THE EVERYDAY LIFE AND INFORMATION PRACTICES OF A NATURAL IMMUNITY ADVOCATE

Samantha J. Kaplan

A dissertation submitted to the faculty at the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the School of information and Library Science.

Chapel Hill
2018

Approved by:

Ryan Shaw

Jenny Bossaller

Amelia Gibson

Sandra Hughes-Hassell

Brian Southwell

© Year 2018
Samantha J. Kaplan
ALL RIGHTS RESERVED

ABSTRACT

Samantha J. Kaplan: The Everyday Life and Information Practices of a Natural Immunity Advocate (Under the direction of Ryan Shaw)

Parents continue to decline or delay immunizing their children resulting in outbreaks of vaccine-preventable disease across the United States. Efforts to profile these parents struggle to find demographic consensus or create a consistent profile of which parents make these problematic decisions. These parents are often assumed to be under the sway of misinformation, exacerbating the division between them and healthcare providers. Research about this population typically studies the behavior in isolate and in relation to the mainstream view where it is normative to vaccinate one's children.

This dissertation, a grounded theory embedded chronological case study of a vaccine-avoidant mommy blogger, describes a worldview where vaccination avoidance and delay is normative and documents related behaviors and beliefs that accompany not vaccinating one's children. This was accomplished using multiple methods, particularly inductive coding, memoing, quantitative and qualitative content analysis, bibliometrics, and digital ethnography. Data streams included seven years of blog posts, videos, comment threads, information citations, artifacts endorsed or created by the blogger, and an assessment of family resemblances between the blogger and her digital peer network.

From the data emerged a theoretical model that overlapped with Ludwik Fleck's theory of thought collectives and Elfreda Chatman's theory of information poverty. The findings include a set of family resemblances observed in the data and artifacts and assessed against a network of nearly 90 other cases. The findings include bibliometric evaluation of the information the blogger cited and discussion of her information behavior and how information operates within her worldview, where vaccine avoidance and delay is normative.

ACKNOWLEDGEMENTS

I would like to thank Dr. Susan Rathbun-Grubb for suggesting I pursue a doctoral degree and mentoring me throughout the process.

I am grateful for the advice, mentorship, and insight of my advisor, Dr. Ryan Shaw, as I have progressed through the doctoral program and prepared my dissertation. I must also express my thanks to my wonderful committee members, Drs. Jenny Bossaller, Amelia Gibson, Sandra Hughes-Hassell, and Brian Southwell, who have guided me through this research.

I would also like to thank Drs. Evelyn Daniel, Mary Grace Flaherty, Stephanie Haas, and Barbara Wildemuth for their support and wisdom. Additionally, behind every researcher is a stack of paperwork, and I thank the wonderful staff at SILS for always being willing to guide me through it with a smile.

I would also like to thank the friends and colleagues who have supported me through this process, Ashlee Edwards, Sarah Beth Nelson, Leslie Thomson, Annie Chen, Patrick Golden, Megan Threats, Kristen Bowen, Charlene Finley, Amanda Click, Sandeep Avula, and Emily Vardell.

I also wish to thank my beloved friends and family, particularly my parents, who have supported me throughout this experience. Their kindness and compassion made the impossible enjoyable, thank you Zoe, Dorey, Xani, Lital, Michelle, Jessie, Elizabeth, Marc, Mel, Jessica, Jo Elin, Trish, Anne, Brian, and Kirby.

I am so grateful to my peer debriefers for their insights and patience. Finally, I must thank the woman who made this work possible—Mama Natural. Thank you for sharing so much of yourself.

TABLE OF CONTENTS

LIST OF TABLES XII

LIST OF FIGURES XIII

CHAPTER 1: LITERATURE REVIEW 1

1.1 Introduction **1**

1.2 Phenomenon of Interest **1**

1.3 Literature Review **3**

CHAPTER 2: PROPOSED STUDY 7

2.1 Purpose of this study **7**

Significance of the study **8**

2.3 Methodological Design **11**

2.3.1 Theoretical lens 11

2.4 Proposed case **13**

2.4.1 "A single case" 19

2.5 Sources of evidence **21**

2.6 Operationalizing the questions **24**

2.7 Formal Data Collection Techniques **25**

2.8 Formal Data Analysis Techniques **27**

2.8.1 Digital ethnography 28
2.8.2 Qualitative content analysis: Inductive coding analytic memo writing 30
2.8.3 Quantitative content analysis 30

2.8.4 Metrics, impact, story 31

2.9 Summary 32

2.9.1 Ethical considerations—Anonymizing the case 32
2.9.2 Institutional Review Board 33

2.10 Challenges 33

2.10.1 Debriefing 34
2.10.2 Researcher as instrument 35

2.11 Impact 36

CHAPTER 3: METHODS 38

3.1 Summary of Data Collected 38

3.2 First Phase of Data Collection: 39

3.2.1 Comment Collection Rationale 41
3.2.3 Conclusion of first phase 42

3.3 Secondary Phases of Data Collection 42

3.3.1 Review of videos on YouTube but not on Blog 42
3.3.2 Coding of blog posts 43

3.4 Artifacts 43

3.5 Information Used 44

3.6 Evaluating the scholarly information used 45

3.7 Mama Natural's Network 45

3.8 Statistical data analysis 47

3.9 Hidden and invisible posts 48

3.10 External perceptions of Mama Natural 48

3.11 Peer debriefing 48

CHAPTER 4: FINDINGS 50

4.1 Choosing an inside on the outside: Theoretical findings 50

4.1.1 How do people move on this model? 55

4.1.2 Where does this case fit on this model? ... 57
4.1.3 Propositions ... 59

4.2 The willful traveler: The many cases of Mama Natural ... 60

4.2.1 Coming into focus ... 61
4.2.2 Hidden Mama Natural ... 67
4.2.3 A Natural Capitalist ... 71
4.2.4 Quantitative findings of blog behavior ... 74

4.3 The message manager: Artifact analysis ... 78

4.4 The message manager compared to the information leader ... 81

4.4.1 Vegetarians not preferred ... 81
4.4.2 No judgment! ... 83
4.4.3 Allowing difference ... 85
4.4.4 What "causes" Autism Spectrum Disorder ... 86

4.5 A worldview in focus: Natural as Epistemology to explain information use and worldview ... 88

4.6 Beliefs, values, and thematic landscape of this worldview ... 92

4.6.1 Offering another way ... 92
4.6.2 Redemption for the sinner ... 94
4.6.3 Exoticizing ancientness ... 94
4.6.4 Story first, facts later: "Anecdotal evidence" ... 97
4.6.5 Themes ... 98

4.7 Offering another way in action ... 104

4.7.1 Contesting categories, classification, and metadata ... 104
4.7.2 Inclusion criteria: ... 106
4.7.3 Complementary and alternative medicine ... 107
4.7.4 What happens when a child is sick? ... 110

4.8 Anecdotal evidence: The information used ... 112

4.8.1 Full-text, full attention ... 112
4.8.2 Bibliometric findings ... 113
4.8.3 Information Behavior ... 114

4.9 The spaces between: Family Resemblances ... 117

4.9.1 Rationale for Inclusion ... 119
4.9.2 General Family Resemblances ... 121
4.9.3 Food Family Resemblances ... 123
4.9.4 Child-Rearing Family Resemblances ... 125
4.9.5 Information Sources Family Resemblances ... 126
4.9.6 Personal Habits Family Resemblances ... 127
4.9.7 Pregnancy and Childbirth Family Resemblances ... 128

4.10 Barriers to access: What keeps people from moving freely? ... 129

4.10.1 Pay to play ... 129

4.10.2 What cannot be purchased 131

4.11 Outsiders: External perceptions of Mama Natural 134

CHAPTER 5: DISCUSSION OF FINDINGS 138

5.1 Discussion of theoretical findings 138

5.2 Discussion of values, beliefs, and thematic findings 142

5.2.1 The plural of anecdote is not evidence 143
5.2.3 Cultural appropriation 148
5.2.4 Nature is gentle? 149
5.2.5 Us v. Them 150

5.3 Message or money managers? 153

5.3.1 Discounting authority without assumption of equivalent responsibility 153
5.3.2 Financial Incentives 155
5.3.3 Privilege and power 159
5.3.4 Problematic proclamations from privileged and powerful people 162

5.4 Implicit bias toward outsiders 164

5.4.1 An image issue 165
5.4.2 Representation and selective speaking out 167
5.4.3 Beneath the surface—a danger of responsibility 169
5.4.4 Ableism 171

5.5 Researcher reflections 173

5.5.1 Faith, Spirit, Christianity 174
5.5.2 No kids, no problem 175

5.6 Future work and final considerations 176

5.6.1 Theoretical implications 176
5.6.2 Information implications 178
5.6.3 The limitations of fact-checking and information literacy 179
5.6.4 Reflections on authority and privilege 180
5.6.5 Vaccination—the pregnancy and childbirth connection 181
5.6.6 What else are they avoiding? 183
5.6.7 Moving forward—together? 183

APPENDIX A—ARTIFACTS 185

APPENDIX B—BLOG POST DATABASE ENTRY FORM 186

APPENDIX C—GENERAL MEMO COLLECTION FORM 191

APPENDIX D—COMMENT COLLECTION TOOL 192

APPENDIX E—ORIGINAL MAMA NATURAL PAPER 194

REFERENCES 210

LIST OF TABLES

1. Table 2.1 – Research Design……25
2. Table 2.2 – Evidence, Collection Protocol and Storage Plan……27
3. Table 3.1 – Data Summary……39
4. Table 4.1 – Genevieve Comments Per Post by Year……75
5. Table 4.2 – External Citation and Self-Citation ……77
6. Table 4.3 – External Citation and Product Recommendation…… 77
7. Table 4.4 – Self-Citation and Product Recommendation…… 77
8. Table 4.5 – Journal Characteristics ……113
9. Table 4.6 – Metrics ……113
10. Table 4.7 – Summary of Year…… 114
11. Table 4.8 – Category and Characteristics……120
12. Table 4.9 – General Characteristics ……122
13. Table 4.10 – Food Family Resemblances ……123
14. Table 4.11 – Child-Rearing Family Resemblances ……126
15. Table 4.12 – Information Sources Family Resemblances ……127
16. Table 4.13 – Personal Habits Family Resemblances ……128
17. Table 4.14 – Pregnancy And Childbirth Family Resemblances……128

LIST OF FIGURES

1. Figure 4.1 – Preliminary model……51
2. Figure 4.2 – Model with information leaders……52
3. Figure 4.3 – Model with message managers……53
4. Figure 4.4 – Model with passive participants……54
5. Figure 4.5 – Complete theoretical model……54
6. Figure 4.6 – Model with Mama Natural……58
7. Figure 4.7 – Model of Mama Natural's worldview……59
8. Figure 4.8 – Current Mama Natural website……62
9. Figure 4.9 – Past Mama Natural website design……62
10. Figure 4.10 – May 2011 Mama Natural website design……62
11. Figure 4.11 – February 2011 Mama Natural website design……62
12. Figure 4.12 – Original Mama Natural website design……63
13. Figure 4.13 – Mama Natural timeline……64
14. Figure 4.14 – Post with author……65
15. Figure 4.15 – Post without author……65
16. Figure 4.16 – Original blog navigation……66
17. Figure 4.17 – Navigation with Mama Natural show……66
18. Figure 4.18 – Navigation without Mama Natural show……66
19. Figure 4.19 – Purple navigation……66
20. Figure 4.20 – Current navigation……66

21. Figure 4.21 – How to be a natural mama……68

22. Figure 4.22 – News coverage……70

23. Figure 4.23 – Post with affiliate links……73

24. Figure 4.24 – Post without affiliate links……73

25. Figure 4.25 – Theoretical model with information objects……78

26. Figure 4.26 – Family resemblances map……118

27. Figure 4.27 – Alternative family resemblances map……119

28. Figure 5.1 – Sleeping fox card……150

29. Figure 5.2 – Pregnant African woman……166

30. Figure 5.3 – Woman cooking……166

31. Figure 5.4 – Woman in printed dress……166

32. Figure 5.5 – Woman of color……166

33. Figure 5.6 – Woman with plant……166

34. Figure 5.7 – Women in water……168

CHAPTER 1: LITERATURE REVIEW

1.1 Introduction

Octavia Butler's short story, "The Evening and the Morning and the Night" depicts a world that has cured cancer—with devastating results. Those who used the miraculous cure have passed an incurable disease to their children, a disease that will cause them to become psychotic and mutilate themselves. To delay disease onset, these children must follow a rigid diet that marks them as a future sufferer and makes their stigma visible. The parents' cure came at the expense of their future progeny's health.

A hallmark of the anti-vaccine movement, or vaccine safety advocacy, depending on your position, is linking vaccines to future suffering because parents chose to vaccinate their child. Advocates for and adherents to this belief remain convinced that the risk of their child contracting a vaccine-preventable disease is less than the risk of exposing their child to the disease remnants and chemical additives comprising a vaccine. Minute amounts of aluminum, mercury, thimerosal and formaldehyde (among others) are of greater concern than the perceived low susceptibility to and perceived treatability of measles or pertussis.

Unlike Butler's story, where there are numerous children who can testify to the long-term costs of their parents' choices, there are relatively few who can speak with authority about life before vaccines. In an article for *Gizmodo,* Jennings Brown interviewed the few remaining users of iron lungs – a medical device that helps polio survivors breathe – and they

shared their stories because one "thing they all had in common is a desire for the next generations to know about them so we'll realize how fortunate we are to have vaccines" (Brown, 2017).

1.2 Phenomenon of Interest

According to Hinshaw et al. (2013), "Ever since vaccines were introduced in the 18th century, questions and concerns about their safety have been voiced" (p. 18). Of course, "Vaccines—like all drugs or medical interventions—are neither 100 percent risk-free nor 100 percent effective" (Hinshaw et al., 2013, p. 2). Still, vaccination ranks among the most successful public health interventions of all time. Zhou et al. (2014) report

> because of vaccination, US children born in 2009 will suffer 20,000,000 fewer cases of vaccine-preventable diseases and 42,000 fewer early deaths related to those diseases during their lifetimes. From a societal perspective, at a program cost of $7.5 billion, the routine immunization schedule will save a total of $76 billion in direct and indirect costs, resulting in a net savings of $69 billion and a BCR of 10.1. In other words, from a societal perspective, every dollar spent ultimately saves at least 10 dollars. (Zhou et al., 2014, p. 581)

However, despite these successes, anti-vaccination behavior persists with preventable outbreaks of disease and loss of life (Centers for Disease Control, n.d.). Confronting this phenomenon is complicated because the number of parents who do not vaccinate their children in full compliance with the childhood vaccination schedule is difficult to calculate and the nature of deviation is as multi-faceted as the reason(s) for deviating.

Most researchers make a distinction between children who have received no vaccines at all and children who have received some or all vaccines but not in accordance with the recommended schedule, pursuing an alternative schedule. Researchers have estimated the number of children who receive no vaccines to be between 0.3 percent and two percent of all children in the United States (Dempsey et al., 2011; Gust, Darling, Kennedy, & Schwartz, 2008; P. J Smith, Chu, & Barker, 2004). The number of children who are vaccinated along an alternative schedule is even less precise, with estimates ranging from 13 percent (Dempsey et al., 2011), 13 percent (Glanz et al., 2013), 21 percent (Robison, Groom, & Young, 2012), 22 percent (Smith, Humiston, Parnell, Vannice, & Salmon, 2010) to 37 percent (Smith, Chu, Barker, 2004). Despite the large numbers of parents who do not vaccinate or partially vaccinate their children, "Conflicting findings demonstrate that there is no firm profile of people who do not vaccinate" (Bossaller, 2014, p. 233).

Rationales for opposing, avoiding, or delaying vaccines typically include but are not limited to one or more of the following factors; falsified research that suggests vaccines are linked to Autism Spectrum Disorder (Wakefield et al., 1998), endorsement from high-profile figures like celebrities and politicians (Flaherty, Tayag, Lanier, & Minor, 2014; Gottlieb, 2016; Rupert, 2017), lack of direct experience with many of the diseases for which we vaccinate (Fine, Eames, & Heymann, 2011), broad and specific safety concerns (Dempsey et al., 2011; Freed, Clark, Butchart, Singer, & Davis, 2010; Luthy, Beckstrand, & Callister, 2010), a calculated risk assessment (Feikin et al., 2000), and conscientious objection to government regulation of the body (Busse, Wilson, & Campbell, 2008).

We cannot definitively say who engages in the wide range of anti-vaccination behavior—hesitancy, avoidance, delays, and so on—nor can we clearly say why.

1.3 Literature Review

Research about anti-vaccination behavior and attitudes typically attempts to profile the population in some way (P. J Smith et al., 2004) describe the rhetoric and themes of extreme anti-vaccination material (Davies, Chapman, & Leask, 2002); catalog a skew toward anti-vaccination materials in digital spaces (Buchanan & Beckett, 2014; Guidry, Carlyle, Messner, & Jin, 2015); or center the issue around what happens in the office of a health care provider (Luthy et al., 2010).

Each of these approaches is valuable and has made significant contributions to understanding this phenomenon despite the inherent trade-offs of every methodological decision. Studies using the strictest definition of anti-vaccination behavior still have a very large population segment to work with. Even if one adheres to that strict definition, it is a problematic choice because it falsely suggests the problem is only limited to those who engage in the most extreme behavior. Understanding outliers is valuable, but the evidence suggests this is a much more commonplace concern. Demographic and socioeconomic profiling of one percent of the population versus twenty percent of the population defines the problem by focusing on the one in one hundred parents who oppose all vaccines rather than the one in five parents who oppose some vaccines and have a lot of questions. Once the issue expands to such a large percentage of parents, statistical profiling seems to answer the wrong question. Instead of answering who doesn't vaccinate, we would be better served to ask why they do not

vaccinate. It is necessary to "engage with the spectrum of vaccine acceptance behaviors [and] the complexity of parental beliefs" (Gottlieb, 2015, p. 154).

Documenting "the magnitude, interest, and purpose and validity of the information regarding vaccination available"(Buchanan & Beckett, 2014, p. 228) in digital spaces enhances our understanding of the pitfalls awaiting parents on the Internet and how these places can be manipulated. Understanding why places like this are trusted, other ways individuals may come to them, among other questions, is outside of the scope of these content analyses. Given the high public costs to vaccine opposition and a large body of research that suggests there are communication issues between parents and providers (Busse et al., 2008; Dempsey et al., 2011; Diekema et al., 2005; Offit & Moser, 2009), there is surprisingly little research about the literal information used by parents and activists and anti-vaccine websites to justify their decisions. Offit and Moser (2009) addressed the claims of popular and problematic book, *The Vaccine Book: Making the Right Decision for Your Child* by Dr. Robert Sears, but a factual dressing down plays into anti-vaccination advocates' hands—that they are persecuted by "scientific evidence." It also ignores how information objects are endowed with legitimacy, authority, and credibility by individuals, institutions, and communities. While the book's claims are not evidence-based, it is probably a bigger problem that it is a national bestseller and sits on the shelves of many libraries.

Studies of vaccination behavior in health care provider's offices have consistently found issues of communication, trust, time constraints, and competing values (Hinshaw et al., 2013; Luthy et al., 2010; Yaqub, Castle-Clarke, Sevdalis, & Chataway, 2014). This has also confined it to being studied as a health behavior, editing it out of other contexts where it occurs. To avoid

vaccinating a child altogether or even partially requires regular discussion and potentially disagreement with a health care provider, with school personnel, even with gatekeepers to certain extracurricular activities like summer camp. This is not a decision accepted as final or finite. Instead parents must renew it repeatedly and reaffirm their commitment to doing so. In addition to health, vaccination choices should be seen as everyday life behavior.

There is another element of vaccination behavior that has received little to no attention—stigma. In an ethnography of California mothers who lived in southern California and had at least one child under 18, Gottlieb asserted that parents who do not vaccinate their children are portrayed as "unsophisticated or disengaged" (Gottlieb, 2015, p. 154). Exacerbating this, "mainstream US media and vaccine advocates have vilified parents who refuse to vaccinate or who under-vaccinate their children," (Gottlieb, 2015, p. 153-154). The "mainstream" treats almost any deviation from the immunization schedule as a norm violation which typically is stigmatizing. However, the research has not thoroughly examined **why a parent would violate this norm and take on this stigma and how they manage it over time**. Of course, it is a norm that parents make the best decision for their child, and it seems likely that for these parents, not adhering to the immunization schedule is, in their eyes, adherence to this norm. Perhaps because they are violating the norm to vaccinate in service of the presumably higher norm, they feel they are wrongly stigmatized. The roles of stigma and everyday life in vaccination behavior deserve examination.

When discussing the participants in her ethnography of southern California mothers, Gottlieb (2015) asserts, "The information these women may use to justify their choices may be highly flawed, but they are not made without reflection" (p. 160). This language suggests their

information use deviates from a correct or normative standard, but also positions their behavior within a scientific paradigm—evaluation and selection of information to justify and defend a choice.

Perhaps this is not a "scientific" decision, but these mothers felt they had to present it in this format, and doing so reveals their outsider status (the use of flawed information). Regardless, "Constant affirmation of their decision requires commitment" (Gottlieb, 2015, p. 166). Parents who choose not to vaccinate or to under-vaccinate do not choose this one time. They must reaffirm this stance at doctors' appointments, with school officials, and other reoccurring everyday life situations. To portray this decision as anything other than mindful, considered, and intended does these parents a disservice. Additionally, it perpetuates feelings of stigmatization, which adds to the "adversarial notion of 'us versus them'" (Davies et al., 2002, p. 22) found on many anti-vaccination sites—also reported in half of the websites evaluated by Kata (2010) in her content analysis of anti-vaccination websites (p. 1713).

CHAPTER 2: PROPOSED STUDY

2.1 Purpose of this study

Among those who do not adhere to the immunization schedule, there is considerable nuance and range. Too often research focuses at the ends of the spectrum—those who are virulently opposed and those who follow the schedule, leaving a rich range unexamined. Some research looks at alternative schedule use, making it distinct from complete abstinence (Dempsey et al., 2011; Robison et al., 2012), but there is still much to learn. We also lack an understanding of the worldview of someone in this unexamined range. Within those who are not completely anti-vaccine, but are also not following the schedule, how does this fit into their lives? What information and sources do they use, engage with, find, look for, share, and trust? Does that information tell a larger story? I answered the following questions in this research:

- R1: How does vaccination avoidance and delay fit into everyday life?
- R2: What information practices does someone who has not vaccinated their children employ?
- R3: What is the story and impact of the information and information sources (including people) the case uses?
- R4: What "family resemblances" can be discerned about Mama Natural and her network?
- R5: What theoretical framework can describe this context?

Significance of the study

Much of the existing research on people who do not vaccinate, who hesitate, or who delay, is demographic or centers the behavior in the health care provider's office. Because parents must repeatedly reaffirm and maintain this decision over time, it is not just a health behavior, but an everyday life behavior. The first question I asked provides insight into how this behavior functions in everyday life. Everyday life is "the acquisition of various informational (both cognitive and expressive) elements which people employ to orient themselves in daily life or to solve problems" (Savolainen, 1995, p. 267).

Within the research about this phenomenon, parents frequently perceive information about vaccination to be biased and partial (Petts & Niemeyer, 2004), thus the information they use and how they use it is of interest. Lingel and boyd (2013) consider information practices "to refer to the ways that people locate, use, share, and evaluate information" (p. 981). There is evidence that vaccine opposition is louder than support online (Buchanan & Beckett, 2014; Guidry et al., 2015; Kata, 2010; Wolfe & Sharp, 2005), but limited insight into other information behaviors, which the second question could begin to answer. Lingel and boyd (2013) ask "whether information itself constitutes a kind of stigma" (p. 990), and my third research question is framed with this in mind. If mentioning belief in the retracted, falsified Wakefield study can discredit a person, then the information and the information's story is of interest. Further, while the Wakefield study may be the most well-known, it is in no way the only information object that functions as a marker or source of division between those who support vaccination and the many classes of vaccine opposition.

Given the limited demographic understanding of this population and how large it is, I suggested the fourth question as a frame to describe the "complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail" (Wittgenstein, 1967, p. 32). Learning what, if any, family resemblances can be discerned between my case and the information objects and sources she uses helps identify what family this behavior belongs to—for example, is someone likely to avoid or hesitate on vaccines if they want a natural birth, or if they use cloth diapers and amber teething necklaces?

The fifth question enhances our understanding of how stigma functions in vaccine opposition. Not vaccinating a child is a stigmatizing choice—the American Association of Pediatrics (Committee On Practice And Ambulatory Medicine, Committee On Infectious Diseases, Committee On State Government Affairs, Council On School Health, & Section On Administration And Practice Management, 2016) allows doctors to decline to treat families who do not want to vaccinate their children. Content analyses of anti-vaccination sites, which represent the most extreme behavior, report themes of wrongful persecution (Kata, 2012). However, there is also evidence that wealthy, white parents are more likely to engage in this behavior (McNutt et al., 2016). How (if) this normally privileged group experiences, manages, and negotiates stigma in this context is of interest.

Observing the interplay between vaccine behavior, everyday life, and management of stigma required a methodological approach that allowed for studying a phenomenon in its natural setting, as it is the interaction of these variables with their context that has not been examined. Because it is a contemporary phenomenon intertwined so tightly with its context, it

demanded a methodology that could absorb the interconnected network of variables, rather than isolating them or removing them to preserve the integrity of the method.

There is evidence that parents who deviate from the immunization schedule consult more information sources than those who do not (Brunson, 2013). There is also extensive evidence that regardless of the choice parents make, they consult multiple source types (Brunson, 2013; Gottlieb, 2016; Jones et al., 2012) including their own parents, peers, healthcare providers, books, pamphlets, social media, and websites—to name a few. All of this information and these sources demanded equal consideration, rather than just tabulation of type.

I studied this phenomenon via a case study. This approach has not, to my knowledge, been utilized (or utilized extensively) in this context before. The case study was uniquely suited for studying this phenomenon because "A case study is an empirical inquiry that a) investigates a contemporary phenomenon (the 'case') in depth and within its real-world context, especially when b) the boundaries between phenomenon and context may not be clearly evident" (Yin, 2014, p.16). The case study provided advantages to studying anti-vaccination behavior that other methods do not. It is well suited to answering how and why questions—answers that content analyses and large-scale surveys are not designed or able to provide. Further, it is a behavior of the moment, out of the researcher's control, and influenced by a wide array of variables. An additional strength was the case study's appetite for multiple sources of evidence and allowance for multiple methods to evaluate data.

Individuals who oppose vaccination rarely cite just one information source, instead drawing from many sources and source types. They make and maintain anti-vaccination choices

over a period of time. The behavior and attitudes result in complicated decisions that individuals must defend and reinforce. The case study was ideally suited to explore and describe this instead of reducing it to a false binary of anti- or pro-vaccination.

2.3 Methodological Design

I conducted a case study of the information practices and everyday life behavior of a parent who has not vaccinated their children using multiple methods. Mixing methodological approaches is appropriate when the "research problem may be one in which a need exists to both understand the relationship among variables in a situation and explore the topic in further depth" (Creswell, 2002, p. 76). I will now review the theoretical frame, the single-case design, my proposed case, the sources of evidence, and how the questions were answered.

2.3.1 Theoretical lens

The case study methodology "differs from other qualitative methods because it has theory development prior to data collection" (Yin, 2014, p. 37). Similar to mixed methods studies, theory serves as a "lens or perspective to guide the study" (Creswell, p. 136). The case is "the opportunity to shed empirical light about some theoretical concepts or principles" (Yin, 2014, p. 40). I employed grounded theory because, like the case study, it is "systematic, yet flexible" and prioritizes "iterative strategies of going back and forth between data and analysis" (Charmaz, 2014, p. 1) which, given the numerous evidence streams, was necessary. The constructs and propositions of Elfreda Chatman's theory of Information Poverty served as sensitizing concepts, which Charmaz (2014) defines as "initial but tentative ideas to pursue and questions to raise about their topics" (p. 30). The constructs and propositions of Information Poverty "provide[d] a place to *start* inquiry" (Charmaz, 2014, p.31).

Chatman's theory of Information Poverty rests on four constructs and six propositions. The six propositions of information poverty; which draw from the constructs of insiders and outsiders, secrecy, deception, and risk-taking; are

> Proposition 1: People who are defined as information poor perceive themselves to be devoid of any sources that might help them.
> Proposition 2: Information Poverty is partially associated with class distinction. That is, the condition of information poverty is influenced by outsiders who withhold privileged access to information.
> Proposition 3: Information poverty is determined by self-protective behaviors which are used in response to social norms.
> Proposition 4: Both secrecy and deception are self-protecting mechanisms due to a sense of mistrust regarding the interest or ability of others to provide useful information.
> Proposition 5: A decision to risk exposure about our true problems is often not taken due to a perception that negative consequences outweigh benefits.
> Proposition 6: New knowledge will be selectively introduced into the information world of poor people. A condition that influences this process it the relevance of that information in response to everyday problems and concerns. (Chatman, 1996, p. 197-198)

These constructs and propositions guided me in determining which questions to ask.

My first question, "How does vaccination avoidance fit into everyday life?" drew from the proposition that not vaccinating a child is a stigmatizing behavior and the management of that stigma touched upon all four constructs of information poverty. My second question was informed by the third and sixth propositions of information poverty. The third question was a question embedded in the findings of my second question but was also influenced by the sixth proposition of information poverty. My fourth question derived from the second proposition of information poverty. My final question considered the need for a theoretical framework to explicate this context.

Research Questions:

- R1: How does vaccination avoidance and delay fit into everyday life?

- R2: What information practices does someone who has not vaccinated their children employ?
- R3: What is the story and impact of the information and information sources (including people) the case uses?
- R4: What "family resemblances" can be discerned about Mama Natural and her network?
- R5: What theoretical framework can describe this context?

2.4 Proposed case

I conducted a case study of Mama Natural, the online moniker and website of a woman named Genevieve Howland (alternately referred to as Genevieve and Mama Natural). I previously conducted a small case study of Genevieve for an end-of-course project in Spring 2015 (attached in Appendix B). For that paper I was only able to read and view a portion of Mama Natural's posts and videos—about two years' worth. While I think I answered the questions I set out to, the study generated additional questions I could not attend to and during data collection I observed ways I could improve the methodological rigor of the study, which due to time constraints I could not implement.

Mama Natural could be described as a "mommy blogger." According to Friedman (2010), "Mommy blogs are online journals (Web logs) written by women documenting the experiences of motherhood and motherwork. Most mommy blogs have been written since 2005." The concept of mommy blogs has a greater presence in popular culture than scientific literature. Of the attention given them, it has mostly noted the demographics of who writes them (Lopez, 2009; Song, 2016), their motivations (Pettigrew, Archer, & Harrigan, 2016), and issues surrounding monetization (Hunter, 2016), fraud and authenticity (Whitehead, 2014). The actual content these bloggers produce has been treated as secondary to the communities they create. This is surprising given the amount of conflict the activity has provoked. At a conference

for women who blogged, one non-mommy blogger spoke of mommy-blogging in a dismissive way and “Alice Bradley, who writes about her children in a blog called ‘Finslippy’ (http://finslippy.typepad.com), declared: ‘Mommy blogging is a radical act’” (Lopez, 2009, p. 730). Lopez notes that the next year the statement was the name of a conference session.

However it must be mentioned that this “radical act” is mostly performed by “white, middle-class, partnered women in heterosexual relationships” (Friedman, 2010). Lopez (2009) agrees that “white, married, heterosexual women dominate this conversation” (p. 733). Their blogs are also similar in appearance and functionality:

> the most successful feature lively writing, gorgeous photos, iTunes playlists, Twitter, Facebook, and Instagram feeds, and most importantly, thousands of active readers and commenters. Many of them are also monetized, carrying multiple banner and side ads and featuring contests, promotions, product reviews, and giveaways. Bloggers have developed sophisticated public relations strategies and advertising policies to deal with the multitude of eager marketers clamoring for a piece of their audience (Whitehead, 2014, p. 128)

This “radical act” is also, potentially, a profitable one. Some readers feel this has compromised the integrity of the once “radical act” and “what was once an act of resistance through which communities formed has become simply a shallow marketing tool” (Hunter, 2016, p. 1307). The markers Whitehead (2015) identified as synonymous with success in mommy blogging have detractors who see them as signifiers that the bloggers are “glib, trite, and focused solely on creating content that will appeal to advertisers” (Hunter, 2016, p. 1307) when they should be “providing alternate narratives of what it means to be a mother, and a woman” (p. 1307).

The shift toward commercialization and sanitized content has catalyzed backlash, most notably visible on the website, Get Off My Internets (GOMI), which “is generally very critical. GOMI participants refer to what they do as ‘snarking’ and when a participant does say

something positive about a blogger, they are often accused of 'white knighting.'" (Hunter, p. 1312). Hunter analyzed the threads relating to several very popular bloggers (popular on the Internet and popular on GOMI) and found that in addition to distrust of sponsored content and annoyance over clickbait, GOMI commenters expressed criticism that "bloggers monitor their comments sections, censoring anyone who does not agree with the blogger, or is any way negative. Part of the reason people have come to GOMI is precisely because bloggers do not allow for any dissenting viewpoints" (Hunter, p. 1316).

The "radical act" performed mostly by white, heterosexual, married women with high technological literacy and access, that has become a means to make a living, has generated a massive website for those who feel censored by it. Hunter (2015) concludes that

> The growing consensus on GOMI is that rather than fostering communities that allow for multiple points of view, blogging is more of a performance than anything else; a performance designed to sell an aspirational lifestyle where there is only room for applause and accolades. (Hunter, 2015, P1316)

Why are these white, heterosexual, married women performing this "radical act"? Song (2016) interviewed numerous bloggers, in addition to attending many social media conferences for women and mothers, and noted:

> Like so many other mom bloggers who are privileged in their race, education, and economic status, Kim opted out of a flourishing career to become a full-time mother, only to find the culturally circumscribed sphere of influence for mothers to be distressingly confining and undervalued (Song, 2016, p. 49)

Kim did not realize that by choosing motherhood as her primary role she would sacrifice much of the privilege she had previously been accorded. Given the majority of highly successful mommy bloggers—women who can earn an income commensurate with a full-time job—are white, heterosexual, well-educated, and married, the role of lost privilege or privilege forgone

cannot be ignored. Blogging is, in this lens, a path to legitimacy, an attempt to reclaim power and restore past privilege.

In a survey of Australian mothers who blogged, Pettigrew, Archer, and Harrigan (2016) reported five themes for blogging motivations, "connection, stimulation, validation, contribution, and extension" (p. 1027). I read these themes as "peers, intellectual activity, legitimacy/affirmation of choices, desire to be viewed as person with expertise, and desire to influence." Women who are blogging about motherhood are, in some regards, attempting to create or mimic a workplace and a career by treating it as such. In that regard, mommy blogging is a radical act because it pushes against "Motherhood … as part of the private or domestic sphere that women are supposed to occupy and not challenge" (Lopez, 2009, p.731), which is why it is even more the pity that "there appears to be relative absence of self-consciousness within the mamasphere" and the homogeneous women who compose it (Friedman, 2010, p. 2).

These criticisms are especially interesting given the tricky and contradicting nature of vaccine opposition. Anti-vaccination activists often claim they are being persecuted by pro-vaccine authorities or are the victim of larger conspiracies at work (Davies et al., 2002; Kata, 2010). However, they also position vaccine avoidance as a more natural way of life, the way it "should" be. Are they stigmatized or are they an aspirational way of living? The intersection of vaccine opposition and a profitable mommy blog will pull these tensions taut and allow for a close examination.

Genevieve maintains a blog at mamanatural.com and has channels or a presence on many other areas of the Internet, such as YouTube, Twitter, and Pinterest. Her online presence

is her full-time job and career. She purports to help "mothers-to-be and moms of young children lead healthier and more natural lives" ("About Mama Natural," 2011). I considered Genevieve an ideal case for several reasons. Petts and Niemeyer's (2004) asserted that "maternity appears a significant factor forming views on MMR" (p. 14). Mama Natural is a mother of two children and devotes herself to helping women who are mothers or are preparing to become mothers. Pregnancy is one of the main subtopics of her website; she has written a book on the topic and offers an online class about it, and sells several products for expectant mothers. This makes her an ideal case to examine the intersection of maternity and anti-vaccination attitude formation.

In line with her moniker, Mama Natural embraces and encourages natural living. This contributed to her suitability as a case because an affection for or pursuit of natural living has been reported in many studies of anti-vaccination parents or anti-vaccination advocates and content (Dempsey et al. 2011, Gottlieb, 2015, Kata, 2010, Davies, Chapman, and Leask, 2002). Davies, Chapman, and Leask (2002) suggested this alignment occurs because "Along with alternative health and natural parenting, antivaccination sites represent a return to an idealised, natural existence" (p. 24). Zimmerman et al.'s (2005) content analysis of anti-vaccination websites also reported a strong presence of encouragement for pursuing alternative medicine.

Mama Natural's expertise with online platforms and tools is another facet of what made her an excellent case. Jones et al. (2012) reported "a relationship between Internet use and an acceptance of alternative views to traditional medicine about vaccination," although the authors could only speculate on the direction of the relationship (p. 5). Mama Natural obviously

uses the Internet and accepts and promotes alternative views. Not only is she this parent, but she is also the type of source to which this parent is potentially receptive. Jones et al. (2012) found Internet users "were less likely to agree with accepted tenets of vaccine science, less likely to agree that children need or benefit from vaccines, and more likely to have obtained nonmedical exemptions from vaccination for their children" (p. 5). It was important to study both sides of this—a parent who met these criteria and the information they interacted with, Mama Natural was at this intersection.

Mama Natural provided a window into how stigma fits in vaccine opposition. To the outside eye, Mama Natural enjoys much privilege—she is white, attractive, in a heterosexual marriage, Christian, and appears to live in relative comfort. However she has also made videos like "Sh*t crunch mamas say" ("Sh*t Crunchy Mamas Say," 2012) which goes through common things "crunchy" parents say that make them distinct (and possibly alienated) from other parents. She also addressed a question from a reader struggling with the reaction of family and friends to her parenting choices with the video, "What to do when people think you're nuts ;)" (Mama Natural, n.d.). Perceived and felt stigma are something she experiences and engages with, though her relative privilege surely shapes how much this actually influences her, her parenting choices, and the community she builds online.

Selecting the case, for a single case study design, was of inestimable import, especially because the "case may later turn out not to be the case it was thought to be at the outset" (p. 53). Yin identifies five rationales, "*critical, unusual, common, revelatory,* or *longitudinal*" (p. 51). Flyvbjerg (2006) describes four types of cases: extreme/deviant cases, maximum variation cases, critical cases, and paradigmatic cases (p. 230). Stake (2006) asserts that in selecting a

case, the researcher also selects a situation (p. 2), suggesting that the types of cases could also be seen as situational labels. Walton (1992) does not delineate with specificity, rather asserts "cases are chosen for all sorts of reasons, from convenience and familiarity to fascination and strategy" (p.125).

Considering these possible labels, Mama Natural fit in several categories. In some ways she was a common case—an Internet-savvy mother who has not vaccinated her children. She was also a critical or extreme case—an Internet personality and information resource who has not vaccinated her children, who is open to and endorses natural living and alternative health practices. She was also a longitudinal case, as her blog and videos provided more than 7 years of insight into her life. Adding another layer, Platt (1992) asserts "that the kind of a case a whole work is may change over time" (p. 41). Ultimately, what kind of a case Mama Natural is matters less than that she was the right case to answer the research questions.

2.4.1 "A single case"

A single case design is frequently subject to criticisms of rigor and representativeness. The latter is perhaps easier to dismiss—a single case study is not representative of the larger population from which it was selected because it is not designed to be. Expecting representativeness from a single case study is akin to expecting quantitative data to talk, if you tried very hard you might manage it but it would be a challenge for you and for the data. Case studies can generate theoretical constructs that may transfer to or "represent" other contexts, and the content of the case study report may highlight elements worth exploring in the larger population, but they will never be a substitute for survey work, just as a television will never be

a substitute for a chair. You could sit on a television if you had to, but it is really not designed for that.

Whether a case study can be representative of any population or theory is frequently called into question because its N of one is used to diminish its potential rigor. Yin (2014) discourages equating a case to samples and instead compares a single case to a single experiment. One experiment examines isolates variables and analyzes them in a particular situation at a particular time and then tries to replicate it or expand the situation(s) or time(s) when those findings occur. A case study follows a similar path, except instead of empirical findings, it generates theoretical constructs and rich descriptions and explanations that can answer questions other approaches cannot.

But is any case only one case? Even a single experiment often contains embedded experiments. A single-case study design can still "involve units of analysis at more than one level" (Yin, 2014, p. 53). Embedded case studies which collect and analyze data at multiple levels may struggle "to return to the larger unit of analysis" (Yin, 2014, p. 55). Mama Natural as a case was difficult to define because it existed at multiple levels and the delineation between them was murky. Her website, her blog, her family life, her social media channels, her information use—co-occured.

According to Hennion (1989), "The intermediary is not at the interface of two known worlds: he or she is the one who constructs these worlds by trying to bring them into relation" (p. 406). Hennion (1989) suggested a popular music producer could be seen as an intermediary between culture and technology, that the producer mediates between society and the artist. Mama Natural is an intermediary between many worlds, but also, like the case of the music

producer was used as a proxy to understand how production and consumption intertwine to create objects, she is a representation or an instance of a process we do not fully understand—and provided an opportunity to examine it in depth.

White (1992) acknowledges "a case study takes a single count and opens it up, with attention to context" (p. 83). Mama Natural was potentially a single count. However, the single instance of her and her blog consists of numerous decisions, another way of looking at cases, according to Yin (2014, p. 15). Mama Natural documented numerous decisions that are not normative—a set of decisions that are each "cases." How she presented her decision not to vaccinate, compared to her decision to cosleep with her newborn, or whether she should have her son circumcised provided rich opportunities for comparison. While she may was a single instance, comparing the "cases" of her deciding to make controversial childrearing decisions was an opportunity for insight and compromised the idea of her as a single case. Instead her presence and website become a context in which I had the opportunity to examine multiple "cases."

2.5 Sources of evidence

Case studies are unique because of their allowance for multiple types of evidence—Yin (2014) identifies the 6 most common sources of evidence as documentation, archival records, interviews, direct observations, participant-observation, and physical artifacts (p. 106). While "a good case study will therefore want to rely on as many sources as possible" (Yin, p. 105), Yin acknowledges "Any of the preceding sources of evidence can and have been the sole basis for entire studies" (p. 118). Multiple sources of evidence are important and were sought because particularly when working with a single case it protects against the implicit omission of relying

on one evidence type. For example, survey work can tell you who participates in a workforce, but only conducting interviews with the workers will tell you why. Findings arise from convergence across types of evidence—if they do not converge they also can identify points of tension between different facets of the context's fabric.

Mama Natural was an excellent candidate for the case study because, in addition to the characteristics already listed, there are numerous evidence streams related to her that are publically available. The first and foremost was her website, MamaNatural.com. On this site she writes about her everyday life and usually posts videos to accompany her posts. Her posts typically focused on educating the reader about a specific topic or about sharing her life with the reader. Educational posts provide an additional opportunity for evidence—Genevieve usually cited her sources, opening an avenue for bibliometric analysis. This was an excellent opportunity to study in-depth the information and sources utilized by a parent who has chosen not to vaccinate their child—to make that choice but also in her day-to-day life. Her posts also allow visitors to comment, to which she or someone from her team sometimes responded.

On her website, Genevieve also has a section where she endorses specific artifacts (in addition to talking about them in her posts) and also a storefront where visitors can purchase artifacts she has created. Examples of created artifacts included the book she authored and pregnancy affirmations. Examples of endorsed artifacts included books, natural food products and supplements (purchasable from Amazon, she is an Amazon affiliate and can receive income from people purchasing items they found via her site). Genevieve also maintains public accounts under the MamaNatural handle on Pinterest, Twitter, Instagram, Facebook and GooglePlus where, depending on the platform, it is possible to observe what she shares, follows

and “likes,” and if she engages with her followers. Artifact analysis was confined to information objects because limited value was seen in purchasing and trying the foods and supplements Mama Natural endorses. I also refrained from studying her social media usage because after a quick perusal they seemed to function as echo channels for her blog, rather than featuring distinct content.

In addition to the channels she controls, Genevieve does appear in other settings to promote her website. Her site mentions appearances on Daily Mail, The Doctors, CBS News, and in Newsweek. She also has appeared on the channels of others and written posts for other venues, possibly to promote herself or the channel hosting her. This was an additional stream of evidence and a possible place to assess the propositions—if her narrative, behavior, and information practices are consistent across contexts. I observed they were very consistent and usually focused around amplifying her blog and YouTube channel, so I did not evaluate them in detail. Genevieve also advertises a class on her website; the Mama Natural Birth Course (“Mama Natural Birth Course - The #1 Online Childbirth Class,” n.d.). There are also forums, such as Get Off My Internets (GOMI), where online personalities, such as Mama Natural are discussed—sometimes, even frequently, in unflattering terms. This was an additional source of evidence, along with comment threads on the MN site to understand how others perceived her. More evidence can be obtained from the Wayback Machine at the Internet Archive where I observed how MamaNatural’s website changed over time, with particular attention to how posts about stigmatized topics changed or were no longer available.

Mama Natural is, at this point, a public figure and enterprise. Currently her website indicates that she does not respond to email inquiries, though visitors are invited to leave a

comment or visit her Facebook page instead. Because of this, and the likelihood that this research would be perceived as threatening—I did not try and contact Genevieve. Additionally, I did not think direct contact with Genevieve would reveal more than the video logs and web posts she has made over 7 years.

2.6 Operationalizing the questions

To answer these questions, I conducted a case study of an anti-vaccine mother who is a natural living advocate via an online social media presence. I proposed a single case and that the case constitutes the image created and cultivated by the person it represents. Anti-vaccination attitudes and choices have been studied extensively out of context via large-scale survey research without producing an accurate characterization of who does not vaccinate, much more providing a deep answer to how they made their choice, and why. Anti-vaccination behavior is a contemporary behavior, with historical precedent, but the context of those engaging in it has changed significantly due to digital age information access and relaxed gatekeepers. The table below lists each questions, the evidence sources and methods of analysis.

TABLE 2.1 RESEARCH DESIGN

Research Question	Sources of Evidence	Method of Analysis
R1: How does vaccination avoidance and delay fit into everyday life?	Blog and video posts, artifacts, comment threads	Convergence of qualitative analysis from coding multiple evidence streams
R2: What information practices does someone who has not vaccinated their children employ?	Blog and video posts, artifacts, information sources	Analytic memo-writing, capture of information use instances
R3: What is the story and impact of the information and information sources they use?	R2, artifacts	Bibliometric tools, altmetric tools
R4: What "family resemblances" can be discerned about Mama Natural and her network?	Blog and video posts, artifacts, R2, appearance on other channels	Analytic memo-writing, quantitative content analysis of MN and her peers/ network
R5: What theoretical framework can describe this context?	All evidence streams	Analytic memo-writing, qualitative coding

2.7 Formal Data Collection Techniques

"The emergent nature of the investigation means that very often it is impossible to say exactly what data collection techniques will be applied until" research begins (Pickard, 2007, p. 89). However, this also means the design can adapt "for confirmation or refutation of emerging themes as the researcher is aware of them before vacating the site and can adapt the data collection to respond to these emerging themes" (Pickard, 2007, p. 90). Due to inherent qualities of the case study approach it was difficult to anticipate exactly which data would be collected and how they would be analyzed. Despite or because of this, Yin argues for a detailed protocol and, if possible, the creation of a database(s) to ensure internal validity within a case study. The protocol ensures that every time data is collected it is collected in the same manner; that regardless of who collected it they would collect the same data. Of course, this is not

always feasible—for example, in a semi-structured interview the data would be different each time—but the stronger and more detailed the protocol, the more feasible such replication is. Replication in case studies means another researcher, using the protocol(s), could replicate the case, not replicate the case's findings in another case.

Pickard (2007) notes, "You will collect and store multiple sources of evidence. This needs to be done comprehensively and systematically, in formats that can be referenced and sorted so that converging lines of inquiry and patterns can be uncovered" (p. 89). Because I collectd and evaluated multiple data types, there were multiple databases of evidence and data collection protocols. The collection protocol and storage plan for each evidence stream is in the table below. The data collection protocols are outlined in Appendices B, C, and D. As the design may shift during data collection and analysis, I intended to "keep a methodological journal in which you jot down your methodological dilemmas, directions, and decisions" as Charmaz (2014, p. 165) recommends. This did not suit my working style. Instead I kept a master task list that documented where I was at each phase of analysis and wrote about my methodological decisions in memos.

TABLE 2.2

Evidence Stream	Data Collection Protocol	Storage
Blog posts	Detailed Qualtrics entry form (Appendix B)	Each post was saved as a PDF, the data collected about each post will be stored in Qualtrics
Videos	Detailed Qualtrics entry form (if part of a blog post, Appendix B, other video will be Appendix C)	Data collected about video were stored in Qualtrics
Artifacts	Inductive coding and memoing in Qualtrics or on the artifact when possible	Physical artifacts were stored in a safe space, some data collected about them were stored in Qualtrics and other digital tools
Information Used	Collected during different rounds of data collection (from posts, videos, & artifacts) in different Qualtrics databases, then entered into protocol in Appendix B	Stored in Qualtrics, analysis stored in Excel and Stata files
Other Evidence Streams	Determined which of existing protocols was most suited for it or developed new one	Stored in Qualtrics and other spaces as needed

2.8 Formal Data Analysis Techniques

The nature of the research design meant the anticipated data analysis techniques were just that—anticipated. It was possible other methods would be deemed necessary or even that planned analysis would be altered. Based on the research questions I thought quantitative and qualitative content analysis would be used, as well as bibliometric methods, and descriptive statistics, and digital ethnography.

2.8.1 Digital ethnography

Hine (2015) considers the role of ethnography when studying the Internet and mediated communication and how it challenges basic assumptions, such as

> When we watch a fight break out on Twitter we cannot be sure whether any of the followers of those involved are seeing the same fight, at the same time, and understanding it in the same way that we do. The very notion of a singular "situation" as a pre-existing object breaks down (p. 3).

Ethnographers strive to observe and do what those they study are doing, in many ways I was observing and doing what Mama Natural's followers do. I could only see the interactions they chose to publish, but reading the blog without leaving a public comment, "lurking," is an extremely common behavior. Like a case study, an ethnographic study cannot be wholly premeditated (Hine, 2015). Hine's (2015) view of the Internet as "an infrastructure that underpins the things that people do, rather than a foregrounded activity that they do in its own right" (p. 8) is a helpful frame for looking at Mama Natural. The Internet is the infrastructure that has allowed her to store years of the "mundane aspects of everyday existence" (Hine, 2015, p. 164) that I think shape the phenomenon of interest but that would be difficult to obtain in other forms of data collection.

This work was also driven by "a belief that engagement with the field should be driven by a pursuit of the ways in which a setting uniquely makes sense, rather than the application of a particular model of what a field should be" (Hine, 2015, p. 31). As case studies must triangulate evidence, "Ethnographers need to triangulate their own perceptions with those of other participants" (Hine, 2015, p. 50). I did not triangulate my own experiences with Mama Natural's participants, but did debrief them with people who were proxies for facets of her, as discussed in section 2.10. Other than not interviewing participants, this research included

typical ethnographic "learning-by-doing, observation, recording activities and archiving documents" (Hine, 2015, p. 15) and "the embodied experiences of the researcher [will be] one of its primary means of discovery" (p. 19).

However, the primary methodological approach was still the case study. While I do not "aspire to develop depersonalized and standardized instruments of data collection" (Hine, 2015, p. 19), the data were collected in a systematic, standardized way that could be replicated by another researcher following the same protocol. Though our findings would differ, the data we collected, for the most part, should match. Like an ethnographer, I did not make an "objective account independent of the specificities of a particular ethnographer's engagement with the setting" (Hine, 2015, p. 20), if only because such an account is, when examining such a contested topic, impossible.

Unobtrusive digital ethnographic methods were embedded within this research design. Hine (2015) does "not claim that unobtrusive methods applied to online settings are necessarily in themselves sufficient to enable a robust ethnographic account to be constructed" (p. 157) but "for an ethnographer interested in those aspects of the minutiae of everyday life which participants may find it difficult to talk about retrospectively in an interview situation" (p. 157) they can be illuminating. These methods were essential to my work and also underlined the rationale for avoiding face-to-face data collection because "non-reactive research methods are very useful where it may be difficult for respondents to give honest or authentic answers about their behavior, possibly because answers might be seen as socially undesirable" (Hine, 2015, p 159). Asking a parent why they have not vaccinated their child, or anything about possible vaccine opposition almost always puts them in a defensive position—particularly when the

person questioning them is associated with the scientific community. Mama Natural's site and content are "a form of data that can readily be collected and interpreting it as a proxy for a behavior that the researcher is interested in but cannot necessarily ask about or observe directly" (Hine, 2015, p159).

2.8.2 Qualitative content analysis: Inductive coding analytic memo writing

I utilized certain grounded theory methods as articulated by Charmaz, particularly inductive coding and analytic memo writing. Coding is a place to "*define* what is happening in the data and begin to grapple with what it means" (Charmaz, 2014, p. 113). Grounded theory coding typically involves multiple rounds, an initial broad phase and then a focused selective phase (Charmaz, 2014, p. 113). Via memo-writing I accessed the "implicit, unstated, and condensed meanings" (Charmaz, 2014, p. 180). These codes and memos were distilled into themes, "*outcome[s]* of coding, categorization, or analytic reflection, not something that is, in itself, coded" (Saldaña, 2013, p. 14).

2.8.3 Quantitative content analysis

Quantitative content analysis "applies *preconceived* categories or codes to the data" (Charmaz, p. 114). In assessing family resemblances, I utilized quantitative content analysis. The Mama Natural site exists within a network of mommy blogs that advocate natural living. Just the blog page advertising her book features endorsements from 13 other authors or digital creators ("The Mama Natural Week by Week Guide to Pregnancy & Childbirth | Mama Natural," 2017). A cursory look at their descriptions and web presences reveals some obvious similarities in demographic characteristics, general areas of focus, and specific topics or stances on topics (for example, circumcision or cosleeping). Additional elements included some of the

information sources identified in my third research question, such as the book, *Nourishing Traditions*. The creators of some of Mama Natural's favorite artifacts, other blogs she appears on, or individuals she regularly cites, could have been included in this assessment, but ultimately were not because they were seen as experts she admired, rather than peers. Other individuals were identified by looking at who Mama Natural follows and interacts with on her social media accounts, particularly YouTube. To ensure a robust comparison, I aimed for a minimum of 30 individuals, though I was able to obtain over 80 cases to contrast.

2.8.4 Metrics, impact, story

The website *RetractionWatch*, a blog devoted to "tracking retractions as a window into the scientific process" reported a surprising story—the top ten most cited retracted articles had continued to be cited after they been retracted and some had received more citations since retraction than before (Oransky, 2015). This list included the infamous article by Wakefield et al. which alluded to a causal link between the MMR vaccine and Autism Spectrum Disorder. In my previous study of Mama Natural, I noticed she engages with information sources of all types —scholarly, government, informal, et cetera. It is possible that some of the information she uses is a special case, such as the Wakefield article, but without examining the metrical aspect of such information it would be impossible to know. Thus, when possible, I intended to tell the bibliometric story of the information object's influence.

While for some this was as easy as retrieving its information in the major bibliometric sources (Web of Science, Scopus, Google Scholar) and checking the Altmetric plug-in, for others it was a decidedly more complex task. The citations for popular materials are not tracked, and

stating the influence of a blog or a specific newspaper article is a nebulous task. However, that does not mean it is not worth attempting. Many researchers who study online spaces state the space's impact via Alexa ratings. Flaherty et al.'s (2014) work about the Jenny McCarthy effect noted how many libraries the controversial book was available in via WorldCat. Sometimes the influence of an information object can be discerned in ways other than measurement. For example, the Dr. Sears Vaccine book inspired Offit and Moser (2009) to write an article specifically addressing it and many of its claims. I had intended to devote more time to analyzing the information objects cited, but because of the difficulties in understanding their influence, the amount of cited objects, and the relatively low importance Genevieve placed on them, I did not pursue this line of inquiry.

2.9 Summary

2.9.1 Ethical considerations—Anonymizing the case

Mama Natural is a website and an online personality. She is also a person who shares much of her personal life with whomever comes to any of her digital platforms. Studying her meant studying her livelihood and her family in great detail. While her husband chooses to be a part of this digital presence, her children cannot, however they are an integral part of her story. It was necessary at all times to remember that these are real people and not all are consenting adults.

There was also the matter of how to report the findings of this case study. Yin (2014) advocates not anonymizing the case whenever possible. Considering Mama Natural is a public figure and all data collected will be publically accessible or paid for (such as artifacts available for anyone to purchase), I did not study anything confidential or hidden. Because the

identifiable aspects of her site make her distinct and a good case, anonymizing her threatened the integrity and salience of the findings. In addition, prior research that has focused on mommy blogs has not anonymized them. Bruckman, Luther, and Fiesler (2015) even "argue that anonymizing [Internet names] … would be unethical" (p. 244) because "we are studying people who deserve credit for their work, and who are entitled to respond to our representations of them" (p. 244).

2.9.2 Institutional Review Board

This research was found exempt by the UNC Office of Human Research Ethics on September 1, 2017, IRB Notice 17-2009.

2.10 Challenges

It was foreseeable that the research design, questions, and direction would change during data collection and analysis. The qualitative elements of this study relied on my interpretation—and another researcher might interpret the data differently, for "multiple realities exist because we each perceive and interpret social life from different points of view" (Saldaña, 2013, p. 8). Charmaz notes "Every researcher holds preconceptions that influence, but may not determine what we attend to and how we make sense of it" (p. 156).

The main limitation of this work was that it is a single-case design. One case is not representative of or generalizable to others, nor is it designed to be. Mama Natural does not stand for all mommy bloggers or mothers who do not vaccinate their children, or any of the other facets that make her of interest to researchers. A case study about her cannot be used to tell us about all others like her, but that is acceptable because it is not designed to do so. Instead, it can shed light on theoretical constructs that broader research cannot be sensitive to,

the empirical depth reached by a single case can contribute by generating thorough description and theoretical understanding that can be sought in other cases and contexts. There were aspects of this case that I could not say with certainty are pertinent to other cases and contexts, though they held great import to understanding Genevieve. This is discussed further in section 5.5.1.

One methodological limitation of this work was that it did not utilize direct interaction with the case as an evidence source. Yin considers the interview "one of the most important sources of case study evidence" (p. 110) though he notes that "interviews should always be considered *verbal reports* only" (p. 113) especially because "Corroborating these views against other sources would not be as relevant as when you are dealing with behavioral events" (p. 113). At the time the research was undertaken, Mama Natural's website said she did not respond to email inquiries ("About Mama Natural," 2011), making contact a challenge. Interviewing her would have presented such significant challenges in building rapport and trust that I did not think it would be a worthwhile use of time, especially given the immense amount of video diary-like evidence already available. Interviewing her followers also presented challenges, as doing so with or without her consent would have disturbed the site more than necessary—something Creswell (2002, p. 181) cautions against.

2.10.1 Debriefing

Because I was the principal and sole investigator in this study, I chose to improve the validity of the findings with peer debriefing. Via my own social network, I have access to and friendly relationships with a chiropractor who has never been vaccinated and is opposed to vaccines; Dr. Alice Callahan of the blog, Science of Mom; a certified nurse midwife, and several

new mothers. All agreed to participate in discussions with me to discuss findings, themes, and ask for their insight and experience. In practice, interviews with the new parents and the midwife were the most necessary to check my interpretation and gain subject matter expertise.

2.10.2 Researcher as instrument

Holloway and Biley (2011) assert, "The self is always present" (p. 971), implicitly or explicitly in fieldwork. In qualitative research it may be more so, thus more necessary to directly assess one's own standing in the work and how that can shape one's interpretation. While I am fond of children, I do not have my own and could not draw on personal experiences of child-rearing and maternity (though this same lack also meant my own experiences could not bias me). However, if I have children I have every intention of adhering to the CDC's vaccination schedule. I am able to separate my perspectives on how I view the decision not to vaccinate as a researcher and as a member of society.

When I first began to study parents who choose not to vaccinate, it was from a place of consternation. I had numerous assumptions; that the scientific evidence was crystal clear, that all of these parents were listening to Jenny McCarthy, and so on. Quickly, I saw the complexity of the issue and the numerous segments who had been coalesced into one group. I also was repeatedly exposed to my own assumptions in the literature and in media about the subject and began to see how they exacerbated my misreading of the phenomenon which contributed to my misunderstanding, false conflations and oversimplifications. While I can now assert I view the phenomenon as considerably more layered and complicated, the science as science, rather than delivered with the ten commandments, I still must recognize my own views and how they shape my interpretation. Despite or because of everything I have read and studied, I still believe

choosing to vaccinate is the right decision for virtually every child. In fact, studying it has intensified this belief.

Considering how my own views have evolved has shaped this research design. After working on my comprehensive exams for several months I concluded that I believed even more firmly in vaccination, but that I now had different language for it and could articulate why in a much richer way. Surprisingly to myself, the science became supporting evidence and vaccination became a way to operationalize one's values. As I began to see vaccination as a choice made to align with values (for some, not for all), I wondered how it fit into everyday life, particularly as it is not a normative choice and can involve stigma, though the values-aspect likely imbues the parent with much conviction.

I was limited in certain ways that shaped my interpretation, but I am and was able to empathize with making a decision that is stigmatized for reasons the decider feels are unfair and wrong. I did not think Mama Natural and I make many of the same choices, but I thought we made our choices in similar ways. Also, while some of her behaviors are not the choices I make, many are choices my friends and family have made. At a reductive level, this research will be conducted by a pro-vaccine woman who is not a parent studying a woman who is a parent who has not vaccinated her children. The limitations were obvious, but also less limiting than they appeared.

2.11 Impact

At the completion of the case study, I have generated a case study report that describes how vaccine opposition fits into everyday life, the worldview where it is normative, and

theoretical model that describes this worldview. This report describes the information practices and information used by my case, as well as the family resemblances of those in this context.

CHAPTER 3: METHODS

3.1 Summary of Data Collected

A summary of all data I collected can be found in Table 3.1. The first data I collected were blog posts, along with comment interactions and citation data. During this phase, I viewed some of her videos, identified artifacts and began that analysis, conducted several interviews with peer debriefers. After all blog posts were read (and comments and citation data collected), I viewed all Mama Natural videos on YouTube but not on her blog—artifact analysis was concurrent. After the completion of all videos, I registered for her birth course—an online-delivery education artifact consisting of 10 sessions with videos, quizzes, and handouts. Concurrent with this period was iterative coding of blog posts. After completing the course and completing all of the other artifacts, I cleaned the bibliometric data and descriptive data from the blog posts. At the completion of these phases, I reviewed hidden blog posts and an external forum thread about Mama Natural discovered during the first phase. I then reviewed and distilled all memos, comments, and data from earlier phases. Nearing the completion of these phases, the set of family resemblances was finalized and the list of Mama Natural's potential network was cleaned, reduced to 85 cases, and assessed for exhibition of each resemblance.

TABLE 3.1

Data Type	Volume	Note
Blog posts	554 (+10 hidden posts)	
Comment interactions	426 comment exchanges	Selected from 20,743 total comments
Videos	534 (36+ hours)	
Artifacts	6 (approximately 2400 pages) 1 video (90 minutes) 1 deck of 50 affirmation cards	
Information Objects Cited	1500 citations	
Interviews with PDs	5 (about five hours)	
Birth Course	9 hours of video	
External perceptions of MN	1 forum thread of 154 posts	
Network	85 cases with 51 characteristics	

3.2 First Phase of Data Collection:

The first phase of data collection began on September 1, 2017 upon receipt of exemption from the UNC IRB. Mama Natural's blog, mamanatural.com, was the focus of the first phase—specifically every available blog post listed in sequence. I reviewed each post input data into a Qualtrics form I designed. The form is available in Appendix B. I created this form based on the proposal and previous experience in the pilot content analysis of Mama Natural conducted in Spring 2015. The form included structural components—the post's title, URL, and file name (all blog posts were saved as PDFs for future qualitative coding), descriptive aspects—date, category, number of comments, and space for researcher's notes, both methodological and qualitative. In addition to this data collection tool, there were two other Qualtrics forms open for use during this phase—a general memo capture tool and a comment collection tool. In addition to this, there was a Google Sheet where potential members of Mama Natural's network were entered (their names and handles, the MN post they were featured in, and any

notes); a Google Document where possible family resemblances were listed, and an additional Google Document where artifacts were listed.

I analyzed the posts in chronological order of their appearance on the site (during data collection I discovered that some posts were reordered, sometimes by years). I viewed each post in a new tab while the data collection tool was viewed in a different window. For every blog post reviewed, the I entered the URL into the Wayback Machine (https://web.archive.org/) for dating, and I opened and cataloged every hyperlink as information or as a product for purchase. When Mama Natural included links to her own posts, I noted this (in a Yes/No format) but did not tabulate how many because which posts was not of interest—only that she was self-citing. I never counted Mama Natural's own posts in the information cited section because that question aimed to capture all external information use and her reliance on herself as a source was measured in a different question. Frequently Mama Natural would include an Amazon link to information objects, such as reference books, I counted these as sources rather than products because theoretically one could acquire them without paying and still experience the benefit, unlike a food product. I treated embedded links to digital storefronts as products, not as information, because they are primarily for purchasing. I did not count products because she frequently linked to a whole page of products, not just one specific item, because it changed over time; because she would list items without linking to products; and the links changed over time.

Dates for posts reflect, as precisely as possible, the date they were first published. Many had been edited and revised and republished so that they appeared in sequence with more recent posts.

3.2.1 Comment Collection Rationale

Early in the first phase of data collection I found collecting every single comment unwieldy and unimportant. Mama Natural's readership was not the primary point of interest—how she interacts with them was. However, even isolating only to comments that she responded to still would have included hundreds of non-substantive comments that were not useful. For example, when a reader wrote "Thank you so much for this post" and Genevieve responded "you're welcome!" I did not observe anything that would add to the understanding of the phenomenon of interest. I typically collected longer comments, more detailed responses where Genevieve or someone from her team made specific recommendations or shared something revelatory—such as when Genevieve told a reader she had to remove a video because its content did not comply with the FDA ("Hospital Bag Checklist," 2016). Other comments were collected for reasons I could not easily articulate but intuitively felt to be important and possibly of interest in future stages of analysis.

Of course, something is lost in ignoring the comments to which Genevieve did not reply. It is possible and likely to uncover patterns in who she responded to, but it would not be possible to understand why she didn't reply to others. Even proposing a reason would be a guess—perhaps she was busy, maybe the commenter wrote a comment years after the original post. That, combined with the community of commenters not being of primary interest pushed those whose comments were not responded to outside of the scope of this research. Further, commenters are a distinct group of Mama Natural's audience, especially given what we know about lurkers (Sun, Rau, & Ma, 2014), individuals who are active users of online spaces but never post.

Overall I entered 426 comment interactions into the collection form. It is important to note that sometimes I entered one comment and one response, on other occasions I entered a longer thread of 3-8 comments where it was unclear which Genevieve was responding to or if she was responding to many, but I counted all of these as a single interaction.

I reviewed this collection of comments several months later. I discarded over 300 comment exchanges and kept the remainder in a separate document with notes and codes as applicable. I treated the comments as an opportunity to observe Genevieve interacting with members of her community, so I gave preference to observing interactions that revealed new facets and details of Genevieve, the website, and her information practices.

During the initial review of blog posts, other than visitors, I noticed three distinct blog commenting accounts attached to the site in some way. These included Team Mama Natural (perhaps Genevieve's husband, Mike, and/or Maura, the nurse who helped create the birth course), comments from Genevieve, and another account called Genevieve Mama Natural. These accounts were offset in a different color font that made them distinct from the comments of readers.

3.2.3 Conclusion of first phase

At the conclusion of the first phase, I collected 544 posts 426 comments 20 memos and identified 130 network members (including duplicates).

3.3 Secondary Phases of Data Collection

3.3.1 Review of videos on YouTube but not on Blog

I watched 220 videos between October and November of 2017. Video titles and links were collected along with a short abstract, notes, and relevant quotes.

3.3.2 Coding of blog posts

I began the first round of coding of the 544 blog posts on November 9, 2017 and concluded it several weeks later. I coded the posts inductively in two rounds. During the first round, I read each post and applied codes and notes with annotations. I did not read posts in any particular order, to mark a post as read, "XXX" was added to the file name. During the second rounds, I read posts again, along with the codes and notes, sometimes further codes and notes were added. At this point I removed the "XXX" from the file name. Additionally, I entered any coded text or notes into a separate document for later review.

3.4 Artifacts

During the first phase of data analysis, I identified many artifacts as relevant research objects, they are listed, along with rationale for inclusion, in Appendix A. I considered artifacts relevant if they were recurring threads in Mama Natural's public videos—such as the cookbook *Nourishing Traditions,* which she repeatedly mentions changed her life and would reference all the time. I identified other artifacts as relevant because they were central to the landscape and necessary to absorb the multiple layers of meaning embedded within the worldview.

I purchased books coded them inductively in ink. I saved digital text artifacts as PDFs and coded them inductively with text notes, and coded selections were later compiled in a separate document. I watched artifacts like documentaries in formats friendly to frequent pausing and rewinding. As codes emerged, I wrote multiple memos to define the codes, and abstract them. Artifact consumption was concurrent—finishing a book was not a requirement to beginning another. I did this to prevent researcher fatigue and hinder the tendency for later artifacts being too heavily compared to artifacts studied first.

I collected a bracelet and a deck of affirmation cards as physical artifacts. I described these items in notes and memos. The final artifact was Mama Natural's birth course, a digital class comprised of ten sessions, all featuring a video, quiz, downloadable resources and weblinks. Each class video and materials were described in lengthy memos. Class videos were typically upwards of forty minutes long, but due to pausing and rewinding for note-taking, usually took twice as long to view. To register for the birth course, I had to enter an expected due date, as I was not and am not expecting, I falsified one. This was the only act of subterfuge I had to perform to obtain data.

3.5 Information Used

On December 24, 2017, all of the information citations I gathered during the first round of data collection were entered into a spreadsheet. I collected them en masse and had to separate them, so from 554 posts, of which 273 had external citations (citing information other than MamaNatural posts), came 1499 citations. During this first cleaning, I had to remove some because they were not clear citations or did not contain links or enough information. For example, I did not enter one citation because my entry for it was "she talks about Bruce Fife a lot" but she did not directly link to him. Another example was an in-text reference to a Biblical verse—this was excluded. Alternatively, some were included—such as a mobile phone application, because she directly linked to it and because it was free, I considered it information rather than a product. Ultimately less than 10 entries required this kind of consideration.

Once all 1499 citations were in a format where they were individual cases (rather than attached en masse at the level of a blog post), I examined and entered metadata for each case using a modified Dublin Core format (Title, Creator, Publisher, Date, Type, Format, Source, with

Duplicate and Notes as added fields). I assigned all citations a case number. I gathered metadata about books from WorldCat.org when possible, or publisher sites, booksellers, and Goodreads when not. I tagged items that appeared to be or were definitely duplicates as such. I had to remove certain items, such as broad search results rather than specific information objects, for example "Christian soaking music" is a genre, compared to *Nourishing Traditions*, a cookbook. Once I had cleaned the information citations, I found there were actually 1500 citations—two citations had been entered into one row. From there, I found and removed 120 broken links and 134 duplicates for a total of 1246 citations.

3.6 Evaluating the scholarly information used

I entered the title of each scholarly article into Google Scholar, Scopus, Web of Science, and Altmetric to obtain its citation count. If additional metadata was needed, I entered that as well. If an article could not be located, I indicated that with an "X" as opposed to a "0" which meant it could be found but had a citation count of zero.

I was also interested in which journals were cited and how often, because the number of scholarly citations was relatively small, assessing duplicates was relatively easy and done via simple sorting techniques and then counting the number of tallies. I wanted to know if the journals cited were peer-reviewed and open-access, as during the initial cleaning of data, I noticed Genevieve sometimes linked to abstracts and sometimes full-text, depending on what was available (surprisingly I have never heard her express upset about this).

3.7 Mama Natural's Network

While reading Mama Natural's posts, any time she included a link to a friend's blog, profiled a friend, allowed someone to guest post, or collaborated with someone in anyway, I

recorded their name and website in a spreadsheet for future analysis of family resemblances. While cleaning Mama Natural's information citations, I expanded this criteria to include blogs she cited—for their posts or recipes, with the rationale that she was familiar with them and if some of their material supported her ideas, they might be members—if not direct links—of the natural lifestyle community.

At the beginning, there were 205 names. First, I removed duplicates, then I assessed the cases against inclusion and exclusion criteria. To be included, a case needed to be a web presence which supported and sought public engagement and which had a relationship with Mama Natural, such as a collaboration or a guest post. I excluded cases if they had no evidence of activity within the last 12 months (since January of 2017); if they were part of a larger presence but did not have their own individual presence (an author whose article appeared on *The Huffington Post* but who did not have their own blog/website); and finally, if their digital presence did not primarily feature one of these four topics: natural lifestyle, pregnancy and childbirth, parenting, or food/recipes. At the conclusion of this phase, there were 85 cases.

I collected these cases with the goal of identifying a set of family resemblances that were common or common enough across the community that the presence of one increased the likelihood of another. I kept the set of family resemblances in a document that was always open when collecting and evaluating any part of my dissertation data. I distilled these into 6 categories with a total of 51 characteristics. The full list can be found in the section 4.9. I generated these characteristics from the data I collected and analyzed during the first rounds of the study, they are in no way exhaustive or definitive.

I marked the presence of a family resemblance with a zero, yes, or no. A zero meant no presence, yes meant it was addressed or endorsed, and no meant it was addressed or mentioned but in a negative manner. For example, Mama Natural has a post about baby-led weaning, but she does not personally feel it is the best choice for her child, I considered this a yes.

Measuring or scoring cases along these characteristics was difficult. First, I could not assess some fields, such as race, partnership status, religion, or orientation, in a zero-yes-no manner. A zero did not necessarily mean a characteristic was not shared by a case—only that I could not detect its presence. For some cases, this bias may be more pronounced than others—such as cases whose primary presence is YouTube. These cases likely share more family resemblances than I detected, but it was not reasonable to watch hundreds of videos listening for a casual reference to baby-led weaning or Ina May Gaskin. Other characteristics are prone to researcher bias, such as race and ethnicity (determined by researcher's examination of photographs) or the presence of a personal redemption arc. Overall, it is more likely I underestimated a case's resemblances due to my own limitations or the case's own non-disclosure.

3.8 Statistical data analysis

I downloaded all first round data from Qualtrics. I then resolved cases with missing data. I revisited and resolved cases with ambiguous or erroneous data (for example, when a year was entered 201, this was an error). I stripped the body of data to relevant variables (fields containing memos, titles, et cetera were dropped) and entered remaining data into Stata. I

calculated summary statistics and cross tabulations in Stata. I followed the same protocol when calculating bibliometric summary statistics.

3.9 Hidden and invisible posts

I did not collect or analyze posts that were no longer accessible except via the Wayback Machine until I evaluated all other blog data. I had identified a set of 10 posts related to vaccines in earlier phases of collection. I entered these URLs into Wayback Machine and saved a version of each as a PDF. From there, analysis followed the same iterative pattern for all other blog data. I entered the dates, titles, number of comments and shares for each posts into a document along with relevant quotes and comment interactions from each post. I kept this document separate from other blog post-related data because I considered these posts—hidden but still available and accessible via the WayBack Machine—separate and distinct from blog posts available on the Mama Natural website.

3.10 External perceptions of Mama Natural

While there were no threads on GOMIBLOGS devoted to Mama Natural, I identified a public thread on YTMD (YouTube Momma Drama) about her. It featured 154 posts from 2012 to 2015. I saved each page of the thread as a PDF and coded them in an iterative fashion.

3.11 Peer debriefing

Peer debriefing occurred at all phases of data collection. During the first phase of data collection, my peer debriefing heavily centered on conversations with a certified nurse midwife who resides and works in a large urban area. I did not record these phone conversations, but took detailed notes recorded some comments verbatim. During these early conversations, my questions varied in structure and focus. Some centered on meaning, “If a woman comes to you

and says she has watched this film, what is she telling you?" Others were more scientific in nature, "Please tell me what the term 'bloody show' means."

Another important person who served as a peer debriefer was a chiropractor who has never been vaccinated and is vaccine-avoidant. I interviewed this person at the beginning of the artifact analysis phase. I focused on his definition of key terms, clarification of how those constructs and values might be operationalized into everyday life, and information seeking behavior. I also asked about his familiarity with several key figures and artifacts in Mama Natural's life.

Throughout this period I engaged in casual questioning and debriefing with friends and peers, particularly a physician and new parents. These interactions were usually characterized by short interactions, less than 10 minutes and centered around specific subject matter they would know from direct experience (for example, why wait until a newborn is 2 weeks old to start cloth diapering?). I had originally intended to reach out to a mommy blogger within my own network, but never did so. I did not do this because throughout data collection, memoing, and note-taking, I never produced a list of questions for her. During most phases of data collection, I had a running list of items to ask others about, but such questions never came organically for Alice, so I did not pursue an interview. I think this is because Mama Natural was somewhat transparent about how her blog would change and it was easy to see the changes in the WayBack Machine, thus, many of the questions about blogging mechanics I might have had for Alice were answered by the data.

CHAPTER 4: FINDINGS

Throughout the findings and discussion section, I will include quotations from numerous evidence streams, including comments on blog posts, selections from forum threads, and statements from Mama Natural's videos. If they appear casual, colloquial, and incorrect, this should not discredit the legitimacy of their content or be used to judge the speaker. Rather it is a reflection of the norms of discourse in the environment from which the data was taken. For example, in the anonymous online forum YTMommaDrama, usernames like PinkTuTu, Otherthings, and Shortysahm were normative within that space.

In this chapter I will present my theoretical and empirical findings. First, I will introduce a theoretical model to explain this context. I will then present each aspect of the theory alongside the evidence that illustrates it.

4.1 Choosing an inside on the outside: Theoretical findings

I now introduce a model of the worldview my case, Mama Natural, inhabits (Figure 4.1). This worldview, naturalism, is discussed in great detail in sections 4.5 and 4.6. I developed this model to describe the relationships between the behaviors and ideology I observed throughout data collection and to help me explain them to others. The worldview is represented by three concentric circles, the outermost is green, the middle orange, and the innermost red. These colors correspond to the meanings of a traffic light and reflect the level of movement available

to inhabitants. The outermost circle is a dotted barrier—there are many points of entry throughout the circle and individuals can enter many ways. This circle is the boundary between this worldview and another one. The next circle is the distance between being a fringe-member and a more involved member, to enter this circle—the orange one—the line is dashed, there are fewer points of entry because less variation is allowed. Individuals contained within this circle will still be variable, but there will be greater homogeneity. The last circle, the red, is a long-dashed line to represent increasing homogeneity and fewer paths to entry. In this circle, there is a close alignment between ideology and actions—members of this circle are similar to high-level politicians. Individuals in the orange circle are closer to lower-level politicians or moderate political activity, like the winner of a state-wide seat. These individuals may moderate the views and information from the red circle to make it more palatable to members on the fringe. Alignment of behavior and values with the principles of the worldview determines position. For example, in a hypothetical community that did not value consuming animal products, a cattle farmer would not be welcome in the center of the circle.

Figure 4.1

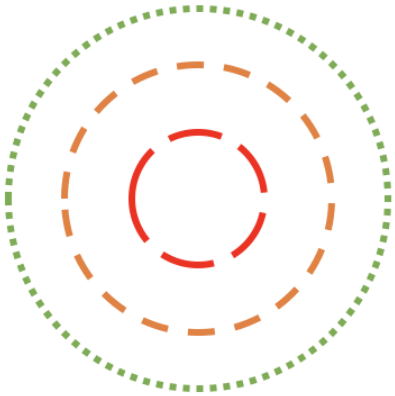
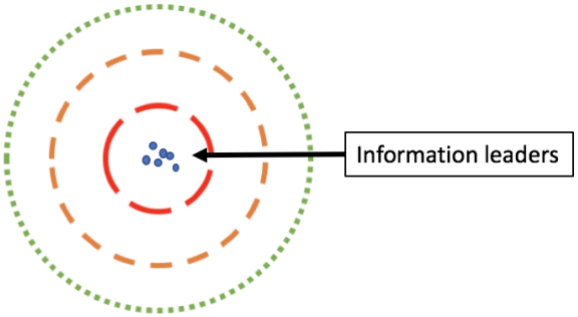


Figure 4.2 depicts the inhabitants of the innermost circle, information leaders. Information leaders are individuals like Sally Fallon, the author of *Nourishing Traditions,* Andrew Wakefield or Jenny McCarthy. Their views may be extreme, they lead by example, and they are probably known outside of the worldview. They have agency, privilege, and power within the worldview. They are represented by small blue dots packed tightly together—because this circle is more closed and has fewer paths to entry, those within it will have high homogeneity—though it may not be visually apparent. The center is a place where views are not moderated to be appealing to outsiders and where there is a close match of behavior to ideology. Individuals within this circle will publically embrace and exhibit much of the core tenets of the ideology.

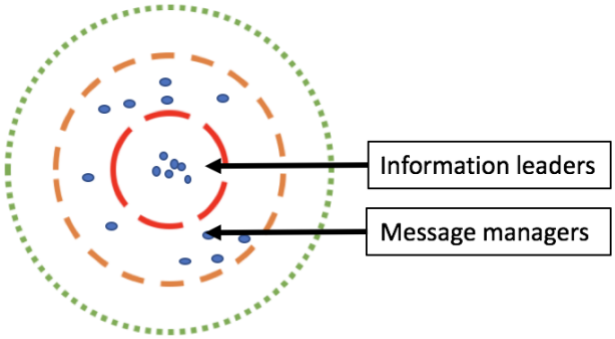
Figure 4.2



Within the orange circle are managers who may repackage the information and directives of information leaders. They will "soften the message" so that it will be more appealing and palatable to those residing within or outside of the green circle. Message softening was visible when Genevieve presented her reasons for consuming animal products, but assured readers she wasn't judging them, compared to Sally Fallon's blunt declaration that "Even the most ardent vegans cannot escape dependence on animal products" (1999, p.474). This circle is less homogeneous than the innermost circle because there are more paths to

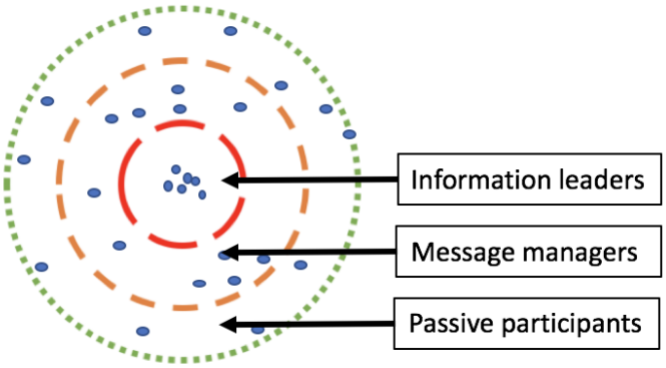
entry. Members of this circle may be very different from one another. An individual on the top of the orange circle) may have entered this worldview for reasons entirely different than a person who entered it from the left. Though these individuals are very different, enough of their behaviors align with the orange circle that they cannot be termed mainstream outsiders.

Figure 4.3



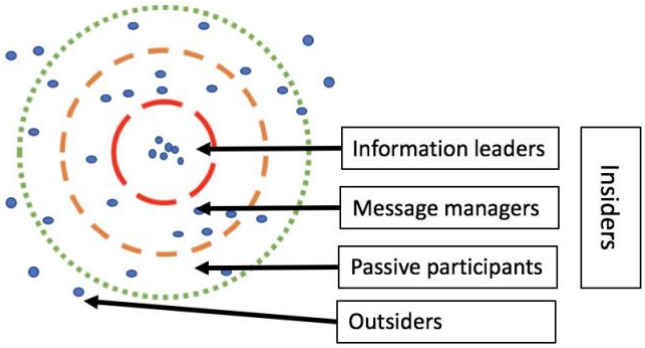
Within the green circle are individuals who are loosely affiliated with this worldview. There will not be a close alignment with their behavior and the ideology of the worldview, however their affiliation with the worldview may still be of profound importance to their identity. To transcend from this circle to a more inner circle, these individuals must adopt behavioral changes that put them in closer alignment with the ideology of the worldview. There is a great degree of heterogeneity within this circle and much more tolerance of choices that deviate from the principles of the worldview. Because the barriers to access are lowest here, this is the easiest circle to join. Loose affiliation might mean only using essential oils or apple cider vinegar, relatively inexpensive everyday products, while agreeing or disagreeing with more central tenets of the worldview.

Figure 4.4



Outside of the green circle exists the fringe. Individuals in this area are unaffiliated with this worldview and may not even be aware of it. Within the worldview these individuals are perceived as potential followers or agents of persecution. This binary approach is preferred to force the issue, because allowing for gradation encourages more differences of opinion which would require greater tolerance for dissent. These outsiders may be members of the mainstream or of another worldview. Within this framework the mainstream is an aggregation of worldviews opposed to or outside of this worldview. Worldviews that exist on the fringes of this worldview, such as veganism or environmentalism, are treated differently than others to which this worldview, naturalism, is likely to appeal. This is discussed in greater detail in section 4.4.1.

Figure 4.5



4.1.1 How do people move on this model?

Movement across these circles increases in difficulty as one moves closer to the center of the circle. To move across the circles repeatedly requires not only agency and autonomy, but privilege and power. Residing within this worldview is not a choice for everyone who is in it. Choice is construed to mean individuals would choose to reside there if they had the means and opportunity to reside elsewhere. This definition of choice is essential to understanding the difference between the two actors I will introduce, because one truly does not have a choice, and the other may characterize or consider themselves without a choice despite great privilege and power. I will use travel as a metaphorical frame because of Genevieve's own conception of natural lifestyle as a journey one does not always "choose" to take

> Most of us start on our natural living journey because we encounter a health issue. It may be an issue with a digestion, or a loss of energy, or a food sensitivity with one of our kids. Circumstances like these force us to look at what we're putting into – and onto – our bodies ("My 'Before' Pictures! ❂ IRL #48," 2015)

Individuals who move into this worldview are reluctant newcomers or willful adventurers. Reluctant newcomers are marginalized, stigmatized, and disenfranchised, pushed out of their home worldview—they cannot find sanctuary within this place and are forced to find a new "home" (even if it is in the same geographic place) whose perspective or ideology is not hostile to them. They may have "chosen" this new worldview because of lack of accessible resources or needs unmet by the mainstream worldview. This new home is similar but also different. Rules, norms, customs may all be different—some drastically so. Think of how race may influence perception of a routine traffic stop. Even if this new world is different it is in the same place (physically), so individuals must constantly manage two (at a minimum) different, potentially conflicting worldviews and the residual stigma that created their reluctant newcomer status.

Willful travelers may experience some stigma, but it is not equivalent or at the scale of reluctant newcomers. Willful travelers have not been pushed out, they have chosen to leave their home worldview. In some ways, they are explorers. Because they are explorers of new worlds, they relish and enjoy learning new worldviews. It is **imperative** to remember willful travelers have chosen their journey—they retain agency, but most importantly they retain the privilege and power they enjoyed before they began their journey. They can navigate between the worldviews they inhabit with relative ease. Willful travelers can move freely between the various circles of the model—even outside of it if they so choose. Reluctant newcomers likely cannot.

The difference between a reluctant newcomer or a willful traveler in the outermost circle could begin with food. A reluctant newcomer might enter the worldview because of an allergy to soy—an omnipresent ingredient in processed foods. Because of the allergy, by default they must observe many of the nutritional directives of the natural lifestyle. Their primary reason for seeking foods made with "clean" ingredients is not nutrition, but safety. To contrast, a willful traveler might choose to give up soy because they are interested in making lifestyle changes or they want to experiment with their diet. There is no dire imperative forcing their hand.

Because willful travelers retain the privilege and power from their former worldview, and especially because they likely maintain relationships (friendly and family) they have fairly permanent ties to the worldview they no longer inhabit. This means even if they do not actively participate in it, they remain up-to-date on its happenings and customs. Because of the privilege and power they enjoy, they are able to navigate introducing and enjoying the learned

behaviors of one world into another without experiencing significant stigmatization. In a post promoting a book, Genevieve wrote "We know how powerful media can be in influencing a generation and this book will speak to our children in a powerful and important way" ("Buy a Book & Change the World... | Mama Natural," n.d.)Their ability to choose these things, much like they choose to inhabit these external worlds, means that experiences such as learning a new vernacular are enjoyable explorations, not a necessity as they would be for a reluctant newcomer. Because these customs are elective for travelers, they are pleasant, sought-after activities, *they are choices*. These willful travelers may inhabit the world, but because of their socioeconomic privilege and power they do not fully inhabit the context of this world. Because they do not fully inhabit the context, they do not recognize that what they are **choosing** for many is not a choice.

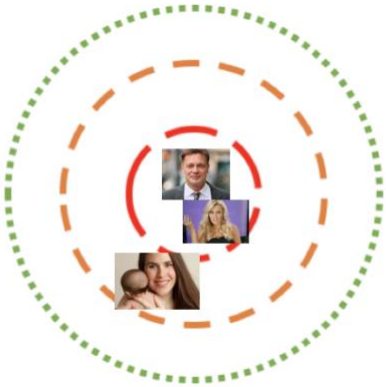
4.1.2 Where does this case fit on this model?

In this model, Mama Natural is within the orange circle. In the red circle are images of Jenny McCarthy and Andrew Wakefield. Because Mama Natural is in the orange circle—the moderating circle—because she does not express extreme anti-vaccination views, instead she shares her own views and links to more extreme information, giving it a tacit endorsement. Jackie Mize's book, *Supernatural Childbirth,* asserts "You don't find 'miscarriage or abortion in the Bible. It was not and is not today the will of G-d for you to lose your baby" (1995, p. 112). Sally Fallon's baby-rearing book "features a thought-provoking chapter dedicated to childhood vaccines" ("Top 10 Natural Parenting Books," 2014). Dr. Sears

> presents the information in a way that empowers and encourages the parent to make his/her informed decision without pushing an agenda. Finally, he offers a helpful alternative schedule for parents who still want to vaccinate, but in a gentler way ("Top 10 Natural Parenting Books," 2014)

These items do not come with warning labels or descriptions that speak to their true content.

Figure 4.6



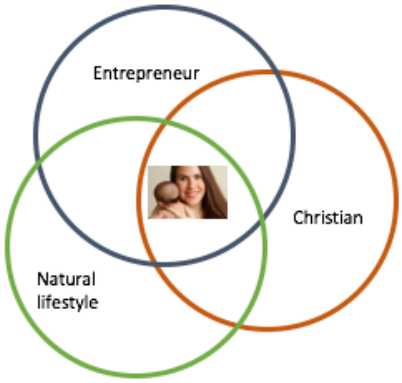
She also makes comments about preserving her children's ability to reenter other worldviews. On the topic of peanut butter, she says "I stay away from peanut butter and don't give it to Griffin often. He has had it a few times as I don't want him to live in a bubble" ("Is Peanut Butter Healthy?," 2013).

Genevieve is also positioned within the orange circle because of how she positions herself when she creates opportunities for her audience to categorize themselves on the spectrum of natural living. In a quiz that lets readers see "where do [they] fall on the parenting crunch-o-meter?" she says "Full disclosure – I got Crunchy Mama Lite ☺" ("QUIZ," 2014). Other options included Traditional/Conventional Mom, Middle of the Road Mama, Earth Mama, and Attached to the Max Mama. She does not present herself as the most extreme. In a related quiz to determine one's crunchiness, she reassured readers who were upset they received "Newbie" rather than more experienced and extreme labels like "Granola Girl" or "Queen of Crunch" ("Just How Crunchy Are You?," 2014) that the quiz had misclassified them. To contrast, Sally

Fallon only identifies one recipe in all of *Nourishing Traditions* (which is over 650 pages) where "we compromise somewhat on our principles" (1999, p. 57).

Of course, individuals are complex and may "travel" through multiple worldviews. While Genevieve is a message manager for those who live a natural lifestyle, she is also a devout Christian, a digital entrepreneur, at times a stay-at-home-mom, an author, and a wife. Her worldview may be more accurately represented by a model like the one below. The model I have created instead considers how an entrepreneurial person of faith experiences the natural lifestyle.

Figure 4.7



4.1.3 Propositions

The following propositions comprise this theory.

1. One cannot penetrate deeper layers of the worldview without modifying behavior to operationalize the values of the worldview.
2. Only information aligning with the principles of the chosen worldview will be allowed to circulate without limits

3. Information and behaviors from the discarded worldview will be limited, meaning its legitimacy and relevance will be tightly confined to scenarios likely extreme and rare
4. Negative mainstream attention may be sought by information leaders and message managers and will always be used by information leaders and message managers to legitimize the perception inhabitants of this worldview are persecuted
5. The persecution perception will be used to attract individuals who identify as outsiders of the mainstream, they will be given the opportunity to become insiders in this new worldview, which will mark their persecutors' worldview as outsiders
6. This worldview is in conflict because it is trying to maintain two identities—the persecuted, helpless outsider and the shrewd, wiser-than-thou insider

4.2 The willful traveler: The many cases of Mama Natural

This next section describes Genevieve's evolution over time and reviews how she has refined her focus, monetized her persona, and concealed parts of her past. After introducing her digital persona and its evolution, I will position it within the theory in section 4.3 which describes her as a message manager and section 4.4 which portrays how she manages messages. Next I will describe the worldview whose messages she manages and the beliefs and values that govern her actions in sections 4.5 and 4.6. Sections 4.7 and 4.8 describe how these values and beliefs are operationalized. Section 4.9 offers an overhead view of this worldview, mapping behaviors to position. I then consider what prevents individuals from entering the worldview in section 4.10, and finally how outsiders perceive this worldview in section 4.11.

4.2.1 Coming into focus

Before Genevieve reached the position of a message manager, she was a willful traveler. Her digital journey to becoming Mama Natural began with her first pregnancy when she joined YouTube and started creating videos "because I was craving community, I wanted to bond with other moms, and I knew I wanted to go natural and I knew that was going to be hard so I knew I needed support" ("BABY FEVER! 👶 🤰 👶 (IRL s2 e7)," 2015). Her blog has grown to cover 7 years of Mama Natural's life, during which she had two children, moved from Chicago, IL to Destin-area, FL, created a birth course and wrote a book. During my first review of the posts I noticed that the site's focus seemed to shift every 12-18 months, Genevieve herself acknowledged this in the sixtieth episode of her IRL show, "My husband Michael and I tend to get restless with our projects after a year or so" ("The End Of The IRL Show?," 2015). Genevieve mentioned several phases, such as pregnancy, postpartum, the MN show and the IRL show.

My own observations were that the site began around her pregnancy with her first child and originally had less of a focus. The earliest videos included cooking demos, a relationship series, and pregnancy updates. There was also a "mama natural show" that was not on the blog but was sometimes referenced in newer videos. The earliest iteration of the site featured "How to be a natural mama" in ten steps (these steps disappeared by 2013) and was less polished and professional in appearance.

Figure 4.8



Figure 4.9

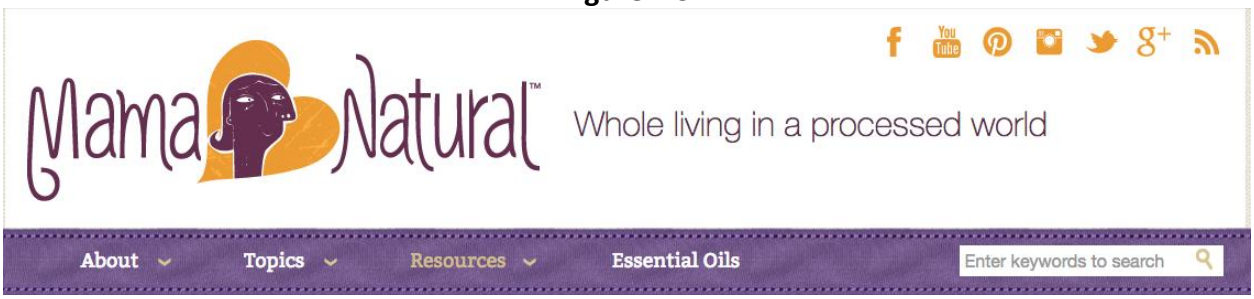


Figure 4.10



Figure 4.11

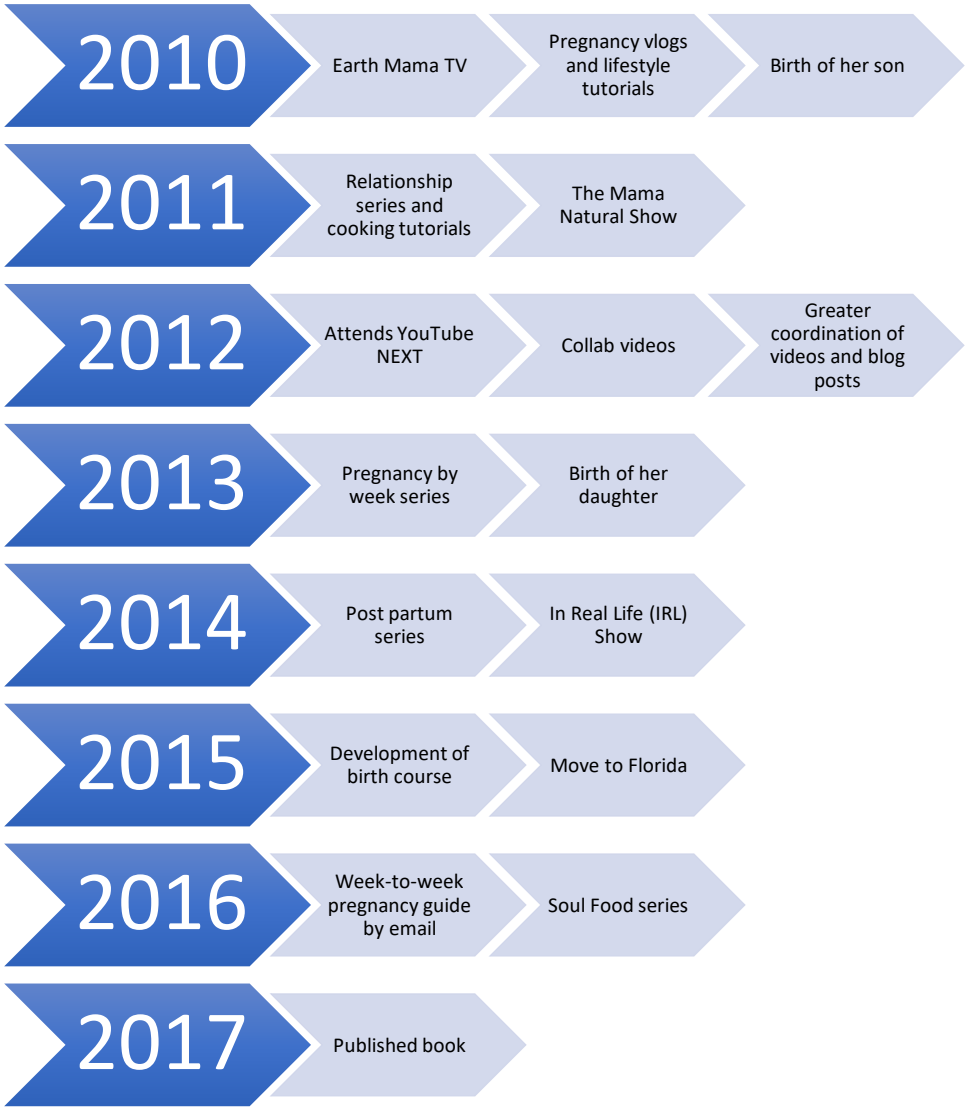


Figure 4.12



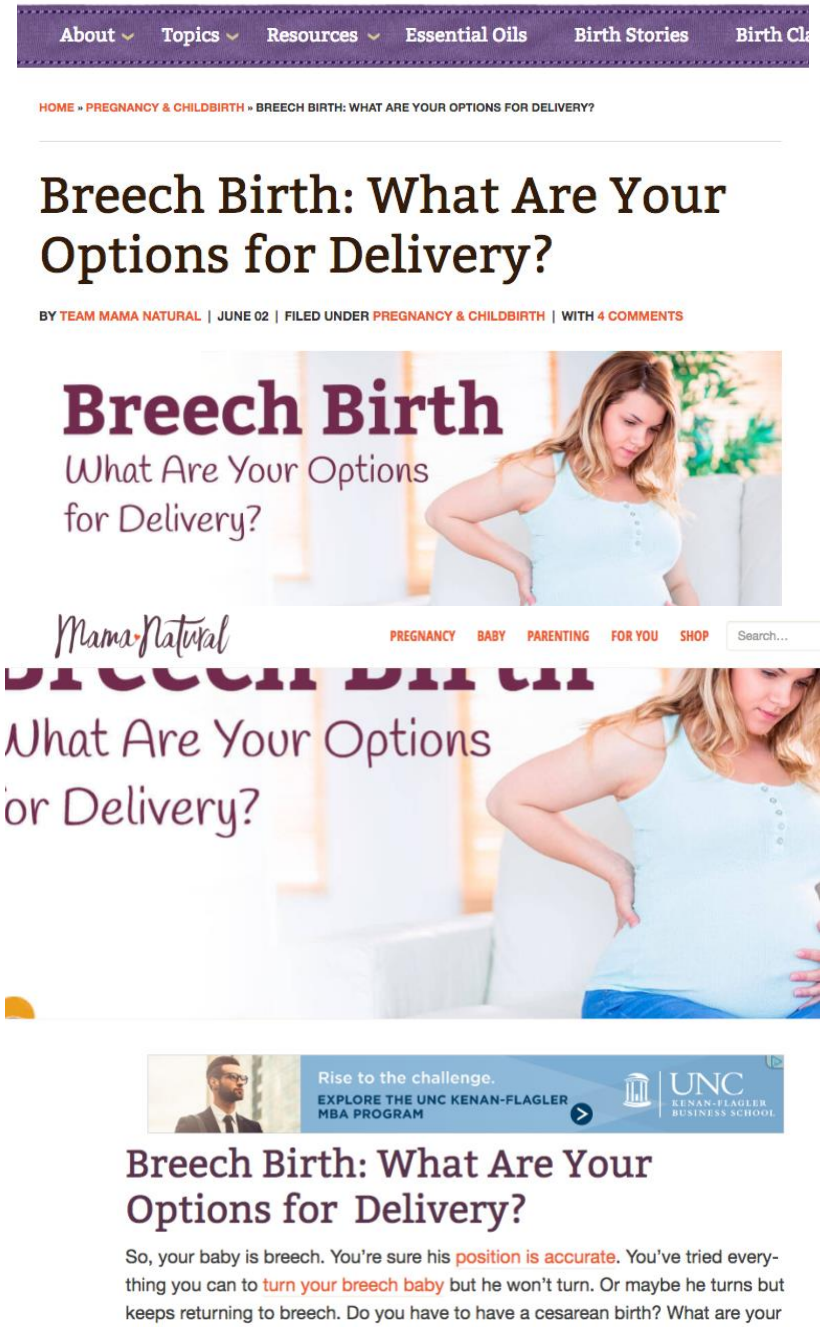
In the beginning of her blog, her actions resembled Morrison's rendering of "personal mommy blogging" which "is marked by direct emotional reciprocity among its participants, creating strong bonds of trust and support" (2011, p. 37). While Genevieve has created a community, the size of her audience and her enthusiastic "participation in remunerative blogging practices such as advertising, sponsorship, paid reviews" (Morrison, 2011, p. 38) mark her as a more polished, professional blogger. The blog's focus shifted repeatedly (Figure 4.13); towards caring for a new baby, and then again toward pregnancy and having a natural pregnancy while she was carrying her second child. During this time she posted weekly vlogs and kept posting on that schedule until her daughter was 12 weeks old (the 4th trimester). After this the blog shifted again to "The IRL show," IRL short for In Real Life, which was more focused on family, faith, food, fun, and talking-head style allowed her to spend more time developing her Mama Natural personal. This phase lasted a long time—over a year, during which she and her family moved. They briefly rebooted this phase, but it was at this time she also began to develop the birth course and pregnancy- and birth-topics took the spotlight. Her desire to share her everyday life once again surfaced with the "Soul Food" video series.

Figure 4.13



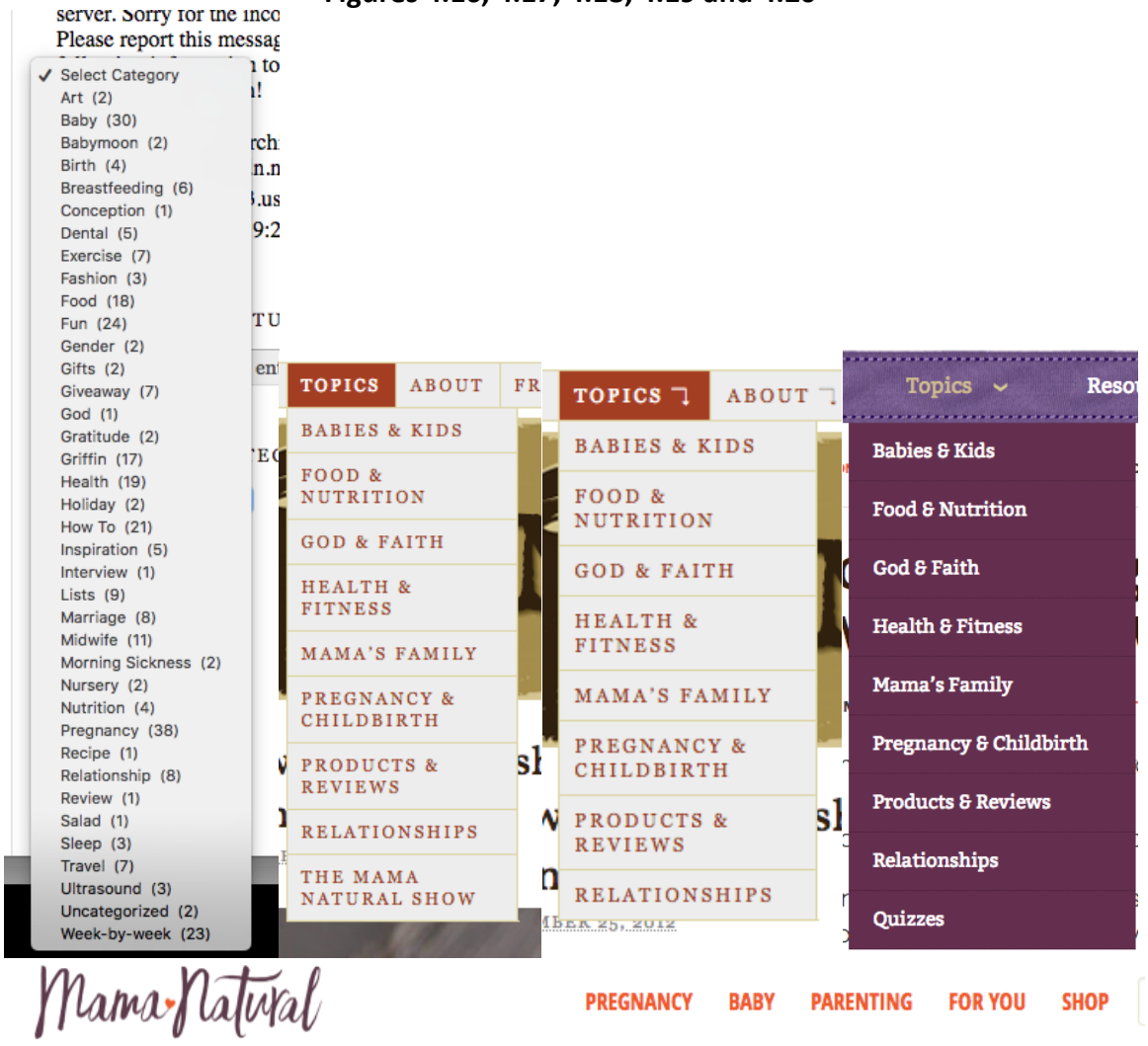
During the early years of Genevieve's blog, she featured guest posts with some regularity. Looking at some posts in Wayback Machine, many of these guest posts remain on the blog but over time, the information about the guest author has been removed. Some guest posts do retain the guest authorship, but not all. Posts have coalesced around one author - Mama Natural. While some guest posts remain with guest authorship still preserved, others such as "Breech Birth: What are your options for delivery?" lost evidence they were authored by someone other than Genevieve - the post was originally authored by Team Mama Natural.

Figures 4.14 and 4.15



There are many possible reasons for this, but it seems to support a larger shift within the blog over time—merging around a core identity and persona. When the blog first began, there were many tags, now there are just four.

Figures 4.16, 4.17, 4.18, 4.19 and 4.20



Removing categories and tags removes specificity and precision tools for readers, transferring control to the domain owner, common user design. This shift requires users to look through more posts or use search and make relevance judgments to find posts previously accessible. The result, intended or not, keeps readers' eyes on the blog and forces deeper engagement—which is more profitable.

In the early years before the blog was her and her husband's full-time jobs, Genevieve featured far more giveaways of varying value (jars of coconut oil to a $2000 treadmill desk). Some of these were likely sponsored, but others may have been an effort to grow her audience

and attract new members. Genevieve also started refining a "schpiel" of sorts where she would instruct viewers about her posting schedule at the end of her videos. Genevieve's transformation into a more professional mommy blogger started with reoccurring features, like annual gift guides, April Fool's videos, and birthdayl updates of her children. Genevieve also edited or modified many posts to keep up with the changes on her site and style. Some of the revisions are unsurprising and based on comments, such as fixing links or adding citations. Others involved the previously mention injection of Amazon Affiliate links. Some posts were also updated with transcriptions of videos. Other posts were rearranged to appear in sequence with newer posts. Genevieve also has plans for the future of MamaNatural.com, in a post entitled "My 2017 resolutions" she discussed her intention to create bump clubs and a series devoted to the first year of a baby's life ("My 2017 Resolutions | Mama Natural," n.d.).

4.2.2 Hidden Mama Natural

Some phases and facets of Mama Natural were later concealed or deemphasized over time. The shift on immunizations was the first that I noticed. The URL link mamanatural.com/vaccines has been captured 81 times in the Wayback Machine with the earliest on Januray 11, 2014 and the last on August 21, 2017 (though that capture says "Page not found") ("What We Are Doing About Vaccines for Children Now," 2016). I have not seen the post publically since mid-April 2017 and have had to study it from a WM-capture since that time. This is a dramatic shift in public persona. The first iteration of Mama Natural featured "be intentional about vaccines" in the side navigation bar as number 9 of 10 steps to being a natural mama (Figure 4.14). She had not vaccinated either of her children and talked about it, if

sparingly—there was even a video series of posts (now removed and not mentioned to on her blog) in addition to the aforementioned blog post.

Figure 4.21



There are other parts of Genevieve's Mama Natural persona that she has separated and attempted to create new channels for. How she incorporates her faith appears to be an area somewhat unfulfilled to her. She mentions spirituality quite often—in her IRL series "Faith" was a segment dedicated to it. A cross appears in her bedroom, and she usually wears a cross that can be observed by viewers. However, there is the sense she would like these to be a larger part of her offering. She announced launching "MamaSuperNatural" while probing for this audience. Some of her readers commented that they were disappointed she would be separating her faith from the rest of her programming ("The End Of The IRL Show?," 2015). While the Instagram and YouTube profiles are still available and public, they were never developed further. The handle Mama Supernatural is too close to be coincidentally linked to the book *Supernatural Childbirth* by Jackie Mize, of which Genevieve is an avowed reader, believer, and supporter.

After the first phase of data collection, I went to MamaNatural's YouTube page and reviewed videos that were still public but not available on her blog. Watching her earliest videos, I found out the Mama Natural was not her first foray. Some of these videos referenced an Earth Mama TV, some pointed to or acknowledged the name change, but others did not. Despite looking on YouTube and online, I could not find Earth Mama TV. For whatever reason, Genevieve has removed or hidden all of that former material except for the videos she transferred to the Mama Natural persona.

There are certain parts of Genevieve's life that receive opaque references but are never revealed in focus. Some are not surprising - it is common for individuals to keep identifying personal details such as their place of employment private online. Despite the amount of research she conducts for her blog and videos, she rarely references her information seeking behaviors or what sources she monitors. She never reveals where she works (other than vague "Corporate America" ("DO YOUR CHORES! 🤷‍♀️ ☹️," 2016)), and only mentions working part-time and then quitting in passing, not discussing specifics or bringing it up at the time. References to her job are only given when necessary, such as when she took her son with her to a meeting she had in California and Mike accompanied her to help - the meeting's purpose is never revealed but she needed to acknowledge being out of town to explain the change of scenery in the video.

Given how much Genevieve shares with her audience and how much of a regular role she gives her faith, it stands out that she has never spoken about her religious practice in great detail. It aligns with a larger pattern of not adding context which might limit her appeal. Even when discussing her spirituality, she typically uses the word "G-d" rather than Jesus.

Withholding context and using more inclusive language is a way to make this message more accessible.

There are also matters hinted at and only disclosed later. The post "My big secret project REVEALED!" disclosed the real reason she and her husband went to New York - meeting with book publishers ("My Big Secret Project REVEALED! | Mama Natural," n.d.). Other life experiences are disclosed only after the danger has passed or the chance to weigh in would be meaningless, such as revealing only after it happened, that her daughter went on formula for a week because Genevieve was on antibiotics for a tick bite ("My Big Secret Project REVEALED! | Mama Natural," n.d., "What is the Best Baby Formula?," 2016). In a video titled "Week 17 - Scary Midwife Visit" it took the midwife a little while to find the heartbeat of the [fetus? Baby?] and she instructed her husband to turn off the camera, rather than film the entire interaction.

Other acts of concealment include her site highlighting mainstream media attention but not linking to this coverage or give much information about it.

Figure 4.22



It is true that she been featured on the Dr. Oz show, but until you read her post or watch the video (hers or Dr. Oz's) you would not know it was for her pumpkin spice latte recipe ("What's Your MAMA WOUND?," 2014). When Genevieve does not include the coverage, she forces the reader to seek it out—extra labor, or see the logos and come to conclusions that she is trustworthy based on this mainstream media attention.

The most glaring act of hiding is the absence of Genevieve's ten vaccine-related blog posts and the accompanying videos. The main post "What we are doing about vaccines now" ("What We Are Doing About Vaccines for Children Now," 2016) was live until March of 2017. Genevieve's book was published several months later. The nine posts about individual vaccines were created in late 2011 and the remaining post was created in 2014. All posts were no longer publically available by May of 2017. While these posts are only accessible via the Wayback Machine, subtler hints of Genevieve's stance on vaccines remain – such as emphasizing immunity-boosting foods and endorsing the Dr. Sears book.

The aspects of herself she has tried to deemphasize or conceal over time are traits that could alienate outsiders unfamiliar with her. This is an effort to make her worldview more palatable to unaffiliated individuals. Concealing the posts about vaccination happened before a pivotal moment in her movement—publishing her book. The book has the potential to dramatically expand her audience and her profile. Section 5.3.4 discusses how Genevieve views herself as starting a movement, which these acts of concealment support.

4.2.3 A Natural Capitalist

As of this writing, Genevieve and her husband, Michael (Mike), appear to make their living primarily from Mama Natural-related ventures. This includes her blog, her YouTube videos, her book, her birth course, selling essential oils, and other sponsorships or brand partnerships. This has not always been the case. When the blog first began, both Genevieve and her husband worked full-time jobs in addition to creating Mama Natural content. Some of these revenue streams have brought them more success than others: via selling and recruiting

others to sell Young Living essential oils, Mike and Genevieve won an all-expenses paid Mediterranean cruise ("SOLO PARENTING IS EXHAUSTING!," 2015).

Over time, the website was optimized for monetization. By the time I began studying the site, there were advertisements from YouTube and clickable banners from Google AdSense. However, based on comments on older posts, the blog was originally free of advertisements ("Week 1 on the Paleo Diet," 2014). Incorporating advertisements came with pitfalls. In a comment, kate May wrote

> "I've been a fan of your videos and learn from the information you provide. However, I'm disgusted by the pro abortion ads now on your page. You lost me and a few others. We are no longer supporting you. ("Fertility Diet," 2010)

Genevieve wrote a lengthy response

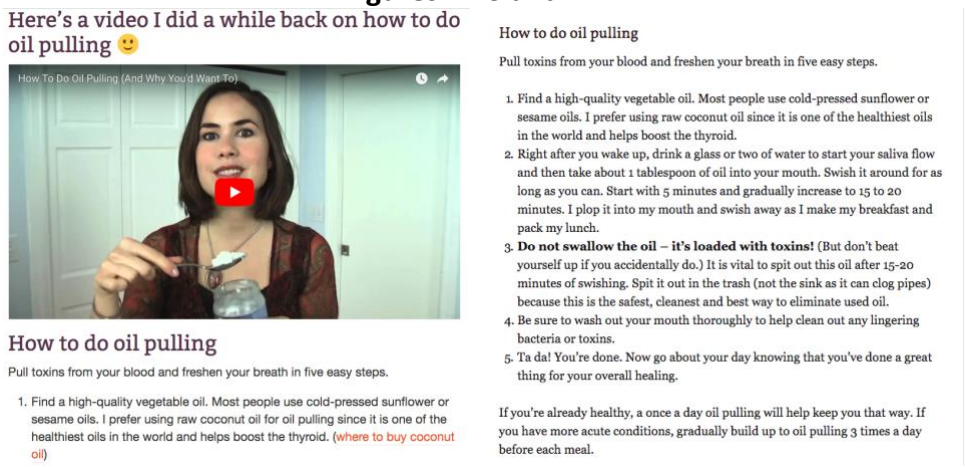
> Hi Kate, can you let me know which ads you're referring to?
> The ads on my site are Google Adsense ads, which are standard for most web sites you'll encounter, including many major news outlets.
> One unique feature of Adsense ads is that they can "target" visitors. So if you visit a website, you may see ads for that site on subsequent websites you visit. I personally notice ads following me around all the time.
> For that reason, the ad experience for each visitor are vastly different.
> I do have the ability to ban certain advertisers, so let me know which ad it was if you can remember ("Fertility Diet," 2010)

Video ads are acknowledged in IRL30 when she says "I'm sure many of you have noticed the YouTube ads that run before our videos and this kind of helps us run and keeps us self-sustaining, but what we're going to try to do s replace those with brand sponsorships" and goes on to discuss the brands she hopes to collaborate with, rather than the arbitrariness of the YouTube ads ("Triumph & Tragedy! - In Real Life #30," 2014). Posts from the blog's inception now have Amazon Affiliate links, which were inserted over time. Below, Genevieve explains her relationship with Amazon

> "P.P.S. This article contains affiliate links, in which I may receive a small commission. This helps to support the work of our blog! Please know that you will never pay extra for these products, and I only recommend things believe in. THANK YOU!" ("The Ultimate, All-Natural Hangover Remedy," 2013)

In the images below, you can see how these posts have changed over time. The image on the left features an affiliate link (in orange), to the right is the text from when the post was first published.

Figures 4.23 and 4.24



Genevieve also started linking to search results rather than direct products, presumably because a direct product link is more vulnerable to obsolescence than search results. Direct product links may break; Amazon may be out of the product; readers may want a different version. Linking to search results provides a greater likelihood of success.

Compared to her willingness to send readers to Amazon for just about anything, Genevieve is extremely selective in brand sponsorships. Most of the brands Genevieve partners/ed with are smaller, boutique outlets (or were at the time) and products she not only used, but which aligned with her principles. These brands included MightyNest, an ecommerce site for green alternatives; Vital Proteins, a brand of gelatin supplements; Simple Mills for gluten and grain-free baking mixes; and Branch Basics, a line of natural cleaning products.

There is an unacknowledged tension in Genevieve's economic stake in Amazon Affiliate links—a partnership almost three quarters of her peers engaged in—Amazon is a monopolistic, capitalist venture frequently blamed for destroying mom-and-pop-style small businesses and brands one would associate with seeking a natural lifestyle. Amazon is the very essence of the toxic technological modernity this worldview perceives as a plague. This is similar to a blog Genevieve references, ScreenFreeParenting.com, which was covered in digital advertisements, and unless one prints it, must be viewed *on a screen*.

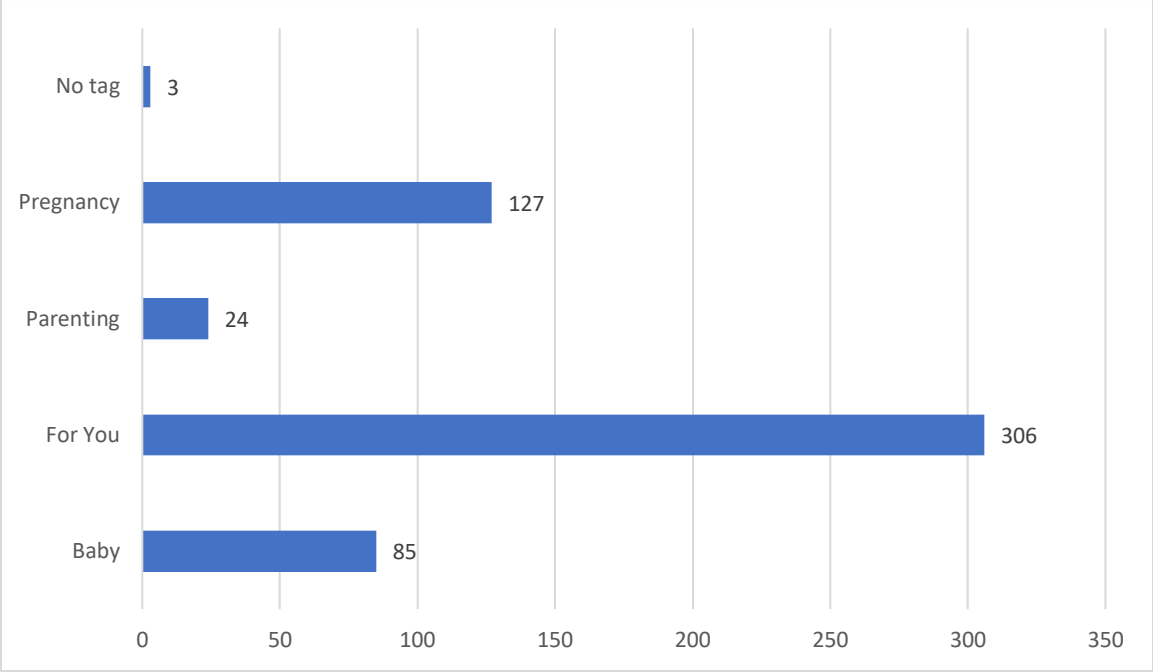
4.2.4 Quantitative findings of blog behavior

Quantitative metadata about each blog post was gathered in a Qualtrics form for future analysis. Descriptive statistics and cross tabulations of that data are below. This data is presented to depict Genevieve's general blogging.

4.2.4.1 Descriptive and summary statistics

Almost all of Genevieve's posts fall into four categories: baby, for you, parenting, and pregnancy. When Genevieve initially started the blog, there were significantly more categories, or tags, for posts. Over time these tags fell away and were reduced to these four categories which align with the blog's focus—natural pregnancy, parenting and lifestyle. Graph 4.1 features a summary of how posts were categorized with "For You" accounting for over half.

GRAPH 4.1 BLOG TAG FREQUENCY



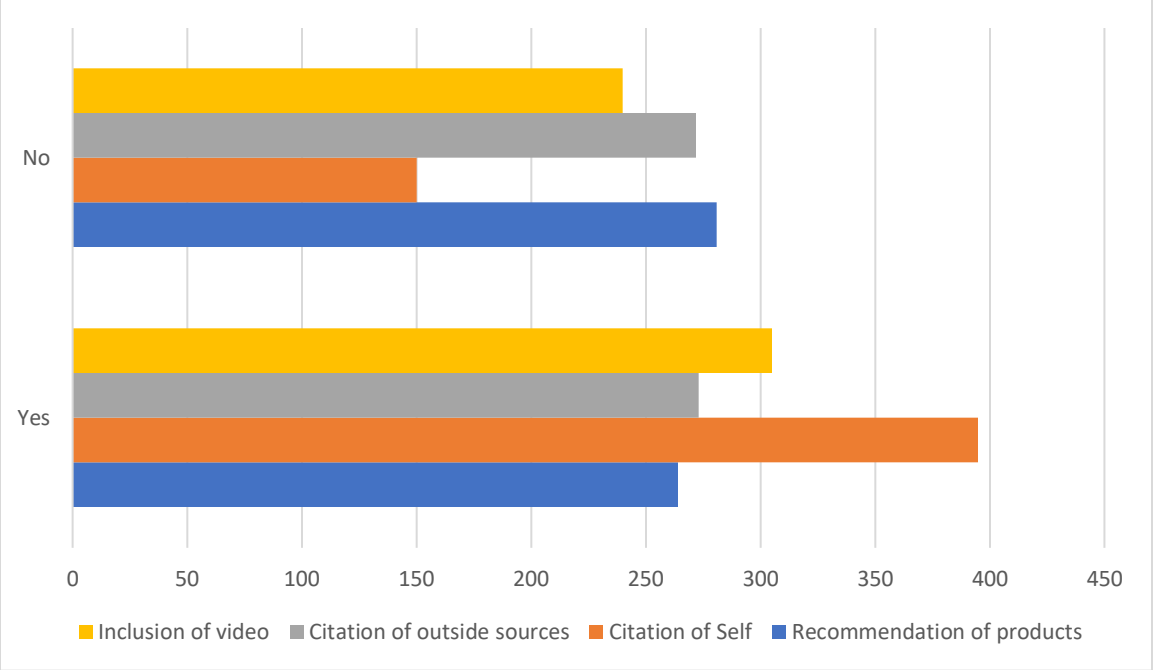
Genevieve's commenting behavior was also of interest. Table 4.1 features Genevieve's comments per post by year. Based on these data, from 2012 to 2015, Genevieve was more engaged in her blog (number of posts peaked in 2014) and more active in the comments section on her blog and there was a serious drop in 2016. This could be due to her compiling and working on her book that year. The small number of posts in 2017 has more to do with the difficulty of dating more recent posts in the Wayback Machine and should not be seen as an accurate count of how many posts Genevieve produced that year.

TABLE 4.1 GENEVIEVE COMMENTS PER POST BY YEAR

Year	Posts	Mean	Median	Minimum	Maximum
2010	19	5.6	3	0	22
2011	46	5.2	4	0	22
2012	31	9.9	9	1	28
2013	84	7.6	4	0	144
2014	147	7.0	5	0	45
2015	91	7.0	5	0	41
2016	91	3.0	2	0	15
2017	20	1.1	0	0	16

Graph 4.2 reflects general frequencies of blogging behavior. Genevieve recommended products for purchase on slightly less than half of posts. She cited herself on nearly three quarters of posts compared to citing outside sources on half of all posts (greater detail on this behavior can be found in the next section) and included videos on over half of all posts.

GRAPH 4.2: GENERAL BLOGGING BEHAVIOR



4.2.4.2 Cross tabulations of blog behavior

Table 4.2 presents a cross tabulation of Genevieve's citation of herself compared to outside sources. There is a small subset of posts where she does not cite herself or outside sources, the smallest proportion is her citation of others without citing herself. For the most part, if she cites outside sources she will cite herself as well, by a ratio of nearly four to one. When she cites herself or doesn't cite anyone, the ratios are more even, closer to two to one. I think this displays how important it is for her to present her own "anecdotal evidence" as

equivalent to outside sources and also possibly functions as a way to maintain readership (external citation links are not monetized, to my knowledge). These numbers should be viewed with the qualifier that in plenty of the posts where she does not cite others, it is absolutely appropriate. In recipes, vlogs about her children, or other personal aspects of everyday life, external citations may not be warranted.

TABLE 4.2: EXTERNAL CITATION AND SELF-CITATION

	Cites others	Doesn't cite others
Cites self	218	177
Doesn't cite self	54	96

Table 4.3 displays a cross tabulation of her external citation behavior compared to product recommendation, table 4.4 presents how this is different when she cites herself. When she cites herself she is more likely to recommend products then when she cites external sources. Self-citation is a strong metric for predicting whether a product will be recommended, as compared to citation of others—if she cited her own posts she recommended a product at a ratio of almost four to one compared to when she cited others, about one and a half to one. This suggests her information has a stronger tilt toward monetization.

TABLE 4.3: EXTERNAL CITATION AND PRODUCT RECOMMENDATION

	Cites others	Doesn't cite others
Recommends products	159	105
Does not recommend products	113	168

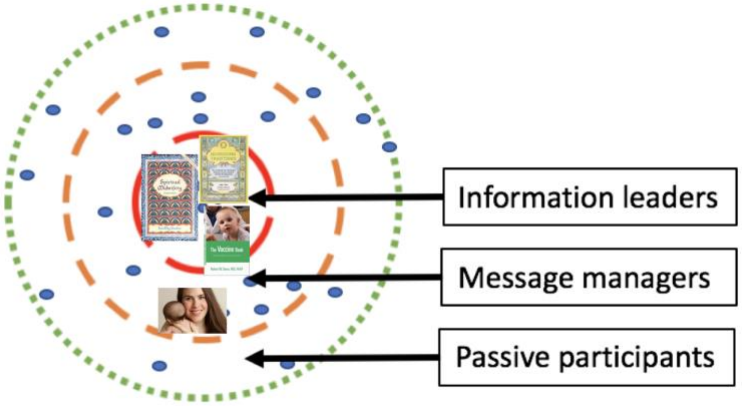
TABLE 4.4: SELF-CITATION AND PRODUCT RECOMMENDATION

	Cites self	Doesn't cite self
Recommends products	205	59
Does not recommend products	105	91

4.3 The message manager: Artifact analysis

In the section "Where does this case fit on this model?" I identified Genevieve as a message manager. Figure 4.25 recalls this with the inclusion of several artifacts in the information leaders' circle. In this section I will present how the artifacts came to be seen as representative of the information leaders and Genevieve's incorporation of their contents and styles caused me to conceive of her as managing their messages rather than delivering her own unique message.

Figure 4.25



I began with the books endorsed by Genevieve that were regularly cited and endorsed by her. This is a key distinction, as Genevieve cited over 1200 unique sources in 554 blog posts. These artifacts, however, were regularly cited, and were clearly foundational to her. The cookbook, *Nourishing Traditions*, earned its own episode of her weekly video update, entitled "this book changed my life." The Dr. Sears' vaccine book was cited as the primary influence on Genevieve's views on vaccines. *Supernatural Childbirth* was highlighted on Genevieve's recommended books page. Language from *The Business of Being Born* was incorporated into

her birth class. All of these artifacts appeared across multiple posts and videos on the website. They are distinct in another way which became apparent while reading them.

These are all items Genevieve is extremely familiar with, to the point she has incorporated them into her material. I evaluated the majority of them after reading all of Genevieve's blog posts at least once. As I studied them, I could see which parts of them had been seeded into Genevieve's site. For example, Genevieve's preference for cooking with pastured butter and consumption of cod liver oil are two key instructions from *Nourishing Traditions*. She does not call back to the book every time she talks about these habits, or Dr. Westin A. Price (whose findings the book draws from), but they have become a part of her everyday life.

Genevieve's gentle, no-judgment approach seems very similar to Dr. Sear's equally gentle, no-pressure, you-decide style when writing to parents about vaccines. She constructs her blog posts much like a chapter in his book, as a neutral provider of information that steps back and allows you to make your own choice. She repeatedly emphasizes that she is "not here to judge." Genevieve also borrows Sear's tendency to offer parents another path and presenting it as equivalent to that being avoided, discussed in greater detail in the section "Offering another way." When Sears discusses avoiding vaccines, he says "Breastfeed for at least one year. Two is better" (2007, p. 231) and "Avoid nurseries for at least two years. This includes group day care as well as church and health club nurseries. Avoid large playgroups with multiple infants" (2007, p. 231). By creating an additional option, Dr. Sear's offers another path that also gives evidence and legitimacy to these "natural" parenting choices.

The book *Supernatural Childbirth* by Jackie Mize is another book that is essential to Genevieve and referenced with regularity. This is the most overtly religious of Genevieve's favorite books and inversely, the one she directly references the least. However, its language and narrative reoccur throughout her blog. Genevieve considers her second childbirth a "supernatural childbirth" and calls it such.

I also read two of the works of Ina May Gaskin, considered the mother of the modern American midwifery movement (the white one anyway). Genevieve actually does not reference her a great deal—however Gaskin is central to the natural childbirth movement in America (Shapiro, 2012). She is featured in *The Business of Being Born*, an additional artifact—a documentary that is foundational to Genevieve's beliefs on childbirth and hospitals. Ina May's work is implicitly referenced in much of Genevieve's work, as it is the antecedent to many elements of the modern movement for natural childbirth.

Though Genevieve manages the messages of all these artifacts, not all are truly information leaders. Dr. Sears' non-judgmental tone and emphasis on helping individuals negotiate their preferences with their doctors is more typical of a message manager, as conceived by this model. Jackie Mize instructs individuals how to manage their faith, "But when a woman walks in the hospital like some kind of a religious weirdo, that's exactly what they will think she is. Then that gives a bad testimony of what a Christian is" (1997, p. 42). Her concern about how her readers will be perceived by outsiders is more characteristic of a message manager than an information leader. In contrast, Sally Fallon calls her book the "cookbook that challenges politically correct nutrition and the diet dictocrats." She does not appear concerned about how others may receive her messages.

4.4 The message manager compared to the information leader

In the previous section, I have positioned Genevieve as managing the messages delivered by leaders within her worldview. I propose these managers are more tolerant of deviation because their role is to attract individuals who are more loosely affiliated with the worldview. I make this assertion based on the observations and evidence discussed in the next four sections: the difference between how Genevieve and one of her artifacts discussed vegetarianism; a desire to appear non-judgmental; allowing difference; and not directly linking vaccines with Autism Spectrum Disorder.

4.4.1 Vegetarians not preferred

As someone who has not eaten meat for over 8 years, and given the common conflation of those who pursue a natural lifestyle with hippies and vegetarians, I was unprepared for how avoiding animal product consumption was portrayed. In *Nourishing Traditions*, Morell asserts

> Animal products are essential for optimum growth and healthy reproduction. If you feel compelled to adopt the life of a saint or a sage and are attracted to vegetarianism, we urge you to wait until your later years to do so, when the period of growth and procreation is accomplished (Fallon, 1999, p. 30)

Fallon prefaces these comments by praising vegetarians as highly spiritual

> The desire to abstain from animal products, found so often in those of a spiritual nature, may reflect a longing to return to a former, more perfect state of consciousness that was ours before our souls took embodiment in physical bodies on the material plane. This longing attracts many to the belief that our bodies and souls can be purified, or that we can achieve spiritual enlightenment, through a meatless diet. Saintly individuals are often drawn to strict vegetarian habits (Fallon, 1999, p. 30)

Ultimately, Fallon suggests those who are drawn to avoid animal product consumption "shirk the earthly duties for which the physical body was created" (1999, p. 30). This surprised me,

because I had assumed a pescetarian, vegetarian, or even vegan lifestyle would be preferred. Genevieve did live a vegan lifestyle for a period, but concludes

> Now, don't get me wrong…I know some people do well on a vegetarian or vegan diet. I think that's great as I want everyone to feel well. But I just know for myself that I could not be a mother…I could not breastfeed…I could not flourish without animal products" ("Why I'm Not Vegetarian ✌ IRL #49 | Mama Natural," n.d.).

In contrast, "in the final years, the Anasazi lacked animal products, particularly vitamins A and D. They died out and so will we if we eliminate animal fats from the diet," (1999, p. 415) according to Fallon.

What is of particular interest is how this choice is praised but not encouraged, compared to other lifestyle choices that are judged with less empathy and compassion. However, it makes sense because those avoiding animal product consumption are more likely to be receptive to Genevieve's teachings and she would not want to alienate potential adherents. Thus, vegetarians and vegans are treated as well-intentioned but misguided. This is a careful choice, because doing so allows them to transition into Genevieve's worldview without experiencing stigma based on their former choices.

In addition to those who avoid animal products in some way, the natural lifestyle movement recognizes potential followers in those seeking to live a green lifestyle. Genevieve often touted the lower environmental impact associated with certain choices—such as cloth diapering—as a supporting reason, but the "naturalness" was always the primary reason. If a choice happened to be more environmentally friendly than a non-natural one, great, but it never appeared to be the primary principle driving decisions. However, it was used as a supporting principle to attract those for whom environmental impact is a primary principle. This is also evidenced in her evolution from Earth Mama to Mama Natural.

This was further evident in a comment exchange between Genevieve and Mindy Larson, where Mindy questioned replacing plastic Tupperware that was still usable with glass versions, Genevieve responded "I see your point. This initial switch from plastic to glass benefits my family more than the earth. But getting some durable glassware can prevent the purchase of plastic containers in the future. I just updated the post to clarify. Thank you!" ("My Earth Day Pledge. Want to Join Me?," 2014). In a different comment exchange, a reader wrote about the biblical grounds for consuming "ethical meat and eggs" but experiencing friction from family and Genevieve responded "It amazes me when Christians aren't tree huggers as this is G-d's beautiful creation" ("What To Do When People Think You're Nuts | Mama Natural," n.d.).

4.4.2 No judgment!

Genevieve offers reassurances she is "not judging you" for avoiding consumption of animal products while recommending the practice in almost every food-related post. Similar veins of "not judging" were visible in other practices, particularly her sense of humor. Genevieve has a post where a woman encounters stigma for breastfeeding in public and she "hulks out" on the accoster who responds, "I can't help it, I was formula fed!" (("Mama Hulks Out on a Breastfeeding Hater!," 2014). One reader commented

> You can't truly believe that my children will grow up to be bullies because I fed them formula with love, can you? So why would you suggest such a thing, even under the guise of humor ("Mama Hulks Out on a Breastfeeding Hater!," 2014).

Genevieve responded

> I can see your perspective for sure but please know that was NOT my intention with this video…..this decision is none of my business, frankly. We all do what's best for our families. Just like co-sleeping (we don't), vaccine decisions, and any other thing we encounter while parenting

At the appearance of targeted criticism, Genevieve immediately tried to offer reassurance that such difference or deviation was allowed and tolerated. In another video entitled "Mama hulks out on a processed food company," the recipient of her wrath responds "I can't help it, my mom fed me TV dinners" ("Mama Hulks Out on a Processed Food Company ☺," 2013)

Genevieve encountered similar pushback in a Sh*T Crunchy Moms Say. When she joked about circumcision saying "we would never mutilate our son" ("Sh*t Crunchy Mamas Say," 2012). One reader wrote "the part about mutilating genitals is borderline offensive, especially to us regretful moms out here who are now more educated. Yes, my son (and husband) were unnecessarily altered, but they were not mutilated." This became part of a longer thread between readers, but Genevieve's response to this comment was

> Hi Susan, thanks for sharing; I can see your perspective; and oh, my intention wasn't to be harmful. In this particular video, I portray a very exaggerated persona with strong and somewhat judgmental opinions that are counter cultural so that we can all laugh at ourselves" ("Sh*t Crunchy Mamas Say," 2012).

In a separate post about circumcision, Genevieve told readers

> Mama Natural is not here to judge. Baby circumcision is a personal and sometimes religious decision. Thing is, it's an irreversible decision. So do your homework, get the facts, and do what's right for you and your baby boy" ("Baby Circumcision Myths & Facts," 2016)

Genevieve tried particularly hard to avoid appearing judgmental when discussing childbirth choices. In a post entitled "The Truth about epidural side effects," she wrote "And they certainly aren't a moral issue. I am not here to judge" ("The Truth About Epidural Side Effects," 2016). A post praising natural childbirth came with this qualifier, "Please know that my intention in this article is not to condemn, criticize, or judge any mother who chooses to have interventions" ("Why Natural Birth Is So Beneficial For Baby & Mama," n.d.).

Not judging is actually part of this worldview. In a post entitled "What to do when people think you're nuts" Genevieve instructs readers "Set the boundary, but don't judge" (Mama Natural, n.d.). By avoiding judging a decision or asserting that they are not judging a decision, members of this worldview avoid performing boundary work commonly associated with those they deride.

4.4.3 Allowing difference

Even she struggles with the demands of conforming to this lifestyle. In IRL57, she reassures viewers, "It is not about perfection…..we set such high standards for ourselves in every area of our lives" ("It Ain't About Perfection! ☆ IRL 57," 2015). In another episode of IRL, she admits, "When it comes to exercise I am so not disciplined and I hate even saying that because I should be" ("BABY FEVER! 👶 🤰 👶 (IRL s2 e7)," 2015). In another post, she suggests activated charcoal to whiten teeth as "just because we're natural mamas doesn't mean we don't care about beauty" ("Activated Charcoal Teeth Whitening - How to Do It," 2014). In the post "What's in Mama's Makeup Bag?" she echoes this, "Just because we're natural mamas, it doesn't mean we can't enjoy a little glamour" ("What's in Mama's Makeup Bag?," 2012). In several comments, she admits to "toxic gel-based" manicure ("Baby Got a Black Eye! - In Real Life #20," 2014).

This extends to acknowledging how difficult aspects of natural living are, "Frankly, cloth diapering is WAY more complicated than I thought" she admitted ("Why We Chose bumGenius Cloth Diapers," 2011). She also confesses that she "just didn't feel comfortable" when she tried baby-led weaning (a practice that starts weaning by giving children large pieces of food and allows them to self-wean) ("Why I'm Waiting To Do Baby Led Weaning (BLW)," 2011).

Struggling to adhere to this lifestyle was most evident in the comments. A commenter asked where Genevieve found sugar-free bacon, she admitted "it does contain sugar but it's like the 4th ingredient and so minuscule that I don't worry about it" ("Week 1 on the Paleo Diet," 2014). On a comment in a different post, a reader asked why a recommended product included certain ingredients, again Genevieve admitted, "I know. Not perfect. BUT, it is such a minuscule amount that I'm okay with it. I know many other natural mamas that take it with wonderful results" ("Pregnancy Supplements," 2013). She even "enjoy[s] the occasional diet 7up" ("What's the Best Diet?," 2016). I use the words admit and confess because these moments feel like admissions of guilt. She is not transparent about these choices until readers ask for an explanation of her actions.

4.4.4 What "causes" Autism Spectrum Disorder

Genevieve mostly avoids one of the most common and well known anti-vaccine assertions, that vaccines cause Autism Spectrum Disorder. She does mention ASD as a risk in several public posts when discussing EMF exposure ("How to reduce your EMF exposure (and why you want to)," 2015), ultrasound ("Baby Ultrasound," 2016), and cooking with copper ("The Ultimate Guide to Safe, Nontoxic Cookware," 2016). She does provide several clues (can I call them dog whistles) to this belief; in the twenty-sixth episode of her YouTube-only series, she says that a study supporting intestinal differences between ASD and non-ASD children "validates what parents have been doing to address" the condition ("WEIRD PREGNANCY CRAVINGS! (MNShow 26) - YouTube," n.d.)

ASD is not the only condition Genevieve connects to relatively common technologies. She does not hesitate to tell her readers "Excessive EMF exposure during pregnancy has been

linked with childhood autism, ADHD, and asthma" ("How to reduce your EMF exposure (and why you want to)," 2015) or that "new studies from China point to ultrasounds carrying risks including Autism, ADHD, genetic damage, jaundice, childhood cancers, and allergies" ("Baby Ultrasound," 2016).

Genevieve previously had ten blog posts directly related to vaccines—one for each of the vaccines in the childhood immunization schedule and one to discuss her choices for her own children. Genevieve absorbs the style and content of Dr. Sears' book and repackages it for her blog, which she acknowledges, "I structured my videos the same way, breaking down each vaccine, the ingredients, and the diseases it treats. Think of them as Cliffs Notes to Dr. Sears' book" (What we are doing about vaccines for children now). As discussed previously, these posts are no longer available, and at least one was taken down shortly before the launch of her new book even though she does not discuss the childhood vaccination series in her book. Thus, if one went to MamaNatural.com and searched "vaccines," there would be nothing to suggest overtly that she advocated for vaccine avoidance or delay. In these hidden posts, she exhibits many of the common behaviors of vaccine-avoidant parents. Genevieve describes Dr. Sears as "he then challenges the reader to make their own decision" (What we are doing about vaccines for our children now). This language reinforces that evaluating and self-determining about vaccines is harder than following the AAP schedule, setting up a dichotomy between passive acceptance and active challenging and questioning.

The VAERS reports appear to be a motivator - "the more vaccine injury stories I hear, the less I want to vaccinate our kids at all" (What we are doing about vaccines for children now). In a comment exchange on this post, Genevieve encourages a reader to "Dig around on

The National Vaccine Injury Compensation Program Website. They've awarded over 2 billion dollars to victims of catastrophic vaccine injuries" and includes weblinks. When asked directly by a commenter, "I heard vaccine can cause autism? Is it right? What do you think?" Genevieve responds "I would take a look at my MMR vaccine video re: autism" rather than directly addressing the question ("Polio Vaccine (IPV) – Childhood Vaccine Series - Mama Natural," 2015).

In the absence of these posts, Genevieve provides subtle cues to her audience that indicate her views. She is an avowed devotee of the book *Nourishing Traditions* and the Weston A. Price Foundation—both of which feature anti-vaccine language. She also still includes Dr. Sears' book on her list of recommended parenting books. One could assert that if she does not directly say these claims, just links to people who do, she maintains plausible deniability for their content. I would instead assert that the act of making her former posts hidden is an act of deception to "soften" her message and then her endorsement of problematic materials legitimizes and sanitizes them.

4.5 A worldview in focus: Natural as Epistemology to explain information use and worldview

The worldview explicated by the theoretical model is one where scientific evidence plays an inconsistent role, along with the meaning of "natural." Science is sometimes demonized but is also used with regularity. It is similar to the disparagement of media as "fake news" and justifying it with a news article to prove it. Because science (very broadly—scientists, scientific findings, the scientific community, the scientific process) is not used or treated in a consistent way (sometimes the subject of criticism and sometimes the agent of proof), I saw it as a secondary character or actor in this world. It was not consistently trusted or mistrusted,

accepted or dismissed, shared or avoided, et cetera. This became especially apparent when I read the artifacts central to Genevieve's Mama Natural persona. For example, in *Nourishing Traditions*, the author expressed skepticism "When research showed that astronomical quantities of artificial safrole caused cancer in rats" (Fallon, 1999, p. 589) and suggested "the FDA was more concerned about eliminating competition for the drug and soft drink industries than in protecting the populace from a carcinogen" (Fallon, 1999, p. 589). Alternatively, the findings of a study with a similar methodology which fed cereal to 18 rats in three groups are accepted and shared (Fallon, 1999, p. 469). It spoke even louder when I evaluated Mama Natural's scholarly information use—she repeatedly cited from journals like JAMA, Pediatrics, NEJM, and the American Journal of Obstetrics and Gynecology and most often linked to PubMed—a government-funded information retrieval and discovery tool. This was stunning considering one of her video is titled "Mama Natural hulks out on evil food scientist," and her belief that the CDC "wants to paint our children with an extremely broad brush when it comes to vaccinations" ("What We Are Doing About Vaccines for Children Now," 2016). Despite distrust of these institutions, their policies, even the generic individuals who conduct this work, she uses their tools and selectively presents their findings.

Over time I did begin to see patterns in when scientific findings were accepted and shared versus when they were criticized and considered suspicious. A code that occurred across artifacts, blog posts, and videos was aligning which became a construct for absorbing information that confirmed or aligned with preexisting beliefs. For example, take the belief that it is better to eat butter than margarine. A study finding evidence of this would be accepted and used as proof in *Nourishing Traditions*, while a study disputing this belief would be criticized, its

funders examined, and its limitations used to raise significant doubt over its trustworthiness. In *Supernatural Childbirth,* Jackie Mize allowed for this as well, "there are usually a few things in every good source of information that you have to toss out because it doesn't agree with what you are believing for" (p. 31). Aligning also extended to modifying one's behavior to "align" with the principles of this lifestyle.

This pattern of behavior out of context is not particularly concerning, scientists also read papers and consider the findings and limitations in line with their pre-existing knowledge. They are also known to resist evidence, findings, and theories that contradict their own epistemological identities and oppose those whose work threatens paradigmatic shift. For example, take the Semmelweis effect which is discussed in *The Business of Being Born* and by Ina May Gaskin. This was a distressing historical case of a physician realizing that physicians' lack of hygiene caused women to die in childbirth—but the doctor was ignored and ostracized, women continued to die, and it took decades for his life-saving changes to be enacted (Gaskin, 2003). While this behavior is similar, it is not the same. Semmelweis was alone and his findings were ahead of the theory that explained them, his peers threatened or offended by his ideas. The findings and theories this worldview rejects have more evidence and scientific consensus. One could also consider it a simple case of confirmation bias, where individuals accept information that reinforces what they already believe. I think both are at work here, but they do not explain everything I observed—particularly the tolerance or openness to behaviors one did not personally endorse or exhibit. When Genevieve had her placenta encapsulated but ultimately did not feel she benefited from the experience, she still treated the concept favorably and encouraged women to consider it ("My Experience Eating Placenta | Mama

Natural," n.d.). Rather than crudely using information to confirm only her own experience, there was an allowance for range and difference of opinion, interpretation, and experience.

In this worldview, natural functions much like an epistemology. In the way a researcher may be a positivist or a constructivist, Genevieve is a "naturalist." Surprisingly, Mama Natural avoids directly defining what natural means to her. Avoiding definition is a canny strategy to allow the label to be unlimited. Limiting was another code that emerged across all evidence streams. Limiting meant confining the relevance and legitimacy of information. For example, when Genevieve asserts that vaccines have saved countless lives, and then adds "other factors have "saved" lives in regards to infectious disease like better sanitation, clean water, and good nutrition" ("What We Are Doing About Vaccines for Children Now," 2016) she is limiting the information's power.

When I debriefed with a chiropractor who avoids vaccines and pursues a natural lifestyle, he defined natural as "a state of being of an organism that s well-adapted to its environment, a way to describe a relationship between an organism and its environment, a well-adapted relationship" also "something left alone and unaltered by man." Within that definition all information that supports and aligns with this view is inherently considered more trustworthy, information disputing this view undergoes significant scrutiny and suspicion. It is similar to a positivist epistemology except it is not the knowledge that is discovered, it is a lifestyle and set of choices that are championed. Within this worldview, there is knowledge, but it is "natural" and information is not so much constructed, discovered or found, but unearthed. There is a "natural" way of doing things, a way that "nature" intended, and all information is

interpreted through this lens, nearly all choices made to align with it.

4.6 Beliefs, values, and thematic landscape of this worldview

I will now discuss the beliefs, values, and themes I constructed from my observations of this worldview. The first belief, offering another way, is a strongly held conviction that there is an alternative to most mainstream choices. This goes along with the second belief, that we can be redeemed through our choices and return to or reach a destined or ordained way of being. The value, exoticizing ancientness, is determinant in how desirable other ways are. The second value discussed is preferring anecdotal evidence over traditional conceptions of authoritative knowledge. The themes of limiting, magic and miracles, and oil-slicked icebergs illustrate the principle of "another way," valued as "preferably an older way" often evidenced by personal testimony, in action.

4.6.1 Offering another way

A code that emerged across evidence streams was "offering another way" and "creating an alternative path." Much of the natural lifestyle movement rhetoric consists of revealing another choice and characterizing it as equivalent if not superior to the existing and normative choice. This other choice is the "natural" one, it may be one that was abandoned or fell out of use due to a new technology, it may be more laborious or more expensive, it may be all of these things. Sometimes practices, behaviors, and items are presented as equivalent alternatives to the mainstream norms. This was most evident in breastfeeding.

Occasionally, Genevieve would "offer another way" when mainstream medicine would not. In the United States, it is very difficult to deliver a breech (when a baby is not position headfirst) birth vaginally. However, Genevieve informs her readers, "There are times when a

breech baby may be delivered vaginally" ("Breech Birth," 2015). This is true, there are providers who are comfortable allowing women whose babies are breech to attempt a vaginal birth, often under a very strict protocol, but the practice is uncommon. Genevieve hints at this when she writes, "What if my practitioner can't or won't allow a planned vaginal birth?" but goes on to tell readers they "can either accept the situation. Grieve. And give birth via gentle cesarean. Or, if you live in Tennessee, or are willing to travel, you may want to consider going to Ina May Gaskin's The Farm Midwifery Center" ("Breech Birth," 2015).

On the topic of vaccines, Genevieve wrote, "If you're like me, you're weary about exposing your newborn to the host of immunizations for various diseases; but take heart, if you breastfeed your child, he/she will have a stronger immune system and be more resilient" ("10 Surprising Benefits of Breastfeeding," 2017). Even if you do vaccinate "it may give you more peace knowing that breastfeeding increases the positive benefits of immunization." Instead of vaccinating her son, Genevieve 'offers another way' by providing

> natural and gentle ways to boost his immunity…..one of the best ways to do so is through diet…..I also boost his immune system with probiotics and use elderberry syrup and mushroom complexes to ward off colds, flus and other sicknesses ("What We Are Doing About Vaccines for Children Now," 2016)

and also she's "started looking into homeopathy as an alternative or a complimentary course of action in preventing childhood diseases" (What we are doing about vaccines for our children now).

Offering another way is also a method of modifying mainstream practices so they better align with the principles and priorities of the natural lifestyle. This is evident in the recommended changes to make a ceasarean "gentle," such as "doctors and nurses are asked to refrain from 'shop talk'" ("Gentle Cesarean," 2017).

4.6.2 Redemption for the sinner

On Genevieve's "About me" page, and in the "Before" story she references in many posts, she portrays herself as 60 pounds overweight and even calls herself "obese" (this last point is always with an exclamatory punctuation point), says she drank six Diet Coca-Colas a day, and terms this "the typical American diet" ("About Mama Natural," 2011, "My 'Before' Pictures! ❂ IRL #48," 2015). But then, Genevieve found *Nourishing Traditions*. She even says "by G-d's amazing grace, and the help of many others, gave it up and life has never been better" ("Sugar Addiction" 2012). To me, this story sounds very familiar to "I was a sinner and then I was redeemed." Instead, it is "I was a junk food eater, and now I am a healthy eater," but the underlying message is the same. This is especially evident when Genevieve emphasizes she still views herself as a junk food "addict" or sinner, "With G-d's amazing power and grace, plus the help of friends, I haven't binged on sugar and junk food ever since" however "To this day, I am still a junk food junkie, and I still need to abstain from sugar. I know that if I try to have just one cookie or piece of cake, it would probably lead to overeating…and the inevitable remorse and shame" (Special Day Today + Floriday Vacation).

4.6.3 Exoticizing ancientness

Age is used as a proxy for evidence. For example, "Swaddling a baby is a technique practiced throughout the world for thousands of years (so it must be good, right?)" ("Swaddle a Baby the Right Way (with Pictures) | Mama Natural," n.d.). Behaviors are promoted because of nostalgia for their ancientness, such as when "a birth ball recreates ancestral movement" ("Can a Birth Ball Really Help You Have a Better Labor & Delivery?," 2016). This extends to food as

well, “I know butter’s been demonized, but it’s been nourishing humans for thousands of years, and I ate plenty of it and it didn’t cause me any problems” (“Fertility Diet,” 2010).

She mentions Weston A. Price’s research with long-lived cultures, asserting “they knew **instinctively**” that children should be spaced three years apart (“Why I Waited 3 Years Between Pregnancies,” 2013)[emphasis added]. Colostrum “has been prized for its health benefits by many cultures - primarily in India - for thousands of years” (“Colostrum,” 2016). If you are suffering from a toothache, “Forget Novocain; ancient dentists used cloves” (Howland, 2017, p. 352).

Along with ancestral knowledge, an undercurrent of the natural lifestyle is respecting the instincts and intuition of the individual. This includes respecting the autonomy of the individual - even an infant’s autonomy. When weaning her first child, Genevieve wrote, “I knew six months was around the time to start him on solid foods, but I wanted him to tell me when he was ready” (“Starting Solids,” 2011). She also wanted her son to “nurse as long as he wanted to” and insisted “the baby will lead the way” when describing motivations and process for extended breastfeeding (“Extended Breastfeeding the Older Baby or Toddler,” 2012). Baby-led weaning is endorsed because “it allows your baby to control his/her solid food intake by self-feeding from the very beginning of the weaning process” (“Why I’m Waiting To Do Baby Led Weaning (BLW),” 2011). There is an implication that instinctive knowledge can be accessed if one seeks or waits for it, almost an encouragement for humans to look for and prize primal responses.

This also extends to endorsing products and foods. “Moroccans have been using Argan oil for more than 3500 years” (“Which is the Best Carrier Oil?,” 2016) according to Genevieve. In

"Natural Morning sickness remedy" she tells her readers "Native Americans used almonds before drinking to prevent hangovers" but does not specify which tribe(s). Essential oils are recommended as "the oldest form of a natural health aid, dating back to the ancient Egyptians" ("How to Use Essential Oils," n.d.). Oil pulling is "an ancient Ayurvedic practice" ("10 Doable Resolutions for a Healthier New Year | Mama Natural," n.d.). Mama Natural tells readers "In China, mothers have engaged in placenta consumption for thousands of years" ("Eating the Placenta," 2014) and "we're some of the only animals that don't consume our placentas after birth" ("Week 1 on the Paleo Diet," 2014). Saunas are "powerful means of detoxification, from Native American sweat lodges to Finnish wood-fired saunas" ("SaunaSpace Sauna Review - Near Infrared FTW!," 2016). Moxibustion acupuncture "has been around for over 3500 years!" ("How to Turn a Breech Baby," n.d.). The neti pot is an "ancient nasal irrigator that's been around for 1000s of years" ("How to Use a Neti Pot (And Why You'd Want To)," 2010). None of these cultural references are explored or contextualized.

This behavior was extremely visible in *Nourishing Traditions*, a book beloved to Genevieve. Its author, Sally Fallon Morell tells readers "Primitive tribes in both Africa and the New World consumed algae in the form of 'pond scum,' which they dried in the sun" (1999, p. 613). She instructs "The ancient Chinese valued the pear for treatment of the stomach and lungs" (1999, p. 577). Fallon mentions a study about eggs that "proves the folk wisdom of the Orient" (1999, p. 443). Additionally "Native Americans understood instinctively that pecans had to be treated in some way before they were consumed" (Fallon, 1999, p. 514).

4.6.4 Story first, facts later: "Anecdotal evidence"

Ina May Gaskin begins both *Spiritual Midwifery* and her guide to childbirth with over 100 pages of women's stories (Gaskin, 2002, 2003). These stories read like testimonials [insert what that means]. Even those that feature pain—such as a miscarriage or stillbirth—result in a beautiful, happy baby at the end. They all have happy-ever-afters. The vast majority feature natural childbirths delivered at The Farm (the community/commune founded by Gaskin's husband, herself, and his followers). Only after these stories, nearly halfway into each book, does Gaskin begin her instruction and teaching about childbirth.

Relaying information this way is not unique to Gaskin. Mama Natural also practices this. Genevieve tells her readers, "Anecdotal evidence of amber's efficacy as a teething necklace abound in both directions, but the scientific research is sparse" ("The Natural Mama's Guide to Amber Teething Necklaces," 2017). She assures them "We've waded through the scientific and anecdotal evidence for you so you can make the best choice for your family" (Natural Mama's guide to amber teething necklaces). In this worldview, this is a valid tool to make decisions, "Anecdotal evidence shows that stumps that had dried herbs used on them fell off around day 3 as opposed to the standard 1-2 weeks" ("Umbilical Cord in Newborns: How to Care for It Naturally (without using alcohol)," n.d.). She also uses this tactic to limit the persuasive power of her own experience, "My experiment with eating placenta was by no means scientific, and there may have been other factors that drove my experience" ("My Experience Eating Placenta | Mama Natural," n.d.). But still, "anecdotal evidence" is the preferred form. In privileging "anecdotal evidence," inhabitants of this worldview are valuing the experiences of their peers, as articulated by Genevieve's thoughts on red raspberry leaf tea, "Frankly, I put more stock

into the experience of moms throughout the centuries (and in our community), as well as my own positive experience with red raspberry leaf tea" ("The Truth About Red Raspberry Leaf Tea During Pregnancy," 2017).

This behavior may be learned from or reinforced by sources of authoritative knowledge within the worldview. Sally Fallon Morell cautions against soy formula usage by asserting "Anecdotal reports of other adverse effects include extreme emotional behavior, learning difficulties, immune system problems, irritable bowel syndrome and depression" (p. 603).

4.6.5 Themes

Three major themes emerged—limiting, magical miracles, and tainted icebergs. These were coded inductively and using gerunds (magicking, miracling, tainting, iceberging).

These words were typically applied to food and medical interventions, but extended to products like mattress and electromagnetic frequencies (EMFs). Magicking or tainting meant imbuing an item with extraordinary properties—if good, magic, if negative, tainted. Iceberging was the tendency to then link a tainted food to a laundry list of very serious health conditions (often conditions with unclear etiologies, such as Autism Spectrum Disorder). Miracling is similar except the skew is switched

4.6.5.1 Limiting

4.6.5.1.1 Limiting medicine

Genevieve avoids saying "never" about medications or drugs considered not natural. Rather, she limits them, such as in a post titled "How to increase breast milk supply naturally (video)" she instructs, "As a last resort you can talk to your doctor about taking prescription medication that can boost supply" ("How to Increase Milk Supply Naturally," 2014). She

presents drugs as a last resort and will try natural remedies first, “I’m so grateful we didn’t use any of the harsher medications and instead found natural remedies for baby reflux. If going through it can help just one other mama not resort to harsh pharmaceuticals, then it was worth it!” (“Natural Remedies for Baby Reflux,” 2013). Sometimes her recommendations directly contradict those of the remedy - she endorses the Moringa probiotic while nursing, though the supplier does not recommend it for pregnant and nursing women (“Week 9 Postpartum,” 2014). For labor she tells readers “Bring. On. The. Drugs. (Natural, of course)” (“10 Natural Birth Essentials for Labor & Delivery,” 2012). For UTIs she says “There are plenty of potent natural antibiotcs” (“Natural Remedies for UTI,” 2016). She also discourages the use of synthetic birth control, such as IUDs and synthetic hormone replacement pills (is that the term?) (“Natural Birth Control - Options & Suggestions,” 2016). Genevieve asserts copper IUDs can cause copper toxicity, and that “although western medicine denies such a condition exists, I know too many people who experienced this to agree.” (“Natural Birth Control - Options & Suggestions,” 2016).

4.6.5.1.2 Limiting HCP’s power:

Genevieve also imposes limits, like her peers and the artifacts she endorses, on the expertise of healthcare providers. Genevieve encourages women to take birth courses outside of hospitals because “while some hospital-run childbirth education courses can be helpful, they usually teach women how to be good patients” (“Which Birthing Classes Are Best For You?,” 2016).

She instructs readers that their values may not align with the HCP system, “We have to remember that our healthcare system is trying to take care of the general population” (“Natural Baby,” 2016). In the third session of her online birth course, she and her co-instructor assert,

"Don't rely on your pediatrician, pediatricians do not have training in breastfeeding." Doctors are often treated as a last resort, in the post "What is your green poop telling you?" she gives numerous recommendations and concludes with "If your green poop persists, despite trying all of the digestive support, it's time to see the doctor." A reader commented about a doctor wanting to induce her on her due date because the doctor was going out of town, Team Mama Natural responded, "Your doctor going out of town is a very poor reason to be induced, he or she should know better. If I were you I would get a new doctor right away" ("The Truth About Red Raspberry Leaf Tea During Pregnancy," 2017). When a reader asks if it safe to use charcoal while pregnant, Genevieve responds,

> "I would but of course, check with your doctor or midwife. You don't swallow so it's similar to toothpaste. If it's OK to use fluoride toothpaste while pregnant, which is a known neurotoxin and poison, then I wouldn't see why this wouldn't be okay" ("Activated Charcoal Teeth Whitening - How to Do It," 2014)

In his book about vaccines, Dr. Sears limits doctors' vaccination recommendations by suggesting they have been overly influenced by extreme cases

> All it takes is one very bad case of a disease to convince a doctor that anyone who opposes vaccines is crazy. Fortunately for me (and even more so for my patients!), I almost never see kids suffer complications from vaccine-preventable infectious diseases. Death and disability from a disease is a hard thing for any doctor to stomach, so it's not wonder that most are pro-vaccine (Sears, 2007, p. 245)

4.6.5.2 Everyday magic and miracles

The code "magicking" referred to imbuing an item with almost magical properties, almost as if it were a panacea that could fix or improve anything. This code occurred across all evidence streams. Blog posts like "101 Uses for Apple Cider Vinegar" or "Hemp Seeds Benefits and How to Use 'em" exemplified this code, taking an item easily obtainable and expanding its applications while promoting its almost miraculous properties. Apple cider vinegar may truly

have 101 uses, probably even more, but so do other everyday items like eggs, butter, sugar, or tinfoil.

Items and behaviors magicked were then imbued with miraculous properties. In the post "How to do Oil Pulling (And Why you'd want to)" she asserts "According to long-time devotees, oil pulling has the power to alleviate migraine headaches, asthma, diabetes, bronchitis, diseased teeth, chronic blood disorders such as leukemia, arthritis, eczema, heart and kidney disease," among others ("How To Do Oil Pulling (And Why You'd Want To)," 2010). Genevieve instructs her readers that "breastfeeding protects against developing chronic diseases such as: celiac disease, inflammatory bowel disease, asthma, and childhood cancers" ("10 Surprising Benefits of Breastfeeding," 2017). Camu camu powder can "help with shingles, asthma, atherosclerosis, chronic fatigue syndrome, depression, gum disease, headaches, osteoarthritis, and herpes" ("Crazy Benefits of Camu Camu Powder," 2016). In *Nourishing Traditions,* Sally Fallon magicks algae as "Rich in chlorophyll, protein, beta carotene, omega-3 fatty acids, minerals, enzymes and nucleic acids" (1999, p. 613) and then connects it to miracles, "dried microalgae have been used successfully to treat everything from leprosy to AIDS" (1999, p. 613). Flax oil can treat "heart disease, cancer, diabetes, PMS, arthritis, and inflammatory and fibroid conditions" (1999, p. 458) according to Fallon.

4.6.5.3 Oil-slicked icebergs

Tainting is a code that emerged across evidence streams. It was across the axis from magicking. Tainting occurred when an item or process was linked or implied to cause a negative (often horribly so) outcome. It also became a way to move the goalposts on what natural living means. At first it was just organic foods, then the organic foods must be non-GMO. Later

Genevieve also introduce concerns about EMFs, at first buying special shields for her electronics ("How to reduce your EMF exposure (and why you want to)," 2015) and evaluating everyday objects like hair dryers and toothbrushes but even going so far as to rent EMF meters to check the levels at the lot they were purchasing for a house and at her son's school ("Are EMFs Real? | Mama Natural," n.d.).

Tainting items and behaviors often led to the need to detox or calls to detox like "Did you know that we are exposed to more toxins in one day than our grandparents were exposed to in a lifetime? That's why it's so important for us to practice simple detox measures" ("SaunaSpace Sauna Review - Near Infrared FTW!," 2016). This was evident in the post "What's the best diet? 5 immutable truths of nutrition" when she discussed the need to "undo the damage of the industrial food diet." Linking a specific diet to unspecified harm was a common behavior. Genevieve's posts and videos imply omnipresent food items are tainted, such as when she writes "Many are allergic to our highly tampered wheat crop" ("Non GMO foods: How to Avoid GMOs (for real)," n.d.). In the second class of her birth course she talks about the need to "offset the modern world and what it does to our bodies." She instructs her readers "If our bodies never eliminated toxins without the help of a heavy handed cleanse, they'd become overburdened pretty quickly" ("Kombucha During Pregnancy: What You Need to Know | Mama Natural," n.d.). She prefaces a post about supplements with "I don't think we can get every nutrient we need from our diets. Unfortunately, our depleted soils produce foods that aren't as nutritionally dense as they could be" ("Pregnancy Supplements," 2013). She even suggests this is the result of our parents' choices, "So if you or your mom (or even your grandmother) have ever taken antibiotics, eaten store bought bread or pasta everyday, or eaten fermented foods

fewer than once a day, your baby may need probiotics" ("Probiotics for Infants," 2016). Based on those criteria, virtually everyone needs to give their infant probiotics.

After an item or behavior was tainted, it would often become an "iceberg" with the code iceberging. An example from the post "What everyone should know about toothpaste" demonstrates this code in action, "What we often don't hear is that fluoride can discolor teeth, suppress the immune system, contribute to certain cancers, cause gastrointestinal issues like vomiting and diarrhea, and lead to birth defects." Copper "can cause many issues, like Tourette's, schizophrenia, bipolar disorder, autism, and Aspergers" warns Genevieve ("The Ultimate Guide to Safe, Nontoxic Cookware," 2016). This behavior was also observed in artifacts, particularly *Nourishing Traditions.* Sally Fallon linked fluoride with "bone loss, bone deformities, cancer and a host of other illnesses" (1999, p. 53); avoidance of cholesterol and saturated fats with "eating disorders, depression, fatigue, infertility" (p. 433); and soy formula with "extreme emotional behavior, learning difficulties, immune system problems, irritable bowel syndrome and depression" (p. 603), are several extreme examples.

Tainting leads to thorough inspection and providing alternatives for numerous everyday items. These are offered with a hint of self-deprecation but still encouraged. In the post "natural Easter Basket Ideas" Genevieve says "Imagine the look on your neighbor's face when you tell them you only use organic veggie sidewalk chalk. Ha! But it makes perfect sense, especially when baby is using them" ("Natural Easter Basket Ideas," 2016). Once items have been thoroughly tainted, alternatives are needed. Tainting an item lays the foundation for needing an alternative, the skill at which this worldview excels.

4.7 Offering another way in action

This worldview's leaders believe they can offer another, better way. The next sections examine how offering another way manifests. The first reviews challenging mainstream descriptions, classifications, and ultimately, meanings. The second considers the differing inclusion criteria for what constitutes a valid substitute. The third examines a popular alternate way in this worldview, complementary and alternative medicine. The fourth section reviews specific instances in Genevieve's family life and how she operationalizes "another way" when her children are sick.

4.7.1 Contesting categories, classification, and metadata

A driving principle of this worldview is that there are alternatives to mainstream norms and that those alternatives are equivalent if not superior to their counterparts. Contesting mainstream interpretations and descriptions often prefaced offering an alternative. This begins with food and extends to nearly everything. For example, Monosodium Glutamate (MSG), a controversial food flavoring additive is labeled a neurotoxin in *Nourishing Traditions,* labeling echoed by Genevieve.

There is often a literal effort to change the meaning and connotation of a term. In a recipe post [paleo pumpkin dessert bites], she asserts, "Halloween *doesn't have to mean* high fructose, GMO corn syrup candy." If Halloween has other forms of candy, it is accessible to the natural lifestyle. This occurs again when she asks "Did you know that jello can be a health food? Well, if you make it the Mama Natural way it can be" ("How to Make Jello the Natural and Healthy Way," 2012). Alternatively, there is an effort to change the label, Genevieve asserted "We've come to realize breastfeeding is not the best word for the process because it's more

than feeding" ("How & Why to Work With a Lactation Consultant," 2016). If breastfeeding is more than feeding it can be afforded more status.

Some of the contested definitions are part of a larger debate. "Birth is a normal biological function" (Home birth: Is it safe?), vs "The problem is that the people who believe that home birth is reckless think about birth as a medical condition" ("Home Birth: is it safe? | Mama Natural," n.d.). Definitions do not freely circulate, however. In a comment exchange, on reader asked about products claiming to be natural, another responded "The word 'natural' means nothing" to which Genevieve wrote "Hmmm, I think natural means something" ("What's in Mama's Makeup Bag?," 2012), but did not provide a definition.

Contesting labels and their meanings is most visible around childbirth. The term "natural childbirth" is prominent but problematic. Even Genevieve laughs and asks, "What is an unnatural childbirth?" in her childbirth course. In her class, she and Maura emphasize that women must ask their providers what they mean when they say natural childbirth, because to many providers it only means vaginal birth. Genevieve believes a "natural" childbirth is a vaginal delivery without Western medicine interventions; when she accepted Pitocin as she labored with her son it was a decision she grieved later, even feeling like it mean she had not achieved a natural childbirth ("What's Your MAMA WOUND?," 2014). A more accurate but less used descriptor is medicated or non-medicated childbirth.

Other terms contested by Genevieve and peers are more obviously problematic and insensitive. Rather than the term "incompetent cervix," Genevieve uses "dynamic cervix." The phrase "inadequate pelvis" should also probably be retired. Whatever natural childbirth means, advocates are more considerate of how professional terms and labels may be internalized by

pregnant persons. Some of these efforts are met with more resistance than others. Caesarian section is a procedure perceived to be too common in the United States. There is a growing call for "gentle" c-sections. Genevieve has a post addressing this ("Gentle Cesarean," 2017), guest authored by a woman who is open about her own difficult experiences with c-sections. I mentioned "gentle c-section" off-hand to a surgical resident who chortled and said "no such thing!"

4.7.2 Inclusion criteria:

The natural lifestyle movement devotes a lot of time to labeling certain foods, chemicals, and additives as unnatural and toxic. Many of the items receiving this categorization are common, everyday items easily acquired. The reasons for excluding them are not always obvious. Sometimes the criteria are clearer, however. In a post about natural deoderant, Genevieve raves "You could eat every single one of the ingredients" ("The Pit Paste That Works (For Everything)," 2014), implying if you cannot safely eat it, you should not use it. About her toiletries she remarks, "today, I'm happy to say that most of the products in my bathroom are safe and even edible!" (How to detoxify your medicine cabinet). One company is dismissed because "I'm not a huge fan of Honest products, as I think they add too many ingredients" ("The Best Natural Bubble Bath + DIY Recipes," 2016). Whether an item is edible or has a certain number of ingredients serves as a litmus test for whether it is safe enough to use for other non-food purposes suggests a different risk evaluation criteria for inclusion. A comment exchange between Genevieve and a reader also suggests a different risk threshold when evaluating scientific research. Beth wrote

> Studies like this always fascinate me because I wonder how they divide the participants into groups without violating research ethics. Doesn't it seem unethical to tell one group

> that they need to stay sedentary when activity has been shown to improve recovery and pregnancy outcome overall? It seems like a better design would be to survey women throughout their pregnancy on activity rates and analyze the results later. You would still be able to estimate the impact of exercise but you wouldn't be instructing anyone NOT to work out. With a large enough sample you will be people who exercise more or less than average. Also, I'm curious about the measure they used - auditory memory of a sleeping newborn. What does this signify exactly? Why did they choose this measure? ("Exercise During Pregnancy," 2014)

Genevieve responded "I thought the same thing about the sedentary mamas. I would not want to be in that control group!" ("Exercise During Pregnancy," 2014). This is similar to Dr. Sears consideration that

> The only foolproof way to study the long-term side effects of vaccines would be to take 50,000 infants, set aside 10,000 as an unvaccinated control group, and give the remaining four groups of 10,000 babies each a series of only one vaccine. Then testers would follow these kids for twenty years and compare the types of problems they have. Of course, we can never follow this plan, as it would leave many children unvaccinated and susceptible. We could look for 10,000 volunteer families and compare the health of their unvaccinated kids to a group of 10,000 fully vaccinated kids over a twenty-year period. That would be a bit easier. Any volunteers? (2007, p. 179)

In this worldview, participant autonomy is the most important component in research design. They do not discuss how this could compromise findings.

4.7.3 Complementary and alternative medicine

Genevieve is a huge advocate of complementary and alternative approaches to medicine. In 7 years of blog posts she utilized chiropractic care, a holistic dentist, acupuncture, essential oils, reflexology, naturopathic and homeopathic remedies regularly. While there's something to be said for a "try everything" approach, hers is often "try everything else first" and only then go to a practitioner of Western medicine.

Historically, some of anti-vaccination opposition came from practitioners, such as chiropractors, who were disenfranchised by the practice (Kaufman, 1967). Vaccination is largely

confined to Western medical practitioners. While they do not profit from them (a commonly-held belief by vaccine-avoidant parents), the monopolization around who can provide immunizations and receive reimbursement for them contributes to the perception of pharmaceutical companies, government, and health care providers in collusion. There are also unflattering examples of certain providers continuing to lobby to retain monopolistic privilege to dispense certain forms of care—the American Medical Association is famous for advocating against permitting non-physician healthcare workers to expand their scope of practice to skills performed exclusively by doctors ("Scope of Practice | AMA," n.d.).

There are aspects to Genevieve's promotion of complementary and alternative medicines and practices that, while reflective of her own choices, also reveal the economic benefit for her if her readers adopt them. I presume Genevieve makes a great deal of money selling essential oils based on several factors; a) she has used buying essential oils as a way to gain closer proximity to her with a private Facebook group, b) she has removed a video to comply with the FDA, and c) she and her husband attend an annual conference held by the company she purchases from —they even won an all-expenses paid Mediterranean cruise for their work.

Genevieve is an avowed user of supplements, homeopathic and naturopathic remedies, and probiotics. She is transparent about which she uses and acknowledges some are controversial—particularly the company Hyland's, whose teething tablets were recalled because parents reported their babies were poisoned by them ("Hyland's homeopathic teething tablets recalled - CNN," n.d.). Readers asked Genevieve to weigh in on these controversies in the comments on posts. Her responses show a comparatively high risk

threshold for these products compared to Western medicine. When a reader asked her to weigh in on disturbing test results for fermented cod liver oil, Genevieve responded “We don’t have enough information yet to fully understand the situation. It definitely is disturbing but know that we’ll get to the bottom of it” and went on to recommend brands she finds trustworthy (“What Have We Done?,” 2015). She reassured a different reader about the same controversy, “I would feel comfortable still taking it at this point. A practitioner who I trust has had it tested and it showed no rancidity” (cod liver oil for kids).

One reader expressed in a comment “I don’t believe that belladonna is a ‘toxin’ for children as the FDA claims, since it has been used for hundreds of years” and Genevieve responded, “I agree. It’s about proper dosage and good sourcing” (“6 Natural Teething Remedies for Baby,” 2017). Responding to a reader who was troubled by the use of belladonna, Genevieve wrote, “Yes, there is definitely controversy with belladonna for children. In fact, that is what spurred the FDA to put pressure on Hyland who recalled their teething tablets since they contain belladonna. However, I don’t believe that belladonna is a ‘toxin’ for children as the FDA claims, since it’s been used for hundreds of years, in a variety of different ways for infants. I think it’s about proper dosages/usage and this can be in partnership with a homeopathic practitioner or strong word of mouth/experience from other mamas. Ultimately, just like everything else, parents need to make informed choices for their family” (“6 Natural Teething Remedies for Baby,” 2017). In response to a different reader, Genevieve went a step further and said, “I don’t really worry about their safety as I’m sure they are extra careful since the recall” (“6 Natural Teething Remedies for Baby,” 2017).

4.7.4 What happens when a child is sick?

Upon learning someone has not vaccinated their child(ren), many respond "just wait until they get sick." There were two particular instances of this in the data that were revelatory about how a vaccine-avoidant parent approaches illness.

4.7.4.1 A recurring health concern:

Genevieve's elder child, Griffin, struggled with eczema several times, based on her posts. The first time she mentioned his eczema was in a post entitled "Why I don't use soap (much)" and "noticed he started to get a patch or two of dry skin and the doctor thought it might be eczema" ("Why I Don't Use Soap 😯😯😯 (Much)," 2016). Later, when Griffin was three years old, it reappeared and she told her listeners

> "I was just disappointed because since this kid has been born I have given him such a healthy diet, I mean it's certainly not perfect but all things considered he eats super well, he was breastfed for two years, I gave him lots of probiotics, I ate lots of probiotics so I was just kind of baffled" ("The House is a Wreck! - In Real Life #26 | Mama Natural," n.d.)

In her view, based on these preventative choices, her son should not have developed this condition. They decided to do a blood test for food allergies and eliminated anything for which he had sensitivities and gave him certain supplements so that "by doing all of this together in a month this guy's eczema was gone" ("The House is a Wreck! - In Real Life #26 | Mama Natural," n.d.)

There was an element of Genevieve that took Griffin's eczema as a personal affront to her parenting. When she first told her audience about it, she asserted

> I'm mama natural and I follow this awesome diet and I give him probiotics and I've been giving him the stuff that's 'good' and blah blah blah but it just goes to show that none of us are exempt and I'm just frustrated by it ("Ain't No Baby Up In Here - In Real Life #8," 2014)

At that point, she was attributing Griffin's eczema to gas leaks in her home ("Toxic Gas Leak! - In Real Life #6," 2014). Genevieve said, "It's just a drag, I don't want my kid to have this" ("Ain't No Baby Up In Here - In Real Life #8," 2014). Of course, no parent wants their child to suffer from eczema, but this instance reveals how health functions in this worldview. Ill health is viewed as something that can be preempted based on preventative choices, when environmental and lifestyle factors are examined for culpability. An innate tendency toward eczema is never discussed.

4.7.4.2 Short-term illness:

When Genevieve's second child, Paloma, was two months old, her son (about three) came down with a serious fever. At the time, neither child had received any vaccines. Genevieve was well aware of the risks stating

> I was so worried about her I did not want her to get sick. I mean first of all a fever for 2 month old could be super serious and don't even get me started about that cough I mean it sounded horrible and of course I go to– its whooping cough– and that could be deadly for 2 month old and it just freaked me out ("Week 10 Postpartum | Mama Natural," n.d.)

She and her husband divided their house and essentially quarantined one child from the other with each parent tending to one child only until the danger had passed. She did realize the privilege of her position, admitting, "I can't even imagine if I had to be home with just the two of them trying to block and tackle. It would have been a freaking disaster" ("Week 10 Postpartum | Mama Natural," n.d.)

4.8 Anecdotal evidence: The information used

I have described a worldview where anecdotal evidence counts as more than or equal to traditional authoritative knowledge. In the next three sections I will discuss how traditional knowledge is treated based on Genevieve's citation behavior and general information behavior observed.

4.8.1 Full-text, full attention

When cleaning Genevieve's citation data, I counted 304 scholarly articles, after removing duplicates this was 270 unique scholarly citations. I considered any web link that appeared on PubMed or a journal's domain to be a scholarly article. Of these citations, 162 (60%) were from PubMed. Of the PubMed citations, 118 of the PubMed citations (72.84%) were abstracts or citations. Out of all 270 citations, 61.85 percent were abstracts or citations.

By not providing free full-text access to scholarly work, we may be contributing to ideas that the scientific community is gated and elitist and withholds information. Worse, we may be privileging work that is full-text and open access, work that is not necessarily better. This is dangerous because journals that publish problematic work may exploit this loophole if they are interested in reaching the public via authoritative sources. For them, scholarly work is primarily a way to gain legitimacy with non-scientific audiences—not contribute to scholarly dialogue. There are potential conflicts of interest within these systems. One example was *The Journal of Perinatal Education*, a Lamaze International Publication which appears full-text in PubMed "courtesy of Lamaze International."

Genevieve never addresses that the links she provides are sometimes full-text, sometimes abstracts, and sometimes citations. This is concerning because of her willingness to

criticize studies and because of how often she summarizes studies. There is no way of knowing if these judgments were formed from reading the whole thing or just the abstract [insert article about abstracts not being representative of the article]. It is interesting because despite having several videos about hulking out on evil scientists, she never mentions distress about not being able to access this information. This supports other behavior that suggests Genevieve wants you to get your information from her. The inclusion of references is not about enabling readers to examine the information themselves, instead it is a marker of why readers can trust her. This is most evident in the last page of her book, before the index, when in a red box titled "REFERENCES" she wrote "Find links to all the research, studies, and historical data referred to in this book at www.mamanatural.com/book/references/" (Howland, 2017, p. 486).

4.8.2 Bibliometric findings

Table 4.5 shows almost half of Genevieve's scholarly citations came from journals she cited from more than once. Over 95 percent of her citations came from journals I was able to verify were peer-reviewed. The articles she cited were published between 1939 and 2017 with a mean year of 2005.

TABLE 4.5: JOURNAL CHARACTERISTICS

Cited from more than once	47.78%
Peer-reviewed	95.19%

TABLE 4.6: METRICS

	Citations	Mean	Minimum	Maximum
Altmetric	256	67.48828	0	1449
Web of Science ISI	251	71.41434	0	902
Scopus	246	86.06504	0	1044
Google Scholar	267	148.1273	0	1901

TABLE 4.7: SUMMARY OF YEAR

	Observations	Mean	Minimum	Maximum
Year	270	2005.626	1939	2017

4.8.3 Information Behavior

Across artifacts and platforms, Genevieve's information and narrative were remarkably consistent—especially down to specific details. For example, Genevieve struggled with weight and diet prior to becoming "Mama Natural." Over time, how she presents this struggle has ossified into a set story with identical details— "I was 60 pounds overweight – obese!", "I was addicted to sugar", "I drank up to 6 Diet Cokes a day!" ("About Mama Natural," 2011, "My 'Before' Pictures! ❂ IRL #48," 2015, "Sugar Addiction," 2012). Amounts and adjectives did not vary, they became a fable more than anecdote.

Genevieve extended this behavior to less personal information as well. Even more mundane stories were repeated across platforms—her book, her blog, and her videos—almost verbatim. I noticed, as I read her book, that much of the material felt like it had been pulled directly from her blog. There was additional, new information I had not read previously, but there were also stories and information from posts I could recall reading or hear her telling me in a video. This also extended to the stories in her birth class videos.

This struck me as odd, and a measure of how controlled this narrative is. It also underscores the limits of relying on "anecdotal evidence" —the information hardens because the holder is not in situations that challenge the existing evidence—the well upon which to draw is not deep. Genevieve's book, blog, videos, and course are largely drawn from and about her experiences during the pregnancies and births that produced her two children. Over time,

and if the barrier to access is higher, she adds layers of meaning and new interpretations—but it is always the same experience being evaluated.

I observed this when watching Genevieve describe the birth of her first child, Griffin. Genevieve's labor with Griffin stalled after 24 hours and was prodromal, meaning his head was pressed against her tailbone for hours—extremely painful. After various non-medical interventions, her midwife suggested a minute amount of Pitocin, a synthetic version of the hormone that causes contractions, Genevieve says "With regret, I agreed to two drops of Pitocin" ("Griffin Natural Childbirth Videos - Part 2, Delivery [GRAPHIC]," 2010). Within minutes of receiving Pitocin, her contractions began again and her son was born soon after. At the time, Genevieve wrote and spoke about personal grief and disappointment over a perceived "failure" to have a completely natural (unmedicated) birth, she says "It saddened me because I am MamaNatural and I didn't want to have to go that route" ("Griffin Natural Childbirth Videos - Part 2, Delivery [GRAPHIC]," 2010). She shows evidence of bargaining, "it was just two drops of Pitocin, some moms are at 20/30 for their entire birth!" ("Griffin Natural Childbirth Videos - Part 2, Delivery [GRAPHIC]," 2010). Over the years she referenced this repeatedly and expanded her explanation for how and why it happened. Initially, when she referenced it, she focused on forgiving herself and her personal grief. This influenced later posts and directives to readers to allow themselves to grieve and how to ask for the support for having a birth experience other than the one they had hoped for. She also produced posts about prodromal labor (back labor) and how painful it was; videos would segue to her naked and loudly grunting in pain as her husband pressed on her back to relieve her aches.

In Genevieve's childbirth class, the explanation shifts outward. For the first time (in my memory) as Maura (the midwife, nurse, lactation consultant and doula) explains how labor progresses and the urge to push et cetera, Genevieve hypothesizes that she pushed too soon, tiring out her uterus and stalling her labor, she goes on to talk about how the midwife was not with her the entire time but had multiple patients that night and thinks her ultimate need for Pitocin might have been preventable. Her grief and perceived "failure" to "achieve" a completely non-medicated childbirth shifted over time from something personal to an unnecessary outcome of the unsupportive hospital system. This hypothesis, that the Pitocin intervention was preventable and would not have been necessary if the midwife had been in the room the entire time only appears in Genevieve's birth course—a course that costs $200 to take. The video is only accessible via a password and email address. As the barriers to access become higher (i.e. financial) the information shared is less filtered to be appealing to the masses.

The sameness of the information is interesting for many reasons. It has largely been unchanged for different media—video, book, blog post—the message and words used to deliver it are not altered. The same message is disseminated to different platforms (and maybe different audiences) but it is not adapted with those different audiences in mind. This is not about tweaking a message to reach different people, this is about reaching people on all sides of the bubble with the same travel brochure to a new land. It is not until one pays to enter (via the birth course or joining Genevieve's team to sell essential oils) that one is exposed to the additional layers of interpretation and meaning.

4.9 The spaces between: Family Resemblances

The theoretical model implies leveling and a progression of choices and behaviors that set each level apart. In the next section I will present the family resemblances detected and how they demonstrate this leveling based on Mama Natural and 84 of her peers. Family resemblances refer to the "complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail" (Wittgenstein, 1967, p. 32) that determine membership or association to a "family." Individuals were considered peers if they had a current digital presence where they discussed parenthood, pregnancy, diet and nutrition, or natural lifestyle, and if they had a tangible link to Genevieve. I discuss this selection process in greater depth in section 3.7.

In Figure 4.26, there is a model of the different levels with the family resemblances at each level. Items are clustered around their higher categories to represent the various paths to entry in this worldview. Not all characteristics are represented in this graphic, but there is a clear progression and "path" to the center. As one adopts more practices and incorporates more knowledge, these choices become more laborious and require more determination. This figure illustrates how there are numerous points of entry to this worldview, but the path to the center does not have as many openings.

Figure 4.26

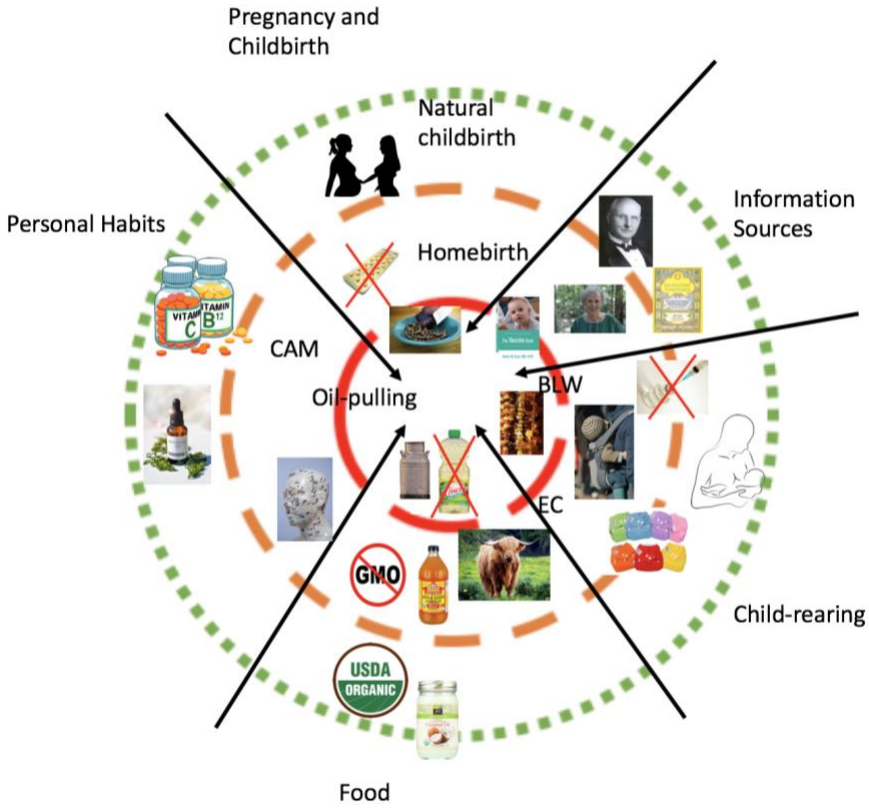
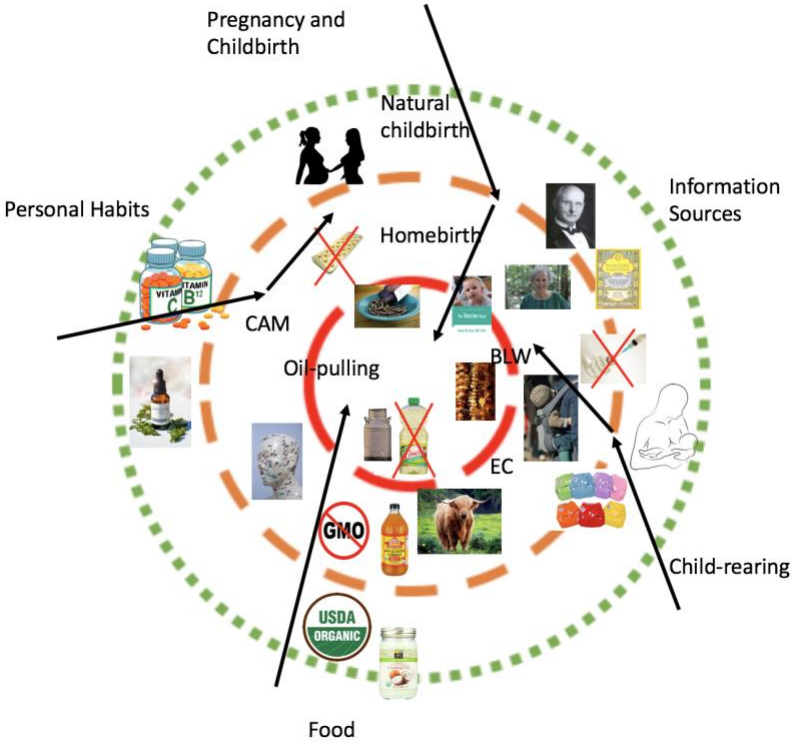


Figure 4.27 presents an alternative of this model, which is likely more realistic to the paths people take. In this figure, the journey is not a straight line, and it does not always end at the center. It allows for movement in multiple directions and the accumulation of practices from various parts of this landscape. It is still limited because it does not illustrate when someone truly transitions through the circles. If someone does all of the things contained by the green circle, compared to someone who only does several, are they really in the same place?

Figure 4.27



The next sections discuss each category of family resemblances in greater detail, the leveling observed, and the limitations to the data.

4.9.1 Rationale for Inclusion

During my first round of data collection—watching and reading Mama Natural's posts and videos, I recorded my impressions, thoughts and comments in brief memos and collected metadata from the posts and videos. I quickly noticed that just because Genevieve had a post about a topic did not mean she adhered to it—usually she had tried it at least once, or researched it herself, but it was clear she felt she needed to address it. The topic baby-led weaning exemplified this. In a post and video, Genevieve discusses the various schools of thought, her own experience, and ultimately why she was not comfortable with it ("Why I'm Waiting To Do Baby Led Weaning (BLW)," 2011). Even in this worldview and on her website,

Genevieve did not perform every associated behavior, and of those she did perform, it was not always a positive experience. The inclusion of those experiences anyway speaks to how integral these practices are to this worldview.

Potential family resemblances were identified over time and sorted into 6 categories with a total of 51 characteristics. Categories were not always discrete and some characteristics would have been appropriate in multiple categories, especially for items that had multiple uses—such as coconut oil, a food item (in the Food category) which many members of Mama Natural use for cooking, but also as a carrier oil for essential oils, for oil pulling, and during pregnancy. The categories are listed in the table below.

TABLE 4.8

Category	Characteristics
General	Voice(s), Gender, Race, Orientation, Religion, Marital Status, Children, Amazon affiliate, non-book product, book published, disclaimer, personal redemption arc
Food	Coconut oil, special diet, apple cider vinegar, grass-fed/pastured beef, raw milk, organic products, anti-seed/vegetable oil, anti-GMO
Child-rearing	Baby-led weaning, breastfeeding, babywearing, attachment parenting, circumcision, vaccine avoidance, homeschooling, amber teething necklace, elimination communication, cloth diapers
Information Sources	Dr. Robert Sears, Weston A. Price, Ina May Gaskin, Sally Fallon Morell, Gail Tully
Personal Habits	Reflexology, Homeopathy, Naturopathy, Oil pulling, chiropractor, supplements, oppose fluoride, essential oils, acupuncture
Pregnancy & Childbirth	Homebirth, Natural childbirth, Midwifery care, Skin to skin, delayed cord clamping, placentophagy, NFP/synthetic birth control opposition

Of the 85 cases, strong homogeneity was found in certain characteristics. In some categories, leveling was observed, where between certain resemblances there would be a steep difference, suggesting distinct levels of adherence. Sometimes this made sense, calling back to "Just two steps to natural living," as resemblances like coconut oil or essential oils have a

relatively low cost compared to characteristics that are perceived as more extreme or expensive, such as fluoride opposition (obtaining fluoride free toothpaste is not difficult, but fluoride-free water is very expensive and time-consuming).

In the sections below, I present the findings for each category. All percentage points are rounded to the nearest hundredth.

4.9.2 General Family Resemblances

Almost all cases were women, most of these women were married, white, had children and were the sole voices and creators of their digital space. Of those who mentioned a spouse, not a single one was in a non-heterosexual partnership. It is possible that they would not disclose this for fear of stigma and negative backlash. Of the minority who did not acknowledge a romantic partner, it is also foreseeable they may have avoided doing so at their partner's request, because they do not have a partner (for example, a blogger who was attending college and relatively young was unsurprisingly unmarried), or other reasons. The same can be said for the percentage of cases with children. The majority did not express or acknowledge a religious background, of those who did, most followed a Christian denomination. It is likely the proportion of Christian cases is much higher. To be categorized as a Christian, a case had to self-identify that way in their biographical sketch, directly acknowledge Jesus in a flattering way, or personally discuss their faith. Casual observance of Christmas, inclusion of holiday recipes or activities was not taken as evidence of faith, because such behavior could be seen as cultural, like a Thanksgiving meal, rather than religious.

TABLE 4.9

Race	92.9% White
Gender	92.9% Female
Marital Status	90.6% Married
Voice	83.5% Solo Internet presence
Children	83.5% have children
Religion	71.8% did not express religious background
Amazon Affiliate Participation	71.8%
Disclaimer	65.9%
Published book	55.3
Non-book product	44.7
Personal redemption story	44.7

In the general set of resemblances, there were five characteristics pertaining to the perceived professionalism of the blog. This began with participation in the Amazon Affiliates program, a program that allows Internet users and content creators to include Amazon links and receive a small commission when visitors purchase from those links. If cases were attempting to capitalize off of their content via affiliation, they likely also had a disclaimer limiting their liability and emphasizing they were educational and informational resources. After this "level" there was then another drop to participants who had published a book—this characteristic did not distinguish between physical and electronic books, self-publishing or publishing via a traditional publisher, or charging for the book. More than half (55%) of participants had produced a book in some fashion. About 45 percent of participants offered a non-book product of some kind. This varied from electronic courses, videos, and other digital products to physical goods. The same proportion (45 percent) of cases featured a personal redemption story. This characteristic was based on Mama Natural's frequently repeated fable about her "Before" life, when she drank Diet Coke, smoked cigarettes, and was overweight, but through diet had "healed." Many of the cases exhibiting this characteristic featured similar

stories of struggles with weight, often with health, and through persistence and food choices: healing and glowing physical health.

4.9.3 Food Family Resemblances

Food behaviors were highly significant as family resemblances. These categories were derived from Genevieve's most commonly expressed food preferences and the directions found in the artifact, *Nourishing Traditions*. Because of the frequency with which we eat, purchase and prepare food, our diets are perhaps the easiest entry point into this worldview. The blog post "Just two steps to natural living" focused on diet choices. Food can also be less expensive than accessing other characteristics.

More than six of every seven cases endorsed or exhibited coconut oil usage. Genevieve personally uses coconut oil for cooking (even bringing it to restaurants and asking them to cook her food in it and almost innumerable other things, such as a balm for cracked nipples. Almost as popular was a preference for organic ingredients.

TABLE 4.10

Coconut Oil	87.10%
Organic Products	85.90%
Apple Cider Vinegar	77.60%
Anti-GMO	73%
Grass-fed Protein	69.40%
Raw Milk	53%
Anti-seed oils	50.60%
Special Diet	29.40%

Nearly four of every five cases endorsed or used apple cider vinegar in some way. Genevieve had a blog post entitled "101 uses for apple cider vinegar" ("101 Uses for Apple Cider Vinegar," 2016). Like coconut oil, apple cider vinegar is relatively inexpensive and a

common grocery ingredient. The embrace and usage of these two ingredients was ubiquitous throughout Genevieve's network.

The next "level" of behaviors was a hostility toward GMO (genetically modified organism) products and a preference for grass-fed or pastured animal protein. There was a large drop between these two behaviors and the next two behaviors contained in the level—hostility toward certain oils (seed oils, like canola) and preference for raw dairy. It is important to acknowledge that both of these characteristics were more difficult to assess. Detecting preference for grass-fed or pastured animal protein usually involved one to two searches—"pasture" and "grass-fed." Assessing raw milk was much more complicated, as raw is also a popular way of eating in this communities and resulted in many false positives (recipes like "raw carrot salad"). There are also many forms of dairy, such as milk, cheese, and yogurt. Unpasteurized or non-pasteurized are not the commonly used terms. Thus, preference for raw dairy is likely understated. The same can be said for hostility toward seed oils; it was necessary to do multiple searches. In addition, bloggers did not need to warn against using certain oils, they could display bias against those oils without ever saying so if they created recipes that never used them—however this would not have "counted" as hostility, thus that number is also likely understated.

About a third of cases were characterized as "special diet," meaning they were vegan, vegetarian, dairy-free, gluten-free, Paleo, or some combination in their biographical sketch. This was included because, again, diet was seen as a gateway into this worldview and an aspect of life where it is relatively easy for individuals to experiment. However, the distinction between being on a special diet and not is very blurry. For example, while Mama Natural is on a very

specific diet of organic, non-GMO products that are largely unprocessed, I would not have counted her as on a special diet because there is no specific food group she avoids (elimination of highly processed, inorganic, GMO foods has yet to gain a label).

4.9.4 Child-Rearing Family Resemblances

Within the category of child-rearing, breastfeeding was the obvious gateway behavior to this worldview, with more than three quarters of cases acknowledging or exhibiting the behavior. Cloth diapering, homeschooling, and vaccine avoidance and delay were the next level of behaviors. Each involves significantly more parental labor to adopt. These numbers refer to awareness and inclusion of these perspectives, not necessarily adoption and exhibition of them. Homeschooling may be overstated because if a case referenced homeschooling in any way, it was counted—the case did not have to personally homeschool. Thus, bloggers creating activities and suggesting modifications for homeschool parents were counted in this category. The reason for this was primarily because it was very difficult to tell if a parent was actually homeschooling and many cases expressed ambivalence about homeschooling, suggesting they might do so in the future. The same could be said of cloth diapering (many cases admitted attempting it or performing it only under certain restrictions). Vaccine avoidance and delay, as discussed in the literature review, is a notoriously messy label that can mean many things. However, almost half of cases mentioned and included these topics.

TABLE 4.11

Breastfeeding	76.50%
Cloth Diaper	47.10%
Vaccine Avoidance/Delay	47.10%
Homeschooling	44.70%
Babywearing	31.80%
Attachment parenting	25.90%
Baby-led Weaning	25.90%
Circumcision Opposition	15.30%
Elimination Communication	12.90%
Amber Teething	12.90%

Babywearing (attaching a child to one's body and "wearing" them), attachment parenting, and baby-led weaning were the next set of characteristics. These are intertwined, with babywearing a common attachment parenting practice. Attachment parenting is a philosophy of parenting developed by Dr. FIRST NAME Sears, the father of the Dr. Robert Sears, who wrote *The Vaccine Book*. These behaviors also require additional parental labor to perform. They may also be understated. Attachment parenting was difficult to assess because of high false positive returns in many cases, and baby-led weaning and babywearing are acts likely performed by many people who do not recognize them as such. The last level and most "fringe" were circumcision opposition and use of amber necklaces for teething pain.

4.9.5 Information Sources Family Resemblances

The information sources category was derived from the resources considered central to Mama Natural's formation. Dr. Sears and Ina May Gaskin have relatively high mainstream recognition compared to the others, but this did not correlate to presence in the network. The closeness between Weston A. Price and *Nourishing Traditions* is unsurprising, given the latter derives its teachings from the former. Gail Tully is the creator of SpinningBabies, techniques to shift a fetus' position and decrease the likelihood of a Caesarian. Gaskin and Tully's information

is only applicable to pregnancy and childbirth. Dr. Sears' books are only relevant if one has children. Because of their smaller domains, it is unsurprising they were less prevalent than the works of Price and Fallon. Price and Fallon's information pertains to diet, a topic with wider appeal.

TABLE 4.12

Dr. Westin A. Price	48.20%
Nourishing Traditions by Sally Fallon	47.10%
Ina May Gaskin	17.60%
Gail Tully	9.40%
Dr. Robert Sears	9.40%

4.9.6 Personal Habits Family Resemblances

Utilization of essential oils or supplements were the most commonly shared personal habits within the network. It is not surprising that these two characteristics might serve as "gateway habits," as essential oils are relatively inexpensive and supplements is a larger and inclusive term that could encompass some of the other behaviors, but can also be a relatively inexpensive item. Acupuncture, homeopathy, naturopathy, fluoride opposition, and chiropractic care were the next level of behaviors. Four of the five are associated with practitioners of complementary and alternative medicine, and the remaining may be an attitude widely held by these practitioners. The last two behaviors, reflexology and oil-pulling were less common. They may be under-represented based on difficulty detecting them—searching sites for "oil-pulling" often returned false positives related to oil or pulling but not the actual practice. Reflexology as a term rarely returned results, but given the popularity of other practices, it is possible cases referred to it a different way.

TABLE 4.13

Essential Oils	80%
Supplements	78.80%
Homeopathy	54.10%
Oppose Fluoride	51.80%
Chiropractor	50.60%
Naturopathy	50.60%
Acupuncture	49.40%
Oil pulling	35.30%
Reflexology	17.60%

4.9.7 Pregnancy and Childbirth Family Resemblances

Not surprisingly, natural childbirth (admittedly an ambiguous term with various meanings) was the characteristic most likely to be exhibited by this set of cases, with almost two-thirds referencing this behavior. Midwifery care was referenced almost as frequently. The next "level" was comprised of homebirth, skin-to-skin, delayed cord clamping, placentophagy, and natural family planning or hostility to synthetic birth control methods. As in other categories, not every case that was "counted" for these characteristics personally exhibited them, but they did include or make note of them to be counted. Placenta consumption, in particular, was a behavior in which many of the cases who mentioned it had not actually performed it. Each of the behaviors in the second "level" of characteristics requires more persistence, time, or money to perform.

TABLE 4.14

Natural Childbirth	61.20%
Midwifery Care	58.80%
Homebirth	37.60%
NFP / anti-synthetic birth control	36.50%
Skin-to-skin	32.90%
Placentophagy	29.40%
Delayed cord clamping	27.10%

4.10 Barriers to access: What keeps people from moving freely?

In the model, inhabitants act with the understanding that movement is restricted based on strength of adherence to beliefs and relative adoption of behaviors. There are additional factors at play, namely financial freedom and privilege based on external characteristics, which are discussed in the next two sections.

4.10.1 Pay to play

The financial cost of admission to this lifestyle is high. It begins with the prices of organic, non-GMO, fresh food and extends into a number of areas of the home. In "The Ultimate Guide to the best cookware (what's safe, what's not)," of course the cookware deemed safest by Mama Natural was also the most expensive ("The Ultimate Guide to Safe, Nontoxic Cookware," 2016). In a blog post and video about pregnancy supplements, there are ten different bottles recommended totaling hundreds of dollars ("Pregnancy Supplements," 2013). There were areas that the rigorous inspection of ingredients and processing did not always reach. For example, clothing - Genevieve mentioned purchasing inexpensive clothing for her daughter from Old Navy ("I Can't Stop Buying Girl Clothes! - In Real Life #35," 2014) or wearing a Forever21 sweater ("STRANDED! - In Real Life #33," 2014).

There are occasional nods to the cost of pursuing this lifestyle. Cloth diapers are presented as a long term investment that will save money over time ("Why We Chose bumGenius Cloth Diapers," 2011). Natural (non-medicated vaginal) childbirth is accurately presented as less expensive than medicated childbirth or non-vaginal birth ("Is a Birth Center Right for You?," 2015). Genevieve also tells her viewers that her family views their expensive food bill as "preventative medicine" which is why they allocate so much money to it.

I was surprised at the vitriol directed at items like canola oil and the high percentage of individuals in the family resemblances analysis who shared this dislike (50.6%). Upon reflection, canola oil is an omnipresent ingredient in highly processed foods, it is inexpensive and it is derived from GMO ingredients. Almost three quarters (73%) of the cases in Genevieve's peer network derided or opposed GMO foods. GMO foods are also less expensive and more likely to be found in processed foods. There may also be an effect of their perceived inferiority contributing to their inexpensiveness.

Demonizing GMO-foods and seed oils like canola severely contracts the foods available to most individuals. With just those "two steps" to natural living, individuals would be deeply within the natural lifestyle because, by default, not a lot remains. Genevieve and her peers do not acknowledge what "cheapness" means and what they are doing when they use it as an insult. Removing ingredients (foods, chemicals, additives, et cetera) because they are "cheap" or criticizing them for being "cheap" does not acknowledge that cheapness often is a means for something to be accessible. For example, using canola oil in processed foods is cheaper than using grass-fed butter, switching to the latter would escalate the cost and possibly make the item inaccessible to the audience who buys it, removing their ability to access it. Opposing "cheapness" without acknowledging the systemic and structural barriers that make the cheap choice the only choice is problematic. This is best described in a comment exchange between Genevieve and a reader, who commented about his use of inexpensive canola oil rather than more expensive cooking fats. Genevieve responded "**If** money is tight" (emphasis added) ("Olive Oil Scam REVEALED (And How To Spot The Real Stuff)," 2017). If. If money is tight. Not

"When." It is easy to lambaste "cheap" food when one has always been in the position to avoid it.

4.10.2 What cannot be purchased

There are barriers to access of this lifestyle that cannot be overcome with money. Some of Genevieve's recommendations for natural lifestyle reflect the power afforded by her privilege. For example, in the video attached to IRL14, she recommends bringing your own cooking oil to restaurants when eating out. In comments on this post, one reader expressed skepticism restaurants would honor the request but Genevieve reassured her "You'd be surprised about the oil thing. I thought waiters would not go for it but we haven't had an issue ONCE" ("Two Words to Describe Your Child - In Real Life #14 | Mama Natural," n.d.). Another reader asked Genevieve to "walk [her] through a sample of this conversation" and Genevieve's response included "If they give me any pushback, I say that we are trying to avoid other vegetable oils due to allergies (I am allergic psychologically to bad oils.)" This is not the only occasion where Genevieve treats food allergies and sensitivities with a levity they do not merit. When a reader asks about preventing her child from eating the unhealthy snacks at preschool, Genevieve responds "I advocate hard for bringing your own snack. You can always play the 'food sensitivity' card" ("What To Do When People Think You're Nuts | Mama Natural," n.d.). In Genevieve's worldview, food allergy or sensitivity is a "card" to be played to achieve a goal, not a condition that can threaten one's life.

Genevieve also appropriates the language of serious issues on occasion for the purpose of humor. For example, she says "I was addicted to the white stuff...I couldn't get enough...towards the end, just one hit and I was down for the count...I knew I had to quit but I

didn't know how" when talking about her relationship with refined white sugar ("Sugar Addiction," 2012). Disordered eating is not the same thing as addiction to or abuse of illegal substances. In her video "Sh*t crunch mamas say: Part 2," she has a skit about buying raw milk in secret which depicts the act like someone buying illegal drugs—she even mentions "the feds" (though she's referring to the FDA) ("Sh*t Crunchy Mamas Say - Part 2," 2012). The skit is light-hearted and comical, but also highlights the inherent privilege of the situation - clearly she is not afraid of the consequences of buying raw milk and publicizing her illegal actions. She even jokes "aaaah, that's the stuff." She literally broadcasts this illegal activity on YouTube. It is difficult to image a person of color and without her socioeconomic status creating the same video.

It's rare that Genevieve directly addresses situations outside of her own. When she acknowledges "for some women, prenatal care is their first or only chance to see a doctor and undiagnosed STDs can be dangerous for the baby" ("First Prenatal Care Visit," 2016), it is a rare concession to women who are not able to access health care regularly, and the need to accept a treatment plan designed to anticipate women at that level. If you are unable to exclusively breastfeed and instead pump and use bottles, Genevieve characterizes these as "commitments that will keep you from feeding baby exclusively" ("Best bottles for breastfed babies," 2016), commitments rather than work, obligations, et cetera. In a different post encouraging breastfeeding, she muses

> What this tells us is that many women want to breastfeed and are trying to do so, but they face barriers. Maybe they're not getting the support they need. Maybe they're not hearing a ton of great examples. Maybe they don't know other breastfeeding mamas ("Breastfeeding Gets Easier," 2010)

In discussing blood or hair mineral analysis, she admits “not everyone can afford or access this kind of personalized testing but hopefully this will be the medical norm one day” (“What are the Best Prenatal Vitamins for You?,” n.d.). In food, “Enriched flour is one of my pet peeves. It really isn’t necessary to give our kids synthetic forms of vitamins unless they are malnourished or in very poor health (and even then, it’s questionable how beneficial they are)” (“Healthy Goldfish Crackers Recipe,” 2016). In the 55th episode of the MN Show, she discusses how married sex can be better, because (in her worldview) you don’t have to worry about contracting diseases or worry as much about birth control failure (“IS MARRIED SEX BETTER? (MNShow 55) - YouTube,” n.d.)

Genevieve admits she and her husband are “both blessed to work from home, so we can go anywhere there’s a decent internet connection” (“We are leaving Chicago ➜➜ IRL 59 | Mama Natural,” n.d.). In discussing their occupational choices, she says

> I have found what works best is for me to work part time and Michael to work full time. Michael loves to work and so he needs that for his just his well being and for me I love part time because I really love accomplishing things and sharing messages with you and doing blog posts, but I also love being with my kids” (“What’s Wrong With My Neck?,” 2016)

In a post about flying with an infant, she says “I would seriously consider not travelling if you have to go alone” (“10 Tips for Airline Travel with Baby,” 2011). Single parenting was addressed about four years into the blog, when her husband returned to work after the birth of their second child

> It’s very humbling because I know tons of moms that do this every single day. I know other ones that have twins and more kids than just two and they manage it and they show up and they get it done but it was hard (“Week 4 Postpartum,” 2013)

Still, single parenting was considered through the lens of staying home while a partner works outside the home. Genevieve structures her posts and videos around her own experiences. She does not consider how her instruction would need to be adapted for someone who lacks the privileges afforded to her because of her race, her marriage, or her work choices.

Genevieve's blog does not address and appears not to consider conditions outside of her own. Her circumstances are "blessings" rather than privileges. Blessings are favors from a higher power, privileges are special advantages or rights offered for a variety of reasons—such as the color of one's skin, one's sex, or one's marital status. Genevieve may be blessed, but she is also a well-off, white, Christian, woman in a loving heterosexual marriage. Those characteristics grant her an immunity she does not acknowledge—she can brag about buying raw milk, she can suggest she has a food allergy so restaurants will accommodate her—which is unavailable and inaccessible to individuals who do not resemble her.

4.11 Outsiders: External perceptions of Mama Natural

The theoretical framework I have outlined identifies outsiders as possible followers or agents of persecution. Genevieve rarely addresses or speaks about individuals who do not ascribe to her worldview. I wanted to understand how outsiders might perceive her, but they had to be individuals who were aware of her. Looking at online forums devoted to criticism and "snark" about mommy bloggers and other digital personas was the best option to consider how relative "outsiders" viewed Genevieve while remaining within the scope of the case.

On GOMIBLOG (Get off my Internets), the most well-known forum for these discussions, there was not a thread devoted to Mama Natural. However, searching "Mama Natural forum" immediately returned a long thread on the website YTMommaDrama. Other than the

comments on Mama Natural blog posts (which she has the power to delete), this was my first opportunity to observe external perceptions about and reactions to her. Forum threads are also distinct from comments on a Mama Natural channel, because comments are directed to her and there is an awareness she can see them. Forum threads on websites like YTMommaDrama are devoted to individuals talking *about* a person, not to them. This disassociation, especially with anonymous usernames, may allow individuals to voice comments and criticisms they otherwise would not.

I was not surprised at all to see negative reactions to Genevieve in this forum. One poster, PinkTuTu, asserted "This woman is nuts. She would probably eat kitty litter if someone told her it was organic trail mix," and another, Autumnlane, suggested she suffers from orthoexia ("YTMD • View topic - Mama Natural Blog," n.d.). I observed many of the themes described by Hunter (2016) in her content analysis of threads on GOMIBLOG. Elisabeth A wrote "damn she is so pious I can't stand her. A little humility would do her good" ("YTMD • View topic - Mama Natural Blog," n.d.). I perceived this comment about Mama Natural's piety as a two-fold criticism of her frequent references to her faith, but also implying she is not "real," as calls for authenticity were a common refrain in [gomiblog author]'s work. Interestingly, numerous contributors wrote about and expressed outrage over Genevieve's reaction to a nurse attempting to take her newborn daughter and clean the infant. They attacked her for this moment, for sharing it and for her perception of it. It is surprising because one could argue it was a show of authenticity—what users of these forums most commonly find lacking in mommy blog content. An authentic, if unflattering, moment became the most robust evidence to disparage this woman.

I did not anticipate forum contributors defending (or declining to judge) Mama Natural. Springsahm commented, “I like Mama Natural's videos because they are short and actually planned out, so you get some production quality. it's also refreshing to see a YT mom who definitely seems old enough/financially stable enough to have kids” (“YTMD • View topic - Mama Natural Blog,” n.d.). SincerelyMe wrote

> In the end I believe f you make an informed decision than it’s the right decision for your family. And ultimately that’s what she does. Research, learn and then puts it into her own life. I really enjoy her videos, now do I follow every bit of advice or suggestion of course not, but I love that shes willing to share her information along the way (“YTMD • View topic - Mama Natural Blog,” n.d.)

Her stance on vaccines was also discussed and it was divisive. Otherthings wrote

> she’s okay in moderation. SOme of her videos are really informative (I loved the ones she did on vaccines) but some of them are a little too ‘out there’ for me and I parent in a very natural way. SPACE I could do wthout all the mention of god in her videos but whatever. I’m sure a lot of her subs relate to that but I just.. Don’t (“YTMD • View topic - Mama Natural Blog,” n.d.)

Yummymummy, however, criticized Genevieve’s choice to avoid vaccinating her son, “So she thought Griffin had whooping cough.. You would think she would have gotten him vaccinated BEFORE Paloma arrived?! Damn, maybe there are vaccines FOR A REASON!” (“YTMD • View topic - Mama Natural Blog,” n.d.).

There were contributions that were more “detective” style, such as FibroMommy’s query

> If she's under 35 how did she get that special blood test that she used to debunk the Intelligender tests? I've noticed people ask her how she got it cause they want it to and she's playing the crickets game. Pisses me off. (“YTMD • View topic - Mama Natural Blog,” n.d.)

Shortyh asserted

She sure doesn't have a degree in science. Her way of using the words toxin, chemicals and detox is the reason I stopped watching her. There is no such thing as a toxin. All chemicals are toxic in certain amounts. Everything is made up of chemicals, so her whining about 'conventional products' being 'loaded with chemicals' is just complete bullshit. And don't even get me started on what a scam 'detoxing' is *end rant* (“YTMD • View topic - Mama Natural Blog,” n.d.)

CHAPTER 5: DISCUSSION OF FINDINGS

In this chapter I will discuss my theoretical findings and ruminate on the values and capitalistic concerns of this worldview. I will also discuss the implicit bias lurking within this worldview and how this threatens accessibility and inclusivity. I then reflect on my role as the researcher. I conclude with future work and final considerations.

5.1 Discussion of theoretical findings

Elfreda Chatman's theory of information poverty provided sensitizing concepts for this study. This research built off of previous works which considered how information poverty applies when individuals seek stigmatized information (Lingel & boyd, 2013) or when residing in an "impoverished" place is a choice (Pollak, 2016). In situations like these, individuals may be privileged and connected to mainstream society in other ways that make it difficult to consider them truly disenfranchised. Information poverty has largely been confined to groups and persons experiencing Goffman's concept of "discredited" stigma rather than "discreditable" stigma (Goffman, 1974, p. 41-43). The "discredited person" must "manag[e] tension generated during social contacts" while the discreditable person "manag[es] information about his failing" (Goffman, 1974, p. 42).

The theoretical findings of this research expand our understanding of how persons who experience manageable stigma traverse the world. The natural living worldview is one that involves many people who are or who come from a place of economic, educational, racial, and religious privilege—to name a few affordances they enjoy. However, some are also individuals

who enter it because of an unmet need that has resulted in stigmatizing experiences which have made them feel inferior.

The natural lifestyle worldview is not one Chatman would consider impoverished because, in my observations, my case and her peers were not "unwilling or unable to solve a critical worry or concern" (Chatman, 1996, p. 197). On the contrary, the belief they could "offer another way" often led to promises of all-natural remedies that would resolve chronic conditions they believed were related to diet. However, Genevieve's worldview is one in which "outsiders are usually not sought for information and advice" (Chatman, 1996, p. 205). Inhabitants of this worldview were able and willing to solve critical worries and concerns without seeking outside assistance not just because of their privilege, but also because this is a worldview that values anecdotal evidence, rather than outside knowledge. They have constructed a worldview that makes outsider information and advice less desirable and less valid than the information and advice circulating on the inside.

In information poverty, "insiders shield themselves from needed resources" (p. 194) and practice secrecy and deception because of a "sense that outsiders cannot comprehend a worldview different from their own" (p. 194). My findings did not align with this conception of insiders. In Genevieve's worldview, insiders believed outsiders could comprehend their worldview and she actively tried to recruit them, hence her role as a "message manager." I also did not observe insiders "shielding" themselves, rather according to the values and beliefs of their worldview—those resources were not needed. Jaeger and Thompson (2005) suggest the insider/outsider divide "may lead to people ignoring what they see as outsider information, actively choosing a state of information poverty" (p. 100). This mostly aligned with what I

observed, except they were not choosing poverty—in their opinion they were choosing wealth and health.

I did identify outsiders in my findings—individuals who were potential followers or agents of persecution. They did not inhabit the worldview and were labeled as such by insiders. It is possible Chatman would label them—based on their proximity to the worldview—as experiencing information poverty. I think inhabitants of this worldview may characterize outsiders in ways that align with information poverty, though those outsiders might disagree with the assessment. This recalls a tension of applying the label information poverty to marginalized groups, as reported by Hersberger (2003) in her study of homeless families, "When asked if they felt information poor, none of the residents answered in the affirmative" (p. 55). I think my findings demonstrate the importance of reexamining populations and communities we have traditionally labeled as information impoverished through a different lens. My findings describe a worldview populated by autonomous insiders and also a worldview where individuals can develop these traits, despite remaining on the "outside" of the mainstream.

Genevieve's worldview did not exhibit secrecy or deception often or in ways I could consistently detect. This could have been because most of the data collected were public and designed with insiders and outsiders in mind. The final construct of information poverty, risk-taking, was somewhat evident but, in my estimation, it appeared as a result of other values and beliefs rather than a driving behavior. Of Information Poverty's six propositions, only the last, "New knowledge will be selectively introduced into the information world of poor people. A

condition that influences this process is the relevance of that information in response to everyday problems and concerns" (Chatman, 1996, p. 198) held value in this context.

My theoretical findings did align far more closely with Ludwik Fleck's theory of thought collectives. Fleck's collectives are "an esoteric centre made up of (scientific) specialists, and an exoteric circumference composed of both educated and uneducated lay person" (as cited by Arksey, 1994). My theoretical framework suggests a circle between these two which mediates between specialists and individuals who are new to the circle. Fleck, according to Sady, sometimes included three groups in the collective: a vanguard, the main body, and stragglers (2017). I did observe Arksey's assertion that in thought collectives "audiences participate in verifying the specialised knowledge" (1994, p. 449). The collectives have a "shared thought-style which links the individual participants of a collective together, whilst simultaneously constraining and determining the way of thinking adopted" (Arksey, 1994, p. 450). Key to understanding the natural lifestyle worldview was grasping the idea of natural as an epistemology with experts or information leaders limiting the influence of outside knowledge. Fleck also asserted "that thought-styles are passed on from teacher to pupil" (according to Arksey, 1994, p. 451) which explains Genevieve's adoption of information leaders' narrative styles. I reported "offering another way" to be the key belief of this worldview—that another "natural" way existed for virtually every circumstance. This aligns with Harwood's (1986) statement that "conceptual networks in Fleck's scheme possess infinite resilience, bouncing back vigorously, though altered, after each challenge" (p. 180). My findings also demonstrate "Fleck's suggestion that presuppositions of a thought-style may arise from non-rational commitment to primitive images or metaphors" (Harwood, 1986, p. 182).

My findings are limited however, because other members of the thought collective from different circles were seen through the lens of someone who regards the experts as expert and does not have personal access to the center of the worldview. I can only describe the center of the worldview as someone who is not in it perceives it to be—a place where opinions are on full display without concern for or fear of backlash. At the center, negative reactions are perceived as confirmation of someone's outsider status, not as a reflection on the insider's choices. The center is the source before it is distilled for less expert audiences. Based on my findings, it sounded like an orthodox Eden where one can fully embrace and exhibit the worldview with the confidence of someone who inhabits the mainstream, which is how someone seeking it would probably perceive it, but because I did not study an "expert" I cannot state with authority that its inhabitants also share this perception.

My theoretical findings demonstrate the experience of managing non-discernible stigma—specifically the choice not to vaccinate a child based on natural lifestyle principles—is not well explicated by Chatman's Theory of Information Poverty. Instead, Fleck's thought collectives describe how this worldview functions. My findings do contribute to our understanding of thought collectives by providing rich evidence to suggest there is a middle group distinct from the experts and non-experts.

5.2 Discussion of values, beliefs, and thematic findings

In the next sections I discuss my findings and share aspects of this worldview I found problematic and why. I do not believe these values or their flaws are unique to the naturalism worldview. However, they intertwine together in this worldview in a way distinct from their appearances outside of it. I first review the issue of relying on anecdotal evidence through the

lens of what material I found missing in the artifacts. I then discuss why age should not be a proxy for value, this worldview's comfort with cultural appropriation, and the disparity between the "natural lifestyle" and living in nature. After reviewing the values of this worldview and what they can mean for outsiders, I examine how this worldview uses an attitude of "non-judgment" to perform boundary work and prime inhabitants to experience opposition from outsiders.

5.2.1 The plural of anecdote is not evidence

Reading Ina May Gaskin's guide to childbirth (2003) from the beginning, I saluted her for privileging women's voices over her own when writing her book. However, the sheer amount of birth stories (half of the book), and their sameness began to feel propagandistic to me. It bothered me as I felt I only heard one point of view, one story and that its repetitive nature was a priming effort so that I would receive the actual instruction a certain way. To counter this, I read her first book, *Spiritual Midwifery*, concurrently and backwards—starting with the last chapter of midwifery instruction and working up to the childbirth stories that compose the first half of the book. I will qualify Gaskin's work, by acknowledging when *Spiritual Midwifery* was first published in 1973, midwifery was illegal in many states and non-medicated, non-hospital births were unattainable to most women (Granju, 1999). Reading the stories of these natural childbirth may have been many readers' first exposure to the possibility of having a say in their childbirth experience.

The emphasis on individual stories to illustrate rationale for choices nagged at me throughout this research. I forced myself to ask, "What is inherently wrong or problematic about putting stories and anecdotes first?" These works, of Mama Natural and Ina May Gaskin,

are meant to educate people, particularly women. They present themselves as equivalent to or better than existing resources. Many existing resources do not lead with stories. Scientific papers do not usually lead with personal stories; they present facts and evidence to make a case for hearing the story of their study. Their findings are important within the context of the evidence and facts presented. When it is reversed, the evidence becomes important within the frame of the story presented. Personal anecdotes are just that—personal, contextual, and specific. Introducing information after them reinforces the frame of that story and also only holds relevance for that story.

Time after time, Genevieve tells her story as an opening to introduce a topic or concept, and then cuts away to "that didn't happen to me/with me." The plural of anecdote *is not evidence.* I do not take issue with individuals pointing out that aspects of their lived experiences do not correspond to the immense range of what can happen to someone during pregnancy and childbirth. What I find problematic and troubling is when someone's own personal experience is used as a rationale to dismiss or diminish accepted protocol and evidence.

There are serious limits to our own experiences. Combined over time and across individuals like us, these coalesce into implicit and explicit bias. Again – this is not inherently "wrong" per se – or at least not more wrong than any other group. But it is sinister when one group believes their experiences are not limited, and thus biased, and that they can and should make comprehensive recommendations for *everyone*.

During my first reading of Mama Natural's blog, I was worried by "what's missing here" and had a running mental list that included miscarriage, stillbirth, abortion, infertility, post-partum depression, what to do in the event of prenatal testing coming back with a result one

was unprepared for, et cetera. Adoption was addressed in a guest post, but largely from a Christian perspective ("The ABC's of Adoption, Guest Post by Susanna Brown | Mama Natural," n.d.). The more I observed and analyzed from her site, the more convinced I was that there were strong, serious "limits" to her experience and that these limits biased her site to a certain segment.

Of course, there is the "so what" refrain. Everyone has a desired audience and tries to reach it to make money. But Genevieve has articulated that she wants more. She wants to start a movement and build a community of natural childbirth mamas. She has created an entire brand for telling those women what their biggest risks and concerns are or should be. She claims her book "was written with *all* mamas in mind" (Howland, 2017, p. xxi). She teaches them how to advocates for themselves with health care providers, friends, family, and hospitals. In so doing, the limits of her experience—and using her own experience as evidence—become visibly harmful.

Genevieve never directly addressed miscarriage in a standalone blog post until she had one. Over the course of seven years, while creating and crafting "the #1 pregnancy and childbirth YouTube channel" and her blog and a childbirth course—she never addresses this topic on its own. She had a post about rainbow babies ("What Is a Rainbow Baby? (Pregnancy After Loss) | Mama Natural," n.d.), a movement to talk about babies that come after miscarriage, but never just miscarriage. Miscarriage happens to between 10 and 25 percent of women. The book *Supernatural Childbirth,* a favorite of Genevieve's tells readers "You don't find 'miscarriage' or 'abortion' in the Bible. It was not and is not today the will of G-d for you to lose your baby" (Mize, p. 112). Miscarriage doesn't happen on MamaNatural.com until it

happens to Genevieve. Miscarriage and Stillbirth do feature in Genevieve's book, which was written and compiled before her own miscarriages.

Still, something is missing from this chapter and it is completely absent from Ina May Gaskin's books, except for when it occurs in women's childbirth stories—meaning women who had or considered abortions but ultimately bore children. Abortion. Planned pregnancies that do not end in the birth of a child, sometimes end with an abortion. This can be for many reasons at many different points of pregnancy. The decision to abort a wanted and planned pregnancy is exceedingly difficult and painful and the reasons one may do so are numerous. Yet, Gaskin and Genevieve do not name these women or include their difficult journeys. **If a topic, group, or experience is not explicitly included, it is implicitly excluded.**

There are similar, startling omissions in Ina May's books. In *Spiritual Midwifery* she discusses her own stillbirth story, but the segment "What to do if your child dies" (2002, pg. 267) is only one page long—half text, half photograph. In *Ina May's Guide to Childbirth*, she does address the racial disparities at work in maternal death but only devotes a half-page to it. Alternatively, amniotic fluid embolism—a condition she experienced—is discussed for two full pages. I include this because, at the time she wrote it, "For African American women in New York City in 2008, the rate was an incredible 79 per 100,000 births" (2003, p. 275) and amniotic fluid embolism occurred in one in every 6,500 births (2003, p. 282). In NYC, in 2008, 5 of every 6,500 (or 1 out of 1300) African American women who gave birth died. However, the rarer condition that affected Ina May Gaskin is the one which she devoted more attention and more space.

Gaskin also avoids a deep discussion of post partum depression (PPD) and admits she rarely encounters it (2003, p. 262). She asserts “Most--but not all--cases of PPD and postpartum psychosis can be prevented by providing plenty of help to new mothers during the weeks following birth, but much of this disease is caused by isolation and exhaustion” (Gaskin, 2003, p. 262). This underlines the danger of relying on anecdotal evidence—even when drawing from a community of anecdotes.

Omitting or glossing over or downplaying the frequency of events does significant harm. Aside from the obvious implication of misinforming and ill-preparing their readers, this contributes to long-standing stigma surrounding some of these topics—particularly miscarriage and post-partum depression. Individuals experiencing these conditions would be forced to seek out other resources, potentially alienating and isolating them.

5.2.2 Age isn’t everything

I struggled with ancientness being used as a proxy for legitimacy. I do not think "this has been done for thousands of years" in itself is proof of efficacy, or morality or that it should never be used as such. It is fine and appropriate to use this as significant, but it is the reason to keep looking at something - not stop looking at it. There are numerous practices with millennia-long traditions—slavery, rape, abuse, racism, to name a few. Only through serious activism challenging normative, mainstream mentality have we begun to dismantle how these acts of violence are embedded in our culture as acceptable. This hyper nostalgic rendering and longing for the past removes a lot of damaging context that punctures the beautiful narrative. Making all food items from scratch is quite laborious, but if female children are not at school they

probably have the time. Just because "It's always been done that way" or "it used to be that way" does not inherently make it better.

5.2.3 Cultural appropriation

When elevating ancient or “exotic” information and practices, Genevieve has no qualms about making superficial references to a cultural tradition and then considering how to integrate it into her own life. In a post titled “Don’t mess with my family (on Sundays), Soul Food” she discusses going to a conference where they were challenged to practice Sabbath and says “In the Jewish culture there are some communities that still really practice Sabbath” (“DON’T MESS WITH MY FAMILY (On Sundays) - Soul Food,” 2016). She does not mention practice is typically called Shabbat and not observed on Sundays, but from Friday night to Saturday night or discuss at all what it means to “really practice” Shabbat.

Removing context around these practices makes them ripe for commoditization and incorporation by privileged groups. Judaic practices are becoming “brands” and a vein of the wellness industry (Kahn, n.d.). Sometimes this results in white-washing transformation, visible in the growth of Christian yoga studios (Solomon, 2017) or offering a $1100 course to become an indigenous healer (Nov 10, November 10, & 2017, 2017). Genevieve has not personally participated in these things (to my knowledge) but they are part of a worldview she inhabits where “We live in a small town, so we allocate a good chunk of our annual budget to travel so the kids can see DIVERSITY in thought, race, culture, economics, and lifestyle” (“My 2017 Resolutions | Mama Natural,” n.d.). For her, diversity is something to be purchased.

5.2.4 Nature is gentle?

I admit to chuckling when the word natural was considered synonymous with gentle. Along with the nostalgic rendering of the past as a golden age, natural remedies are presented as more "gentle" than their modern counterparts, which are labeled toxic and harsh. This extends to the narrative of natural childbirth—skin-to-skin is "natural" and "how it was intended to be" or "how it would be in nature/the wild." Placentaphagy comes with a similar refrain—stories about how animals do this in the wild, so it's "natural." This is another place where this community elides context. It is true that some animals consume their placenta in the wild (though it's not always their own placenta), but animals also routinely eat their own young or reject and abandon them. Nature is as brutal, harsh, and unforgiving—in some ways more so—than the technological, human-constructed counterpart Mama Natural paints as a tainted, despoiled place.

Nature is also portrayed with gentleness found in Disney, rather than the harshness characteristic of *Planet Earth*. In the two affirmation cards which feature animals rather than people, a mother is portrayed snuggling with a single baby. On one card it is a mother fox and single fox cub. On the other card, an owl mother and owlet stand on a tree branch together, a different branch has a mother squirrel and a single squirrel baby, rabbit, fox and hedgehog mother and baby pairs are also in the deck. In nature, most of these animals give birth to multiple young in a pregnancy and some of them prey upon one another.

Figure 5.1



5.2.5 Us v. Them

Genevieve and the artifacts that shape her and that she creates prime individuals to anticipate opposition to their choices. *Nourishing Traditions* taints our image of the food supply by constantly revealing the modern technological ills lurking within the most basic foodstuffs while instructing readers how to avoid these dangers. Dr. Sears separates himself from other doctors his readers will encounter and instructs them in vaccine avoidance and delay by giving alternatives and questions to ask. While his tone is gentle and non-judgmental, especially compared to Fallon's, it is just as concerning. Dr. Sears is a physician, so he should well know that many of the "reasonable" requests he suggests parents make regarding vaccines (such as single-dose shots or doses that do not contain certain additives) are not actually that reasonable. In many cases they would necessitate a special order, which is not a small task. This is not as simple as ordering a pizza without a cheese, rather it often means asking the restaurant franchise to purchase its cheese from an entirely different supplier the physician's office may not have a relationship with, at great expense—which may not be fully reimbursed

by the insurer. Further, there is evidence that single dose shots are not as efficacious as combined vaccines (Offit et al., 2002). Still, these battles are manifestations of a huge power struggle between parents, particularly mothers, and the systems they interact with in their role as parents—particularly the healthcare system.

Many of Genevieve's pregnancy-related blog posts and a huge component of her course and book are about priming women for the opposition they will face if they pursue a natural childbirth. Genevieve has posts about why to have one, but also *how*. She portrays it as a choice that friends and family may not understand and may try to persuade a woman away from, as a choice that will be met with skepticism or hostility from healthcare providers. The first session of the online birth course features testimonial clips from various couples talking about how and why they pursued a natural childbirth. However, similar to the Dr. Sears book, in priming potential parents for power struggles—it is possible they are precipitated. Genevieve's suggested questions list for a midwife has over 40 items.

On her blog and particularly in her class, when discussing homebirths, she never laundry-lists the states where the practice is illegal (or mentions the workarounds people take) and how a woman and her home are evaluated as candidates for homebirth. This is a startling omission for the #1 natural pregnancy and childbirth YouTube channel. Women who read her site may be familiar with the statistics about homebirths and their safety and efficacy—but Genevieve (and Maura in the class) have omitted crucial context —who is allowed to attempt birth at home (ex, not high-risk, not people who don't have bathtubs).

5.2.5.1 Priming for opposition:

Much of the instruction around pursuing a natural childbirth primes women to expect to experience opposition and resistance. Genevieve states, "medicalized childbirth, the way it's set up, that's just the way it goes if you don't fight the system a little bit" ("BABY FEVER! 👶 🤰 👶 (IRL s2 e7)," 2015). In the post "Which Birthing Classes are best for you?" she tells readers "Without a firm conviction to pursue a natural birth, and the knowledge to support your decision, you are not likely to have one." In the post "how to have a natural hospital birth" she tells readers "accept that the system is (probably) against you." She reinforces this in other posts, "most women don't just stumble into a natural birth. It takes determination and commitment" ("How To Have A Natural Birth | Mama Natural," n.d.).

In the third video documenting her daughter's birth, she reminds viewers "you always have to be pushing and protecting your right for a natural childbirth" ("Paloma Natural Childbirth Videos - Part 3, Afterbirth | Mama Natural," n.d.) while interpreting a nurse's efforts to dry her newborn daughter off as meddlesome and interfering. She provides a template for birth plans in a post titled "Free visual birth plan template (That nurses won't scoff at)" implying that nurses will be skeptical of birth plans ("Free Visual Birth Plan Template (That Nurses Won't Scoff At)," n.d.). The expectation of opposition is not confined to the healthcare system and providers.

Rooted within the push for natural childbirth and healthcare is an undercurrent of reclaiming power. In the 5th class of her birth course, titled Transition and Pushing, when discussing the benefits of laboring in a tub, Genevieve and Maura point out "If you're pushing in the tub your provider has to be hands off." While they highlight other benefits of laboring in

water, they also view it as a way to insert a protective boundary between mother and provider, implying that the provider's hands may be harmful and interfering. In a blog post titled "Midwife Interview Questions: Find the Right Support for YOU" she instructs "Remember, your midwife works for you." ("Midwife Interview Questions," 2017). This is not exactly a partnership but a power dynamic flip.

5.3 Message or money managers?

The next sections examine the capitalistic interests at work in this worldview and the ignorance of the socioeconomic reality of others.

5.3.1 Discounting authority without assumption of equivalent responsibility

There is an unacknowledged awkwardness to much of the health and lifestyle advice prevalent on the Internet and the disclaimer utilized by many of the gurus, experts, doctors, bloggers, influencers, et cetera who create this information.

Despite sowing seeds of distrust and skepticism for the medical establishment, hospitals, and Western Medical providers (doctors, nurses, pharmacists, to name a few), none of these bloggers or online experts take on any liability for the choices their readers may make. They instead disclaim all responsibility or liability and remind you to consult your healthcare provider before making any changes or decisions about your lifestyle. On the first page of her book Sally Fallon includes a note to her readers that "The ideas and suggestions contained in this book are not intended as a substitute for appropriate care of a licensed health care practitioner" (1999, p. i). Genevieve tells readers her book "is sold with the understanding that the author and publisher are not engaged in rendering medical, health, or any other kind of personal professional services in the book" (Howland, 2017, p. v). They have built in plausible

deniability in case you make a decision based on their recommendations and this decision has an unwanted result—after all they told you to talk to your healthcare provider. This is a darker side to the emphasis on parental choice—expertise in one context does not necessarily travel.

This trend of discounting traditional sources of authoritative knowledge without assuming any of the responsibility incumbent upon those figures, allows the critic a great deal of freedom—particularly when the critic is not subject to the checks and balances of the figures and systems they undermine. Mama Natural can criticize doctors and hospitals and their protocols; she can encourage you to disagree with them, discount their advice, or seek alternatives; she can do all of this while reminding you she is not "a substitute for professional medical advice, diagnosis, or treatment" ("Disclosure/Disclaimer," n.d.) and you should discuss all of this with your healthcare provider. However, she cannot be sued for malpractice, her practice cannot be impugned via word-of-mouth, and she cannot explain to you the exceedingly complex and complicated set of compromises that drive the choices and policies in play.

This is a dangerous trend visible in many other spheres—the David and Goliath comparison that is false and flawed. Because when this dynamic is in play, David does not want to defeat Goliath —David actually thrives under Goliath's presence. If Goliath is gone, David must lead—and leaders must answer to everyone, not just the individuals who read their blogs.

A lighter example of this is visible in season seven, episode four, of the American television show, *The Office.* In it, Michael—the racist, sexist, bumbling and incompetent boss who commits a microaggression every minute—departs for the day and leaves Jim in charge. Jim is the handsome leading man who is good at his job, surprisingly good since he spends most

of his time not performing it and playing pranks on a coworker or flirting with the receptionist. At this point in the show, Jim has devoted many talking heads to describing and assessing Michael's limitations. There is the sense that he could do Michael's job infinitely better than Michael. So one would think that when given this opportunity—to do Michael's job for a day—Jim will excel. Instead, he underestimates the importance of allowing each employee their own birthday party and tries to combine all of them into one celebration upsetting all of them and chilling what had been friendly or cordial relationships. When Michael returns and Jim tells him what he did, Michael laughs and admits to committing the same error years earlier when he first started.

5.3.2 Financial Incentives

When Genevieve's blog first began, both she and her husband worked full-time jobs. As of this writing, their full-time jobs are MamaNatural.com and its related products and channels. This includes social media presences such as YouTube and Instagram, the online childbirth course, a book, affirmation cards, a bracelet, a mobile device application, an ebook, and recordings of affirmations. She also participates in YouTube advertisements, which the site Social Blade estimates generate up to forty six thousand dollars a year ("Mama Natural YouTube Stats, Channel Statistics - Socialblade.com," n.d.). Her blog also has advertisements (like AdSense). In addition, her blog and videos are inundated with links to Amazon products, as she participates in Amazon Affiliates (a program that rewards referrals with a small portion of one's purchase), and brand sponsorships or partnerships. This is a common practice with bloggers and individuals whose primary job is their social media participation. A recent study found reported affiliate links were disclosed in less than eleven percent of YouTube videos

which had affiliate links (Mathur, Narayanan, & Chetty, 2018). While Genevieve does disclose her affiliate status on her blog, I was dismayed to find her YouTube behavior aligned with these findings.

This is another unacknowledged awkwardness—that much of their wariness or resentment towards hospitals and providers of Western medicine could result in increasing their own bottom line. As much as they feature the disclaimer that all decisions should be made by a reader or viewer *with their healthcare provider*, if the reader or viewer chooses to purchase any of Mama Natural's alternatives—Mama Natural profits. It is in Mama Natural's financial interest to undermine the authority and knowledge of those we typically think of when we think of healthcare.

When cleaning the data gathered surrounding Mama Natural's information use, I noticed a trend of Dr "first name, last name" followed by dot com. Several of these websites were cited multiple times. Not all were doctors, and not all were doctors in the "M.D." norm we usually resort to, but they were almost exclusively white men who promise to help you take control of your health—Chris Kresser, Dr. Sears, Dr. Ray Peat, Dr. Mercola, Dr. Oz, Dr. Andrew Weil. Their websites almost always offer products and the articles frequently refer readers to the websites' storefronts. Particularly for those whose names end in M.D. or D.O. (doctor of osteopathy), they are capitalizing on their mainstream credentials and authority to legitimize fringe ideas— some of which are dangerous, others which are up for debate.

I labeled Mama Natural a message manager because she is careful to avoid saying anything "too" out there. Because she treads so carefully and avoids explicitly saying things like "Vaccines cause Autism," her passive behavior is of great significance. Dr. Mercola, an

osteopathic physician whom Genevieve cites a number of times, sells ebooks about avoiding immunizations, the dangers of mercury and fluoridated water, among a whole range of other popular wellness topics. On his "about me" page, he states that he donates a portion of the proceeds of his books to numerous organizations, including The National Vaccine Information Center ("Dr. Joseph Mercola's Qualifications," n.d.), one of the most well-known anti-vaccine advocacy groups in the United States. Chris Kresser, not a "doctor" but a functional medicine provider, follows Genevieve's route—limited explicit comments about vaccines, but a gateway to materials like the book *Vaccine Epidemic: How Corporate Greed, Biased Science, and Coercive Government Threaten Our Human Rights, Our Health, and Our Children* ("Recommended Resources," 2013). Not all of the doctors listed are anti-vaccine, Dr. Weil supports and recommends vaccines. Comparing Dr. Mercola with Chris Kresser and MamaNatural, Dr. Mercola is far more direct about asserting ideas that are considered fringe and without credibility, while Kresser and Genevieve modulate their assertions by just providing the information and allowing the reader to make their own decision. Dr. Mercola, and those like him—healthcare providers trained in the tradition of Western medicine and accredited as such—trade on the privilege and power accorded to their authority to impugn the very systems which afforded them their position. Because Dr. Mercola is a doctor, because Dr. Sears is a doctor—they can directly attack the efficacy and safety of vaccines.

5.3.2.1 Complementary and Alternative Medicine

Genevieve uses, recommends, and profits from complementary and alternative modalities; particularly supplements, homeopathic and naturopathic products and essential oils. She promotes these products as better than treatments offered by Western medicine

practitioners, encouraging people to try all of them and only as a last resort visit these providers. These are expensive products that lack an evidence base.

Supplements are a poorly regulated product in the United States and there are efforts to keep it that way. During the hearing of since-resigned Secretary of Health and Human Services Tom Price, Senator Orrin Hatch asked him about the regulation of supplements—a profitable industry in Hatch's state of Utah—and Price assured the senator he supported the existing regulation (Offit, 2017). This is not the opinion of most physicians. In an editorial for the journal *Annals of Internal Medicine*, the authors assert "The message is simple: Most supplements do not prevent chronic disease or death, their use is not justified, and they should be avoided" (Guallar, Stranges, Mulrow, Appel, & Miller, 2013, p. 850). A conference held a meeting of six former FDA commissioners who lamented the agency's inability to regulate supplements, which can be sold "without any safety, purity, or quality testing by the FDA" (Hamblin, 2016).

There is extensive evidence about the lack of efficacy of homeopathic treatments (Ernst, 2002). As for essential oils, Genevieve sells Young Living Essential Oils, a multilevel marketing company "structured in such a way that a large base of distributors generally spend more than they make, while a small number on top reap most of the benefits" (Monroe, 2017). According to Monroe (2017), in 2016, 94 percent of members who were registered to earn commission received less than a dollar. Genevieve and her husband have received an all-expenses paid Mediterranean cruise for their work with Young Living ("SOLO PARENTING IS EXHAUSTING!," 2015). Though many do not profit, Monroe (2017) suggests they stay because "Young Living's affection for abstract nouns—purity, abundance, wellness, vitality—helps to define a shared

culture that prizes freedom, family, and self-sufficiency, and is suspicious of regulation and Big Pharma."

These products are trying to have their cake and eat it too; they are trying to be classed as equivalent to evidence-based, regulated treatments while remaining as accessible as natural remedies. Genevieve recommends homeopathics, naturopathics, probiotics, essential oils, and the use of various household products (such as coconut oil or apple cider vinegar) for virtually any ailment. Are these products magic? As mentioned, many lack a strong evidence base and regulation to guarantee they are what they say they are. But Genevieve cannot provide an Amazon Affiliate link to antibiotics. She could to certain over-the-counter medications, but they are not as expensive, she has used the words "cheap" and "harsh" to describe standard medicines like Tylenol, as the "gentle, natural" remedies she recommends. It does not seem coincidental that Genevieve cannot profit off of the treatments she disparages.

5.3.3 Privilege and power

In the last year, *ProPublica* has covered the disparate maternal death outcomes in the United States. Up to 900 women die every year, and 65,000 almost die – women of color and women in rural areas at disproportionate numbers (Martin, 2017). Black women are 243 percent more likely to die from pregnancy or childbirth than their white counterparts (Martin, 2017b). These numbers are subject to criticism because of poor reporting and data collection which is "a reflection of the scant importance American society places on expectant and new mothers and the urgency of acting to save them" (Fields, 2017). But even Serena Williams—a wealthy, accomplished, well-known professional tennis player—nearly died from pregnancy complications and saved her own life by self-diagnosing her blood clots and advocating for her

own care (Haskell, 2018). Addressing these disparities in a blog post for *Science and Sensibility*; doula and childbirth educator Sharon Muza asserts “Racism is to blame and until that is accepted as fact, it is unlikely to change” (2018). A report from the Center for American Progress expands on this sentiment, suggesting these outcomes are related to the accumulated stress of lifelong experiences with racism and sexism (Novoa & Taylor, 2018).

Throughout Genevieve’s entire blog and all of her videos and her birth course, I recorded one reference to race

> For reasons that are still unknown, black women across all socioeconomic class and age categories are almost twice as likely to experience a stillbirth than white women. Researchers are looking deeper into this statistic, but many questions still remain. In light of this fact, it’s especially important that black women have good prenatal care and work with providers whom they trust and with whom they feel comfortable communicating (“What Is a Rainbow Baby? (Pregnancy After Loss) | Mama Natural,” n.d.)

Genevieve does not question the systemic proportion of this issue. Her comments suggest women of color just need to be extra careful and this problem is within their control. This does a serious disservice to these women. Access to good prenatal care is not available to all women, and in rural areas, there often is not a choice of provider.

Mama Natural, members of her network, and the information artifacts that shaped her views promote a beautiful narrative of natural childbirth that almost every woman can reach and should be given the opportunity to attempt—they only name certain barriers in her way - hospitals, the "techno-medical" system, doctors, unsupportive or non-supportive family and friends. They do not name insufficient healthcare coverage. They do not name maternity care deserts (McKay & Overberg, 2017). They do not name the food deserts that put wholesome nutritious food geographically out of reach - the same food these opinion leaders maintain is

the preventative to most health concerns and the antecedent to a healthy, well-nourished baby. They sometimes name the unmarried mother, but do not acknowledge that she is 40 percent of mothers (Covert, n.d.) and the disproportionate burdens she faces. They do not name paths to parenthood outside of heterosexual partnership. Even adoption, when acknowledged, is given a white, Christian, married voice. They do not name the power and privilege differentials between a married, well-educated, wealthy white woman and women who differ from her. They do not name the significantly higher barriers to accessing care and being treated with respect and dignity that those women face. They do not name her struggle. They instead dive deeper into the crevasse of nurturing and nourishing a pregnancy and working toward a non-medicated vaginal delivery surrounded by supportive caregivers. They continue to speak about nutrition and managing stress. They do not name the mother who works two minimum-wage jobs. They do not name her town that has one hospital. They do not name the implicit bias or overt racism of the healthcare providers and system.

Genevieve does warn women about the increased risk of hospital childbirth and interventions and encourages them to choose midwives, avoid certain interventions, and pursue more laborious child-rearing choices, some of which lack robust evidence. There is a potential misrepresentation in her work – why hospitals are unsafe for women, and for whom they are most unsafe. Presenting the aggregate data without the deeper and significant context is irresponsible and problematic. It obscures the bigger issues preventing women from delivering safely.

5.3.4 Problematic proclamations from privileged and powerful people

As elucidated in the theoretical framework—privileged insiders will adopt practices from other worldviews and may prefer them to the customs of their home world. Sometimes this is the appropriation of culture in rituals, customs, and objects. An all too common practice is to adopt a practice from another place and laud it as significantly better than the normative way in the mainstream Western world and work to undermine the normative method's status. When this happens, the insider removes or omits the context that makes the other worldview's choice its norm, while emphasizing the costs and cons associated with the mainstream Western world's norm.

A common example is the refrain "women have been laboring naturally for thousands of years." The statement is true—women have been laboring naturally for thousands of years. Women have, and they continue to—however when this statement is given as the rationale for avoiding interventions or interventions not being necessary, it is problematic to omit that women have also *died* during childbirth for thousands of years. In many of the places—including the United States—where access to care and resources is limited—women are still dying.

Omitting or ignoring this context matters because Genevieve does not see herself as filling a niche, rather she is "trying to speak to lots of women who are in this spectrum" and described her book as "going to speak to lots of women" ("My Big Secret Project REVEALED! | Mama Natural," n.d.). In the video attached to the post "A Very BIG Announcement" she includes the message "CREATE A BETTER OUTCOME FOR YOUR BABY FOR YOUR COMMUNITY FOR YOUR WORLD" when announcing and encouraging people to sign up for her birth course.

Her work comes from a very personal place as she created much of her material because she "always felt left out because it wasn't geared toward a natural mama." When asked if her book would be available internationally, she responded "I sure hope so! ….. My goal is for it to be translated and localized to reach many international markets" ("My Big Secret Project REVEALED! | Mama Natural," n.d.). Genevieve does not confine her efforts to pregnancy. When she approached her son's teacher about sugar in the classroom and had a positive reception she said it was a "great reminder that I and you can make positive changes in our local community if we just take that initiative" ("STRANDED! - In Real Life #33," 2014).

There are aspects of Genevieve's content and language that are inclusive and speak to common negative experiences and feelings during pregnancy, childbirth, and parenting. In discussing weight gain during pregnancy she is blunt, "Most women need some extra weight to be healthy during pregnancy" ("The Truth About Pregnancy Weight Gain," 2016) and discusses why dieting during pregnancy can be dangerous. This is a meaningful effort to reframe a challenging part of pregnancy for many women. In her own eyes, Genevieve is leading a movement and is performing heroic feats. This is evident in her humorous videos, where she cosplays as the Incredible Hulk and attacks "a breastfeeding hater" or processed food company scientist ("Mama Hulks Out on a Breastfeeding Hater!," 2014, "Mama Hulks Out on a Processed Food Company ☺," 2013) or when she refers to herself as Mighty Mama Natural who fights fraudulent olive oil ("Olive Oil Scam REVEALED (And How To Spot The Real Stuff)," 2017). The co-instructor of her birth course tells her "I feel like you are filling such a void in really empowering women" ("Meet The Queen of Crunch! 👸 IRL 55," 2015). As much as videos of her

"hulking out" are humorous (she wears giant hulk hands and green make-up), the undertone of "this makes me so angry I would commit physical violence" is less so.

When Mama Natural and other leaders in the natural lifestyle movement emphasize good nutrition but do not discuss how expensive and time-consuming that nutrition is—their message is theoretically accessible to all. When they remove the context of what good nutrition means and costs they sow dangerous seeds. It is easy to ask "so what?" and "why does this matter?" It matters because there are very privileged people who will hear their message of "good nutrition," who can easily afford the organic, non-GMO, gluten-free food imbued with other magical descriptors. They can spend their time planning and preparing these nutritious meals. They can and will do these things, and they will have healthy pregnancies and healthy babies. But when they see a poor woman who did not do these things, will they talk about her "bad nutrition"? Will they consider the context of her life because they have only been told about the importance of good nutrition. Omitting the very important context that makes good nutrition out of reach for so many—income, proximity to grocery stores and farmers' markets, and TIME—obscures the nature of a problem. To participate in Mama Natural's movement, all one needs to do is go to the grocery store and purchase it.

This is not a movement, it is a commodity. Commodities are not accessible to all, which means they are not inclusive. If a movement is not accessible and inclusive, it is not a movement. It is an expression of privilege and participation is an expression of power.

5.4 Implicit bias toward outsiders

The next sections consider how this worldview, which is very interesting in attracting new members, is implicitly biased toward certain groups of outsiders.

5.4.1 An image issue

On her website, Mama Natural sells a deck of affirmation cards described as "This 50 card deck will fill your spirit with positive thoughts and inspirations. Each card features a gorgeous illustration and affirmation, along with an encouraging note from Genevieve" ("Natural Pregnancy Affirmation Cards," n.d.). The cards, including shipping, sell for $17 but are included as a gift with the purchase of the birth course—they are also available on Amazon. When I received them I was not surprised that the majority (all but two) feature an image of a woman underneath text. I was shocked at how many of them obviously featured a woman of color. About a third appear to feature a woman of color—this is in stark contrast to Genevieve's website which rarely references race, rarely if at all features women of color, and does not address the unique challenges women of color face. The deck even includes one card that features a heavily pregnant woman wearing an African head wrap, she is on a beach with a dolphin jumping from the ocean and a mountain visible on the beach behind her. Her face is as symmetrical and delicate as a Disney princess, including pink nail polish and lipstick.

Figure 5.2



Despite the variation in colors used for the skin of the women in this deck—they all have remarkably similar and generically beautiful faces – wide-set eyes with pointed chins and pink lips. It is almost as if the same woman has changed her skin color with her clothes, perhaps shortened her hair or changed the color. The "diversity" is barely skin deep. It does not extend to variation in body shape, point of pregnancy, attractiveness. A woman's color is reduced to another form of decoration. This inclusion does not honor or speak to how this shapes identity and makes her pregnancy distinct from white women.

Figures 5.3, 5.4, 5.5, & 5.6



As mentioned, two cards feature no women at all – instead animals nestling with a baby. Two cards feature a woman's outline only – notably the cards that affirm "My body was designed to do this" and "I know I can birth this baby naturally." For these two affirmations – which affirm and emphasize a natural childbirth is within any woman's grasp—any facets (other than gender) such as skin color or dress have been stripped away—so that any woman could look at the card and see herself. Only two of the cards feature women with romantic partners – in both instances the partners are male and white. One card portrays a woman giving birth in a tub while an attendant—a woman of color —supports her. Faith references trickle in and out throughout the deck, with comments about a "Creator," "the Divine," and "G-d."

5.4.2 Representation and selective speaking out

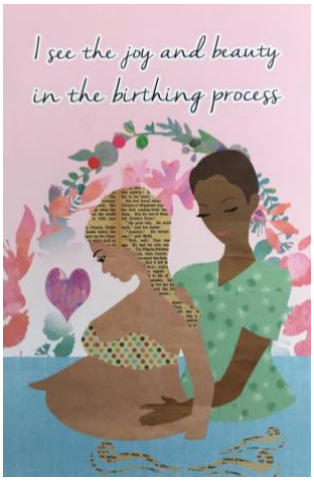
These issues of representation within this case—insensitive portrayals of women of color, only featuring heterosexual partnership—may be dismissed or discounted for reasons of intent or ignorance on the part of the creator. However, a common complaint within the natural birth community members and leaders contained within this case—a criticism articulated by Ina May Gaskin, echoed by *The Business of Being Born,* Jackie Mize and Genevieve on Mama Natural—is the representation of birth in mainstream media. Genevieve knows "how powerful media can be in influencing a generation" (Buy a book & change the world). Genevieve points out "Few labors actually begin with spontaneous water breaking (although you'd never know it from watching TV)" ("Understanding the Stages of Labor," 2017). In a different post, she says "Unfortunately, for most women, the majority of what they know about childbirth comes from Hollywood depictions of a screaming, hysterical woman in stirrups on a metal table" (Which Birthing classes are best for you). Jackie Mize attributes fears of

childbirth to “what mamma, grandma, television, movies, and books have portrayed. In most movies when we see the woman having a baby, she either dies or is in such tormenting pain that she wishes she could die” (1995, p. 49).

This community is sensitive to the “misrepresentation” of the childbirth experience and how it can cause women to internalize the inaccurate portrayal and feel real fears from this misinformation. The text on the back of the card depicting a white woman giving birth in a tub with a woman of color attending her reads “While Hollywood would try to convince us otherwise, there is incredible beauty and joy in the birth process.”

In the sole appearance of a woman giving birth in this deck of cards—it is a white woman, connecting with “the most intense, sacred, and primal experience of [her] life” while a woman of color attends to her in the water (usually considered more natural). This is an image containing a thousand words about this community—birth is not a medical experience but it is also not exactly an everyday experience, it is magic and spiritual and otherworldly.

Figure 5.7



5.4.3 Beneath the surface—a danger of responsibility

The criticism I have lobbied at the phrase "good nutrition" calls to mind the missing context surrounding how many politicians talk about the poor, "if they would just work hard," without mentioning that many of them do work—very hard for very long—at very low-paying jobs that do not treat them with dignity or grant them the basic "benefits" such as affordable health insurance. Good nutrition is not easily accessible, due to systemic and structural oppression.

However, even if a woman is able to practice "good nutrition" during her pregnancy, what is that supposed to mean? In *Nourishing Traditions*, the author speaks about "our God-given genetic inheritance of physical perfection and vibrant health" (Fallon, 1999, p. xii) and instructs readers about how their diets support or compromise this "inheritance." The linking of food consumption into conditions recalls the saying "you are what you eat," but extends it to one's offspring. If you eat crap, your children will be lackluster and suffer maladies. Your diet must be carefully calibrated to ensure you are at peak health when you try to conceive and as you carry your child.

This is borne out in numerous posts from Genevieve and she provides anecdotal evidence of its efficacy with photos of her two smiling children. Sally Fallon, the author of *Nourish Traditions*, also makes a point of telling the readers of she is the "mother of four healthy children" (1999).

This is a dangerous rhetoric that infers we can shape our children's health entirely through control of our consumption and our environments. Humans, though capable of many incredible things – are not capable of this. Additionally, if we suggest that our children's health

boils down to “good nutrition” or other related factors, and entirely within our control – we remove empathy for those who suffer misfortune—after all it was within their control. They just needed to have good nutrition. In this worldview, the suffering of a child is a result of the failings of the parent.

This is evident in how Genevieve approaches misfortunes. When her son developed eczema, she took it as a personal affront to her parenting and painstakingly reviewed environmental and nutritional factors within her control. This incident is revelatory in understanding why Genevieve has chosen not to vaccinate her children and why she would probably identify as “vaccine-avoidant” rather than anti-vaccine. In Genevieve’s worldview, vaccines are not necessary as long as one practices “good nutrition.” In this worldview, vaccines are just another technological modern convenience, marketed as superior but actually an inferior good.

Placing this kind of pressure on parents, but particularly on women is exceedingly dangerous. On the level of the individual, there is the potential for acute emotional suffering—no matter what there is always “more” she could have done for her child. At an aggregate level, placing such a high onus on women—and it must be said that this is largely placed on women—threatens a woman’s ability to have an identity outside of mothering. The author of *Nourishing Traditions* does not view this as a negative:

> When a woman stays at home and cooks with good judgment and understanding, she watches with satisfaction as her children grow up capable and strong and her husband maintains the good health and disposition that allow him to succeed in his work. She also maintains her own good health into middle age, the period of her life when, her family duties accomplished, she can plunge vigorously into meaningful work and community service in order to bring peace and happiness to the world, while her husband, retired with satisfaction from a successful career, supports her endeavors and cooks with good judgment for her (Fallon, 1999, p. 433)

This paradigm helped Fallon achieve her desires and Genevieve is following a similar pursuit. However, what neither discusses is that they *chose* it and what it would mean if this had not been their choice.

5.4.4 Ableism

The anti-vaccine or vaccine safety movement's focus and desire to establish a relationship between ASD and vaccines is a fascinating and bedeviling goal. As of this writing, ASD has no known etiology. As scientists across the globe search for a cause, they have also spent much time and resources evaluating this claim – and have not found any evidence to suggest it is true ((Chen, Landau, Sham, & Fombonne, 2004; Clayton, Rusch, Ford, & Stratton, 2012; Farrington, Miller, & Taylor, 2001)(Chen, Landau, Sham, & Fombonne, 2004; Clayton, Rusch, Ford, & Stratton, 2012; Farrington, Miller, & Taylor, 2001). It must be acknowledged that there is a savviness to claiming vaccines, EMFs, and other trappings of modern life cause conditions like ASD because when met with the response, "there's no proof," they can always respond "not yet." Instead of another discussion of the lack of evidence for this damaging and destructive claim, it is time to address the deeper harm underpinning it—that Autism Spectrum Disorder is an injury and leads to a lesser quality of life than life without ASD.

The excessive focus on child-bearing and child-rearing choices and future health outcomes is troubling. This emphasis portends poor life outcomes for those with those conditions and often sets up false equivalencies between associations and risks of performing or not performing a behavior. A diagnosis of asthma does not mean a child cannot live a full, robust, fulfilling life. The same goes for any number of the conditions cited as reasons to avoid

or eliminate or consume a laundry-list of items. This sets physical health as the standard or norm by which happiness and success are measured.

Physical health should not be a proxy metric of one's life choices (or the choices of one's parents). In *Nourishing Traditions*, Sally Fallon describes the 14 groups studied by Weston A. Price as "free of chronic disease, dental decay and mental illness; they were strong, sturdy, and attractive; and they produced healthy children with ease, generation after generation" (p. xi). According to Fallon

> Children born to traditional peoples who had adopted the industrialized diet had crowded and crooked teeth, narrowed faces, deformities of bone structure and susceptibility to every sort of medical problem. Studies too numerous to count have confirmed Dr. Price's observations that the so-called civilized diet, particularly the Western diet of refined carbohydrates and devitalized fats and oils, spoils our God-given genetic inheritance of physical perfection and vibrant health." (Fallon, 1999, p. xii)

This belief – that chronic disease and mental illness are symptomatic of life choices, particularly modern technology and innovation—ripples throughout the natural lifestyle and parenting community. According to Fallon, Price found evidence certain foods "promoted the beautiful bone structure, wide palate, flawless uncrowded teeth and handsome, well-proportioned faces that characterized members of isolated traditional groups" (1999, p. 16). Jarvis (1981) described Price's findings as "A classic example of an apparently well-intentioned but misguided application of the myth of the healthy savage" (p. 21). Jarvis posits Price's "data is of questionable value because of the obvious view he entertained about the healthy savage" (Jarvis, 1981, p. 21). The lack of dental decay—cavities—that Price observed? Jarvis (1981) reviews several studies that found much lower rates in individuals suffering from **malnutrition**.

There are several disturbing ideas within this belief, besides the flawed evidence from which it was constructed. First, if health status is determined by one's choices, our health is in

our own control and we are "choosing" choices that make us sick, and we could "choose" choices that would make us well. By endowing us with control over our own health, we are also "responsible" for our own ill-health. Second, there is an assumption that life with a chronic condition of any kind profoundly limits one's ability to live a meaningful, fulfilling, happy life. A diagnosis of autism spectrum disorder is not a death sentence. Life with anxiety or schizophrenia is not a death sentence. Life with an autoimmune disorder is not a death sentence. Asthma, food allergies, eczema—these do not need to define a person's life. Constantly presenting these conditions as the result of behavior implies that we can control our health and that life with them is less desirable. This is ableism. If your health is within your grasp—within this worldview—you are denied validity and agency in accessing care, because if you made different choices you would not be suffering. You are also denied power because your health status is seen as less-than someone without your condition. Sarah Kurchak, an autistic woman writing for *Archipelago* calls out the antivaccination movement and its members for "dehumanize[ing] me as an autistic person" (Kurchak, 2015). But the pro-vaccine movement is also guilty of this. Kaylene, the author of the blog *Autistic Mama*, writes

> On the flip side, I've seen those who are pro-vaccine say things like, "There's no reason not to vaccinate your kids, vaccines don't cause autism". Here's what's wrong with that statement. It implies that if vaccines did cause autism, you would be perfectly fine with the population at large refusing vaccinations to avoid autism. Either way you look at the way this myth is portrayed in the vaccine wars, it's ableist, gross, and wrong. So please, just stop. You're not helping the autistic community at all (2016).

5.5 Researcher reflections

Any study involving qualitative interpretation deserves an examination of how the researcher's experiences, biases, and assumptions have shaped the research. I have organized

my reflections into a section on the role of faith in this worldview, and conducting research in the area of parenting and pregnancy without being a parent or having experienced pregnancy.

5.5.1 Faith, Spirit, Christianity

From my early examination of Mama Natural, I was aware of her faith. She mentions prayer, her relationship with a higher power, and church attendance with regularity. I knew she was a Christian of some denomination – though she had never made it clear what kind—and noticed the crucifix on the wall in some of her videos. She also often wears a cross necklace. I initially treated the role of Genevieve's faith very gingerly. Based on her blog, it was not clear to me if faith played a starring role in cases other than Genevieve's. I found it rather odd that she never clarified what denomination of Christianity she identifies with (across 7 years of videos and blog posts, I do not recall encountering this), though I sometimes wondered if she was a Catholic (she has mentioned an Aunt who is a nun and the house has a crucifix).

I considered that perhaps one's denomination is perhaps not so important outside of the Bible Belt and that I was allowing my own experiences too much influence. As someone who is not a Christian, I do not have knowledge of this—how Christians communicate what kind of Christians they are. It occurred to me that this information is perhaps more important for Jews —the adjectives Jews use to describe their Judaism, such as Orthodox or Sephardic, have significant implications for their ritual and spiritual practice. I also considered that most Jews only communicate this to one another, as it does not really hold relevance for non-Jews.

Since I am not a Christian, I did not always trust myself to interpret the role of faith in this case. I do not have extensive, or even minor, knowledge of the Christian faith. Growing up as one of very few Jews in a small town in the Bible Belt, most of my experiences with Christians

involved proselytizing and learning when new "friends" were actually befriending me with the intention of converting me (this happened well into my teens). My bias has become detecting Christian undertones, and at times I wondered if they were there and how much their presence mattered. I also cannot say those undertones are uniquely Christian. Redemption and healing through belief and adherence to a lifestyle are common among numerous faiths.

I did not include some of my interpretations about this facet of Genevieve's life because of these biases and concerns. I think the crossover of faith and the natural lifestyle warrants a broader investigation. While it was an element in this case and appeared in multiple evidence streams, I did not find enough evidence to feel confident to understand and describe its role in this worldview.

5.5.2 No kids, no problem

I do not have children and I have never experienced pregnancy or parenthood. Others, upon hearing my research topic, have commented about this. I had some hesitations, wondering if I could truly understand some of the realities of this world without having these life experiences. Instead, I felt quite the opposite during most of the data collection and analysis, "thank goodness I don't have my own experiences to draw upon!" Many of Genevieve's parenting and pregnancy recommendations were clouded in language that implied judgment and danger if one did not follow them. Because I have never been pregnant, given birth, or parented, I never felt like I had to defend my own decisions or question my choices. To borrow Genevieve's language, this research did not reopen any "mama wounds" for me. Not having my own experiences also meant that I could not internally discount what Genevieve said

with “that’s not what happened to me.” It was much easier to think of myself as many of her readers probably are—women experiencing pregnancy for the first time.

I have questioned if my lack of personal experiences with child-rearing made it difficult or impossible to empathize with or understand some of Genevieve’s choices. There were times I struggled greatly with anger toward some of the I data collection, particularly recommendations about selecting doctors and hospitals for childbirth. During conversations with the midwife I interviewed, I came to realize how my lack of direct experience had resulted in undue harshness. This resulted in reexamination of data and some revisions.

5.6 Future work and final considerations

5.6.1 Theoretical implications

My theoretical findings have expanded our understanding of the mediator in Fleck’s thought collectives and how non-visible stigma is managed in everyday life. Future work in this area could examine the relationship between the different actors more closely—particularly individuals at the center of the thought collective. Additional research is also needed to discern if thought collectives can explain other forms of non-visible, ideology-based stigma.

5.6.1.1 Future work with Information Poverty

My theoretical findings suggest researchers should be cautious when applying Chatman’s Theory of Information Poverty to groups experiencing manageable stigma, particularly groups whose stigma comes from performing behaviors rather than embodying stigmatized characteristics. Future research could try to assess if this is a true limitation to Information Poverty or unique to this context.

This research also underlines the problematic name and nature of Chatman's theory. To label someone "information poor" assigns them an inferior status and the label is typically applied by someone occupying the superior one, exacerbating the distance between them rather than improving the circumstances. The very name, information poverty, is only accurate in the eyes of those who do not meet its criteria and reflects their privilege, the assignation of that name can be viewed as an expression of their power. While the theory still holds useful constructs and propositions for the study of information behavior, it may be time to consider a name that does not aid the stigmatization and marginalization of the communities it seeks to understand.

5.6.1.2 Everyday Life Information Seeking

Fleck's theory of thought collectives has vast potential applications in the realm of Everyday Life Information Seeking (ELIS), particularly when explicating discovery. My case, Mama Natural, pursued an interest in a healthy lifestyle which then extended to non-medicated childbirth and natural parenting. Her interests led her deeper into the natural lifestyle and exposed her to numerous related behaviors, not all of which she adopted. Her participation in and pursuit of this lifestyle facilitated an exploration of everyday life information. Thought collectives described this journey and should be considered in future work about serious leisure. For example, the world of crafting includes numerous modalities that are interrelated by shared tools, supplies, and techniques—in pursuing cross-stich needlepoint, one becomes tangentially familiar with embroidery, which may lead to sewing, quilting, knitting, crochet, among others.

5.6.2 Information implications

This research has serious implications for information providers, libraries, and the individuals who create and maintain their services. We can no longer create collections and information retrieval tools that trust seekers to make their own judgment about problematic materials. I do not imply a lack of trust for the seekers' judgments. Rather, by including materials such as Dr. Sear's *The Vaccine Book* without any context for why they are included, their inclusion in a collection means we are allowing problematic materials to capitalize on the authority and trust individuals place in libraries and legitimizing these materials. We need to consider more accessible ways of cueing that material is grounded in scientific evidence or included in a collection for other reasons, such as popular demand. We also need to reckon with the flaws of our "authoritative" tools, such as PubMed—where it is all too easy to find anti-vaccination "science."

In addition to information service providers, health care providers must begin to reconcile with the variation of opinions available within their own communities—particularly for "experts" who profit from disagreeing with accepted policy and protocols. However, this is not just a fringe problem on the Internet. Throughout this research, there were numerous points across **all** evidence streams instructing parents how to choose practitioners and hospitals. The underlying message is clear—the provider determines the experience and what is "allowed." For example, some pediatricians will not treat anyone who deviates from the immunization schedule for non-medical reasons, others will treat regardless of immunization choices. Within specialties there are contradicting behaviors—this worsens once parents begin comparing experiences between providers from different specialties and perspectives.

This call to action extends to purveyors of information online. The CEO of YouTube, Susan Wojcicki, called the platform "more like a library in many ways, because of the sheer amount of video that we have, and the ability for people to learn and to look up any kind of information" and said the service would try adding a "companion unit" to common conspiracy theories (Thompson, 2018). While those are a dangerous and extreme vein of YouTube content, the lack of interest on Wojcicki's part in evaluating educational content should raise more eyebrows. When asked if there is a system for evaluating the quality of advice available, Wojcicki replied "there's not a lot of incentive to not do the educational part correctly" (Thompson, 2018). I cannot disagree more—there are immense incentives to provide incorrect, flawed, problematic "educational" content. YouTube is a platform that pays providers based on views, not on the accuracy or quality of their content. Providers are rewarded for holding attention—not for educating individuals. This creates a system ripe for exploitation of individuals willing to create "educational" content. As long as it garners views, they are doing it "correctly."

5.6.3 The limitations of fact-checking and information literacy

In the current zeitgeist where problematic information can spread rapidly by exploiting cognitive biases and algorithmic flaws, many solutions have centered on fact-checking and improving information literacy. Both are important concepts to combat this issue, but they are limited. Fact-checking is the foundation of quality journalism, but it relies on a shared worldview. Some facts or truths do not travel as well as others. The facts that undergird the assertion that vaccines are the most safe and effective intervention to prevent certain diseases will not "check out" for everyone. Fact-checking has value, but to suggest we can correct or

modify deeply held personal beliefs by sharing a few choice facts overestimates the power of information and underestimates the human condition.

The concept of information literacy faces significant challenges, perhaps more so at this time than any other. The American Library Association's standard makes no mention of misinformation or problematic information and focuses on cultivating autonomy within students ("ALA | Information Literacy Competency Standards for Higher Education," n.d.). In many ways, Mama Natural is extremely information literate, based on the standards,

> Determine the extent of information needed
> Access the needed information effectively and efficiently
> Evaluate information and its sources critically
> Incorporate selected information into one's knowledge base
> Use information effectively to accomplish a specific purpose
> Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally ("ALA | Information Literacy Competency Standards for Higher Education," n.d.)

but her conclusions or what she used the information for result in her being labeled misinformed. These standards are not enough. They rely on an understanding of relevant and irrelevant information, good and bad information. Like fact-checking, they only work well within a shared worldview. They cannot absorb someone using these very skills to choose information labeled "bad" on purpose. Like fact-checking, information literacy needs to grow into a tool that can accommodate diverse worldviews while maintaining integrity to the pursuit of knowledge.

5.6.4 Reflections on authority and privilege

Distrust of authority and assumption of privilege are recurring themes in discussions of vaccination behavior. Research generally focuses on distrust of traditional sources of authority without examining what is instead considered authoritative by these parents. Future research in this area must connect authority and privilege. Lots of communities and individuals distrust

various authorities for numerous reasons on many issues. In vaccination behavior, however, there is a distinct subset of parents who question or distrust traditional sources of authority, such as Western physicians and governing institutions, and have the privilege to act in defiance of these authorities' recommendations—without severe repercussions. Future discussions must consider how privilege shapes interaction with and perception of authority. This research also suggests that we must consider privilege when creating recommendations and instruction for interacting with authority. Just as Genevieve's privilege protects her when she deviates from doctors' recommendations, a woman without her privilege might have a drastically different experience. If we do not acknowledge that privilege has this power, we are complicit in the continued negative interactions suffered by those with less standing.

5.6.5 Vaccination—the pregnancy and childbirth connection

Based on this research, parents' attitudes, ideas, and beliefs surrounding vaccination begin to form during pregnancy and childbirth. Interventions targeted at increasing vaccination rates need to take this into account—particularly how negative and unanticipated experiences during this period influence future encounters with the healthcare system. This begins by acknowledging certain anti-vaccination beliefs we dismiss as conspiracy theories are relevant and truthful components of some women's childbirth experience. While vaccines are not a money-making venture for physicians, every intervention during the childbirth experience adds to the cost of the event. While vaccines are evidence-based, there is a long, unsettling history of pregnancy and childbirth protocols that are not—even worse, those protocols often resulted (and may still) in a traumatic loss of autonomy for women.

Vaccine avoidance and delay has sometimes been attributed to the belief that vaccines are mandated for financial gain, not preventative care and that the schedule is not individualized for each child (Gottlieb, 2015). This belief may build from certain experiences during pregnancy and childbirth. In a post titled "Home Birth: Is it Safe?" Genevieve writes "Hospitals are businesses that need to function profitably. Birth is sometimes slow and always unpredictable" ("Home Birth: is it safe? | Mama Natural," n.d.) In this selection, birth is a process that needs to be adapted to suit the needs of the hospital's bottom line. Genevieve also warns readers "physicians and other healthcare providers are paid for the services they render, which means that they don't get compensated for keeping people well" ("What Does Birth Cost in the U.S.?," 2015).

In a post "What does birth cost in the U.S.?" Genevieve emphasizes the financial difference between midwifery and hospital births, pointing out that with a midwife "you usually have to pay for extra interventions out of pocket but this also means you aren't forced to pay for things you don't want or need" compared to hospitals where

> you (or your insurance company) are forced to pay for things like: hospital grade personal care products, hospital logo merchandise, parenting DVDs and pamphlets, disposable diapers, formula, etc. That's why the nurses load you up with 'free' stuff when you leave, because you've already paid for it ("What Does Birth Cost in the U.S.?," 2015)

Physicians and hospitals must consider how their treatment of women in these vulnerable moments—particularly the denial of agency and individualization—threatens overall trust in healthcare providers.

5.6.6 What else are they avoiding?

I think the greatest contribution of this research is expanding the conversation around vaccine avoidance. Vaccine avoidance is part of a lifestyle and embedded between other behaviors. Because this is part of a lifestyle we must consider how this behavior may be passed through the generations and what this means for vaccine avoidance.

5.6.7 Moving forward—together?

Genevieve as Mama Natural is absolutely part of larger movements and other communities as she tries to build her own. While she is at times a problematic figure, not everything she lobbies for should be dismissed. She rarely acknowledges how her privilege and accompanying power are not enjoyed by all parents and parents-to-be—explorative introspection need not be public—but its lack is felt when issues and experiences outside of her own are consistently ignored or downplayed. This means that her advocacy, her community, and her movement are somewhat constrained. These components were designed from the experiences of a partnered, privileged, economically comfortable, straight, cis, Christian woman whose two pregnancies were planned. Not incorporating other experiences—particularly those that are from less privileged and powerful vantage points—weakens the message and threatens those who are missing. It is important to decrease fear of non-medicated childbirth, stigma around breastfeeding and miscarriages, among many other preferred issues Mama Natural (and the digital natural lifestyle community favor). However, if Mama Natural wants to start a movement, wants to effect meaningful change in pregnancy and childbirth health care practices, she must address the unpleasant and much more pressing realities—which women are dying in childbirth and why?, what if you live in a place where there are no providers to

choose from?, what if you are unable to access good nutrition?, among many others. It is not enough to provide women with (limited) information. Without addressing the structural and systemic factors that lead to these outcomes and everyone who is touched by them, her work will be incomplete.

APPENDIX A—ARTIFACTS

CREATED

1. Genevieve's book
2. Genevieve's email handouts
3. Genevieve's affirmation cards
4. Bracelet
5. Genevieve's birth course

ENDORSED

1. *Nourishing Traditions* by Sally Fallon Morell – a cookbook and polemic of sorts that Genevieve references quite often. She also featured the book in IRL38 (check) this book changed my life.

2. *Supernatural Childbirth* by Jackie Mize – another book Genevieve mentions repeatedly and whose language she has absorbed, often encouraging women to have a supernatural childbirth.

3. *The Sears Book on Vaccines* by Dr. Robert Sears – in a now unavailable post Genevieve mentions this book as guiding her decision not to vaccinate her children. She also includes it in her list of top parenting books.

4. *Spiritual Midwifery* and *Ina May Gaskin's Guide to Natural Childbirth* by Ina May Gaskin – Genevieve referred to Ina May Gaskin occasionally and referenced the latter book. Gaskin is a popular figure within the natural childbirth movement and is featured in the documentary *The Business of Being Born.* I read the first book because it is a "classic" and I felt I needed to read it to understand the second book.

5. *The Business of Being Born* – Genevieve mentions this documentary as influencing her decision to pursue a natural childbirth

APPENDIX B—BLOG POST DATABASE ENTRY FORM

MNB Calla

Start of Block: Default Question Block

Q1 Blog Post Data Collection Form

Q2 Blog Post Title

_____

Q3 Blog Post Link

_____

Q4 File name of post (Type File Name, format BriefName.Date)

_____

Q5 How did MN tag the post?

- ☐ Baby (1)
- ☐ For You (2)
- ☐ Parenting (3)
- ☐ Pregnancy (4)
- ☐ No tags / unclear (5)

Q6 Abstract of post

_____

_____

_____

_____

_____

Q7 Does this post have a video?

- Yes (1)
- No (2)

Q8 Does she reference other MN posts?

- Yes (1)
- No (2)

Q9 Numbers

- ○ Comments (1) _____
- ○ Shares (2) _____
- ○ Sources cited (3) _____
- ○ Genevieve Comments (4) _____
- ○ Team MamaNatural Comments (5) _____
- ○ MamaNatural Comments (6) _____

Q10 Estimated date first published

- ○ Year (1) _____
- ○ Month (2) _____
- ○ Day (3) _____

Q11 Does this post link to products for purchase?

- ○ Yes (1)
- ○ No (2)

Q12 What products are recommended?

_____

_____

_____

_____

_____

Q13 Does this post cite outside information?

- ○ Yes (1)
- ○ No (2)
- ○ Unclear (3)

Q14 Information Used/Cited by MN (C&P as neat a list as possible)

_____

_____

_____

_____

_____

Q15 Qualitative Memo Space

_____

_____

_____

_____

_____

Q21 Methodological notes

_____

_____

_____

_____

_____

Q16 Revisit this post for deeper analysis?

- Yes (1)
- No (2)
- Maybe (3)

Q17 Rationale:

_____

_____

_____

_____

_____

End of Block: Default Question Block

APPENDIX C—GENERAL MEMO COLLECTION FORM

General Memos

Start of Block: Default Question Block

Q1 General Memos

Q2 Date (MM/DD/YY)

_____

Q4 Memo tags:

_____

Q3 Memo Space

_____

_____

_____

_____

_____

End of Block: Default Question Block

APPENDIX D—COMMENT COLLECTION TOOL

Comment Collection Aster

Start of Block: Default Question Block

Q1 Post Title

_____

Q2 Post Link

_____

Q3 Comment MN is responding to

_____

_____

_____

_____

_____

Q4 MN's response

_____

_____

_____

_____

_____

Q5 Highlight this comment for further analysis?

- ○ Yes (1)
- ○ Maybe (2)
- ○ No (3)

Q6 Qualitative memo space

_____

_____

_____

_____

_____

End of Block: Default Question Block

APPENDIX E—ORIGINAL MAMA NATURAL PAPER

Samantha Kaplan | INLS690 | Term Paper

Manifesting Trustworthiness and Credibility While Endorsing Stigmatized Viewpoints: A Case Study of Mama Natural

Introduction:

In recent years, the United States has seen a resurgence in disease outbreaks for illnesses previously thought eradicated or contained in part by adherence to the recommended immunization schedule for children. Fingers have been pointed at the growing number of parents who are declining to vaccinate their children by exercising their right not to (this right varies from state to state). While many attribute this decision to the falsified article by Andrew Wakefield that claimed a causal relationship between childhood vaccinations and Autism Spectrum Disorder (ASD), the literature reveals a more complicated relationship between parents and vaccines.

Initially, my interest was grounded in understanding why parents choose not to vaccinate. However some of the vicious comments I heard directed at parents who chose not to vaccinate their children sparked sympathy within me for this community and altered my research interest. Considering these parents have made a choice widely stigmatized and not endorsed by the scientific and medical communities, the government, and much of mainstream society, I began to wonder if their information seeking behavior was somehow different from the individuals who support vaccination. Specifically, if they do not trust the opinions of the communities mentioned above, what information sources do they trust? How does a source appear credible and trustworthy to them? To begin to understand this, I decided to evaluate an information source that did not support vaccination in the form of a personal blog. I found Mama Natural via serendipity when she appeared in a video with a blogger I follow for personal

enrichment. She sparked my interest enough that I went to her blog. I searched for "vaccines" on it and found a post where she discussed in great detail her decision not to vaccinate either of her children. Because of her articulateness and transparency about information sources consulted, I considered her ideal for this research question.

Literature Review:

Studies of this population have found these parents are seeking balanced information (Bond, Nolan, Pattison, & Carlin, 1998; Fitzgerald & Glotzer, 1995; Flaherty, 2013; Guillaume & Bath 2004; Gullion, Henry, & Gullion, 2008). Part of the information need for balance arises from a perceived bias or conflict of interest in doctors' endorsement of vaccines (Bossaller, 2014; Guillaume & Bath, 2004). Bossaller found "doctors and scientists recommendations were tainted by their affiliations with insurance and pharmaceutical companies" in online comment sections, but also that the commenters considered doctors "under the control of the government" (2014). Shurtleff reported that trust in vaccinations themselves, not just providers, does appear to be decreasing (2009). If parents have less trust in health providers, it is important to ask who they trust instead or trust more, particularly since Freed, Clark, Butchart, Singer, and Davis found that almost one in eight parents has refused at least one vaccine (2010).

This pervasive mistrust appears to send parents in a multitude of directions for information. In a group of 196 parents, Rochman reported 95 percent consulted a social network about their vaccination decision and 72 percent had a friend or family member tell them to ignore the Center for Disease Control's recommendations (2013). Parents in this population place a high value on personal experiences and consider anecdotal information authoritative (Bossaller, 2014; Freed, Clark, Butchart, Singer, & David, 2010; Rochman, 2013).

Considering the Internet's ability to deliver a virtually limitless amount of anecdotal information, these information channel choices should be taken very seriously.

Further, information literacy issues abound. Many parents struggle to understand some of the scientific concepts that govern vaccine administration (Bossaller, 2014), such as the immunization schedule (Luthy, Beckstrand, & Callister, 2010). Parents also do not understand susceptibility to the diseases for which their children are being vaccinated (Kennedy, Brown, & Gust, 2013; Smith, Chu, & Barker, 2004).

Parents in this population also have very strong feelings about when they should receive information about vaccines from their doctor. In a sample of 225 parents from three healthcare provision settings, 46 percent of parents thought the information should be provided during the visit before the immunizations, and 22 percent of parents thought the information should be provided at the child's first visit with the provider (Fitzgerald & Glotzer, 1995). Overall, 68 percent of those parents did not think the appointment to receive the immunizations was the best time to receive information about the immunizations (Fitzgerald & Glotzer, 1995). Taken with other findings about information seeking behaviors in this population, it appears that members of this population want to verify or triangulate the information they receive from their doctor with other sources, both digital and face-to-face, and want the time to do so.

Shurtleff found that objectors were more likely to be upper middle class, married, educated and white (2009). Additionally, Kirkland examined the leaders of prominent vaccine-critical groups and found them to be middle to upper middle class, white, and hold college degrees (2012). However, these findings should not automatically be considered representative and authoritative about this population, as Freed, Clark, Butchart, Singer, and Davis found black

parents were more likely to have refused a vaccine (2010), and Kennedy, Brown, and Gust reported that parents with lower incomes were less likely to vaccinate (2013).

Davies, Chapman, and Leask found that most anti-vaccination websites are not scientific but are packaged to appear credible (2002). Understanding this credibility will be the focus of this work.

Research Questions:

Given the research findings that an increasing amount of parents do not trust traditional sources of authoritative knowledge – such as doctors and scientists, place confidence in personal connections, and seek information about vaccination online, there is a need to understand trust and credibility in online information environments. Considering that information websites that do not support vaccination are espousing a viewpoint not endorsed by the scientific or medical communities, and directly flouts government regulations – **but are increasingly accepted as authoritative sources** – understanding how these sources manifest trustworthiness, credibility, and authenticity necessitates study. This paper will attempt to answer this research question; how do websites that endorse stigmatized viewpoints, such as the decision not to vaccinate appear credible, trustworthy, and authentic.

Methodology:

To understand this phenomenon I proposed to do a case study of a blog, "a specialised website that allows an individual or a group of individuals to express their thoughts, voice their opinions, and share their experiences and ideas" as defined by Tan, Na and Theng (2011) that does not endorse vaccination. I used quantitative and qualitative content analysis methods to analyze the media.

Why Mama Natural?

Mama Natural ranks within the top 30,000 websites in the United States, according to Alexa.com (2015). On her website, Mama Natural, also known as Genevieve, states having over 25,000 readers signed up for her weekly email (MamaNatural.com, 2015). Mama Natural has also exercised her religious right not to vaccinate her two children within the state of Illinois (Mama Natural, 2014)

Data Collection

I read over 220 blog posts and watched over 130 videos that were embedded within blog posts as part of the content analysis. I read the posts from most recent to least recent. All of the posts were made between October 31,2013 and April 16, 2015.

Content Analysis

For the quantitative component of the content analysis, all of the blog posts were read for:

- If they explicitly quoted other sources, and which source types (scholarly, mainstream news, niche news, organizations, reference sites, an individual's site, or Mama Natural's Facebook Group)
- The tag Mama Natural applied to catalog them (Pregnancy & Childbirth, Quizzes, Giveaways, Mama's Family, Relationships, Products & Reviews, Health & Fitness, Babies & Kids, and Food & Nutrition). Mama Natural rarely applied dual tags.
- Whether the posts contained a video
- Whether the posts contained a demonstration component (video or photo)
- The real-life application of the post (Consumption, Topical, Sensory, Activity, Other, Personal Experience)

Prior to beginning the coding, I read 5-10 of Mama Natural's posts as well as her introductory pages, such as her About pages, to generate preliminary codes. Additional codes emerged during the data collection based on common themes identified in the qualitative memoing of the first 5-10 posts read. As the study was grounded in understanding how Mama Natural appeared credible and trustworthy, I was most interested in whether she cited outside sources in a post. I only marked posts "Yes" for citing outside sources if she provided links within the post's text. I categorized the sources based on traditional source types (Scholarly captured sources like PubMed and the journal Pediatrics; Mainstream News referred to *The Guardian* or *USA Today*; Niche news captured sites that had a focused frame, such as Natural News; Organizations was used broadly for items from government to trade associations; an individual's site was tagged any time Mama Natural cited another individual's blog or book; any time she included quotes from her Facebook group I tagged as from Mama Natural's Facebook Group. I realized many of her posts featured videos and decided to create a coding category for that aspect, as well as whether the posts featured a demonstration (video or photographic) component to understand how often she visibly showed her readers how to do something. Her posts were sometimes anecdotal (about her life and family), but were sometimes topical as well, perhaps endorsing a particular habit, like using essential oils. This necessitated the creation of a category composed of what the blog post's real life application appeared to be (many Consumption posts were about foods Mama Natural endorsed or did not endorse; Topical posts covered items Mama Natural suggested applying to the skin; Sensory referred to posts whose application was targeted at how reader saw or smelled (such as Mama Natural's series on Essential Oils); Activity posts captured concepts like breastfeeding and cosleeping;

Other was primarily used for items like Mama Natural's quizzes, and Personal Experience was used for Mama Natural's vlogs about her everyday life.

In addition to this notation, a brief memo (from two to three hundred words) was composed about each blog post evaluated. Some blog posts' content was not quantitatively analyzed but was subjected to qualitative memoing. Memoing was intended to help the researcher "dig into implicit, unstated, and condensed meanings" (Charmaz, 2014, p. 180).

Findings:

I analyzed 222 posts for the quantitative content analysis and wrote 235 brief memos about Mama Natural's blog. From the quantitative content analysis component I learned the following:

TABLE A

Outside Sources Referenced

Yes	No
58 (26.1%)	164 (73.4%)

Outside Sources Referenced by Type (of 58/26.1% of posts citing outside sources)

Scholarly Source	Mainstream News	Niche News	Organization	Reference	Individual's Site	MN's Facebook Group
20 (34.5%)	9 (15.5%)	20 (34.5%)	22 (37.9%)	15 (25.9%)	27 (46.6%)	9 (15.5%)

Tags Applied By Mama Natural

Pregnancy & Childbirth	Quizzes	Give-aways	Mama's Family	Relationships	Products & Reviews	Health & Fitness	Babies & Kids	Food & Nutrition
37 (16.%)	5 (2.2%)	2 (.9%)	88 (39.6%)	1 (.5%)	10 (4.5%)	11 (5%)	35 (15.8 %)	37 (16.7%)

Video

Yes	No
138 (62%)	84 (38%)

Demonstration Component

Yes	No
31 (14%)	191 (86%)

Application

Consumption	Topical	Sensory	Activity	Other	Personal Experience
45 (20%)	14 (6%)	4 (1.8%)	31 (14%)	30 (13.5%)	98 (44%)

Discussion:

Over a quarter of Mama Natural's posts from the period of analysis cite outside sources (sometimes Mama Natural cited a source but did not provide a direct link, which was not counted). This suggests parents who do not vaccinate their children are not doing so because they are ignorant of the reasons to do so. Further, of those posts citing outside sources, over a third (34.5%) cited scholarly sources such as PubMed or the journal Pediatrics. Not only is Mama Natural reading the scholarly literature (when available) about the topics she discusses on her blog, but she is disseminating it to her audience. It is perhaps surprising that Mama Natural cites scholarly literature in one third of her posts that cite outside sources. It would be

easy to assume that because Mama Natural does not accept the scholarly literature about the benefits of vaccination, she does not accept any scholarly literature. Instead, her inclusion of scholarly sources suggests she is a highly discriminant reader and does include the scholarly literature in her evaluation process. Mama Natural did sometimes cite articles that mentioned studies, rather than the studies themselves. This could be for a number of reasons, but it is interesting to note that she trusted other information sources' knowledge of the studies enough to cite them, rather than the studies.

While nearly 75 percent of posts did not cite outside sources, this should not be interpreted as a reason to discount those posts. Many did not cite outside sources because they were not relevant to the topic, such as a recipe or a video of her child's developmental milestone. Additionally, these posts served to build relationships with the readers over time.

Over half (62%) of Mama Natural's posts include a video of her discussing the topic of the blog post. Sometimes, such as in her IRL (In real life) series, the video was the seminal focus of the post. In other posts, the video is a support, such as in her post titled "Why Eat Your Own Placenta?" which also includes an array of sources and content. Regardless of its focus, the videos help cultivate a personal connection to Mama Natural with their catchy titles (for example, IRL I'm Gonna Smash My Phone!, Mama Natural, 2014) and personal tone. Mama Natural regularly begins her videos with "Hey, Mama" and usually concludes them by asking the viewer a question related to whatever the video was about, which contributes to generating a relationship with her audience.

Personal experience was tagged for 44 percent of posts. Many of these posts featured Genevieve confronting or discussing aspects of her life, frequently via video. Having watched

138 of these videos, they regularly covered the full spectrum of life as a mother – the ups, downs, and unexpected. These posts also captured the competing norms of being a woman, such as Mama Natural's post about "Sex During Pregnancy: Everything You Need To Know" where she candidly discusses the desire to be sexual and sexually appealing, as well as perhaps being less interested in sexual intercourse due to pregnancy and concerned about sexual intercourse potentially endangering the fetus (Mama Natural, 2015). This issue of competing norms occurred repeatedly in multiple areas of Mama Natural's life, from her desire to be healthy as an individual to feeling responsible for her children's health, as well as discussing everyday life issues that were real but perhaps unpleasant, such as not enjoying a child's attitude one week. After viewing just a dozen or so of her videos, I felt a bond with her. Acknowledging these moments of not loving a child's action or struggling as a mother were profoundly authentic. I hypothesize that they resonate with other parents because of the realism inherent within them. I think it is specifically because they focus on the everyday rather than the extraordinary that Mama Natural is able to cultivate a community.

Another layer to the personal experiences Mama Natural shares is that she shares her entire life. Her children, her childbirth, her marriage, her diet, her home, et cetera, are all featured in her blog. Rather than a relationship limited to one purpose, readers can empathize with her via multiple channels. This cultivates authenticity both in immediacy and the long-term. Further, her candidness and rawness add to this authenticity. When she pauses to find a word during her In Real Life (IRL) series, or admits to disliking the Paleo diet (Mama Natural, 2014), she doesn't read off of a script (at least to this researcher's eye) which creates a much

more intimate tone. It is this intimate authenticity that perhaps engenders trust among readers.

Another component of this authenticity was the visibility and frequency of her endorsement of certain lifestyle choices. If Mama Natural likes something or considers it worthwhile, she will mention it multiples times over time. This long-term support and presence builds credibility with readers. For example, her support of gelatin consumption is mentioned in so many videos and posts it became ubiquitous.

An unanticipated finding from the research were multiple posts about topics Mama Natural considers "natural" that are uncommon in the United States but prevalent in other countries, cultures, or even species. These topics included oil pulling, cosleeping, elimination communication, placenta consumption, reflexology among others. Mama Natural practices nearly all of these in addition to more typical behaviors. These behaviors are presented with outside sources to support them as well as anecdotal experience when available. It is foreseeable that individuals might be drawn to Mama Natural's blog for her open discussion and positive remarks on any one of these topics and then see her decision about vaccination and, perhaps, if they have already accepted her post about one of those topics, accept her thoughts on vaccination. This finding also illuminates additional reasons why parents who do not vaccinate might not trust traditional authoritative health information sources. Exposure to or interest in stigmatized or uncommon behaviors like these, which are practiced and endorsed elsewhere, could lead to a general questioning of the authority of medical providers. While equating the medical community's stance on cosleeping with their stance on vaccination is false

for many reasons, it becomes understandable when both behaviors are added to a long list of topics not endorsed in the United States but accepted elsewhere.

Future Research

An expansion of this study could cover additional blog posts over a longer period. Additionally, cross tabulation analysis could provide further insight about how Mama Natural constructs her posts. An analysis focused around sources cited by Mama Natural could also prove valuable in improving our understanding of what individuals like her deem credible. Interviews with parents who do or do not currently follow Mama Natural's blog could also provide much needed insight to understand why she might be perceived as credible and trustworthy.

In Conclusion

After reading over 220 posts by Mama Natural, I feel that I understand why other individuals would perceive her to be trustworthy and credible. She shares almost every aspect of her life (from her childbirth to her diet) with her readers. She also cites outside sources from a wide range of source types when discussing topics many might consider controversial, cultivating an appearance of high and varied literacy. Her reliance on sources such as PubMed or Pediatrics suggests she is highly literate (although she does not fully highlight the difference between findings and facts). Her inclusion of other source types implies a respect for good information (not whether it is good information) regardless of where it comes from. These components, combined with videos that directly address the viewer create an authentic, factual information source.

Perhaps of greatest interest is the authenticity component of Mama Natural. It is understandable why readers would trust her – she shares and gives so much of her life. Having

watched the four-part video blog series on the birth of her second child, one might wonder, “If she shares this, what is private to her?” However this full focus sharing generates trust and credibility as readers can come to know her over time but also in great depth. The authenticity component seems to be of greatest import when endorsing a stigmatized viewpoint, such as the decision not to vaccinate, as readers are able to see Mama Natural’s decisions but also read about her decision-making process. This transparency likely lends credibility and trustworthiness to her blog posts. Perhaps to gain the trust of parents deciding whether to vaccinate, this kind of transparency and openness about the realities of parenting and what is evaluated when making decisions is necessary.

REFERENCES

Bond L., Nolan T., Pattison P., & Carlin J. (1998). Vaccine preventable diseases and immunisations: a qualitative study of mothers' perceptions of severity, susceptibility, benefits and barriers. *Australian and New Zealand Journal of Public Health, 22*(4): 440–6.

Bossaller, J. S. (2014). Evidence, not authority: Reconsidering presentation of science for difficult decisions. *Reference & User Services Quarterly*, 53(3), 232-41.

Charmaz, K. (2014). *Constructing Grounded Theory* (2nd ed). Sage Publications Ltd.

Davies, P., Chapman, S., & Leask, J. (2002). Antivaccination activists on the world wide web. *Arch Dis Child, 87*, 22–25.

Fitzgerald, T., & Glotzer, D. (1995). Vaccine information pamphlets: More information than parents want?. *Pediatrics, 95*(3), 331-334).

Flaherty, M. G. (2013). Consumer health information provision in rural public libraries: A Comparison of two library systems. *Library Quarterly: Information, Community, Policy, 83*(2), 155–165.

Freed, G. L., Clark, S. J., Butchart, A. T., Singer, D. C., & Davis, M. M. (2010). Parental vaccine safety concerns in 2009. *Pediatrics, 125*(4), 654-659. doi:10.1542/peds.2009-1962

Guillaume, L. R. & Bath, P. A. (2004). Health scares on parents' information needs and preferred sources: A Case study of the MMR vaccine scare. *Health Informatics Journal, 10*(1), pp 5-21.

Gullion J.S., Henry L, Gullion G. (2008). Deciding to opt out of childhood vaccination mandates. *Pub Health Nurs. 25*(5):401–8.

I'm Gonna Smash My Phone!. (2014, October 9). *Mama Natural.* Retrieved from http://www.mamanatural.com/irl-34/

Kennedy, A., Brown, C., & Gust, D. (2013). Vaccine beliefs of parents who oppose compulsory vaccination. *Public Health Reports, 120*.

Kirkland, A. A. (2012). The legitimacy of vaccine critics: what is left after the autism hypothesis?. *Journal Of Health Politics, Policy And Law, 37*(1), 69-97. doi:10.1215/03616878-1496020

Luthy, K. E., Beckstrand, R. L., & Callister, L. C. (2010). Parental hesitation in immunizing children in Utah. *Public Health Nursing, 27*(1), 25-31. doi:10.1111/j.1525-1446.2009.00823.x

"MamaNatural.com Site Overview." (2015). *Alexa.* Retrieved May 1, 2015, from http://www.alexa.com/siteinfo/mamanatural.com

Rochman, B. (2013, April 15). How social networks influence parents' decision to vaccinate. Time Health and Family. Retrieved from http://healthland.time.com/2013/04/15/how-social-networks-influence-a-parents-decision-to-vaccinate/

Sex During Pregnancy: Everything You Need To Know, (2015, April 14). *Mama Natural.* Retrieved from http://www.mamanatural.com/sex-during-pregnancy/.

Shurtleff, A. (2009). Attitudes, Beliefs and Behaviors of Parents towards Childhood Immunizations. Fort Worth, Tx: University of North Texas Health Science Center. Retrieved from: http://digitalcommons.hsc.unt.edu/theses/73

Smith P.J., Chu S.Y., & Barker L.E. (2004). Children who have received no vaccines: who are they and where do they live? *Pediatrics, 4*(1):187–95.

Tan, L. K., Na, J., & Theng, Y. (2011). Influence detection between blog posts through blog features, content analysis, and community identity. Online Information Review, 35(3), 425-442. doi:http://dx.doi.org/10.1108/14684521111151450

"Week 4 on the Paleo Diet – CRASH & BURN!." (2014, Janurary 30). *Mama Natural*. Retrieved from http://www.mamanatural.com/paleo-week-4/

"What We Are Doing About Vaccines Now." (2014, January 8). *Mama Natural*. Retrieved from: http://www.mamanatural.com/vaccines/

REFERENCES

6 Natural Teething Remedies for Baby. (2017, February 7). Retrieved March 19, 2018, from https://www.mamanatural.com/6-natural-teething-remedies/

10 Doable Resolutions for a Healthier New Year | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/doable-resolutions/

10 Natural Birth Essentials for Labor & Delivery. (2012, December 4). Retrieved March 15, 2018, from https://www.mamanatural.com/10-essentials-to-a-natural-childbirth/

10 Surprising Benefits of Breastfeeding. (2017, March 4). Retrieved March 15, 2018, from https://www.mamanatural.com/10-breastfeeding-benefits-you-may-not-have-heard-of/

10 Tips for Airline Travel with Baby. (2011, April 12). Retrieved March 15, 2018, from https://www.mamanatural.com/10-tips-for-airline-travel-with-baby/

101 Uses for Apple Cider Vinegar. (2016, March 25). Retrieved March 15, 2018, from https://www.mamanatural.com/apple-cider-vinegar/

About Mama Natural. (2011, February 28). Retrieved April 7, 2017, from https://www.mamanatural.com/about/

Activated Charcoal Teeth Whitening - How to Do It. (2014, July 22). Retrieved March 15, 2018, from https://www.mamanatural.com/charcoal-teeth-whitening/

Ain't No Baby Up In Here - In Real Life #8. (2014, April 10). Retrieved March 20, 2018, from https://www.mamanatural.com/irl-08/

ALA | Information Literacy Competency Standards for Higher Education. (n.d.). Retrieved June 21, 2018, from https://www.ala.org/Template.cfm?Section=Home&template=/ContentManagement/ContentDisplay.cfm&ContentID=33553

Are EMFs Real? | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/are-emfs-real/

Arksey, H. (1994). Expert and lay participation in the construction of medical knowledge. *Sociology of Health & Illness*, *16*(4), 448–468.

Baby Circumcision Myths & Facts. (2016, January 3). Retrieved March 15, 2018, from https://www.mamanatural.com/circumcision-myths-and-facts/

BABY FEVER! 👶 🤰 👶 (IRL s2 e7). (2015, October 1). Retrieved March 13, 2018, from https://www.mamanatural.com/irl2-7/

Baby Got a Black Eye! - In Real Life #20. (2014, July 3). Retrieved March 19, 2018, from https://www.mamanatural.com/irl-20/

Baby Ultrasound: Risks vs. Rewards. (2016, January 25). Retrieved March 15, 2018, from https://www.mamanatural.com/baby-ultrasound/

Best bottles for breastfed babies. (2016, July 13). Retrieved March 15, 2018, from https://www.mamanatural.com/best-bottles-for-breastfed-babies/

Bossaller, J. (2014). Evidence, Not Authority: Reconsidering Presentation of Science for Difficult Decisions. *Reference & User Services Quarterly*, *53*(3), 232–241.

Breastfeeding Gets Easier. (2010, November 2). Retrieved March 15, 2018, from https://www.mamanatural.com/breastfeeding-gets-easier/

Breech Birth: What Are Your Options for Delivery? (2015, June 2). Retrieved March 13, 2018, from https://www.mamanatural.com/breech-birth/

Brown, J. (n.d.). The Last of the Iron Lungs. Retrieved March 14, 2018, from https://gizmodo.com/the-last-of-the-iron-lungs-1819079169

Bruckman, A., Luther, K., & Fiesler, C. (2015). When Should We Use Real Names in Published Accounts of Internet Research? *Digital Research Confidential: The Secrets of Studying Behavior Online (2015)*, *243*.

Brunson, E. K. (2013). The impact of social networks on parents' vaccination decisions. *Pediatrics*, *131*(5), e1397–e1404.

Buchanan, R., & Beckett, R. D. (2014). Assessment of vaccination-related information for consumers available on Facebook®. *Health Information & Libraries Journal*, *31*(3), 227–234.

Busse, J. W., Wilson, K., & Campbell, J. B. (2008). Attitudes towards vaccination among chiropractic and naturopathic students. *Vaccine*, *26*(49), 6237–6243.

Buy a Book & Change the World... | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/help-andrew-price/

Can a Birth Ball Really Help You Have a Better Labor & Delivery? (2016, October 26). Retrieved March 15, 2018, from https://www.mamanatural.com/birth-ball/

Centers for Disease Control. (n.d.). Measles | Cases and Outbreaks | CDC [Government]. Retrieved March 20, 2017, from https://www.cdc.gov/measles/cases-outbreaks.html

Charmaz, K. (2014). *Constructing grounded theory*. Sage.

Chatman, E. A. (1996). The impoverished life-world of outsiders. *Journal of the American Society for Information Science (1986-1998)*, *47*(3), 193.

Chen, W., Landau, S., Sham, P., & Fombonne, E. (2004). No evidence for links between autism, MMR and measles virus. *Psychological Medicine*, *34*(3), 543–553.

Clayton, E. W., Rusch, E., Ford, A., & Stratton, K. (Eds.). (2012). *Adverse Effects of Vaccines: Evidence and Causality*. National Academies Press.

Colostrum: The Mind-Blowing Superfood for Your Baby. (2016, August 18). Retrieved March 15, 2018, from https://www.mamanatural.com/colostrum/

COMMITTEE ON PRACTICE AND AMBULATORY MEDICINE, COMMITTEE ON INFECTIOUS DISEASES, COMMITTEE ON STATE GOVERNMENT AFFAIRS, COUNCIL ON SCHOOL HEALTH, & SECTION ON ADMINISTRATION AND PRACTICE MANAGEMENT. (2016). Medical Versus Nonmedical Immunization Exemptions for Child Care and School Attendance. *PEDIATRICS*, *138*(3), e20162145–e20162145. https://doi.org/10.1542/peds.2016-2145

Covert, B. (n.d.). The Rise and Downfall Of The American Single Mother. Retrieved March 27, 2018, from https://www.forbes.com/sites/brycecovert/2012/07/16/the-rise-and-downfall-of-single-mothers/

Crazy Benefits of Camu Camu Powder. (2016, March 16). Retrieved March 15, 2018, from https://www.mamanatural.com/camu-camu/

Creswell, J. W. (2002). *Qualitative inquiry & research design: Choosing among five approaches*. Thousand Oaks, CA: Sage Publications.

Davies, P., Chapman, S., & Leask, J. (2002). Antivaccination activists on the world wide web. *Archives of Disease in Childhood*, *87*(1), 22–25.

Dempsey, A. F., Schaffer, S., Singer, D., Butchart, A., Davis, M., & Freed, G. L. (2011). Alternative Vaccination Schedule Preferences Among Parents of Young Children. *PEDIATRICS*, *128*(5), 848–856. https://doi.org/10.1542/peds.2011-0400

Diekema, D. S., & others. (2005). Responding to parental refusals of immunization of children. *Pediatrics*, *115*(5), 1428–1431.

Disclosure/Disclaimer. (n.d.). Retrieved March 27, 2018, from https://www.mamanatural.com/disclaimer/

DO YOUR CHORES! □□□□ ⚙ □□. (2016, June 9). Retrieved March 15, 2018, from https://www.mamanatural.com/soul-food-04/

DON'T MESS WITH MY FAMILY (On Sundays) - Soul Food. (2016, June 23). Retrieved March 15, 2018, from https://www.mamanatural.com/soul-food-06/

Dr. Joseph Mercola's Qualifications. (n.d.). Retrieved March 27, 2018, from http://www.mercola.com/forms/background.htm

Eating the Placenta: Why Would Anyone Do It? (2014, January 7). Retrieved March 15, 2018, from https://www.mamanatural.com/why-eat-your-own-placenta/

Ernst, E. (2002). A systematic review of systematic reviews of homeopathy. *British Journal of Clinical Pharmacology*, *54*(6), 577–582.

Exercise During Pregnancy: Can it Boost Your Baby's Brain Power. (2014, May 2). Retrieved March 19, 2018, from https://www.mamanatural.com/boost-babys-brain-power/

Extended Breastfeeding the Older Baby or Toddler. (2012, January 17). Retrieved March 15, 2018, from https://www.mamanatural.com/breastfeeding-the-older-baby/

Farrington, C. P., Miller, E., & Taylor, B. (2001). MMR and autism: Further evidence against a causal association. *Vaccine*, *19*(27), 3632–3635.

Feikin, D. R., Lezotte, D. C., Hamman, R. F., Soloman, D. A., Chen, R. T., & Hoffman, R. E. (2000). Individual and community risks of measles and pertussis associated with personal exemptions to immunization. *JAMA*, *284*(24), 3145–3150.

Fertility Diet: Nutrition to Conceive Naturally. (2010, April 30). Retrieved March 15, 2018, from https://www.mamanatural.com/what-to-eat-if-you-want-to-conceive-naturally-and-have-a-healthy-pregnancy/

Fine, P., Eames, K., & Heymann, D. L. (2011). "Herd immunity": a rough guide. *Clinical Infectious Diseases*, *52*(7), 911–916.

First Prenatal Care Visit: What Happens & How to Prepare. (2016, February 24). Retrieved March 15, 2018, from https://www.mamanatural.com/first-prenatal-visit/

Flaherty, M. G., Tayag, E. K., Lanier, M., & Minor, J. (2014). The Jenny McCarthy conundrum: Public libraries, popular culture, and health misinformation. *Proceedings of the American Society for Information Science and Techonology*, *51*(1), 1–1.

Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, *12*(2), 219–245. https://doi.org/10.1177/1077800405284363

Free Visual Birth Plan Template (That Nurses Won't Scoff At). (n.d.). Retrieved March 20, 2018, from https://www.mamanatural.com/visual-birth-plan/

Freed, G. L., Clark, S. J., Butchart, A. T., Singer, D. C., & Davis, M. M. (2010). Parental vaccine safety concerns in 2009. *Pediatrics*, *125*(4), 654–659. https://doi.org/10.1542/peds.2009-1962

Friedman, M. (2010). Mommy Blogs. In A. O'Reilly, *Encyclopedia of Motherhood*. 2455 Teller Road, Thousand Oaks California 91320 United States: SAGE Publications, Inc. https://doi.org/10.4135/9781412979276.n416

Gaskin, I. M. (2002). *Spiritual Midwifery* (Fourth). Summerton, TN: Book Publishing Company.

Gaskin, I. M. (2003). *Ina May's Guide to Childbirth*. New York, NY: Bantam Books Trade Paperbacks.

Gentle Cesarean: How To Have A More Natural C-Section. (2017, March 2). Retrieved March 13, 2018, from https://www.mamanatural.com/gentle-cesarean/

Glanz, J. M., Newcomer, S. R., Narwaney, K. J., Hambidge, S. J., Daley, M. F., Wagner, N. M., … others. (2013). A population-based cohort study of undervaccination in 8 managed care organizations across the United States. *JAMA Pediatrics*, *167*(3), 274–281.

Goffman, E. (1974). *Stigma: Notes on the management of spoiled identity*. New York, NY: Touchstone.

Gottlieb, S. D. (2016). Vaccine resistances reconsidered: Vaccine skeptics and the Jenny McCarthy effect. *BioSocieties*, *11*(2), 152–174. https://doi.org/10.1057/biosoc.2015.30

Granju, K. A., & Granju, K. A. (1999, June 1). The midwife of modern midwifery. Retrieved March 26, 2018, from https://www.salon.com/1999/06/01/gaskin/

Griffin Natural Childbirth Videos - Part 2, Delivery [GRAPHIC]. (2010, September 27). Retrieved March 15, 2018, from https://www.mamanatural.com/natural-childbirth-scenes-part-2-delivery/

Guallar, E., Stranges, S., Mulrow, C., Appel, L. J., & Miller, E. R. (2013). Enough is enough: stop wasting money on vitamin and mineral supplements. *Annals of Internal Medicine*, *159*(12), 850–851.

Guidry, J. P. D., Carlyle, K., Messner, M., & Jin, Y. (2015). On pins and needles: How vaccines are portrayed on Pinterest. *Vaccine*, *33*(39), 5051–5056. https://doi.org/10.1016/j.vaccine.2015.08.064

Gust, D. A., Darling, N., Kennedy, A., & Schwartz, B. (2008). Parents with doubts about vaccines: which vaccines and reasons why. *Pediatrics*, *122*(4), 718–725.

Hamblin, J. (2016, June 26). Why Vitamins and Other "Dietary Supplements" Can Contain Anything. *The Atlantic*. Retrieved from https://www.theatlantic.com/health/archive/2016/06/supplements-make-tobacco-look-easy/488798/

Harwood, J. (1986). Ludwik Fleck and the sociology of knowledge. *Social Studies of Science*, *16*(1), 173–187.

Haskell, R. (2018). Serena Williams on Her Pregnancy, Motherhood and Making Her Tennis Comeback - Vogue. Retrieved March 27, 2018, from https://www.vogue.com/article/serena-williams-vogue-cover-interview-february-2018

Healthy Goldfish Crackers Recipe. (2016, June 28). Retrieved March 15, 2018, from https://www.mamanatural.com/goldfish-recipe/

Hennion, A. (1989). An intermediary between production and consumption: The producer of popular music. *Science, Technology, & Human Values*, *14*(4), 400–424.

Hine, C. (2015). *Ethnography for the internet: Embedded, embodied and everyday*. Bloomsbury Publishing.

Hinshaw, A., Aragon, T., Berg, A., Buka, S., Charo, R., Fairbrother, G., … others. (2013). Childhood immunization schedule and safety: stakeholder concerns, scientific evidence, and future studies. *Institute of Medicine*.

Holloway, I., & Biley, F. C. (2011). Being a qualitative researcher. *Qualitative Health Research*, *21*(7), 968–975.

Home Birth: is it safe? | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/home-birth-is-it-safe/

Hospital Bag Checklist: What to Bring When You're Having a Baby. (2016, August 24). Retrieved March 25, 2018, from https://www.mamanatural.com/hospital-bag-checklist/

How & Why to Work With a Lactation Consultant. (2016, January 17). Retrieved March 15, 2018, from https://www.mamanatural.com/lactation-consultant/

How To Do Oil Pulling (And Why You'd Want To). (2010, November 29). Retrieved March 15, 2018, from https://www.mamanatural.com/how-to-do-oil-pulling/

How To Have A Natural Birth | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/how-to-have-a-natural-birth/

How to Increase Milk Supply Naturally. (2014, May 13). Retrieved March 15, 2018, from https://www.mamanatural.com/how-to-increase-breast-milk-supply/

How to Make Jello the Natural and Healthy Way. (2012, May 22). Retrieved March 15, 2018, from https://www.mamanatural.com/how-to-make-healthy-jello/

How to reduce your EMF exposure (and why you want to). (2015, December 8). Retrieved March 15, 2018, from https://www.mamanatural.com/emf-exposure/

How to Turn a Breech Baby. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/turn-breech-baby/

How to Use a Neti Pot (And Why You'd Want To). (2010, December 16). Retrieved March 15, 2018, from https://www.mamanatural.com/how-to-use-a-neti-pot/

How to Use Essential Oils. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/how-to-use-essential-oils/

Howland, G. (2017). *The Mama Natural Week-by-Week Guide to Pregnancy and Childbirth*. North Star Way.

Hunter, A. (2016). Monetizing the mommy: mommy blogs and the audience commodity. *Information, Communication & Society*, *19*(9), 1306–1320.

Hyland's homeopathic teething tablets recalled - CNN. (n.d.). Retrieved March 26, 2018, from https://www.cnn.com/2017/04/14/health/hylands-teething-tablet-fda-recall-bn/index.html

I Can't Stop Buying Girl Clothes! - In Real Life #35. (2014, October 16). Retrieved March 15, 2018, from https://www.mamanatural.com/irl-35/

Is a Birth Center Right for You? (2015, May 20). Retrieved March 26, 2018, from https://www.mamanatural.com/birth-center/

IS MARRIED SEX BETTER? (MNShow 55) - YouTube. (n.d.). Retrieved March 25, 2018, from https://www.youtube.com/watch?v=2ELuyrx8i4A

Is Peanut Butter Healthy? (2013, April 23). Retrieved March 25, 2018, from https://www.mamanatural.com/is-peanut-butter-bad-for-you/

It Ain't About Perfection! ☆ IRL 57. (2015, April 30). Retrieved March 15, 2018, from https://www.mamanatural.com/irl-57/

Jaeger, P. T., & Thompson, K. M. (2005). Social information behavior and the democratic process: Information poverty, normative behavior, and electronic government in the United States. *Library & Information Science Research*, *26*(1), 94–107.

Jarvis, W. T. (1981). The Myth of the Healthy Savage. *Nutrition Today*, *16*(2), 14–15.

Jones, A. M., Omer, S. B., Bednarczyk, R. A., Halsey, N. A., Moulton, L. H., & Salmon, D. A. (2012). Parents' source of vaccine information and impact on vaccine attitudes, beliefs, and nonmedical exemptions. *Advances in Preventive Medicine*, *2012*.

Just How Crunchy Are You? (QUIZ). (2014, May 21). Retrieved March 18, 2018, from https://www.mamanatural.com/how-crunchy-quiz/

Kahn, M. (n.d.). Jewish Rituals Are The Hot New Thing In Wellness. Retrieved March 26, 2018, from https://www.buzzfeed.com/mattiekahn/goop-shabbos

Kata, A. (2010). A postmodern Pandora's box: anti-vaccination misinformation on the Internet. *Vaccine*, *28*(7), 1709–1716.

Kata, A. (2012). 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.

Kaufman, M. (1967). The American anti-vaccinationists and their arguments. *Bulletin of the History of Medicine*, *41*(5), 463.

Kombucha During Pregnancy: What You Need to Know | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/kombucha-during-pregnancy/

Kurchak, S. (2015, February 6). I'm Autistic, And Believe Me, It's A Lot Better Than Measles. Retrieved March 27, 2018, from https://medium.com/the-archipelago/im-autistic-and-believe-me-its-a-lot-better-than-measles-78cb039f4bea

Lingel, J., & Boyd, D. (2013). "Keep it secret, keep it safe": Information poverty, information norms, and stigma. *Journal of the American Society for Information Science & Technology*, *64*(5), 981–991.

Lopez, L. K. (2009). The radical act of'mommy blogging': redefining motherhood through the blogosphere. *New Media & Society*, *11*(5), 729–747.

Luthy, K. E., Beckstrand, R. L., & Callister, L. C. (2010). Parental hesitation in immunizing children in Utah. *Public Health Nursing*, *27*(1), 25–31. https://doi.org/10.1111/j.1525-1446.2009.00823.x

Mama Hulks Out on a Breastfeeding Hater! (2014, February 18). Retrieved March 15, 2018, from https://www.mamanatural.com/mama-hulks-out-on-breastfeeding-hater/

Mama Hulks Out on a Processed Food Company ☺. (2013, April 25). Retrieved March 15, 2018, from https://www.mamanatural.com/mama-hulks-out-on-processed-foods/

Mama Natural. (n.d.). *What To Do When People Think You're Nuts ;)*. Retrieved from https://www.youtube.com/watch?v=iFrGDcSbQ4Q

Mama Natural Birth Course - The #1 Online Childbirth Class. (n.d.). Retrieved July 24, 2017, from https://mamanaturalbirth.com

Mama Natural YouTube Stats, Channel Statistics - Socialblade.com. (n.d.). Retrieved March 27, 2018, from https://socialblade.com/youtube/channel/UCnb5r7fjjYumNP4PTyA9Zxg

Mathur, A., Narayanan, A., & Chetty, M. (2018). An Empirical Study of Affiliate Marketing Disclosures on YouTube and Pinterest. *ArXiv Preprint ArXiv:1803.08488*.

McKay, B., & Overberg, P. (2017, August 11). Rural America's Childbirth Crisis: The Fight to Save Whitney Brown. *Wall Street Journal*. Retrieved from https://www.wsj.com/articles/rural-americas-childbirth-crisis-the-fight-to-save-whitney-brown-1502462523

McNutt, L.-A., Desemone, C., DeNicola, E., El Chebib, H., Nadeau, J. A., Bednarczyk, R. A., & Shaw, J. (2016). Affluence as a predictor of vaccine refusal and underimmunization in California private kindergartens. *Vaccine*, *34*(14), 1733–1738.

Meet The Queen of Crunch! 👸 IRL 55. (2015, April 9). Retrieved March 15, 2018, from https://www.mamanatural.com/irl-55/

Midwife Interview Questions: Find the Right Support for YOU. (2017, April 14). Retrieved March 15, 2018, from https://www.mamanatural.com/midwife-interview-questions/

Mize, J. (1995). *Supernatural Childbirth*. Tulsa, Oklahoma: Harrison House Publishers.

Monroe, R. (2017, October 2). How Essential Oils Became the Cure for Our Age of Anxiety. *The New Yorker*. Retrieved from https://www.newyorker.com/magazine/2017/10/09/how-essential-oils-became-the-cure-for-our-age-of-anxiety

My 2017 Resolutions | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/new-years-resolutions/

My "Before" Pictures! ✪ IRL #48. (2015, February 19). Retrieved March 21, 2018, from https://www.mamanatural.com/irl-48/

My Big Secret Project REVEALED! | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/soul-food-07/

My Earth Day Pledge. Want to Join Me? (2014, April 13). Retrieved March 19, 2018, from https://www.mamanatural.com/earth-day-pledge/

My Experience Eating Placenta | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/placenta-eating-experience/

Natural Baby: Alternatives to routine newborn procedures. (2016, March 14). Retrieved March 15, 2018, from https://www.mamanatural.com/routine-newborn-procedures/

Natural Birth Control - Options & Suggestions. (2016, April 20). Retrieved March 15, 2018, from https://www.mamanatural.com/natural-birth-control/

Natural Easter Basket Ideas. (2016, March 10). Retrieved March 20, 2018, from https://www.mamanatural.com/natural-easter-basket-ideas/

Natural Pregnancy Affirmation Cards. (n.d.). Retrieved March 27, 2018, from https://www.mamanatural.com/product/pregnancy-affirmation-cards/

Natural Remedies for Baby Reflux. (2013, July 19). Retrieved March 15, 2018, from https://www.mamanatural.com/natural-remedies-for-baby-reflux/

Natural Remedies for UTI. (2016, April 6). Retrieved March 15, 2018, from https://www.mamanatural.com/natural-remedies-uti/

Nina Martin, R. M. (2017a, August 17). Many Nurses Lack Knowledge of Health Risks for New… [text/html]. Retrieved March 27, 2018, from https://www.propublica.org/article/many-nurses-lack-knowledge-of-health-risks-for-new-mothers-study-finds

Nina Martin, R. M. (2017b, December 7). Nothing Protects Black Women From Dying in Pregnancy and… [text/html]. Retrieved March 27, 2018, from https://www.propublica.org/article/nothing-protects-black-women-from-dying-in-pregnancy-and-childbirth

Non GMO foods: How to Avoid GMOs (for real). (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/how-to-avoid-gmos/

Nov 10, L. M. · C. N. · P., November 10, 2017 8:00 AM ET | Last Updated:, & 2017. (2017, November 10). How to become an Indigenous healer for $1,111 | CBC News. Retrieved March 26, 2018, from http://www.cbc.ca/news/indigenous/anishnaabe-indigenous-healer-course-backlash-1.4395739

Novoa, C., & Taylor, J. (n.d.). Exploring African Americans' High Maternal and Infant Death Rates. Retrieved March 27, 2018, from https://www.americanprogress.org/issues/early-

childhood/reports/2018/02/01/445576/exploring-african-americans-high-maternal-infant-death-rates/

Offit, P. A. (2017, April 9). Tom Price's Other Failure: Snake Oil Supplements. *The Daily Beast*. Retrieved from https://www.thedailybeast.com/articles/2017/04/09/tom-price-s-other-failure-snake-oil-supplements

Offit, P. A., & Moser, C. A. (2009). The problem with Dr Bob's alternative vaccine schedule. *Pediatrics*, *123*(1), e164–e169.

Offit, P. A., Quarles, J., Gerber, M. A., Hackett, C. J., Marcuse, E. K., Kollman, T. R., … Landry, S. (2002). Addressing parents' concerns: do multiple vaccines overwhelm or weaken the infant's immune system? *Pediatrics*, *109*(1), 124–129.

Olive Oil Scam REVEALED (And How To Spot The Real Stuff). (2017, September 10). Retrieved March 15, 2018, from https://www.mamanatural.com/virgin-olive-oil-scam-fraud/

Oransky, I. (2015, December 28). Top 10 most highly cited retracted papers. Retrieved July 24, 2017, from http://retractionwatch.com/the-retraction-watch-leaderboard/top-10-most-highly-cited-retracted-papers/

Paloma Natural Childbirth Videos - Part 3, Afterbirth | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/natural-childbirth-afterbirth/

Pettigrew, S., Archer, C., & Harrigan, P. (2016). A thematic analysis of mothers' motivations for blogging. *Maternal and Child Health Journal*, *20*(5), 1025–1031.

Petts, J., & Niemeyer, S. (2004). Health risk communication and amplification: learning from the MMR vaccination controversy. *Health, Risk & Society*, *6*(1), 7–23.

Pickard, A. J. (2007). *Research methods in information*. Facet Publishing.

Platt, J. (1992). Cases of cases ... of cases. In C. C. Ragin & H. S. Becker, *What is a case?: Exploring the Foundations of Social Inquiry* (pp. 21–52). Cambridge University Press.

Polio Vaccine (IPV) – Childhood Vaccine Series - Mama Natural. (2015, March 21). Retrieved from https://web.archive.org/web/20150321085430/http://www.mamanatural.com:80/childhood-vaccines-polio-ipv

Pollak, A. (2016). Information seeking and use in the context of minimalist lifestyles. *Journal of Documentation*, *72*(6), 1228–1250.

Pregnancy Supplements: What I Choose to Take During Pregnancy. (2013, June 4). Retrieved March 15, 2018, from https://www.mamanatural.com/supplements-i-take-during-pregnancy/

Probiotics for Infants: Everything you need to know. (2016, July 28). Retrieved March 15, 2018, from https://www.mamanatural.com/probiotics-for-infants/

QUIZ: What Kind of Natural Mama Are You? (2014, June 11). Retrieved March 18, 2018, from https://www.mamanatural.com/natural-mama-quiz/

Recommended Resources. (2013, December 3). Retrieved March 27, 2018, from https://chriskresser.com/resources/

Robin Fields, J. S. (2017, October 23). How Many American Women Die From Causes Related to… [text/html]. Retrieved March 27, 2018, from https://www.propublica.org/article/how-many-american-women-die-from-causes-related-to-pregnancy-or-childbirth

Robison, S. G., Groom, H., & Young, C. (2012). Frequency of alternative immunization schedule use in a metropolitan area. *Pediatrics*, *130*(1), 32–38.

Rupert, E. (2017, January 10). Vaccine skeptic says he's been asked to lead Trump vaccine commission [Text]. Retrieved January 18, 2017, from http://thehill.com/policy/healthcare/313572-trump-asks-vaccine-skeptic-to-lead-commission-on-vaccination-safety

Sady, W. (2017). Ludwik Fleck. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Fall 2017). Metaphysics Research Lab, Stanford University. Retrieved from https://plato.stanford.edu/archives/fall2017/entries/fleck/

Saldaña, J. (2013). *The coding manual for qualitative researchers*. Sage.

SaunaSpace Sauna Review - Near Infrared FTW! (2016, June 14). Retrieved March 15, 2018, from https://www.mamanatural.com/saunaspace-review/

Savolainen, R. (1995). Everyday life information seeking: Approaching information seeking in the context of "way of life." *Library & Information Science Research*, *17*(3), 259–294.

Science & Sensibility : Blogs : Birthing While Black – Worse Outcomes, More Deaths. (n.d.). Retrieved March 27, 2018, from https://www.scienceandsensibility.org/blog/birthing-while-black?source=1

Scope of Practice | AMA. (n.d.). Retrieved March 26, 2018, from https://www.ama-assn.org/about/scope-practice

Shapiro, S. M. (2012, May 23). Ina May Gaskin and the Battle for at-Home Births. *The New York Times*. Retrieved from https://www.nytimes.com/2012/05/27/magazine/ina-may-gaskin-and-the-battle-for-at-home-births.html

Sh*t Crunchy Mamas Say. (2012, January 31). Retrieved July 15, 2017, from https://www.mamanatural.com/shit-crunchy-mamas-say/

Sh*t Crunchy Mamas Say - Part 2. (2012, February 21). Retrieved March 15, 2018, from https://www.mamanatural.com/shit-crunchy-mamas-say-part-2/

Smith, P. J, Chu, S. Y., & Barker, L. E. (2004). Children who have received no vaccines: Who are they and where do they live? *Pediatrics*, *114*(1), 187–195.

Smith, Philip J, Humiston, S. G., Parnell, T., Vannice, K. S., & Salmon, D. A. (2010). The association between intentional delay of vaccine administration and timely childhood vaccination coverage. *Public Health Reports*, *125*(4), 534–541.

SOLO PARENTING IS EXHAUSTING! (2015, June 25). Retrieved March 25, 2018, from https://www.mamanatural.com/solo-parenting-is-exhausting/

Solomon, S. (2017, September 5). Inside the Growing World of Christian Yoga. Retrieved March 26, 2018, from https://www.vice.com/en_us/article/7xxa3a/inside-the-growing-world-of-christian-yoga

Song, F. W. (2016). The Serious Business of Mommy Bloggers. *Contexts*, *15*(3), 42–49.

Stake, R. E. (2006). *Multiple case study analysis*. Guilford Press.

Starting Solids: 5 Signs Your Baby is Ready for Solid Food. (2011, March 11). Retrieved March 15, 2018, from https://www.mamanatural.com/5-signs-your-baby-is-ready-for-solid-food/

STRANDED! - In Real Life #33. (2014, October 2). Retrieved March 15, 2018, from https://www.mamanatural.com/irl-33/

Sugar Addiction: 6 Tips to Help You Kick the Habit. (2012, April 10). Retrieved March 15, 2018, from https://www.mamanatural.com/6-tips-to-help-you-kick-sugar/

Sun, N., Rau, P. P. L., & Ma, L. (2014). Understanding lurkers in online communities: A literature review. *Computers in Human Behavior*, *38*, 110–117.

Swaddle a Baby the Right Way (with Pictures) | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/how-to-swaddle-a-baby/

The ABC's of Adoption, Guest Post by Susanna Brown | Mama Natural. (n.d.). Retrieved March 20, 2018, from https://www.mamanatural.com/adoption-abcs/

The Best Natural Bubble Bath + DIY Recipes. (2016, March 28). Retrieved March 15, 2018, from https://www.mamanatural.com/natural-bubble-bath/

The End Of The IRL Show? ☂ IRL #60. (2015, May 21). Retrieved March 13, 2018, from https://www.mamanatural.com/irl-60/

The House is a Wreck! - In Real Life #26 | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/irl-26/

The Mama Natural Week by Week Guide to Pregnancy & Childbirth | Mama Natural. (2017). [Blog]. Retrieved July 24, 2017, from https://www.mamanatural.com/book/week-by-week-guide-pregnancy-childbirth/

The Natural Mama's Guide to Amber Teething Necklaces. (2017, March 17). Retrieved March 15, 2018, from https://www.mamanatural.com/amber-teething-necklaces/

The Pit Paste That Works (For Everything). (2014, April 22). Retrieved March 15, 2018, from https://www.mamanatural.com/primal-pit-paste/

The Truth About Epidural Side Effects. (2016, January 28). Retrieved March 15, 2018, from https://www.mamanatural.com/epidural-side-effects/

The Truth About Pregnancy Weight Gain. (2016, May 16). Retrieved March 15, 2018, from https://www.mamanatural.com/pregnancy-weight-gain/

The Truth About Red Raspberry Leaf Tea During Pregnancy. (2017, February 28). Retrieved March 19, 2018, from https://www.mamanatural.com/red-raspberry-leaf-tea/

The Ultimate, All-Natural Hangover Remedy. (2013, December 30). Retrieved March 15, 2018, from https://www.mamanatural.com/natural-hangover-remedy/

The Ultimate Guide to Safe, Nontoxic Cookware. (2016, July 11). Retrieved March 20, 2018, from https://www.mamanatural.com/best-cookware/

Thompson, N. (2018, March 15). Susan Wojcicki on YouTube's Fight Against Misinformation | WIRED. Retrieved April 5, 2018, from https://www.wired.com/story/susan-wojcicki-on-youtubes-fight-against-misinformation/

Top 10 Natural Parenting Books. (2014, January 15). Retrieved March 15, 2018, from https://www.mamanatural.com/top-10-books-for-natural-parents/

Toxic Gas Leak! - In Real Life #6. (2014, March 27). Retrieved March 20, 2018, from https://www.mamanatural.com/irl-06/

Triumph & Tragedy! - In Real Life #30. (2014, September 11). Retrieved March 25, 2018, from https://www.mamanatural.com/irl-30/

Two Words to Describe Your Child - In Real Life #14 | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/irl-14/

Umbilical Cord in Newborns: How to Care for It Naturally (without using alcohol). (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/umbilical-cord-care/

Understanding the Stages of Labor. (2017, March 22). Retrieved March 15, 2018, from https://www.mamanatural.com/stages-of-labor/

Wakefield, A. J., Murch, S. H., Anthony, A., Linnell, J., Casson, D., Malik, M., … others. (1998). *RETRACTED: Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children*. Elsevier.

Walton, J. (1992). Making the theoretical case. In C. C. Ragin & H. S. Becker, *What is a case?: Exploring the Foundations of Social Inquiry* (pp. 121–138). Cambridge University Press.

We are leaving Chicago ➜➜ IRL 59 | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/irl-59/

Week 1 on the Paleo Diet. (2014, January 11). Retrieved March 13, 2018, from https://www.mamanatural.com/paleo-week-1/

Week 4 Postpartum. (2013, December 19). Retrieved March 15, 2018, from https://www.mamanatural.com/week-4-postpartum/

Week 9 Postpartum. (2014, January 24). Retrieved March 15, 2018, from https://www.mamanatural.com/week-9-postpartum/

Week 10 Postpartum | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/week-10-postpartum/

WEIRD PREGNANCY CRAVINGS! (MNShow 26) - YouTube. (n.d.). Retrieved March 25, 2018, from https://www.youtube.com/watch?v=FR_BBrKHz5c

What are the Best Prenatal Vitamins for You? (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/best-prenatal-vitamins/

What Does Birth Cost in the U.S.? (2015, November 6). Retrieved March 15, 2018, from https://www.mamanatural.com/birth-cost/

What Have We Done?!? (IRL s2 e2). (2015, August 27). Retrieved March 20, 2018, from https://www.mamanatural.com/irl2-2/

What Is a Rainbow Baby? (Pregnancy After Loss) | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/rainbow-baby/

What is the Best Baby Formula? (2016, June 8). Retrieved March 15, 2018, from https://www.mamanatural.com/best-baby-formula/

What To Do When People Think You're Nuts | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/what-to-do-when-people-think-youre-nuts/

What We Are Doing About Vaccines for Children Now. (2016, March 20). Retrieved from https://web.archive.org/web/20160320214934/mamanatural.com/vaccines

What's in Mama's Makeup Bag? (2012, August 14). Retrieved March 15, 2018, from https://www.mamanatural.com/whats-in-mamas-makeup-bag/

What's the Best Diet? 5 Immutable Truths of Nutrition. (2016, January 29). Retrieved March 19, 2018, from https://www.mamanatural.com/nutrition-truth/

What's Wrong With My Neck? . (2016, April 7). Retrieved March 15, 2018, from https://www.mamanatural.com/whats-wrong-with-my-neck/

What's Your MAMA WOUND? In Real Life #41. (2014, December 11). Retrieved March 13, 2018, from https://www.mamanatural.com/irl-41/

When They Say It's Just Your Parenting-This Outnumbered Mama. (2016, April 26). Vaccines and Autism. Retrieved March 27, 2018, from https://autisticmama.com/vaccines-and-autism/

Which Birthing Classes Are Best For You? (2016, January 7). Retrieved March 15, 2018, from https://www.mamanatural.com/birthing-classes/

Which is the Best Carrier Oil? (2016, May 23). Retrieved March 15, 2018, from https://www.mamanatural.com/best-carrier-oil/

White, H. C. (1992). Cases are for identity, for explanation, or for control. In C. C. Ragin & H. S. Becker, *What is a case?: Exploring the Foundations of Social Inquiry* (pp. 83–104). Cambridge University Press.

Whitehead, D. (2014). The evidence of things unseen: Authenticity and fraud in the Christian mommy blogosphere. *Journal of the American Academy of Religion*, *83*(1), 120–150.

Why I Don't Use Soap □□□□□ (Much). (2016, March 31). Retrieved March 15, 2018, from https://www.mamanatural.com/why-i-dont-use-soap/

Why I Waited 3 Years Between Pregnancies. (2013, May 28). Retrieved March 15, 2018, from https://www.mamanatural.com/why-i-waited-3-years-between-pregnancies/

Why I'm Not Vegetarian ✌ IRL #49 | Mama Natural. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/irl-49/

Why I'm Waiting To Do Baby Led Weaning (BLW). (2011, April 5). Retrieved March 15, 2018, from https://www.mamanatural.com/why-im-waiting-to-do-baby-led-weaning/

Why Natural Birth Is So Beneficial For Baby & Mama. (n.d.). Retrieved March 15, 2018, from https://www.mamanatural.com/natural-birth/

Why We Chose bumGenius Cloth Diapers. (2011, May 24). Retrieved March 15, 2018, from https://www.mamanatural.com/why-we-chose-bumgenius-cloth-diapers/

Wittgenstein, L. (1967). *Philosophical investigations* (3rd ed.). Blackwell.

Wolfe, R. M., & Sharp, L. K. (2005). Vaccination or immunization? The impact of search terms on the internet. *Journal of Health Communication*, *10*(6), 537–551.

Yaqub, O., Castle-Clarke, S., Sevdalis, N., & Chataway, J. (2014). Attitudes to vaccination: a critical review. *Social Science & Medicine*, *112*, 1–11.

Yin, R. K. (2014). *Case study research: Design and methods*. Sage publications.

YTMD • View topic - Mama Natural Blog. (n.d.). Retrieved March 25, 2018, from https://ytmommadrama.com/viewtopic.php?f=196&t=3232&start=150

Zhou, F., Shefer, A., Wenger, J., Messonnier, M., Wang, L. Y., Lopez, A., … Rodewald, L. (2014). Economic evaluation of the routine childhood immunization program in the United States, 2009. *Pediatrics*, *133*(4), 577–585.

Zimmerman, R. K., Wolfe, R. M., Fox, D. E., Fox, J. R., Nowalk, M. P., Troy, J. A., & Sharp, L. K. (2005). Vaccine Criticism on the World Wide Web. *Journal of Medical Internet Research*, *7*(2), e17. https://doi.org/10.2196/jmir.7.2.e17