, digitally-entrenched praxis of motherhood that, in a context of responsabilization and insecurity, involves locating good feelings wherever they can. Mothers may not be able to change their economic circumstances, but they can feel good about the new recipe that allowed them to sneak spinach into their children’s chocolate pudding. They may not be able to send their children to the best school, but they might feel good knowing that they are at least keeping up with their vaccination schedule.

While such strategies may indeed support mothers in feeling better, there are several drawbacks to this. For one, the neoliberal system and narrative which empowers mothers via Facebook is the same one that simultaneously burdens them. Further, there is a sense that through digital behaviours that perpetuate the never-ending flow of maternal work, mothers are simultaneously feeding their anxieties while also pacifying them. In this context, the achievement of well-being for children and families is not a collective project, but is rather an individual one, downloaded to families, and, as this research suggests, mothers in particular. Using Facebook to inform individual decisions and emotional experiences might thus be considered a profoundly individualist strategy that arguably does little to support other families.

Compounding this issue further is the matter of Facebook being a profit-oriented enterprise. In using Facebook as a tool to generate good feelings, mothers engage in a form of techno-consumerism that benefits corporate interests. This is not inherently problematic, but does mean that the ability to mobilize shared interests is shaped and arguably limited by technological affordances. In addition, while such social spaces hold tremendous potential for facilitating collective action, it is worth considering whether the small “hits” of good feelings afforded by Facebook and other digital media might “take the edge off” maternal discontent, hampering the development of a critical mass. In addition, we do not yet know about the stability of online bonds; for instance, how durable are they in the face of conflict and/or collective action? Put differently, we should consider whether pursuing action focused on changing feelings, rather than the context that produces them, may hamper collective action toward systemic change.

Yet, there is a beacon of hope here. The strategic use of a corporate platform to solicit information about health is, in many ways, a brilliant way to capitalize on technological

affordances. Through the behaviours highlighted in this research, mothers can more efficiently seek out information to inform their parenting and health decisions, while also benefiting from a sense of security and good feelings. In addition, mothers might come to groups to learn information to help them care for their children, but in the process are able to care for themselves (through emotional support, affirmation, and other good feelings), and for other mothers (when they support and affirm to other mothers that they, too, are “doing a good job”). In this way, mothers in groups foster a digitally-mediated, collective interdependency that challenges the individualist logic of neoliberalism.

In closing, if I were asked how to describe Facebook mothering groups, I would call them a paradox. They both hearten and discourage, unify and polarize, persuade and repel. They are intangible spaces that can both shape and be shaped. At the same time, their impact on our lives is ambiguous. They are not inherently bad or good. They are neither the cause of, nor the solution to maternal anxieties. Perhaps our biggest challenge going forward will be learning how to mobilize our increasingly digitized interdependencies to create positive social change – not only for mothers, but for the world at large. The opportunities are tremendous, should we choose to pursue them.

## References

- Abbott, A. (1988). *The System of Professions*. University of Chicago Press.
- Adam, B., Beck, U., & Van Loon, J. (2000). *The Risk Society and Beyond*. SAGE.
- Afflerback, S., Carter, S. K., Anthony, A. K., & Grauerholz, L. (2013). Infant-feeding consumerism in the age of intensive mothering and risk society. *Journal of Consumer Culture*, 13(3), 387–405.
- Agency for Healthcare Research and Quality. (2018, June). Access and Disparities in Access to Health Care. <https://www.ahrq.gov/research/findings/nhqrdr/nhqrdr15/access.html>
- Alba, R. (2005). Bright vs. blurred boundaries: Second-generation assimilation and exclusion in France, Germany, and the United States. *Ethnic and Racial Studies*, 28(1), 20–49.
- Aldiabat, K., & Le Navenec, C.-L. (2018). Data Saturation: The Mysterious Step In Grounded Theory Method. *The Qualitative Report*, 23(1), 245–261.
- Allen, D. (2000). Doing Occupational Demarcation: The “Boundary-Work” of Nurse Managers in a District General Hospital. *Journal of Contemporary Ethnography*, 29(3), 326–356.
- American Sociological Association. (2018, June 4). Code of Ethics. [https://www.asanet.org/sites/default/files/asa\\_code\\_of\\_ethics-june2018.pdf](https://www.asanet.org/sites/default/files/asa_code_of_ethics-june2018.pdf)
- Apple, R. D. (1995). Constructing Mothers: Scientific Motherhood in the Nineteenth and Twentieth Centuries. *Social History of Medicine*, 8(2), 161–178.
- Arendell, T. (2000). Conceiving and Investigating Motherhood: The Decade’s Scholarship. *Journal of Marriage and Family*, 62, 1192–1207.
- Attwell, K., Smith, D. T., & Ward, P. R. (2018). “The Unhealthy Other”: How vaccine rejecting parents construct the vaccinating mainstream. *Vaccine*, 36(12), 1621–1626.
- Baker, D. A., & Algorta, G. P. (2016). The relationship between online social networking and depression: a systematic review of quantitative studies. *Cyberpsychology, Behavior, and Social Networking*, 19(11), 638–648.
- Bakshy, E., Messing, S., & Adamic, L. A. (2015). Exposure to ideologically diverse news and opinion on Facebook. *Science*, 348(6239), 1130–1132.
- Beard, K. W., & Wolf, E. M. (2001). Modification in the Proposed Diagnostic Criteria for Internet Addiction. *Cyberpsychology Behaviour*, 4(3), 377–383.
- Beck, U. (1992). *Risk Society*. SAGE.
- Bekalu, M. A., McCloud, R. F., & Viswanath, K. (2019). Association of Social Media Use With Social Well-Being, Positive Mental Health, and Self-Rated Health: Disentangling Routine Use From Emotional Connection to Use. *Health Education & Behavior*, 46(2\_suppl), 69S–80S.
- Bidmon, S., & Terlutter, R. (2015). Gender Differences in Searching for Health Information on the Internet and the Virtual Patient-Physician Relationship in Germany: Exploratory

- Results on How Men and Women Differ and Why. *Journal of Medical Internet Research*, 17(6), e156–19.
- Bird, C.E., & Rieker, P. P. (2008). *Gender and Health*. Cambridge University Press.
- Bloor, M. & Bloor, T. (2007). *The practice of critical discourse analysis: An introduction*. Oxford University Press.
- Boellstorff, T., Nardi, B., Pearce, C., & Taylor, T. L. (2012). *Ethnography and Virtual Worlds*. Princeton University Press.
- Bollen, J., Mao, H., & Pepe, A. (2011). Modeling Public Mood and Emotion: Twitter Sentiment and Socio-economic Phenomena (pp. 450–453). Presented at the Fifth International AAAI Conference on Weblogs and Social Media.
- Boutyline, A., & Willer, R. (2017). The Social Structure of Political Echo Chambers: Variation in Ideological Homophily in Online Networks. *Political Psychology*, 38(3), 551–569.
- Brady, E., Segar, J., & Sanders, C. (2016). You get to know the people and whether they're talking sense or not: Negotiating trust on health-related forums. *Social Science & Medicine*, 162(C), 151–157.
- Brady, W. J., Wills, J. A., Jost, J. T., Tucker, J. A., & Van Bavel, J. J. (2017). Emotion shapes the diffusion of moralized content in social networks. *Proceedings of the National Academy of Sciences*, 114(28), 7313–7318.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Brice-Saddler, M. (2019, March 5). Ethan Lindenberger: Facebook's anti-vax problem intensified in Congressional testimony. *The Washington Post*.  
<https://www.washingtonpost.com/health/2019/03/06/ethan-lindenberger-mom-anti-vax-facebook-groups/>
- Brown, P., & Zavestoski, S. (2004). Social movements in health: an introduction. *Sociology of Health & Illness*, 26(6), 679–694.
- Brotsky, S. R., & Giles, D. (2007). Inside the “Pro-ana” Community: A Covert Online Participant Observation. *Eating Disorders*, 15(2), 93–109.
- Bruns, A. (2017). Echo Chamber? What Echo Chamber? Reviewing the Evidence. *In The Biennial Future of Journalism Conference FOJ*, 1–11.
- Brunson, E. K., & Sobo, E. J. (2017). Framing Childhood Vaccination in the United States: Getting Past Polarization in the Public Discourse. *Human Organization*, 76(1), 38–47.
- Calvey, D. (2017). *Covert Research: The Art, Politics and Ethics of Undercover Fieldwork*. SAGE.
- Canizares, M., Hogg-Johnson, S., Gignac, M. A. M., Glazier, R. H., & Badley, E. M. (2017). Changes in the use practitioner-based complementary and alternative medicine over time in Canada: Cohort and period effects. *PLoS One*, 12(5), e0177307–17.
- Caplan, S. (2002). Problematic Internet use and psychosocial well-being: development of a theory-based cognitive-behavioral measurement instrument. *Computers in Human Behavior*, 18, 553–575.

- Caplan, S. (2010). Theory and measurement of generalized problematic Internet use: A two-step approach. *Computers in Human Behavior*, 26(5), 1089–1097.
- Capurro, D., Cole, K., Echavarría, M. I., Joe, J., Neogi, T., & Turner, A. M. (2014). The use of social networking sites for public health practice and research: a systematic review. *Journal of Medical Internet Research*, 16(3), e79.
- Caron, C. (2019, March 7). Facebook Announces Plan to Curb Vaccine Misinformation. *The New York Times*. <https://www.nytimes.com/2019/03/07/technology/facebook-anti-vaccine-misinformation.html>
- Chae, J. (2014). “Am I a Better Mother Than You?” *Communication Research*, 42(4), 503–525.
- Charmaz, K. (2006). *Constructing Grounded Theory*. London: SAGE Publications.
- Clarke, A. E., Mamo, L., Fosket, J. R., Fishman, J. R., & Shim, J. K. (2010). *Biomedicalization*. Duke University Press.
- Colineau, N., & Paris, C. (2010). Talking about your health to strangers: understanding the use of online social networks by patients. *New Review of Hypermedia and Multimedia*, 16(1-2), 141–160.
- Collie, M. (2019, April 24). Expectant couple angers neighbours after asking them to do their chores, cook their meals. Global News. <https://globalnews.ca/news/5197435/pregnant-couple-viral-meal-train-request-jim-burns-philadelphia/>
- Collins, P. H. (2016). Shifting the center: Race, class, and feminist theorizing about motherhood. In G. Chang, L. R. Forcey, & E. N. Glenn (Eds.), *Mothering Ideology, Experience, Agency* (pp. 45–65). Routledge.
- Conference Board of Canada. (2013, January). Income inequality - Canada and world results. <https://www.conferenceboard.ca/hcp/Details/society/income-inequality.aspx>
- Cortazzi, M. (2001). Narrative Analysis in Ethnography. In P. Atkinson, A. Coffey, S. Delamont, J. Lofland, & L. Lofland, *Handbook of Ethnography*. SAGE.
- Coulter, I. (2004). Integration and paradigm clash: The practical difficulties of integrative medicine. In P. Tovey, G. Easthope, & J. Adams (Eds.), *Mainstreaming Complementary and Alternative Medicine Studies in Social Context* (pp. 103–122). Routledge.
- Coulter, I. D., & Willis, E. M. (2004). The rise and rise of complementary and alternative medicine: a sociological perspective. *Complementary and Alternative Medicine*, 180, 587–589.
- Crawford, R. (1995). Healthism and the Medicalization of Everyday Life. *International Journal of Health Services*, 10(3), 365–388.
- Damaske, S. (2013). Work, Family, and Accounts of Mothers’ Lives Using Discourse to Navigate Intensive Mothering Ideals. *Sociology Compass*, 7(6), 436–444.
- Davies, A. (2017, April 12). Mommy Facebook groups are full of drama. *New York Post*. <https://nypost.com/2017/04/12/mommy-facebook-groups-are-full-of-drama/>
- De Choudhury, M., Counts, S., & Horvitz, E. (2013). Predicting Postpartum Changes in Emotion and Behavior via Social Media (pp. 3267–3276). Presented at the ACM Conference on Human Factors in Computing Systems CHI.

- Del Vicario, M., Vivaldo, G., Bessi, A., Zollo, F., Scala, A., Caldarelli, G., & Quattrociocchi, W. (2016). Echo Chambers: Emotional Contagion and Group Polarization on Facebook. *Scientific Reports*, 6(1), 37825.
- Derkatch, C. (2008). Method as Argument: Boundary Work in Evidence-Based Medicine. *Social Epistemology*, 22(4), 371–388.
- DeVault, M. L. (1994). *Feeding the Family*. University of Chicago Press.
- Drentea, P., & Moren-Cross, J. L. (2005). Social capital and social support on the web: the case of an internet mother site. *Sociology of Health & Illness*, 27(7), 920–943.
- Dubé, È., Vivion, M., Sauvageau, C., Gagneur, A., Gagnon, R., & Guay, M. (2015). “Nature Does Things Well, Why Should We Interfere?.” *Qualitative Health Research*, 26(3), 411–425.
- Dubois, E., & Blank, G. (2018). The echo chamber is overstated: the moderating effect of political interest and diverse media. *Information, Communication & Society*, 21(5), 729–745.
- Duggan, M., Lenhart, A., Lampe, C., & Ellison, N. B. (2015). Pew Research Center. Parents and Social Media. <https://www.pewresearch.org/internet/2015/07/16/parents-and-social-media/>
- Durkheim, E. (1995). *The Elementary Forms of Religious Life*. (K. Fields, Trans.). The Free Press.
- Dworkin, J., Connell, J., & Doty, J. (2013). A literature review of parents’ online behavior. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 7(2), 1–13.
- Elliott, S., & Bowen, S. (2018). Defending Motherhood: Morality, Responsibility, and Double Binds in Feeding Children. *Journal of Marriage and Family*, 80(2), 499–520.
- Elliott, S., & Reid, M. (2016). The Superstrong Black Mother. *Contexts*, 15(1), 48–53.
- Elliott, S., Powell, R., & Brenton, J. (2015). Being a Good Mom. *Journal of Family Issues*, 36(3), 351–370.
- Eysenbach, G., & Till, J. E. (2001). Ethical issues in qualitative research on internet communities. *BMJ*, 323(7321), 1103–1105.
- Facebook. (2019, March 7). Combatting Vaccine Misinformation. <https://newsroom.fb.com/news/2019/03/combating-vaccine-misinformation/>
- Fairclough, N. (2010). *Critical discourse analysis*. Routledge.
- Forbes, C., & Tsang, E. (2012). Healthcare in Canada: Privatization and How to Contain It. *UBC Medical Journal*, 4(1), 4–5.
- Foster, D. (2016). ‘Keep complaining til someone listens’: Exchanges of tacit healthcare knowledge in online illness communities. *Social Science & Medicine*, 166(C), 25–32.
- Fox, N. J., Ward, K. J., & O’Rourke, A. J. (2005). The “expert patient”: empowerment or medical dominance? The case of weight loss, pharmaceutical drugs and the Internet. *Social Science & Medicine*, 60(6), 1299–1309.
- Fox, P., Butler, M., Coughlan, B., Murray, M., Boland, N., Hanan, T., et al. (2013). Using a mixed methods research design to investigate complementary alternative medicine (CAM)

- use among women with breast cancer in Ireland. *European Journal of Oncology Nursing : the Official Journal of European Oncology Nursing Society*, 17(4), 490–497.
- Garcia, M. E. (2019, February 27). Tech platforms, stop enabling the anti-vaxers. <https://www.cnn.com/2019/02/27/opinions/vaccine-disinformation-amazon-facebook-tech-platforms-garcia/index.html>
- Gavin, J., Rodham, K., & Poyer, H. (2008). The Presentation of “Pro-Anorexia” in Online Group Interactions. *Qualitative Health Research*, 18(3), 325–333.
- Gee, J.P. (2011). *How to Do Discourse Analysis: A Toolkit*. Routledge.
- Gieryn, T. F. (1983). Boundary-Work and the Demarcation of Science from Non-Science: Strains and Interests in Professional Ideologies of Scientists. *American Sociological Review*, 48(6), 781.
- Glaser, B. G., & Strauss, A. L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Aldine.
- Goel, V. (2014, June 29). Facebook Tinkers With Users’ Emotions in News Feed Experiment, Stirring Outcry. *The New York Times*. <https://www.nytimes.com/2014/06/30/technology/facebook-tinkers-with-users-emotions-in-news-feed-experiment-stirring-outcry.html>
- Goffman, E. (1967). *Interaction ritual: essays on face-to-face interaction*. Aldine.
- Goode, J., & Greatbatch, D. (2005). Boundary Work. *Journal of Consumer Culture*, 5(3), 315–337.
- Granville, K. (2018, March 18). Facebook and Cambridge Analytica: What You Need to Know as Fallout Widens. *The New York Times*. <https://www.nytimes.com/2018/03/19/technology/facebook-cambridge-analytica-explained.html>
- Gross, E. (1998). Motherhood in Feminist Theory. *Affilia*, 13(3), 269–272.
- Gross, K., Hartmann, K., Zemp, E., & Merten, S. (2015). ‘I know it has worked for millions of years’: the role of the ‘natural’ in parental reasoning against child immunization in a qualitative study in Switzerland. *BMC Public Health*, 15(1), 628–7.
- Guba, E. G. (1981). ERIC/ECTJ Annual Review Paper: Criteria for Assessing the Trustworthiness of Naturalistic Inquiries. *Educational Communication and Technology*, 29(2), 75–91.
- Gunderson, J., & Barrett, A. E. (2015). Emotional Cost of Emotional Support? The Association Between Intensive Mothering and Psychological Well-Being in Midlife. *Journal of Family Issues*, 38(7), 992–1009.
- Haase, N., Betsch, C., & Renkewitz, F. (2015). Source Credibility and the Biasing Effect of Narrative Information on the Perception of Vaccination Risks. *Journal of Health Communication*, 20(8), 920–929.
- Hall, M. (2019, May). Facebook. Encyclopaedia Britannica. <https://www.britannica.com/topic/Facebook>
- Hampton, K. N. (2010). Internet Use and the Concentration of Disadvantage: Glocalization and the Urban Underclass. *American Behavioral Scientist*, 53(8), 1111–1132.

- Hays, S. (1996). *The Cultural Contradictions of Motherhood*. Yale University Press.
- Henderson, A., Harmon, S., & Newman, H. (2016). The Price Mothers Pay, Even When They Are Not Buying It: Mental Health Consequences of Idealized Motherhood. *Sex Roles*, 1–15.
- Henri, F., & Pudelko, B. (2003). Understanding and analysing activity and learning in virtual communities. *Journal of Computer Assisted Learning*, 19, 474–487.
- Hine, C. (2015). *Ethnography for the Internet : Embedded, Embodied and Everyday*. Bloomsbury Publishing PLC.
- Hine, C. (2017). Ethnography and the Internet: Taking Account of Emerging Technological Landscapes. *Fudan Journal of the Humanities and Social Sciences*, 10(3), 315–329.
- Ho, E. Y. (2016). “Have You Seen Your Aura Lately?” Examining Boundary-Work in Holistic Health Pamphlets. *Qualitative Health Research*, 17(1), 26–37.
- Hochschild, A. R. (1983). *The Managed Heart*. University of California Press.
- Hochschild, A., & Machung, A. (2012). *The Second Shift*. Penguin.
- Hoffman, B. L., Felter, E. M., Chu, K.-H., Shensa, A., Hermann, C., Wolynn, T., et al. (2019). It's not all about autism: The emerging landscape of anti-vaccination sentiment on Facebook. *Vaccine*, 37(16), 2216–2223.
- Ishizuka, P. (2019). Social Class, Gender, and Contemporary Parenting Standards in the United States: Evidence from a National Survey Experiment. *Social Forces*, 98(1), 31–58.
- Johnson, S. (2014). “Maternal Devices,” Social Media and the Self-Management of Pregnancy, Mothering and Child Health. *Societies*, 4(2), 330–350.
- Johnston, D. D., & Swanson, D. H. (2006). Constructing the “Good Mother”: The Experience of Mothering Ideologies by Work Status. *Sex Roles*, 54(7-8), 509–519.
- Kata, A. (2011). Anti-vaccine activists, Web 2.0, and the postmodern paradigm – An overview of tactics and tropes used online by the anti-vaccination movement. *Vaccine*, 30(25), 3778–3789.
- Kite, J., Foley, B. C., Grunseit, A. C., & Freeman, B. (2016). Please Like Me: Facebook and Public Health Communication. *PLoS One*, 11(9), e0162765–16.
- Kivits, J. (2009). Everyday health and the internet: a mediated health perspective on health information seeking. *Sociology of Health & Illness*, 31(5), 673–687.
- Kramer, A. D. I., Guillory, J. E., & Hancock, J. T. (2014). Experimental evidence of massive-scale emotional contagion through social networks. *Proceedings of the National Academy of Sciences*, 111(24), 8788–8790.
- Kreuger, B. S. (2002). Assessing the potential of internet political participation in the United States: A Resource Approach. *American Politics Research*, 30(5), 476–498.
- Kwiecinski, J. (2009). Genetically modified abominations? *European Molecular Biology Organization Reports*, 10(11), 1187–1190.

- Lagan, B. M., Sinclair, M., & Kernohan, W. G. (2010). Internet Use in Pregnancy Informs Women's Decision Making: A Web-Based Survey. *Birth Issues in Prenatal Care*, 37(2), 106–115.
- Lamont, M., & Molnár, V. (2002). The Study of Boundaries in the Social Sciences. *Annual Review of Sociology*, 28(1), 167–195.
- Lamont, M., Pendergrass, S., & Pachucki, M. (2015). Symbolic Boundaries. *International Encyclopedia of Social & Behavioral Sciences* (Second Edition, pp. 850–855). Elsevier.
- Lareau, A. (2003). *Unequal Childhoods*. University of California Press.
- Larsson, M. (2009). A descriptive study of the use of the Internet by women seeking pregnancy-related information. *Midwifery*, 25(1), 14–20.
- Lee, E. (2007). Health, morality, and infant feeding: British mothers' experiences of formula milk use in the early weeks. *Sociology of Health & Illness*, 29(7), 1075–1090.
- Light, D. (1995). Countervailing Powers: A framework for professions in transition. In T. Johnson, G. Larkin, & M. Saks (Eds.), *Health Professions and the State in Europe* (pp. 24–41). London.
- Light, D. (2000). The sociological character of markets in health care. In *The Handbook of Social Studies in Health and Medicine* (pp. 394–408). SAGE.
- Link, B. G. (2008). Epidemiological Sociology and the Social Shaping of Population Health. *Journal of Health and Social Behavior*, 49(4), 367–384.
- Lupton, D. (1997). Consumerism, reflexivity and the medical encounter. *Social Science & Medicine*, 45(3), 373–381.
- Lupton, D., & Jutel, A. (2015). "It's like having a physician in your pocket!" A critical analysis of self-diagnosis smartphone apps. *Social Science & Medicine*, 133, 128–135.
- MacKendrick, N. (2011, July 21). The Individualization of Risk as Responsibility and Citizenship: A Case Study of Chemical Body Burdens. (Doctoral Dissertation, University of Toronto, Toronto, Ontario, Canada).
- MacKendrick, N. (2014). More Work for Mother. *Gender & Society*, 28(5), 705–728.
- MacKendrick, N. (2018). *Better Safe Than Sorry*. University of California Press.
- MacKendrick, N., & Cairns, K. (2019). The Polluted Child and Maternal Responsibility in the US Environmental Health. *Signs: Journal of Women in Culture and Society*, 44(21), 307–332.
- Madison, D. S. (2005). *Critical ethnography: Method, ethics, and performance*. SAGE.
- Martucci, J., & Barnhill, A. (2016). Unintended Consequences of Invoking the "Natural" in Breastfeeding Promotion. *Pediatrics*, 137(4), e20154154–e20154154.
- McCormack, K. (2016). Stratified Reproduction and Poor Women's Resistance. *Gender & Society*, 19(5), 660–679.
- McGregor, S. (2001). Neoliberalism and health care. *International Journal of Consumer Studies*, 1–8.

- McKenzie, J. S. (2017). “You Don't Know How Lucky you are to be Here!”: Reflections on Covert Practices in an Overt Participant Observation Study. *Sociological Research Online*, 14(2), 1–10.
- McKinlay, J. B., & Marceau, L. D. (2002). The end of the golden age of doctoring. *International Journal of Health Services*, 32(2), 379–416.
- McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a Feather: Homophily in Social Networks. *Annual Review of Sociology*, 27, 415–444.
- Mizrachi, N., Shuval, J. T., & Gross, S. (2005). Boundary at work: alternative medicine in biomedical settings. *Sociology of Health & Illness*, 27(1), 20–43.
- Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A New Dimension of Health Care: Systematic Review of the Uses, Benefits, and Limitations of Social Media for Health Communication. *Journal of Medical Internet Research*, 15(4), e85–16.
- Morreim, E. H. (2003). A dose of our own medicine: alternative medicine, conventional medicine, and the standards of science. *The Journal of Law, Medicine & Ethics: a Journal of the American Society of Law, Medicine & Ethics*, 31(2), 222–235.
- Mykhalovskiy, E., & Weir, L. (2004). The problem of evidence-based medicine: directions for social science. *Social Science & Medicine*, 59(5), 1059–1069.
- Naslund, J. A., Aschbrenner, K. A., Marsch, L. A., & Bartels, S. J. (2016). The future of mental health care: peer-to-peer support and social media. *Epidemiology and Psychiatric Sciences*, 25, 113–122.
- National Center for Complementary and Integrative Health (NCCIH). (2018, July). Complementary, Alternative, or Integrative Health: What's In a Name? <https://nccih.nih.gov/health/integrative-health>
- Nichol, J., Thompson, E. A., & Shaw, A. (2011). Beliefs, Decision-Making, and Dialogue About Complementary and Alternative Medicine (CAM) Within Families Using CAM: A Qualitative Study. *Journal of Alternative and Complementary Medicine (New York, N.Y.)*, 17(2), 117–125.
- O'Neill, B. (2017). Towards an improved understanding of modern health information ecology. *Social Science & Medicine*, 173(C), 108–109.
- Ouellette, L., & Wilson, J. (2011). Women's Work: Affective labour and convergence culture. *Cultural Studies*, 25(4-5), 548–565.
- Paechter, C. (2012). Researching sensitive issues online: implications of a hybrid insider/outsider position in a retrospective ethnographic study. *Qualitative Research*, 13(1), 71–86.
- Pandey, S. K., Hart, J. J., & Tiwary, S. (2003). Women's health and the internet: understanding emerging trends and implications. *Social Science & Medicine*, 56(1), 179–191.
- Pedersen, S. (2016). The good, the bad and the “good enough” mother on the UK parenting forum Mumsnet. *Women's Studies International Forum*, 59(C), 32–38.
- Phillips, T. (2019). ‘Mostly accurate with occasional piles of bullshit’: patient ‘boundary-work’ in an online scientific controversy. *Health Sociology Review*, 28(3), 261–276.

- Plantin, L., & Daneback, K. (2009). Parenthood, information and support on the internet. A literature review of research on parents and professionals online. *BMC Family Practice*, *10*(1), 281–12.
- Quattrociochi, W. (2017). Inside the Echo Chamber. *Scientific American*, *316*(4), 60–63.
- Rainie, L. (2013, October 9). E-patients and their hunt for health information. Pew Research Centre: Internet & Technology. <https://www.pewinternet.org/2013/10/10/e-patients-and-their-hunt-for-health-information/>
- Reich, J. A. (2014). Neoliberal Mothering and Vaccine Refusal. *Gender & Society*, *28*(5), 679–704.
- Reich, J. A. (2016a). *Calling the Shots*. New York University Press.
- Reich, J. A. (2016b). Of natural bodies and antibodies: Parents' vaccine refusal and the dichotomies of natural and artificial. *Social Science & Medicine*, *157*(c), 103–110.
- Rice, R. E. (2006). Influences, usage, and outcomes of Internet health information searching: Multivariate results from the Pew surveys. *International Journal of Medical Informatics*, *75*(1), 8–28.
- Rippeyoung, P. L. F. (2013). Governing Motherhood: Who Pays and Who Profits? Canadian Centre for Policy Alternatives. *In Focus*, 1–14. <https://www.policyalternatives.ca/publications/reports/governing-motherhood>
- Rizzo, K. M., Schiffrin, H. H., & Liss, M. (2013). Insight into the Parenthood Paradox: Mental Health Outcomes of Intensive Mothering. *Journal of Child and Family Studies*, *22*(5), 614–620.
- Robinson, O. C. (2013). Sampling in Interview-Based Qualitative Research: A Theoretical and Practical Guide. *Qualitative Research in Psychology*, *11*(1), 25–41.
- Roulet, T. J., Gill, M. J., Stenger, S., & Gill, D. J. (2017). Reconsidering the Value of Covert Research. *Organizational Research Methods*, *20*(3), 487–517.
- Ruddick, S. (1995). *Maternal Thinking*. Beacon Press.
- Sackett, D. L., Rosenberg, W. M. C., Gray, J. A. M., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: what it is and what it isn't. *BMJ*, *312*(7023), 71–72.
- Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., et al. (2017). Saturation in qualitative research: exploring its conceptualization and operationalization. *Quality & Quantity*, *52*(4), 1893–1907.
- Schmidt, A. L., Zollo, F., Scala, A., Betsch, C., & Quattrociochi, W. (2018). Polarization of the vaccination debate on Facebook. *Vaccine*, *36*(25), 3606–3612.
- Schoppe-Sullivan, S. J., Yavorsky, J. E., Bartholomew, M. K., Sullivan, J. M., Lee, M. A., Dush, C. M. K., & Glassman, M. (2017). Doing Gender Online: New Mothers' Psychological Characteristics, Facebook Use, and Depressive Symptoms. *Sex Roles*, *76*, 276–289.
- Shuval, J. T., & Mizrachi, N. (2004). Changing Boundaries: Modes of Coexistence of Alternative and Biomedicine. *Qualitative Health Research*, *14*(5), 675–690.

- Shuval, J. T., Gross, R., Ashkenazi, Y., & Schachter, L. (2012). Integrating CAM and Biomedicine in Primary Care Settings. *Qualitative Health Research*, 22(10), 1317–1329.
- Singleton, R., & Straits, B. C. (2010). *Approaches to Social Research (5 ed.)*. New York: Oxford University Press.
- Slaughter, A-M. (2012). Why Women Still Can't Have It All. *The Atlantic*, (July/August). <https://www.theatlantic.com/magazine/archive/2012/07/why-women-still-cant-have-it-all/309020/>
- Smith, N., & Graham, T. (2017). Mapping the anti-vaccination movement on Facebook. *Information, Communication & Society*, 22(9), 1310–1327.
- Smithson, J., Sharkey, S., Hewis, E., Jones, R. B., Emmens, T., Ford, T., & Owens, C. (2011). Membership and Boundary Maintenance on an Online Self-Harm Forum. *Qualitative Health Research*, 21(11), 1567–1575.
- Statista. (2020, January). Number of monthly active Facebook users worldwide as of 4th quarter 2019. <https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>
- Stirrup, J., Duncombe, R., & Sandford, R. (2014). “Intensive mothering” in the early years: the cultivation and consolidation of (physical) capital. *Sport, Education and Society*, 20(1), 89–106.
- Strauss, E. (2018, December 20). The judgmental mom is little more than a stereotype. <https://www.cnn.com/2018/12/13/health/judgmental-mom-parenting-strauss/index.html>
- Sunstein, C. (2007). *Republic.com 2.0*. Princeton University Press.
- Sunstein, C. (2018). *#Republic: Divided Democracy in the Age of Social Media*. Princeton University Press
- Suryani, A. (2008). Comparing Case Study and Ethnography as Qualitative Research Approaches. *Qualitative Research Approaches*, 5(1), 117–127.
- Thoits, P. A. (1996). Managing the Emotions of Others. *Symbolic Interaction*, 19(2), 85–109.
- Tilly, C. (1998). *Durable Inequality*. University of California Press.
- Timmermans, S., & Kolker, E. (2004). Evidence-based medicine and the reconfiguration of medical knowledge. *Journal of Health and Social Behavior*, 45 Suppl, 177–193.
- Timmermans, S., & Mauck, A. (2005). The Promises And Pitfalls Of Evidence-Based Medicine. *Health Affairs*, 24(1), 18–28.
- Timmermans, S., & Oh, H. (2010). The Continued Social Transformation of the Medical Profession. *Journal of Health and Social Behavior*, 51(1 Suppl), S94–S106.
- Timonen, V., Foley, G., & Conlon, C. (2018). Challenges When Using Grounded Theory. *International Journal of Qualitative Methods*, 17(1), 160940691875808.
- Valtchanov, B. L., Parry, D. C., Glover, T. D., & Mulcahy, C. M. (2016). “A Whole New World”: Mothers' Technologically Mediated Leisure. *Leisure Sciences*, 38(1), 50–67.
- van Dijk, T. A. (1993). Principles of critical discourse analysis. *Discourse & Society*, 4(2), 249–283.

- van Dijk, T. A. (1999). Critical Discourse Analysis and Conversation Analysis. *Discourse & Society*, 10(4), 459–460.
- Villalobos, A. (2014). *Motherload: Making It All Better in Insecure Times*. University of California Press.
- Walls, J. K., Helms, H. M., & Grzywacz, J. G. (2013). Intensive Mothering Beliefs Among Full-Time Employed Mothers of Infants. *Journal of Family Issues*, 37(2), 245–269.
- Walzer, S. (1996). Thinking About the Baby: Gender and Divisions of Infant Care. *Social Problems*, 43(2), 219–234.
- Wang, Y., McKee, M., Torbica, A., & Stuckler, D. (2019). Systematic Literature Review on the Spread of Health-related Misinformation on Social Media. *Social Science & Medicine*, 240, 112552.
- Watson, A. (2016). “Quelling Anxiety as Intimate Work: Maternal Responsibility to Alleviate Bad Feelings Emerging from Precarity”. *Studies in Social Justice*, 10, 261–283.
- Weber, M. (2019). *Economy and Society: A New Translation*. (K. Tribe, Trans.) Harvard University Press.
- White, L., McQuillan, J., Greil, A. L., & Johnson, D. R. (2006). Infertility: Testing a helpseeking model. *Social Science & Medicine*, 62(4), 1031–1041.
- Wiese, M., Oster, C., & Pincombe, J. (2010). Understanding the emerging relationship between complementary medicine and mainstream health care: A review of the literature. *Health: an Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, 14(3), 326–342.
- Wilson, J. A., & Chivers Yochim, E. (2015). Mothering through precarity: Becoming mamapreneurial. *Cultural Studies*, 29(5-6), 669–686.
- Wilson, J. A., & Chivers Yochim, E. (2017). *Mothering through Precarity*. Duke University Press.
- Wilson, R. E., Gosling, S. D., & Graham, L. T. (2012). A Review of Facebook Research in the Social Sciences. *Perspectives of Psychological Sciences*, 7(3), 203–220.
- Witz, A. (1990). Patriarchy and Professions: The Gendered Politics of Occupational Closure. *Sociology*, 24(4), 675–690.
- Wolf, J. B. (2013). *Is Breast Best?* NYU Press.
- Wynne, B. (2001). Creating Public Alienation: Expert Cultures of Risk and Ethics on GMOs. *Science as Culture*, 10(4), 445–481.
- Yavorsky, J. E., Kamp Dush, C. M., & Schoppe-Sullivan, S. J. (2015). The Production of Inequality: The Gender Division of Labor Across the Transition to Parenthood. *Journal of Marriage and Family*, 77(3), 662–679.
- Zadoroznyj, M (2001). Birth and the “reflexive consumer”: trust, risk and medical dominance in obstetric encounters. *Journal of Sociology*, 37(2), 117–139.

- Zadrozny, B. (2019, May 21). Parents are poisoning their children with bleach to “cure” autism. These moms are trying to stop it. NBC News. <https://www.nbcnews.com/tech/internet/moms-go-undercover-fight-fake-autism-cures-private-facebook-groups-n1007871>
- Zadrozny, B. (2020, February 21). She wanted a “freebirth” with no doctors. Online groups convinced her it would be OK. NBC News. <https://www.nbcnews.com/news/us-news/she-wanted-freebirth-no-doctors-online-groups-convinced-her-it-n1140096>
- Zaslow, E. (2012). Revalorizing feminine ways of knowing. *Information, Communication & Society*, 15(9), 1352–1372.
- Zhang, Y., He, D., & Sang, Y. (2013). Facebook as a Platform for Health Information and Communication: A Case Study of a Diabetes Group. *Journal of Medical Systems*, 37(3), 207–12.

## Appendix A: Call for Participants

Hello everyone,

My name is Darryn and I have been a member of [Facebook group] for [time period]. As you may or may not know, I am a PhD Candidate in Sociology at the University of Ottawa. For my dissertation research, I am examining the experiences of mothers who use online communities where health is discussed. I am interested in learning about mothers' experiences with medicine and their motivations in pursuing various medical or health approaches. I am also interested in exploring how their participation in online communities has shaped or influenced their beliefs.

I am currently creating an interest list of possible participants for interviews. Interview participants will be compensated with a \$10 Amazon gift card. Please note that due to limits on time and resources, not everyone who contacts me will be included, but I will do my best.

If you are a mother who meets this criteria and are interested in participating, please e-mail me at [REDACTED], send me a PM, or leave a comment below with your contact information.

If you wish, I am happy to share more with you about the project. This project has been approved by the Ethics Review Board at the University of Ottawa and is not being funded by any external groups.

Many thanks,  
Darryn Wellstead



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Faculty of Social Sciences

Département de sociologie et  
d'anthropologie  
Department of Sociology and  
Anthropology

## Appendix B: Recruitment Letter

### Project Title:

An ethnography of health perspectives among mothers in online communities

### INTERVIEW RECRUITMENT LETTER

Hello,

I am contacting you about a research project that I am undertaking on the topic of mothering, health, and online communities. I am working under the supervision of Dr. Phyllis Rippey and Dr. Nathan Young.

This research project looks at the experiences of mothers who participate in online communities where health is discussed. My hope is to understand how online communities serve as key source of social support and health information for mothers. This project will allow mothers to have their say about the things that are important to them when it comes to their health and the health of their families. A key goal of the project is to advocate for the perspectives and needs of mothers.

I believe your participation would benefit this project and I hope that you will consider participating in an interview. The interview would last approximately 30-45 minutes and would be arranged at a time that is convenient for you over the phone. You will receive a \$10 Amazon electronic gift card for your time.

If you are interested in participating in this project, or for more information, please contact me by email at [REDACTED] or by telephone [REDACTED]. If you know of another person who might be interested in participating in this project, please invite them to contact me. If you have any additional questions please feel free to contact my supervisors, Dr. Rippey at [REDACTED] or Dr. Young, at [REDACTED].

Thank you for your time and your consideration.

Yours sincerely,

Darryn Wellstead, PhD Candidate, Sociology

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120, rue Université / University Pwt.  
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## Appendix C: Interview Consent Form

Project Title:

*An ethnography of health perspectives among mothers in online communities*

### INTERVIEW CONSENT FORM

**Principal Investigator:** Darryn Anne Wellstead, PhD Candidate, Sociology

Contact: [REDACTED]

**Graduate Supervisors:** Dr. Phyllis Rippey, Associate Professor of Sociology

Contact: [REDACTED]

Dr. Nathan Young, Professor of Sociology

Contact: [REDACTED]

**Purpose:** This research project looks at the experiences of mothers who participate in online communities where health is discussed. My hope is to understand how online communities serve as key source of social support and health information for mothers. This project will allow mothers to have their say about the things that are important to them when it comes to their health and the health of their families. A key goal of the project is to advocate for the perspectives and needs of mothers.

**Participation and Procedures:** You are being invited to participate in this research because you identify as a mother who uses online communities to talk about health. If you choose to participate, we will schedule an interview at a time of your choosing over the phone. I expect the interview to last between 30-45 minutes. The interview will deal with topics such as how you use online communities, your views on health, and your experiences around health and parenting. The interviews will be tape-recorded and transcribed for accuracy. However, during the interview you are free to withdraw any statement and it will be disregarded.

**Confidentiality and Anonymity:** Your identity will be kept strictly confidential. Pseudonyms will be assigned to all study participants and you may choose your own pseudonym, if you wish. It is possible that your statements may be quoted in our reports or other publications, but you will never be identified by name, and any identifying information will be masked.

**Conservation of data:** The audio/video files and paper copies of your data will be kept under lock in the office of Darryn Wellstead, and electronic copies will be password protected on my computer. The only persons who will have access to this data are the principal investigator, the supervisors, and any research assistants working on the project.

**Consent:** Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without penalty.

Pièce 10005 / Room 10005

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120, rue Université / University Pvt.

Ottawa ON K1N 6N5

**Remuneration/Compensation:** You will receive a \$10 Amazon electronic gift card for your time. You will receive this compensation even if you decide to withdraw from the study.

**Risks and Benefits:** There are few risks associated with the research. Potential risks are outlined below.

Interview questions have the potential to cause individuals who have had health trauma to recall and perhaps re-live these unpleasant experiences. Participants should be aware of this risk and know that they may skip or opt out of any question, or end the interview at any time. Interviews will be conducted in a compassionate and non-judgmental manner.

Benefits to you include the opportunity to explore your experiences and feelings on a range of issues including your participation in online communities, your mothering experiences, and your views on health and health care. Many people enjoy sharing their views and experiences with others, and this may engender a sense of empowerment and solidarity with others.

**Contact for information about the study:** If you have any questions or would like further information about this study, you may contact me via email at [REDACTED] or by phone at [REDACTED].

**Contact for concerns about the rights of research participants:** If you have any concerns or questions about your treatment or rights as a research participant, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, 550 Cumberland Street, Room 154, 613-562-5387 or [ethics@uottawa.ca](mailto:ethics@uottawa.ca).

**Consent:** Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without penalty.

Your signature indicates that you consent to participate in this study. Your signature below also indicates that you have received a copy of this consent form for your own records.

---

Legal name of participant \_\_\_\_\_ Date \_\_\_\_\_

---

Signature of participant \_\_\_\_\_

---

Email of participant (please fill out only if you wish to be informed of project completion)



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## Appendix D: Quotation Consent Form

### Project Title:

*An ethnography of health perspectives among mothers in online communities*

### QUOTATION/STORY CONSENT FORM

**Principal Investigator:** Darryn Wellstead, PhD Candidate, Sociology

Contact: [REDACTED]

**Graduate Supervisors:** Dr. Phyllis Rippey, Associate Professor of Sociology

Contact: [REDACTED]

Dr. Nathan Young, Associate Professor of Sociology

[REDACTED]

**Purpose:** This research project looks at the experiences of mothers who participate in online communities where health is discussed. My hope is to understand how online communities serve as key source of social support and health information for mothers. This project will allow mothers to have their say about the things that are important to them when it comes to their health and the health of their families. A key goal of the project is to advocate for the perspectives and needs of mothers.

**Participation and Procedures:** You are being invited to participate in this research because of your involvement in Facebook groups where health is discussed. I am interested in recording your quotation/story for potential use in the write-up of my research (please see the attached document for the specific quote(s) or story of interest). No other involvement on your part is required.

**Confidentiality and Anonymity:** Your identity will be kept strictly confidential. Pseudonyms will be assigned to all study participants and you may choose your own pseudonym, if you wish. If your statements are quoted in my reports or other publications, you will never be identified by name, and any identifying information will be masked, to ensure your identity is kept confidential. The name of the Facebook group will also be kept confidential.

**Conservation of data:** The audio/video files and paper copies of your data will be kept under lock in the office of Darryn Wellstead, and electronic copies will be password protected on my computer. The only persons who will have access to this data are the principal investigator, the supervisors, and any research assistants working on the project. The data will be stored for a minimum of 5 years.

**Consent:** Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without penalty.

**Remuneration/Compensation:** There will be no compensation for the use of quotations.

**Risks and Benefits:** With the use of a direct quotation, it may be possible that if members of the Facebook group read the study, they could identify you from your quotes, even if identifying information is masked. Although this is unlikely, you should decide if you feel comfortable with this possibility before providing



consent. Benefits of participating include the opportunity to share your story and opinions with interested readers. Other mothers experiencing similar situations may benefit by knowing your story. This may engender a sense of solidarity and empowerment.

**Contact for information about the study:** If you have any questions or would like further information about this study, you may contact me via email at [REDACTED] or by phone at [REDACTED].

**Contact for concerns about the rights of research participants:** If you have any concerns or questions about your treatment or rights as a research participant, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, 550 Cumberland Street, Room 154, 613-562-5387 or [ethics@uottawa.ca](mailto:ethics@uottawa.ca).

**Consent:** Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without penalty.

Your signature indicates that you consent to participate in this study. Your signature below also indicates that you have received a copy of this consent form for your own records.

---

Printed (legal) name of participant

---

Date

---

Signature of participant

---

Email of participant (please fill out only if you wish to be informed of project completion)

## Appendix E: Interview Guide

**Important Note:** The interview guide was used as part of a semi-structured interview process. I have included the probes I found most useful, in addition to the standard questions.

**Preamble:** *Hi \_\_\_\_\_, thank you so much for taking the time out of your day to speak with me. I'm going to be asking you a series of questions about your use of Facebook and online communities, your views and experiences around health, and how these things connect to mothering. I want you to know that none of the questions are mandatory (you can say "skip" if you do not wish to answer), and you may stop the interview at any time. That being said, most people find it helpful to share their experiences.*

*Just as a reminder, I am recording this interview to ensure that I capture your words accurately. Your responses are confidential. Any identifying information from you will not be included in my dissertation and a pseudonym will be used in place of your real name.*

*I will start out by asking some basic questions about you, your views on mothering. After, we will discuss your use of online groups, and end on a discussion of your thoughts and experiences of healthcare. Do you have any questions before we begin?*

### **About You**

1. Can you tell me a bit about yourself?
  - a. Age
  - b. Occupation
  - c. Single/Married/Divorced/In a relationship
  - d. # children
  - e. Race/ethnicity
2. How would you describe your parenting style or philosophy?
3. What does a 'good mother' look like to you?
4. What are your greatest priorities as a mother?
5. What are your biggest concerns? What do you worry about?

### **Online Groups**

6. I'd like to focus on the Facebook group that is most important to you. Tell me about this group.
  - a. How and when did you come to be a member?
  - b. How do you use the group?
  - c. How often would you say you engage with it?
  - d. What do you like about the group?
  - e. What do you dislike?
  - f. In what ways do you feel connected with the other members?
  - g. How does the group make you feel about yourself *as a mother*?
  - h. What kinds of things have you learned from the group?
  - i. How has your involvement in the group influenced your views on health issues, if at all?
  - j. How has your involvement in the group influenced your choices or decisions?
  - k. I'd like to ask you to think of a time when you ultimately made a *different choice* because of information you learned in the group (or another group)? Can you tell me about that?

- l. Thinking big picture, how would your life be different if you had never been a part of this group?
  - m. When you participate in the group, do you feel you have to present yourself a certain way?
  - n. When you participate, do people get a sense of who you really are?
  - o. If you were giving someone advice on how to get the most out of the group, what would you tell them?
7. About how many other groups would you say you're a member of?
  8. What is important for you when choosing which groups to join?
  9. What kinds of groups would, or do you avoid?
  10. What would cause you leave a group?

### **Health & Healthcare**

11. Generally speaking, how do you feel about western medicine? What have your experiences been like?
12. How do you feel about alternative or holistic medicine? What have your experiences been like?
13. When making health decisions for yourself or your family, how do you decide what approach to take?
14. How do you typically *feel emotionally* when you need to make health care decisions?
15. When you feel uncertain about a health issue, what actions or steps do you take to help come to a decision?
16. What are some strong convictions you hold relating to your health or your children's health? Why?
17. How often do you feel you have to 'defend' the decisions you make about your family's health? Why?
18. How do you advocate for your health beliefs, if at all?

### **Closing Questions**

19. If you had the opportunity to give a message or advice to other mothers out there, what would you tell them?
20. Anything else you would like to add?

## Appendix F: Sample Ethnographic Vignette

My immediate response in joining the natural group is an overwhelming feeling of inadequacy. Reading through the various posts on topics like natural cleaning leave me feeling guilty for my cupboard full of Lysol, bleach, and other so-called ‘chemical’ cleaners. Posts about organic food and eating raw lodge a weight into my gut, as I reflect on my dietary fouts: the sugar-laden peanut butter I had on what was probably GMO toast, the lettuce and peppers in my salad that probably misted with herbicides and bathed in bleach, and the obviously factory-farmed, dairy-based ice cream that I ate with my husband the night before.

Reading a shared article about the “cancer-causing” chemical glyphosate in Canadian grain products caused me wonder how much I have poisoned my children by feeding them Cheerios and packing Goldfish crackers in their lunch. And what about nitrates? Would my daughter catch on if I swapped out ham and cheese sandwiches (her favourite) for a hummus and sprouts wrap? (The thought is almost laughable). Yes, the sentiment I am left with is that I am lacking; I have let myself and my family down.

In reflecting on this thought spiral in myself, I admit that my initial response to the group is one of aversion. *Get me the hell out of here.* I consider what it would be like to pretend I had not just read about all of the things that were poisoning my family. *My mom fed us deli meat for lunch every day, and we’re okay. Why is no one else worried about this?! Maybe ignorance is bliss.* Yet, “know better, do better” is a common adage in this community, and as I continue reading, I notice that expressions of interest in “doing better” are received favourably. It is okay to be learning, I realize. There is hope here.

As the days pass, I find myself becoming more accustomed to the discussions, and not taking their existence as an insult to my own practices. Instead, I find nuggets of wisdom, a feeling of welcoming and kindness. Now in my role as researcher, I am willing to try out a few of these natural suggestions. It turns out that vinegar works wonderfully for removing that dingy mildew smell from towels, and mixed with baking soda, is almost miraculous in its ability to remove hard water stains and grease from my stainless steel kettle. I attempt homemade yogurt with good success, slightly sweetened with maple syrup (instead of sugar) in an effort to coerce my children into eating it. As I read about topics for which I had previously held strong convictions, such as vaccines, I begin to appreciate the diversity in perspectives. Seeing respectful discussion and debate play out, I find myself empathizing with mothers as they struggle to make decisions about their children’s health. *I get it. It is hard.*

## Appendix G: Sample Coding Tree (Natural Group)

Within the *high-level code* “Discusses Medicine or Science”, it became clear that a number of emergent codes could be grouped within the code of “Medical Ambivalence”. This included axial codes such as “It has its time and place”, “Necessary evil or risk”, “Risk vs. Benefit”, and so on. The complete table demonstrating the coding structure and definitions is displayed below.

<b>Coding Level</b>	<b>Code Name</b>	<b>Description</b>
High-Level Code	Discusses Medicine or Science	Thread discusses medicine or science
Associated concept	Medical Ambivalence	Comments reflect ambivalence around western medicine
Axial codes	crunchy as second best	Medicine is first choice, natural approaches are second best
	It has its time and place	Comments suggest that medicine “has its time and place”
	necessary evil or risk	Medical intervention is framed or explicitly discussed as a necessary evil or risk
	pros and cons of both	Comments suggest both natural and western medicine have pros and cons
	risk vs benefit	Comments discuss that there are risks and benefits to Western medicine
	what would a doctor do?	Comments discuss futility of a doctor in a specific situation

## Appendix H: Table of Participants

<b>Group</b>	<b>Name (Pseudonym)</b>	<b>Age</b>	<b>Race/Ethnicity</b>	<b>Location</b>	<b>Occupation</b>	<b>Full Time/ Part Time</b>	<b>Marital Status</b>	<b># Children</b>
Science	Corissa	35	White	Canada	Data analyst	FT	Married	2
Science	Lee	36	White	USA	Stay at home parent	N/A	Married	1
Science	Heather	33	White	USA	Stay at home parent	N/A	Married	2
Science	Kayla	35	White	USA	Stay at home parent	N/A	Married	3
Science	Adhira	34	South Asian	USA	Social worker	FT	Married	1
Science	Elizabeth	30	White	USA	Stay at home parent	N/A	Domestic Partnership	1
Science	Kathleen	35	White	USA	Stay at home parent	N/A	Married	1
Science	Mallory	24	White	Canada	School administration	FT	Domestic Partnership	1
Science	Breanna	31	White	USA	PhD student	FT	Married	1
Science	Nina	37	Ashkenazi Jew	USA	Manager	FT	Married	1
Science	Dana	39	Ashkenazi Jew	USA	Special ed teacher	FT	Married	3
Science	Amna	36	South Asian	Canada	Philanthropist	PT	Married	1
Science	Lauren	36	White	USA	Attorney	FT	Married	2
Science	Jocelyn	28	White	USA	Teacher	FT	Married	2
Natural	Denisha	27	Black	USA	Stay at home parent	N/A	Domestic Partnership	2
Natural	Valerie	37	White	USA	Self-employed	PT	Married	5
Natural	Connie	36	Native-American	USA	Social worker	FT	Married	2
Natural	Rose	37	White	USA	Stay at home parent	N/A	Married	1
Natural	Rebecca	37	White	Canada	Stay at home parent	N/A	Domestic Partnership	2
Natural	Lisa	37	White	Canada	Counselor	FT	Married	2
Natural	Laura	34	White	Canada	Self-employed	PT	Domestic Partnership	2
Natural	Mira	32	White	Canada	Self-employed	PT	Married	2
Natural	Naomi	42	White	Canada	Self-employed	PT	Domestic Partnership	1
Natural	Jen	32	White	Canada	Teacher	FT	Married	3
Natural	Amanda	34	White	Canada	Healthcare administration	FT	Single	1
Natural	Erin	33	White	Canada	Stay at home parent	N/A	Married	2
Natural	Vanessa	22	White	Canada	Stay at home parent	N/A	Married	3
Natural	Deborah	41	White	Canada	Yoga teacher	PT	Married	2
Natural	Victoria	44	White	Canada	Unemployed	N/A	Domestic Partnership	1

## Appendix I: Social Media #SelfCheck Tool

### # Social media #SELF CHECK

Use this tool to check in on your social media use and its impact on your life. Use it regularly, because things change.



Twitter



Facebook



Instagram



LinkedIn



#### TIME



How much time am I spending on \_\_\_\_\_?

**Facebook groups:** How much time am I spending in this specific group? Does the time I spend in the group reflect its importance in my life?

What other things could I have been doing when I was online?

#### MOOD



When I spend time on \_\_\_\_\_, how does it make me feel?

... Uplifted? Supported? Loved?  
... Confused? Inadequate? Guilty?  
... Agitated? Angry?

Do I carry these feelings into my offline interactions?

What would it feel like to deactivate for...  
... a day? ... a week? ... a month?  
... indefinitely?

**Facebook groups:** What would it feel like to leave the group?

How often does my use interrupt my ability to 'be in the moment'?

#### DECISIONS



Has my participation encouraged me to purchase products or services that I otherwise would not?

Have I made different health or lifestyle choices because of my participation?

Have I followed up with the appropriate healthcare professional about the safety of my choices?

#### RELATIONSHIPS



How has my participation affected my relationships? Has it...

... expanded my network?  
... strengthened my offline relationships?  
... Weakened my offline relationships?

#### FURTHER READING

- [MediaSmarts.ca: Media Literacy](https://www.media-smarts.ca/2018/05/01/media-literacy/)
- [Report: Scientific Literacy in Canada \(CCA\)](https://www3.internationaljournalofeducation.com/2018/05/01/report-scientific-literacy-in-canada-cca/)

#### QUALITY CHECK

Is the same information posted to other sites I recognize and trust?

What is the source of information? Mainstream news articles are usually fact-checked, whereas blogs and other user-created media may not be.

When I research the author (s), can I identify any conflicts of interest? E.G. Are they selling a product or service, or do they otherwise financially benefit by the information and/or advice being given?

Are there links to scientific research? If so, do I have the necessary knowledge to interpret the science myself? Is there an expert I can ask about this?

Created by Darryn Wellstead, Ph.D.

## Appendix J: Messages from Mothers

*Q: If you had the opportunity to give a message or advice to other mothers out there, what would you tell them?*

I would tell them to trust their instincts. Your instincts go a long way to the things that you should do. I find a lot of the advice nowadays that's more mainstream, although it's starting to change a little bit, goes against that, so stuff like sleep training and things...it's really to trust those and trust that you know what you're doing, and don't be so quick to go against what your instincts and your judgements are telling you just because it's something that you've read or it's something that your parents used to do or your best friend does it that way. That doesn't make it right. That's not to say what they're doing is wrong, either. They've made those decisions, and respect them, but also respect your own mind's ability to influence what you should be doing. (Erin, 33)

Almost everything on the internet is made up or embellished, babies don't sleep, kids grow out of stages so quickly, you probably aren't the cause of whatever you are struggling with right now. (Rebecca, 37, typed)

I would tell them that - and I wish someone told me this - I was so I was so concerned about being the very best that I was juggling too many balls, really. I was trying to... my family was also only drinking like, homemade nut milks, and I was making EVERYTHING from scratch, like every single thing you can think of, I made from scratch. I was spread so thin that I was... I couldn't be the best at anything, because I had too many things. I was just being mediocre at everything. As well as being a parent, because I feel like I had no sleep. You know? Just slow it down, just like slow it down and focus on... I think about it like a triangle. I can fit these three things in my life today. What's the most important thing, it's at the top of the triangle - that's my family. So family is gonna be number one today. Down here on the other side, I'm going to cook three healthy meals that I've meal planned. Damn, awesome. And then over here, I'm going to [do some work]. You know? And that's it. I'm not fitting in anything else. And tomorrow the bottom two rotate.... I think that giving yourself very realistic goals for every day is the most important thing you can do. And you're feeling like, "I got this. Yeah." (Laura, 34)

It would probably be the same advice I would give anybody if we weren't just talking about social media. It would just be that you're going to get a shit ton of unsolicited advice and to really kind of do your own research and trust your own instinct and to take what's helpful and filter out what's not. And not let it get to you or have it questioned. Kind of, your intuition or instinct. Yeah. (Lisa, 37)

I would say that probably don't be so hard on yourself. Really like in the end, when you look back, like when your children are grown up, the single most important thing that's going to matter is your connection with your child and them feeling loved. Like all the other stuff, like whether they had McDonald's too much or like whether they got vaccinated or not or didn't have enough nature. That stuff all is like background noise. Like really, kids are resilient. And as long as they feel love and accepted that'll give them more resilience than anything else will. So they can recover from all those other things as adults if they're emotionally intact. (Jen, 32)

You're not alone. Reach out to people who parent the way that you want to parent. And I think that's very important because many moms who want to parent a certain way reach out to people who parent completely differently, and so they are bullied, or at the very least, encouraged to act against their instincts. So reach out to a community, even an online community, of like-minded beings. And don't be afraid to be vulnerable. Don't be afraid to ask. And above all listen to your intuition. It is right. And you'll know what to do. And you are exactly who your child needs. (Mira, 32)

Following your gut. There's too many opinions out there and the Internet is just making mothering so much more difficult than it needs to be... Follow your gut, stop Googling things. When I was pregnant with my son, I banned myself from the Internet. I was not going to Google anything because it's terrifying. It just makes us second guess everything that we do with our kids. We think that we have to, like I said earlier about how we feel like we have to make our kids' childhoods magical and they're already magical. Everything is new to them. We don't need to do anything else to make it more magical. It makes us think that we need to be more than we need to be. (Naomi, 42)

I would tell them that all your kids need is love, attention and affection. And as long as you're doing that, you're doing a great job. No matter how you feel or how you look. (Denisha, 27)

You will be bombarded with all types of opinions and advice. Take it, absorb it, question it, look into it. It has been done before. You have the opportunity to not. You need to be able to adapt and change, learn, adapt, and change. (Valerie, 37)

Don't be afraid to put in a little bit of time and research...When we know better, we do better. And so I think it's always worth it to give it even just a few minutes of your time. Even if you don't have time to heavily research it. I don't think it ever hurts to take a step back and just say, let me get a couple different opinions on this, or let me look at it from a few different perspectives before I take a hard line approach to one side or other without having knowledge about it myself. Because I feel like it's better to have done that than to regret something that you've done as a parent. (Rose, 37)

Don't listen to anybody else's advice. ...I will elaborate...I remember all of these people said, "do this, do this, do this, do this, do this". ...But it's things like that, people are gonna tell you everything because, "Oh, I did this, and this is what you should do, and blah, blah, blah." Do your own thing, girl. Like, be you... I guess, listen and say "Thank you for that." Or, knowing that if you ask questions, people are going to give you their 2 cents, but man, throw it away if you want. Or do it. Whatever. (Connie, 36)

I think my biggest piece of mothering advice has been the same since I first heard it from somebody which was, "You're an individual with individual circumstances and you need to make your own decisions about what works for you and your family. And what other people think of that and where other people, the input that they want to have on that is nothing you need to pay attention to. At the end of the day, you're the mom, you know your children best, you have a gut instinct that you can and will trust and you have the intelligence to seek out the appropriate resources when you need them. So take a petal off each flower that you find and then make your own bouquet. (Victoria, 44)

Be informed. Be properly informed. Don't believe what you hear in your mommy groups. Question.. question things that are shared from sources that aren't accurate. Don't be scared of everything. Fear drives so much. Don't give in to fear mongering. There's no such thing as Big Pharma [laughs]. Yeah, those are the main things. (Corissa, 35)

I remember going to this new mom group and everybody seemed so much happier and in love with their babies than me, and I had a really hard time emotionally connection with my daughter at first, which made me feel horrible, and guilty, and like the worst mother of all time. And nobody told me that those feelings are normal and it's okay, and that it's okay to ask for. It's okay to not be 100% in love with your baby at all times. It's okay to be sad and angry because your life is so different than it was before you had your baby, and it's okay to grieve the loss of your non-parent life.

And to really just try to be mindful of the thoughts and the feelings, and if you feel like it's becoming too much to reach out and ask for help, and advocate for yourself and get the help that you need. If you have a doctor like mine who blew you off, to be like, hello, no your job is to help me, you help me. And to try not to be scared, I guess, to push for what you need to be healthy, both physically and

mentally. Because I feel like you cannot be a good parent if you are miserable, because I just feel like that misery is going to make you resentful and angry, and take it out on your innocent child. And then that's going to make you feel more angry, and guilty, and miserable.

Yeah, just those feelings are normal, it's okay to ask for help. And I guess this too shall pass, it'll get better. You will fall in love with your baby eventually, it's just going to take some time, and that's okay. That's okay. You know, not every mom is going to be just desperately in love with their child the second that they're born, and to not feel guilty or ashamed of that because it's normal I guess. (Lee, 36)

Oh my gosh I thought about starting a blog for this reason [laughs]. I so desperately, I feel like there is a voice missing in the Christian community of saying like, "Guys, this weirdo natural medicine thing that you're into, it is not Christian. It's not OK. And here's Biblical reasons why. I'm not going to just throw a study at you. I will do that, but also, this is not biblical, and you're hurting your kids, and it's actually a big problem in the church." That would be, if I had a platform. I would be like: "Christian moms, vaccinate your kids. Let me tell you from the Bible why you need to do that." Maybe someday I will write that. [laughs] (Heather, 33)

Go with your gut. Yeah, we really have to trust our gut. I think a mother's instinct is really the strongest tool that we have amongst all. We can get all the feedback that we want, but I think most of the time, deep in our heart, we know what our answers are. (Amanda, 34)

It's okay if it's hard, and it's okay to tell people that it's hard. Because I think a lot of what... You know, it's also amazing and wonderful. It's worth the hard. It's worth the difficulty. Just to learn how to get support if you need support, and what support you need, and don't be afraid to go for it. (Kathleen, 35)

Always always always research and get 2nd, 3rd even 4th opinions.

Research choice! Is so so so important.

Be kind!! Not everyone will have the same beliefs or parenting style as you... AND THATS OKAY!!! <3

All babies are different. What works for yours may not work for another.

Don't judge!! You never know what a mom is dealing with behind closed doors or what she's been through.

Ask for help! Don't be ashamed. You're not a failure or less than for needing help. Being a mom isn't easy so ask!!

Make time for yourself. Be selfish every so often. Don't feel guilty for having a glass of wine or a date night. You deserve it!!

Date night - SO important. Once a month, once every 2 months. Just do it trust me!!

Teen moms and young adult moms - don't feel bullied, don't let anyone make you feel like you'll fail, you're amazing and going to experience the greatest love you've ever known and be on the crazy hard but amazing roller coaster called motherhood!! You're a rockstar!!!

Bottle fed, breastfed, stay at home mom, working mom, public school mom, homeschool mom, co-sleeping mom, in their own bed and room from day 1 mom... ALL MOMS ARE AMAZING AND YOU'RE ALL DOING AN AMAZING JOB!!

Lastly soak up all those newborn moments cause they go by way too quick!!

(Vanessa, 22, Typed)

I guess to be selective with where the advice and information is coming from, and to make sure it's backed by people who have appropriate education experience to help you with your questions and concerns. I guess for me, it's just because I found myself in this trap of misinformation. And it did affect, you know for a period of time, how I made decisions with my children. I mean it affected not only their medical history but just our pocketbooks. You know, unnecessary expenses, and I mean it can really end up kind of bleeding into your life. And it was all because of online forums and believing things that were not true. (Kayla, 35)

I think probably the biggest thing is that they're probably doing a good job and all of the things that seem like they're the biggest decisions right now, are probably not even going to matter that much in the long run and that what really matters is that you're doing your best and that you love your kid no matter what. (Adhira, 34)

You don't have to martyr yourself even though you will be faced with so much information telling you that you should. Seek out to meet the supportive communities that follow science that explain that you're not going to harm your child by not being attached to them 100 percent of the day. Find supportive communities that are going to help you be the best parent you can be and to raise the healthiest child that you can. (Elizabeth, 30)

Vaccinate your kids, don't spank, and you're doing okay. Oh and feed your kids, I guess, too. But that you're doing better than you think, and this is hard. (Nina, 37)

I would think I would probably say follow your intuition, first. I would also highly, highly suggest that all mothers try to seek out their own ... self care is such a thrown around term these days, but I'll use it anyways. To seek out their own self care. Also, to maybe look at doing some of their own healing works, because it's had a huge affect on the way I parent. (Deborah, 41)

I mostly think... Find the people who are going to support you, who are going to be your people, because this shit is hard and we're all just trying to figure it out. (Breanna, 31)

I would tell them to just take one day at a time, and keep learning and growing. And at the end of the night tell your children you love them, and start fresh in the morning. (Mallory, 24)

Take the time to figure out what typical development looks like, and if that's not something you have time for, find people who do and consult them. Don't be afraid to ask for help, because knowing that you need help is often the first step to getting it. I think we can, as a culture, be very afraid of that. (Dana, 39)

I would tell them not to listen to all... To make their own choices. Take in the information, read it but don't let anyone on the internet make a choice for you or let... I don't know... Yeah. Read the information, take it, absorb it but still make your own decision. (Jocelyn, 28)

I guess I'll tell you both things that I tell people. A, I tell them it's going to be fucking hard. It's brutal. I'm honest. No one told me this by the way, because everyone was so happy and excited that we were having a kid no one said this to me. I went to acknowledge that it will be overwhelming, but to use all the resources they have available to them. That could be money that they have, it could be their friends network, their support. It could be their family for help. It could be anything. But, use every single resource you have available to you, because it will be overwhelming, and it's going to be scary, and it's going to be too much. But, you will get to the other side. Use all the resources you have.

Second of all, I tell everyone to join my evidence-based group, because there's a lot of bad information out there, and you don't want to put your child's life in danger because some random person, or your grandma said something to you that is actually not safe. (Amna, 36)

Read as many books as you can. Social media is definitely great for community and having access to a lot of information, but I think to get really good, thorough advice from a variety of sources, the best thing to do is read a lot of books. And most of the information that I believe most strongly, I got from books versus learned from the internet, or short articles on the internet. (Lauren, 36)