Motherhood in Academia:
A Grounded Theory Pilot Study of Online Texts

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Abstract: *Issues of gender in the workplace are a persistent issue in the U.S. The gender gap is particularly enhanced within academia, with academic mothers facing particular challenges. To address this issue of motherhood in academia, more needs to be known about the problem. Previous research tends to look at the experiences of faculty and graduate students through interviews or work-family policies to (in)formally assist parents with balancing career and caretaking duties. This grounded theory study adds to the literature in a new manner by looking beyond experiences and policies and instead concentrates on the phenomenon of motherhood as seen through an online source focused on an academic audience. By utilizing contemporary technology to focus on this topical problem, an expanded understanding can be achieved. Results from an analysis of texts on Chronicle.com revealed four primary themes: personal experience/story, biology, academic pressures, and advice. These emergent themes developed into a mid-level theory that explains the phenomenon of motherhood in academia online.*
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Issues of gender in the workplace are a persistent concern in the U.S., with men consistently earning more than women for the same job, and women without children earning more than those with children (Glynn & Powers, 2012; National Committee on Pay Equity, 2012). The gender gap is particularly enhanced within academia where women are graduating from colleges and universities at some of the highest rates in history, yet are not being equally represented in academic positions (Harper, Baldwin, Gansneder, & Chronister, 2001). Women, in particular mothers, are disproportionately represented and underpaid in academia (Crosby, Williams, & Biernat, 2004). Research has also shown (Wolfinger, Mason, & Goulden, 2008) that academic mothers are not consistently progressing through the academic pipeline to full professor.

In order to understand more about motherhood in academia and such complexities as why there is gender inequity in tenured professors, more needs to be known. Although there is a growing body of literature on academic motherhood, it is still a "sparse" field (Philipsen, 2008), despite motherhood in academia being referred to as "one of the hottest questions everywhere in higher education" (Marcus, 2007, p. 28). Primarily the ways this topic has been addressed is by looking at the experiences of faculty/graduate students through interviews and the availability and use of work-family policies. Adding to the literature, this study looks beyond policies and experiences told to an interviewer, and instead concentrates on the phenomenon of motherhood as seen on an online source focused on an academic audience. By utilizing

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contemporary technology to focus on the complexities of motherhood in academia, an expanded understanding can be achieved.

This study emerged from the personal experience of becoming a mother while in a doctoral program. The following sections begin with a brief description of the researcher's personal journey to contextualize the story, followed by 1) the purpose and theoretical framework; 2) a selected literature review of motherhood and academia; 3) an explanation of the step-by-step research design and process utilized for the grounded theory methodology and analysis; 4) the emergent results and mid-level theory developed as relating to motherhood in academia as seen in online texts; and 5) conclusion and implications.

A PERSONAL JOURNEY

At the end of my first year of my doctoral program, I became pregnant with our son. When most people, both in and outside of academia, heard our baby was due in September, they responded with shock, and told me something to the effect of "Whoa! You didn't plan that well, did you?" Some of the response was a form of empathizing for a south Texas summer pregnancy, where temperatures often reach beyond 105 degrees. Other responses had to do with timing in my doctoral degree. For instance, having a baby in September meant potential conflicts with courses and research. In order to maintain the academic fellowship which covered tuition, fees, and a stipend to live on, I had to continue to take three doctoral level courses each semester while working 20 hours a week teaching or conducting research with faculty. This meant that I spent the beginning of the semester completing as much homework, presentations, and group work as possible before I had our son. After becoming a mother, I was on the computer writing my professors to both make sure I maintained a positive connection with them and also so as to not fall behind on work. The following email was written less than 48 hours after our son was born:

> *Hi Dr. _____,*
> *I wanted to let you know that our son has officially entered the world! He was 7lbs and is doing great.*
> *In terms of class, I wanted to make sure we were on the same page. My partner will take notes for me in class tomorrow and I will see if she can bring in a hardcopy of the assignment for you. I have also emailed the assignment to you.*
> *Is there something else that I should be aware of?*
> *Thank you for working with me on this.*

My personal experiences in becoming a mother while in a doctoral program led me to a greater awareness of the complexities of academic motherhood. As such, I found that there is a growing interest and need to understand more about motherhood in academia. This study addresses one aspect of the topic that has yet to be fully explored, online texts aimed at an academic audience.

PURPOSE OF THE STUDY

The purpose of this grounded theory study was twofold: 1) to extend the literature on motherhood in academia through "an extension of current ideas" (Charmaz, 2006, p. 153), specifically as seen in online extant texts, and 2) to understand the phenomenon of motherhood in academia as seen on an online source geared toward an academic audience. This study helps to fill a gap in the literature by looking to extant texts posted online as a data source for uncovering how motherhood in academia is discussed

outside of scholarly texts. In particular this will be achieved through looking at texts relating to motherhood as posted on the online version of The Chronicle of Higher Education, *Chronicle.com*, a website addressing news, jobs, and discussion on topics relating to higher education.

Using an interdisciplinary approach, this study sought to incorporate research across multiple disciplines to enhance an understanding of motherhood in academia. The intent of an interdisciplinary approach is to move beyond the tunnel vision (Repko, 2008) of one discipline and integrate multiple perspectives (Klein, 1990). By completing this study, a greater understanding of the topic can be achieved and hopefully applied to supporting academic mothers.

Research question. In grounded theory, research questions are intended to allow for theory generation, instead of being guided by prior theory (Creswell, Hanson, Clark Plano, & Morales, 2007). The following research question guided the study: What types of themes emerge in online texts that focus on an academic audience, relating to motherhood and academia?

THEORETICAL FRAMING

The following study is situated within a sociocultural perspective which foregrounds societal, interactional, and learning contexts. In this study, these theoretical perspectives situate the grounded theory methodological approach by recognizing the constructivist nature of knowledge and "multiple truths" (Charmaz, 2006). With this perspective, learning and knowledge is constructed within situational contexts. For this study, I kept Charmaz's (2006) advice about the multiplicity of truth at the forefront of my mind for data analysis,

> What you see in your data relies in part upon your prior perspectives. Rather than seeing your perspectives as truth, try to see them as representing one view among many. That way, you may gain more awareness of the concepts that you employ and might impose on your data. (p.54)

Drawing from Vygotsky (1978), sociocultural theory places great emphasis on looking beyond the individual to interactions with others. Sociocultural theory emphasizes the ways in which societal constructions and definitions are dynamic and change depending on those involved (e.g., Holland, William Lachicotte, Skinner, & Cain, 1998; West & Zimmerman, 1987). This means then that the societal/sociocultural construction of motherhood is variable and (re)created in daily interactions.

SELECTED LITERATURE REVIEW AT THE INTERSECTION OF MOTHERHOOD AND ACADEMIA

Recently, there has been an extension on the body of literature for motherhood and academia (Gerten, 2011; Tiu Wu, 2013; Trepal, Stinchfield, & Haiyasoso, forthcoming). However after a review of the literature, online texts appear to have not been addressed. Online extant texts, those that are not elicited by a researcher, can provide insight into the ways in which people frame their understanding of a topic. Since there is a paucity of literature that specifically explores motherhood in academia as written online, this selected literature review merges various disciplines to lay the groundwork for the study. By integrating research from multiple disciplines, the purpose was to reach an interdisciplinary understanding that surpasses knowledge found within any one discipline (Repko, 2008).

Recent literature on women and motherhood in academia is situated primarily in two major categories, those that focus on work-family policies (Gerten, 2011; Hill, Nash, & Citera, 2011; Mayer & Tikka, 2008; Ramirez, 2010) and those that focus on the balance of academia and motherhood for faculty (Baker, 2010; Mason & Ekman, 2007; Philipsen, 2008; Trepal & Stinchfield, 2012; Wolfinger, et al., 2008) and graduate student mothers (K. D. Lynch, 2008; Sipes, 2010; Tiu Wu, 2013; Trepal, Stinchfield, & Haiyasoso, (forthcoming); S. Williams, 2007). To situate motherhood in academia within the literature at large, it is important to consider the larger societal/sociocultural context, such as the wage/hiring gap in the United States, which is evidenced through pay disparity, a glass ceiling, and the maternal wall – an additional impediment to promotion throughout pregnancy and motherhood (Crosby, et al., 2004). The following subsections will speak to three major topic areas: 1) societal/sociocultural context of motherhood in academia, 2) work-family policies for academic mothers, and 3) experiences of faculty and graduate students.

TOPIC 1: SOCIETAL/SOCIOCULTURAL CONTEXT OF MOTHERHOOD IN ACADEMIA
GENDERED WAGE/HIRING GAP IN THE U.S.

With the succession of women to top professions around the U.S., gender equity appears successful. However, the persistent wage gap demonstrates a lack of equality. On average, women who work full-time still only make $0.77 on the dollar compared to men (National Committee on Pay Equity, 2012). Women of color, in particular Hispanic women, make the least on the dollar compared to white males (Matthews, 2012; National-Committee-on-Pay-Equity, 2012). These statistics point to a continued "glass ceiling" that permits women only to achieve certain economic heights.

Within the U.S., mothers have even lower status than women who are childless (Ridgeway & Correll, 2004a) with evidence of a wage gap. After becoming a parent, women continue to be at a disadvantage and earn significantly less than working fathers (Crosby, et al., 2004). In addition, working mothers are considered to be less capable (Ridgeway & Correll, 2004a) and also earn less than women without children (Glynn & Powers, 2012). The wage gap for women with children is what Budig and England (2001) refer to as a "wage penalty for motherhood" (2001, p. 205) and what Crosby, Williams, and Biernat (2004) refer to as a "maternal wall."

THE MATERNAL WALL IN ACADEMIA. The "maternal wall" (Crosby, et al., 2004) is particularly obvious within academia where women are underrepresented in the majority of departments. Marcus (2007) notes that although women and men enter and complete graduate degrees at approximately the same rate, men quickly outnumber women as they move forward into academic positions. What we are seeing is that women are increasingly earning doctoral degrees but are not progressing through the academic pipeline from untenured assistant professor to *tenured* associate or full professor. Curtis (2011) from the American Association of University Professors notes in a report for Equal Pay Day, "At only 28 percent of all full professor appointments, women are still outnumbered more than two to one in the most senior rank" (2011, p. 2).

Although some women do not seek tenured professorships, throughout the academy, Wolfinger, Mason, and Goulden (2008) have noted that women are falling through the cracks (what they refer to as "leaks" in the academic pipeline) and not advancing. These "leaks" occur throughout the academic process irrespective of type of institution. What this means is that women in academia, in particular mothers, are systematically not moving forward in equal rates as compared to their male counterparts. While the

reasons for such disparity vary, this lack of gender equity in academia, which keeps faculty women, and in particular mothers at a subsidiary level, has been researched from multiple perspectives.

One reason for this could be the way in which motherhood is considered in our society. Gender representations and roles in our society are reinforced through socially constructed expectations and identities about what it means to be a woman or a man and how race and ethnicity is deemphasized (Holland et al., 1998; Ladson-Billings & Tate, 1995; Ridgeway & Correll, 2004b; West & Zimmerman, 1987). Societal power structures place highest status on White, male, heterosexuals and deemphasize anyone deviating from that norm. Ridgeway and Correll (2004a) propose that motherhood itself may be a status characteristic in our society that inhibits forward momentum by creating stigma, "…like other status characteristics it will implicitly lower people's expectations for a mother's competence on the job, reduce her perceived suitability for positions of authority, and raise the standards she must meet to prove ability in workplace" (2004a, p. 697). Their findings are consistent with other studies that show after having a child, women are suddenly perceived as less capable professionally and less likely to be offered training and promotion (Cuddy, Fiske, & Glick, 2004).

TOPIC 2: WORK-FAMILY POLICIES RELATED TO ACADEMIC MOTHERS

To offset gender inequity for mothers in academia, various policies have developed to support the balance of family and career. Sometimes these are referred to as "family-friendly" at other times "career-friendly" or "work/life" policies. These policies are intended to assist employees juggling both work and care-giving at home such as "…policies concerned with employees' hours of work (job sharing, part-time work, flexi-time) leave entitlements (parental leave, career break), financial assistance (child care, maternity pay) and particular responsibilities, e.g. elder care or children" (Scheibl & Dex, 1998, p. 587).

At a federal level, some family-friendly policies have been created to protect employee jobs such as the Family and Medical Leave Act of 1993 (2007), which allows for a full-time employee who has been working at an institution for at least one year to take up to twelve workweeks for the birth of a child. Yet the FMLA only covers full-time workers, which in most instances automatically disqualifies part-time faculty and graduate students. Also created at the federal level to support gender equality is the Pregnancy Discrimination Act of 1978 which prohibits discrimination on the basis of pregnancy (U.S. Equal Employment Opportunity Commision, 2013). The act constructs pregnancy as a type of temporary disability, which requires the same benefits of other temporary disabilities (e.g., breaking an arm), which could include paid leave and job security for those working full-time jobs.

Unfortunately, these federal and institutional policies have not created gender equity (Gerten, 2011). In looking at family-friendly policies, Gerten's (2011) study of seventeen academic institutions in one Midwestern state found through interviews with administrative staff that there is room for additional support of academic mothers. Approximately half of those interviewed reported that their academic institutions fell into a family-friendly category of "an emphasis on formal policies with an emphasis on rights and fairness" and 100% reported that there is "an emphasis on informal departmental family-friendly support" (2011, p. 54). In the U.S. (see Mayer and Tikka's 2008 article, for a study comparing Finland, Sweden and the United States' family-friendly policies), there are not consistent policies in place to support families, or

mothers. Instead, informal negotiations by faculty mothers (and fathers) are commonplace (Hill, et al., 2011).

Although informal policies in academia have provided some relief and support for mothers juggling work and caretaking, these are not ideal as they are changeable, confusing, and can vary between individuals. Hill, Nash, and Citera (2011) found that "with no formal policy, academic and professional faculty is left confused (and often misguided) about what options are available for parental leave" (2011, p. 113). With only informal family-friendly policies in place, it is up to individuals to negotiate their needs instead of institutions providing equal support for everyone.

However, not all the research agrees about implementing and using family-friendly policies such as paid parental leave for mothers in academia. Gerten (2011) suggests that more needs to be done to support mothers beyond the sole creation and implementation of family-friendly policies. In particular she notes the addition of "career-friendly" policies. By demarcating career-friendly from family-friendly, there would then be attention paid to both helping women (and men) to achieve in their jobs and also balance family and work. Career-friendly policies that women *and* men could benefit from could include practices involving clear tenure guidelines and mentoring (Gerten, 2011).

Furthermore, research points to the need for a culture of *using* policies; a culture that would not stigmatize those – women or men – who choose to use a policy such as paid parental leave or FMLA. Hill et al. (2011) found that "Fifty-one percent of faculty mothers reported coming back to work after having a child sooner than they would have liked because they 'wanted to be taken seriously as an academic' (compared with 14.4% of fathers)" (p. 115). This shows that not having formal family-friendly policies to support parenthood, and motherhood in particular, is particularly disadvantageous to women (Hill, et al., 2011). Armenti (2004) showed that the structure of the academic institution, the lack of acknowledgement of the "female life course" played a large part in women's decisions to postpone having children, or working to have "May babies" to allow for the summer off without requesting maternity leave. As feminist researcher Philipsen (2008) notes, gender equality in academia is looked at as providing the "*same* opportunities" for women as men instead of policies that could focus on "embracing female ways of doing, knowing, and being - in other words, providing equal opportunities for women without the expectation that they become like men" (p. 3).

TOPIC 3: EXPERIENCES OF FACULTY AND GRADUATE STUDENT MOTHERHOOD

Beyond looking at family-friendly policies for mothers in academia, the general topic of how women balance academia and family is increasingly being researched (Baker, 2010; Mason & Ekman, 2007; Philipsen, 2008; Trepal & Stinchfield, 2012; Wolfinger, et al., 2008). Situating women as underrepresented and underpaid in academia is often noted as central to this literature. Rasheed and Sinha note that "Academic women have been on the faculty in higher education institutions for more than 100 years yet still earn less salary across all ranks than do men" (Aleman & Renn, 2002, p. 424). An increasing number of women are earning doctorate degrees but not continuing in the academic pipeline to full professor (Marcus, 2007; Wolfinger et al., 2008). It appears that one reason for this disproportionate representation is the "devastating" effect of being a faculty *mother* as compared to a faculty father (Philipsen, 2008, emphasis added). Particularly concerning is the underrepresentation of a subset of women, mothers, throughout all of academic positions (Harper et al., 2001).

Within the academic workplace there has been a move toward providing gender equity such as through increasing women's wages. The wage gap is particularly glaring in academia. The American Association of University Professors noted "The salary gap is largest at the rank of full professor where, for all institutional types combined, women are paid, on average, only 88 % of what their male colleagues are paid" (2001).

A particularly salient example repeated throughout the research was in the description of the tenure process being based upon a male model of work. When the tenure process was developed, it did not incorporate mother's "second" or "third shift" in having primary childcare duties in addition to full-time work (Hochschild, 1989; J. C. Williams, 2005). When trying to fit within the tenure clock (from assistant to associate, and later full professor), women may be faced with a concurrently ticking biologic clock. Sipes (2010) whose phenomenological study looked at female faculty experiences with children cleverly refers to this as the, "The Common Tick-Tock: Childbearing and the Tenure Track." The confluence of the tenure clock and biologic clock has been shown to result in women having fewer children than they would have liked (Gerten, 2011; Mason & Goulden, 2004).

Furthermore, negotiating multiple roles, such as between mother, student, and employee, has been shown to play a complex and often burdensome role for graduate student motherhood (Grenier & Burke, 2008; Tiu Wu, 2013; Trepal, et al., forthcoming). The lack of women in assistant, associate, and full professor ranks appears to be a result of women's roles in the family, "This problem in the pipeline has much to do with female faculty having babies and continuing to carry the lion's share of family responsibilities" (Philipsen, 2008, p. 25). To try to understand more about the underrepresentation of women faculty with children, Mason and Goulden (2004) set out to study discrimination as a possible reason for the disproportionate representation. The researchers found that "Rather than blatant discrimination against women, it is the long work hours and the required travel, precisely at the time when most women with advanced degrees have children and begin families, that force women to leave the fast-track professions" (Mason & Goulden, 2004, p. 90).

Overall the literature speaks to a gender imbalance in academia that situates women/mothers, as being paid less and systematically not moving smoothly through the academic pipeline as compared to their male counterparts. Researchers suggest the need to expand policies to support the balance of professional and personal lives, as well as to extend the literature on the experiences of motherhood in academia.

GROUNDED THEORY RESEARCH DESIGN AND METHODOLOGY

This study adds to the literature at large by looking to understand the phenomenon of motherhood in academia as written about online for an academic audience. The study utilized grounded theory to unpack the phenomenon of motherhood within academia as discussed on texts at *Chronicle.com*. Data collection and analysis took place simultaneously and employed a "constant comparative method" (Glaser & Strauss, 1967). In utilizing constant comparison amidst adding of new data, it is possible to reach "theoretical saturation" (Glaser & Strauss, 1967), which is where "successive examination of sources yields redundancy and that the data you have seem complete and integrated" (Glesne, 2006, p. 152). However, due to the limited time frame for this study, the data and analysis focused on a prescribed set of data that did not involve theoretical saturation. The following subsections will speak to the process by addressing

the 1) context of the sample, 2) data collection, and 3) data analysis.

CONTEXT OF THE SAMPLE: CHRONICLE.COM

The study focused on the academic website, *Chronicle.com,* that publishes daily content from its headquarters in Washington, DC. The website *Chronicle.com* has a particular focus on news, jobs, and blogs relating to college and university life. Although primarily focusing on the U.S. higher educational system, the website content also includes information from authors outside the country as well as lists of jobs from international locations. There are a variety of people that write content for the *Chronicle.com,* including multiple regular online columnists, bloggers, and guest writers. There are editorial guidelines for each section of the *Chronicle.com* that authors must follow before publication. Texts range from discussion of job attainment strategies to concerns about academia.

DATA COLLECTION

As a first step towards data collection, I began the process by looking to my own experiences and assumptions. These personal experiences can be useful and add to theoretical sensitivity as recommended in grounded theory (Charmaz, 2006; Glaser & Strauss, 1967; Strauss & Corbin, 1990) or they can hinder the research if not properly monitored. Due to the nature of this topic, the fact that I am a new mother in a doctoral program, I have particular experiences that have shaped how I view this work. To remove as much bias as possible, a reflection journal was maintained (Mertens, 2010), bracketing of personal experience was conducted (Creswell et al., 2007), and the underlying assumptions of the study were articulated which include:

1. Women/mothers in academia seek tenure track positions.
2. Anyone who posts on *Chronicle.com* identifies with academia.
3. What is posted on *Chronicle.com* represents *a* truth for the author(s).

NOMINATION PROCESS – SELECTING THE FIRST SET OF DATA. Following preliminary reflection and bracketing of personal reflection, an initial limited selection of data was identified and collected, and analyzed. For the random selection of texts, no restriction on a date range was included in order to allow for a larger pool for random selection. Inclusionary criteria focused on article texts relating to motherhood instead of such posts as job announcements, reviews, photographs/visuals, and advertisements that mentioned the topic. An initial set of data in included two texts, which were used utilized to determine preliminary themes and theory. After the initial selection of texts, an additional set of texts was identified, collected and analyzed against the themes and theory found in the first set of data.

For this study, both random and theoretical sampling (Creswell, 2007) were utilized. The initial set of randomly selected texts took place in two different steps. The first step included an initial sample of two randomly selected texts that involved searching for posts on *Chronicle.com* relating to motherhood. The researcher used the embedded search engine on the website using the following delimiting key terms – *mother* and *pregnancy*. From a preliminary search, these terms collectively yielded over 6,000 entries, with mother yielding 5,113 entries and *pregnancy* revealing 626 entries.

The random selection of texts was achieved by using the website, www.Random.org, entering the total number of entries found for each key word (e.g., 5113 or 626), and having the computer program select a random number from within that set. The randomly selected number was then correlated with the entry as itemized on the key

word search on *Chronicle.com*. When a random sample correlated to an entry that did not relate to motherhood, a new selection was made. In order to make the new selection, the researcher looked to posts before and after the original random selection. As each randomly selected text correlated to a page of 25 results, the researcher produced a .pdf of the page of results and read through the titles searching for the first text that appeared to relate to motherhood.

THEORETICAL SAMPLING – SELECTING ADDITIONAL DATA. After random sampling, coding and analysis concluded, the researcher began theoretical sampling procedures. In contrast to random sampling, "The purpose of theoretical sampling is to obtain data to help you explicate your categories" (Charmaz, 2006, p. 100). This means that purposeful selections were added to assist in finding new themes that may have not yet been discovered. The researcher identified additional texts focusing on sub-sections of the *Chronicle.com* that had not been selected through random selection. Specifically this involved searching for two additional key terms (*motherhood* which yielded 249 entries and *maternity* which yielded 396 entries) to ensure the relevance of themes across various texts on motherhood in academia.

DATA ANALYSIS

OPEN, AXIAL, AND THEMATIC CODING. Within a grounded theory design, data analysis focuses on open, axial, and thematic coding (Corbin & Strauss, 2008). These coding schemes were used to analyze the four texts randomly and purposively selected relating to motherhood in academia. To facilitate open coding line-by-line and for further reference, the researcher used the *Annotate* tool on the computer program *Preview 5.0.3* (See Figure 1). This tool was used throughout the coding process. Open coding followed a line-by-line analysis of the text highlighting key words/themes with a red outline around words. Then axial coding, which involved a preliminary analysis of the open codes into categories and subcategories with descriptions of each, was noted with blue text in the margins. The final step of coding, thematic coding, looked across the axial/grouped codes to determine relationships between categories, was noted with black text in the margins of the document. Memo-writing was conducted both on a separate Word document as well as in parentheses in red on the .pdf text. The following figure is representative of the coding process for the texts:
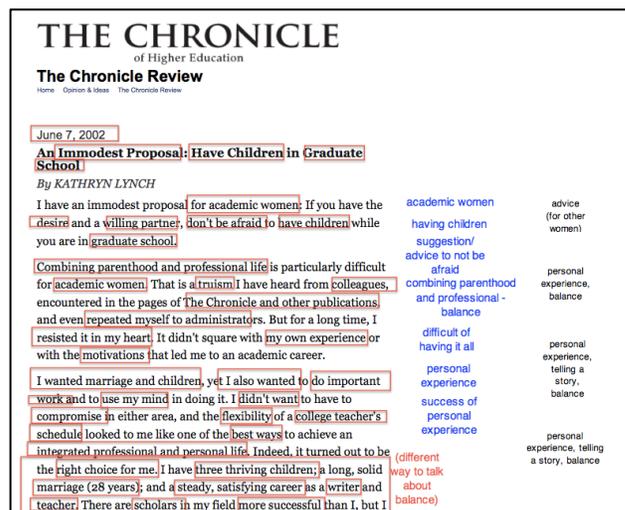

Figure 1: Sample excerpt with open, axial, thematic coding, and memo-writing.

Analysis of texts. The analysis of texts began with open coding then axial coding of the first selected text based on the key word search "pregnancy." The resultant text was in the Advice section of the *Chronicle.com*, "Coping with Obstacles in a Balanced Life," by Ellen Ostrow (2001). Throughout the process of coding, the researcher utilized memo-writing (Glaser & Strauss, 1967) to maintain a method of keeping track of thoughts step-by-step. Using this technique "also frees your mind for new thoughts and perspectives" (Glesne, 2006) with the aim of providing additional understanding. It is in memo-writing that the ground work for analysis and writing is laid (Charmaz, 2006). During the process of constant comparison using memo-writing along with open and axial coding, preliminary themes started to emerge relating to balancing professional and personal lives, setting goals, uncontrollable obstacles, and academic commitment. Before thematic analysis was conducted, the researcher began the coding process with a secondary text, using the key search term "motherhood" in order to compare and contrast as part of constant comparison methods of grounded theory (Charmaz, 2006; Glaser & Strauss, 1967; Strauss & Corbin, 1990).

The second text selected randomly was a blog text titled, "The Mommy Handicap" by Gabriela Montell (2010). Preliminary themes emerged during open and axial coding relating to childbearing and childrearing, mothering as a handicap, gender roles, academic fathers, and university roles. These themes were compared with those from the first text, and then a third text was collected for analysis.

The third text collected came about from a random selection using the key search term "mother." The post by Kathryn Lynch, "An Immodest Proposal: Have Children in Graduate School" (2002), was analyzed in the same manner as the first two with preliminary themes relating to academic mothers, professional balance, suggestions/perceptions of others, gender gap in academia, biologic clock, personal experience and motives. The fourth text selected in the initial phase of data collection and analysis addressed Jeanne Zaino's, "Expecting on the Tenure Track" (2002), in the Advice section. Themes revealed advice from others, forced to balance family and work, apprehension and anxiety, and familial support.

RESULTS

Through using a grounded theory methodological approach that utilized data collection and analysis simultaneously (Charmaz, 2006; Glaser & Strauss, 1967; Strauss & Corbin, 1990), this study sought to unpack the phenomenon of motherhood in academia as seen in online texts. The preliminary themes that emerged in the analysis of online texts through open and axial coding were reduced using constant comparison. Initial coding revealed themes as noted within the online texts (e.g., setting goals, being forced to balance, finding equilibrium, commitments, uncontrollable daily problems, biologic clock, university systems, perceptions/suggestion by others; academic parenthood, familial support, childbearing, childrearing, motives, apprehension and anxiety).

After additional analysis of themes that included rereading the texts and additions/subtractions to the open and axial codes, the initial codes were found to merge into seven major themes: advice, personal experience, nature/body, gender, balance, structural/cultural constraints, and academic pressures. Table 1 below indicates the way that each text was classified by theme.

Table 1.*Emergent themes within the texts analyzed*

	Coping with Obstacles to a Balanced Life (Ostrow, 2001)	The Mommy Handicap (Montell, 2010)	An Immodest Proposal: Have Children in Graduate School (K. Lynch, 2002)	Expecting on the Tenure Track (Zaino, 2002)
Advice (to other women, to institutions, from others)	X (to other women)	X (to other women)	X (to other women, to institutions)	X (from others)
Personal experience (telling a story)	X	X	X	X (story)
Nature/ body (biology)	X	X	X	X
Gender (disparity, mother/father roles, gender roles)	X	X	X	0 (talks around the topic)
Balance	X	0 (talks around the topic)	X	X
Structural/ cultural constraints	X	X	X	0 (talks around the topic)
Academic pressures	X	X (story)	X	0 (talks around the topic)

During the process of additional memo-writing and the step-by-step process of developing a theoretical image to represent the themes, the researcher re-evaluated the three theoretical themes that were not directed addressed with all texts. After re-bracketing off personal experience, the researcher was able to see that previous experience and beliefs about the societal/sociocultural construction of knowledge influenced the way these texts were read. Ultimately then the researcher decided that talking around the themes of gender, balance, and structural/cultural constraints did not constitute the theme's applicability. Therefore, the final theoretical themes were reduced to four: 1) **personal experience/story**, 2) **biology**, 3) **academic pressures**, and 4) **advice**. The following subsections provide an explanation of each theme and examples from the texts to showcase the findings.

THEME 1: PERSONAL EXPERIENCE/STORY

The emergent theme personal experience/story was demonstrated by the authors of the texts mentioning either their own experiences with pregnancy and/or motherhood, or referring to someone else's personal experience. For example, Ostrow (2001) although not speaking directly about motherhood, speaks to the obligations of her multiple roles. She begins the post by talking about the beginning of her academic day:

On paper, yesterday should have been a breeze. Everything was written down in my daily planner: Get a prescription filled, get to an important meeting downtown, and make lamb chops for dinner. Unfortunately, the line at the pharmacy was so long that I was late getting to work. (Ostrow, 2001, para 1)

In contrast, Lynch's (2002) "An Immodest Proposal," specifically relates a personal experience to motherhood. She tells about her personal experience in making the decision to have children despite the difficulties of being an academic mother. She explains:

I wanted marriage and children, yet I also wanted to do important work and to use my mind in doing it. I didn't want to have to compromise in either area, and the flexibility of a college teacher's schedule looked to me like one of the best ways to achieve an integrated professional and personal life. Indeed, it turned out to be the right choice for me. I have three thriving children; a long, solid marriage (28 years); and a steady, satisfying career as a writer and teacher. There are scholars in my field more successful than I, but I have no illusions that my limitations have been caused by my children or my marriage. (K. Lynch, 2002, para 3)

In contrast, some of the related stories refer to someone else's personal experience, such as in Montell's post that focuses on a book written by another woman, Kittelstrom, relating to motherhood in academic. Montell (2010) quotes Kittelstrom's personal experience:

For my two "easy" pregnancies conceived exactly when I planned them with complication-free deliveries, quick recoveries, and no lactation problems, my conservative estimate is 1,810 hours spent. Each. That's a book right there, and then some. (Montell, 2010, para 2, emphasis in original)

The theme of personal experience/story was seen as a central core within all texts. Whether speaking of a first person experience of motherhood of someone else's experience, the texts all centered on this focus.

THEME 2: BIOLOGY

The emergent theme of biology could be seen by the authors' references to the female body such as the physical recovery from pregnancy. For example, Lynch (2002) refers to statistics to paint a picture of motherhood in academia:

Men in academe, however, are more likely than men in other fields to be married and have children. What is it about our profession that exaggerates the gender gap?

One chilling fact to which Hewlett returns again and again, and which has recently been reinforced by biological research, is that a woman's fertility begins to decline as early as age 27, only to fall off dramatically after age 35. Professional women who do have children, according to Hewlett's data, tend to have them early. Perhaps it is the unforgiving trajectory of the academic career path that is responsible for the fact that female professors lag behind women in other professions in their ability to integrate work and family. (para 6)

In a similar fashion, Montell's (2010), "The Mommy Handicap," she notes an example beyond herself to make the point that biology has an affect on motherhood in academia. Citing Kittelstrom:

Even fathers who are committed to gender equity in the division of domestic

work simply cannot compensate in the early years for mammary glands and uteri. Academic men shouldn't be penalized for lacking reproductive organs, but neither should academic women be penalized for having—and using—those organs. (para 10, emphasis in original)

As an alternate approach, in "Coping with obstacles to a balanced life," Ostrow (2001) speaks to her perspective on the way that her body is integral to her life as a mother and academic. She explains:

The idea that it's even possible to keep one role in our lives from impinging on another seems inherently flawed. It harkens back to the Cartesian notion that our minds are separate from our bodies. The fact is, our minds and bodies, our thoughts and emotions, constitute an inseparable whole. The same is true for our life roles. (Ostrow, 2001, p. para 9)

This theme of biology was seen in the texts in relating personal perspective to integrating others' research and thoughts. Biology was seen as an important component that related to the explanation of the experience of motherhood in academia.

THEME 3: ACADEMIC PRESSURES

Discussion of academic pressures was noted throughout all the texts. This emergent theme was noted in both direct and indirect talk about motherhood in academia. For example, in "Expecting on the Tenure Track," Zaino (2002) speaks about her trepidation in sharing her pregnancy with the department head. She writes:

With renewed determination, I made an appointment to speak with the chairman of my department. The Sunday before our meeting, however, The New York Times ran a feature in its "Education Life" section that put a damper on my resolve. "By all accounts," the article read, "the intense competition, the long hours, and the unspoken expectations of the academy's traditionally male culture conspire to make it really, really hard to have a baby and be a professor." These statements, coupled with the firsthand accounts of respected women in the academy who struggled with this issue only to conclude that "you simply can't give 100 % to the academy when you have children," and that "parenting is not a welcome event in the academy" left me feeling somewhat queasy. (Zaino, 2002, para 12)

Likewise, in "Coping with Obstacles to a Balanced Life," Ostrow (2001), talks about her concerns with being a mother in academia. She notes the academic pressures that could be felt such as during a graduate school interview:

When I interviewed for graduate school, it was not illegal for my interviewer to ask me how committed I could possibly be to my career if I planned to marry and have children (Ostrow, 2001, p. para 7)

The theme of academic pressures pervaded the discussion of experiences. Throughout the texts, the implicit and explicit pressures of academia were particularly evident as noted through the vantage of pregnancy and motherhood.

THE THEME OF ADVICE

The theme of advice varied from the other three themes in that it was an extension from the central core of experiences. Each of the texts led to a point in giving advice, either to other women/mothers, or to academic institutions. This can be seen through suggestions to university hiring committee's to recognize the time needed to have and raise a child:

Which is why it's a mistake for universities to treat academic moms and dads alike and make book publication the main criterion in hiring and promotion. Kittelstrom concludes:

When a hiring committee expects to see a published book before it will even consider a candidate for an assistant- professor position, only the childless and parents with full-time caregivers at home are eligible. When a tenure committee expects two books, academic mothers had better start looking for a new job unless they have been extremely lucky with fellowships and helpful grandparents. (Montell, 2010, para 9-10, emphasis in original).

Additional examples focus instead on giving advice to other women. For instance, Ostrow (2001) speaks to mothers in academia:

Having clear goals in each of your life roles is essential to establishing some sort of equilibrium. Your goals serve as a compass -- they guide you back when you get lost in one role. Most often, we need help extricating ourselves from the demands of work. (para 15)

Likewise, Lynch (2002) directly tells women that combining motherhood with academia is a clear possibility: "I have an immodest proposal for academic women: If you have the desire and a willing partner, don't be afraid to have children while you are in graduate school" (K. Lynch, 2002, p. para 1)

These examples of advice were seen throughout the texts. At times this meant recommendations to institutions, while at other times, this emergent theme was seen through advice to other women who are mothers or are considering becoming mothers while in academia.

PHENOMENON OF MOTHERHOOD IN ACADEMIA ONLINE (PMAO)

For motherhood in academia, the interaction of personal experience/stories, the body, academic pressures and advice encompass the *Phenomenon of Motherhood in Academia Online* (PMAO). PMAO can be explained as having four parts that build upon one another – three themes that interconnect within concentric circles, leading to an external purpose – advice – that is either intended for other women or to academic institutions. All texts analyzed fit within this mid-level theory (see Figure 2). Likewise, other online texts on Chronicle.com would be expected to fit within PMAO.

At the core of the PMAO is a personal experience/story. Sometimes these experiences are first hand accounts of being a mother, where other times they are referred to from a third person perspective. In either perspective, the experience of becoming or being a mother while in academia lay at the center of the theory. These personal experiences are conceptualized in two primary ways across the texts, as relating to ones biology and as situated within academic pressures of academia. Ones biology can include speaking to the physical bodily experience of pregnancy or childrearing, or as a reference to the natural differences between men and women. The overarching frame for the personal experience/story and biology lay within the pressures faced within academia. These ranged from negative experiences as a result of academic constraints to more neutral or even positive experiences situated within the academic pipeline.

The concentric circles representing personal experience/story, biology, and academic pressures together lead toward a shared purpose of creating advice. Scenarios of advice focus on 1) other women or 2) academic institutions. Advice given to other women is either directed stated or embedded within the experience discussed in the texts. It is intended to promote assistance for other women who are, or plan to become, mothers

while in academia. Advice given to institutions refers to specific suggestions to improve the academic workplace.
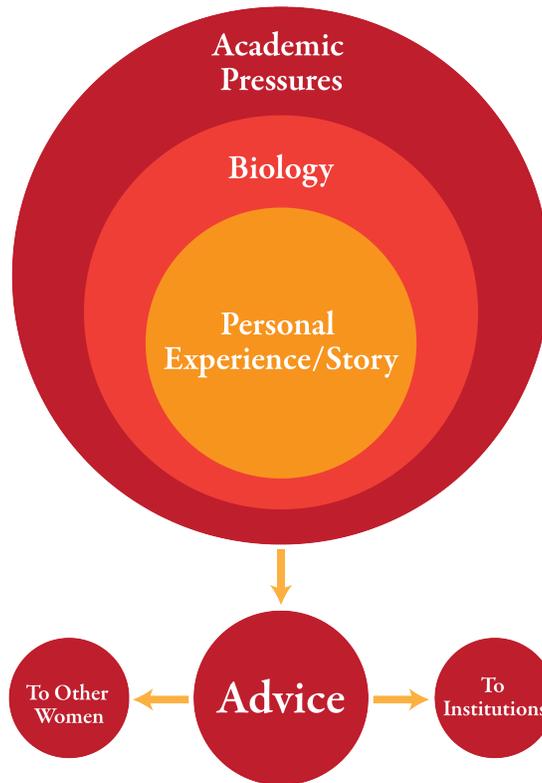

Figure 2: Phenomenon of Motherhood in Academia (PMAO)

CONCLUSIONS

Disproportionate representations of women in academia highlight historical inequity. As a "hot" topic in our society, motherhood in academia has been recognized in popular texts (e.g., *Chronicle.com*) and scholarly literature as needing additional attention (Philipsen, 2008) to address this unequal representation and the "maternal wall." This study sought to add to the literature at large by looking at motherhood in academia as a phenomenon that is discussed in online texts. Specifically, this study utilized grounded theory to develop a mid-level theory (*Phenomenon of Motherhood in Academia Online* – PMAO*)* based upon a selection of texts about the themes that are discussed online relating to motherhood in academia. Results showed four themes that can be conceptualized as three concentric circles of personal experience/story, biology, and academic pressures, leading to advice to other women and institutions.

LIMITATIONS

Foreseen limitations of this study center on the limited timeframe and researcher bias. The timeframe led to a focus on one website and four texts. The resultant online texts that were studied from *Chronicle.com* led to a mid-level theory of the phenomenon of motherhood in academia within that source – a theory that could be further validated through the inclusion of additional sources.

As a woman who became a mother in her second year of her doctoral program, I have

an intimate experience with this topic and a clear focus to provide additional information to support women progress through the academic pipeline. However, this assumption that women and mothers seek tenure track positions is not the only interpretation. It is possible that women/mothers choose to a varied academic path, seeing tenure track positions as undesirable, or unattainable. My personal experience then could be looked at as researcher bias, which is important to recognize and avoid. For grounded theory, personal experiences however are not all considered negative, as they can lead to theoretical sensitivity (Strauss & Corbin, 1990). In order to recognize my bias and to provide greater understanding and transparency of my viewpoint for the reader, I noted my personal journey through a reflective journal, addressed my assumptions, and maintained memos to assist in recognizing my own bias and bracketing it off prior to analysis.

IMPLICATIONS

This study adds to the literature at large on the topic by addressing a seemingly untouched source of material, online texts, to explore the phenomenon of motherhood in academia. The resultant mid-level theory, PMAO, provides insight that could be utilized in future analysis.

It is suggested that future research integrate additional sources for an exhaustive analysis of motherhood in academia as represented online (e.g., personal blogs, additional websites with an academic audience, international websites). Additional analyses of this topic is warranted from other perspectives, such as looking at motherhood in academia online as a "form of online learning community" (Kennedy, Young, & Bruce, 2012) that varies for different generations (Barnes, Marateo, & Ferris, 2007). In the end, this study along with additional research on this topic could inform academic practice and policy to support mothers (and fathers) in academia.

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