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Commerce, Industry, and Security: Biomedicalization Theory and the Use of Metaphor to Describe Practitioner–Patient Communication Within Fertility, Inc.

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ABSTRACT

An infertility diagnosis is distressing. Supportive communication between practitioners and patients before, during, and after treatment is key to mitigating this distress. In the present study, interview questions prompted 22 cis-women who underwent fertility treatment(s) to reflect on practitioner–patient communication during treatment, and their metaphor use was analyzed in light of biomedicalization theory. Participants used metaphors to describe their health care experiences within the infertility-industrial complex known as Fertility, Inc. Findings suggest that metaphor use allowed patients both to participate in and to critique Fertility, Inc.—specifically, their individual communicative experiences with medical practitioners. Recommendations for communication between practitioners and patients and suggestions for future research are discussed.

Until 1978, when the first successful in vitro fertilization (IVF) procedure resulted in a live birth (Barnes, 2014; Spar, 2006), treatment options for those experiencing infertility remained limited and largely ineffective (Marsh & Ronner, 1996; Spar, 2006). Although IVF remained controversial for some years, the fertility industry now offers a more viable treatment option for infertile individuals and couples (Spar, 2006). As a result of the success of new IVF procedures, public awareness of assisted reproductive technologies (ARTs) and reproductive endocrinology and infertility (REI) practices steadily increased. Between 2006 and 2010, 7.4 million women in the United States, more than 10% of childbearing-aged women, accessed infertility treatment (Chandra, Copen, & Stephen, 2014). In 2014, U.S. patients underwent 208,786 ARTs cycles, and more than 35,000 of those cycles simply retrieved ova to freeze for future ARTs cycles (CDC, 2014). Today, the growing public awareness has resulted in increasing pressure for women to avail themselves of ARTs, even before they know whether they will "need" treatment, given that the average age of first-time mothers continues to rise (Barnes, 2014; Mamo, 2007; Twenge, 2013).

The "second wave" of the American feminist movement was well under way at the time of the first successful IVF birth (Rosen, 2000). In fact, by the late 1970s, there was a considerable body of scholarship written by feminist scholars and activists that critiqued the patriarchal

power structure of American medicine. Theorists depicted women both as passive patients and as powerless objects of science, pinned beneath the medical, male gaze (Breitkopf & Rubin, 2015; Donchin, 1996; Meerabeau, 1998; Sawicki, 1991). Sawicki's (1991) Foucauldian feminist analysis of ARTs suggested that ARTs are neither pro- nor anti-feminist; the women who use these technologies are not ignorant of or defenseless against patriarchal power. Instead, she depicted the development of ARTs as a "history of multiple centers of power, multiple innovations … a history marked by resistance and struggle" (p. 80).

Biomedicalization theory examines the multiplicity of innovation in medicine; scholars have asserted that economic trends such as commodification, corporatization, and globalization helped to fashion a new kind of health care system in the post–World War II era (Clarke, Shim, Mamo, Fosket, & Fishman, 2003). Biomedical theorists have positioned "technoscientific innovations [as] the jewels in the clinical crown of biomedicine" (Clarke et al., 2003, p. 162). If technoscience innovations reflect the trend toward biomedicalization in medicine as a whole, then ARTs and the growth of REI practices reflect the dominance of technoscience and biomedicalization within the subfield of REI. More recently, scholars (e.g., Breitkopf & Rubin, 2015) have proposed that the creation and use of ARTs are best understood as a form of biomedicalization. Breitkopf and Rubin (2015) used biomedicalization to explain the ways in which the infertility-industrial complex binds and constrains women, further entrenching conceptions of "normal" fertility and traditional motherhood (Greil, 2002). Breitkopf and Rubin (2015) asserted that ARTs are accessible only to individuals with economic (class) and social (gender, race, sex) privilege: White, upper- and middle-class, and cis heterosexual individuals are most likely to have access to the widest range of treatments that circumvent infertility and encourage conception. All patients, despite their personal identity or forms of privilege, must access ARTs through the multibillion-dollar industry referred to by Mamo (2010, p. 173) as "Fertility, Inc." In this conceptualization of (in)fertility and fertility treatment, Mamo directly linked biomedicalization to ARTs and REI; Fertility, Inc. is the intersection between biomedicalization as a trend and REIs as part of the marketplace for ARTs.

Although infertility is understood as biological, previous researchers concluded that individuals with infertility face undesired emotional and social outcomes from treatment (Bute & Vik, 2010; Willer, 2014). Sandelowski (1993a) and Breitkopf and Rubin (2015) insisted that infertility is not simply biological: for some, it is a disorder, but for others it reflects the socioeconomic and cultural context in which individuals navigate family creation. Past research has demonstrated that infertility is a disruption in the expected life-course, as many people desire children at some point in their lives to fulfill emotional needs, or as a result of societal pressure or biological imperative (Becker 1994; Marsh & Ronner, 1996; Sandelowski, 1993a; van Balen & Bos, 2004). The use of metaphors in descriptions of practitioner–patient communication during (in)fertility treatment offers a linguistic structure through which to study how patients experience infertility, its treatment, and their participation in an impersonal, unequal, and emotionally sterile health care experience.

Metaphor use in health contexts

Metaphors are integral facets of everyday life, which build a "structure for how we perceive, how we think, and what we do" (Lakoff & Johnson, 1980, p. 4). As Angeli (2012) argued metaphors provide both a site for understanding and a vehicle for persuasion. Metaphors used by patients to describe health care experiences provide a means of identity construction, sense-making, and self-reflection throughout the process of treatment (Boylstein, Rittman, & Hinojosa, 2007; Gibbs & Franks, 2002; Palmer-Wackerly & Krieger, 2014).

Although the early literature on (in)fertility treatment focused on the providers' perspective (Ong, de Haes, & Lammes, 1995), more recent scholarship has examined the impact treatment has on patients, particularly female-identified patients (Domar, 2004; Wirtberg, Moller, Hogstrom, Tronstad, & Lalos, 2007). The study of patients' experience during treatment—and their response to that treatment—highlights the scholarly shift of focus from the "illness" to the person diagnosed with the illness (Meerabeau, 1998).

Examination of the use of metaphor by patients can help scholars to understand the experience of female patients undergoing (in)fertility treatments,[1] as involuntary childlessness is widely understood in metaphorical terms (Gibbs & Franks, 2002; Jensen, 2015). The word *infertile* evolved from metaphorical conceptualizations of women's inability to conceive or give birth to healthy children. Terms that reference agricultural and mechanical production, such as *barren* and *sterile*, provide insight into historical attitudes toward women as the primary site of infertility (Barnes, 2014; Jensen, 2015; Sandelowski, 1993a). References to "barren" women focused on their lack of religious or sexual purity and insinuated that lack of character provoked infertility (Marsh & Ronner, 1996). During the Industrial Revolution, doctors conceptualized women's infertile bodies as malfunctioning "machines" that require the "mechanical" intervention of medicine (Barnes, 2014; Marsh & Ronner, 1996). Jensen (2015) examined the intersection between historical and linguistic constructions of the natural and mechanical world; she posited that the linguistic evolution of "barren" to "sterile" to "infertile" parallels shifts from one particular cultural milieu to the next and that individuals' "mixed" metaphors as thinking began to shift from agricultural to mechanistic conceptions of the body (Jensen, 2015, 2016). Currently, the term *infertile* holds multiple meanings, informed by its agricultural and mechanistic roots and reflecting the female body as a biomedical agent within the marketplace of Fertility, Inc.

Metaphor use can reveal the historical as well as the particular ways in which patients engage the physical, social, and economic possibilities and limitations of treatment within Fertility, Inc. Although pregnancy may result from treatment(s), unsuccessful treatment cycles are more common and they heighten stress, anxiety, and despair about treatment failure and mounting debt. (In)fertility treatments particular to women can prompt metaphor use, as they are hard to describe to the uninitiated. Treatments are disruptive and invasive; they require needles, ultrasound wands, and other medical instruments that enter the body for information gathering (e.g., hysteriosonogram [HSG], tissue samples, blood work). Patients also undergo or self-administer injections, surgical procedures, intrauterine insemination (IUI), in vitro fertilization (IVF), and, in some cases, structural augmentation (e.g., polyp removal, removal of endometrial tissue). Hence, metaphor use allows patients to process and to make sense of what infertility means to and for them (Gibbs & Franks, 2002; Sandelowski, 1993a).

Given the history of terms related to (in)fertility, as well as the difficulty and discomfort of the treatment itself, it is understandable that previous studies of infertility metaphors revealed a lingering sense of social stigma and/or self-blame among patients (deLacey, 2002; Friese, Becker, & Nachtigall, 2006; Palmer-Wackerly & Krieger, 2014). According to deLacey (2002), many accounts of (in)fertility treatment reference gambling, which implies that patients could "win" or "lose" at (in)fertility treatment. For example, the majority of deLacey's (2002) interviewees used the term *lucky* to describe successful IVF. Past studies also showed that individuals attribute IVF failure or success to external factors, such as luck or chance (Beaurepaire, Jones, Thiering, Saunders, & Tennant, 1994; deLacey, 2002; Redshaw, Hockley, & Davidson, 2007; van Balen & Bos, 2004). Palmer-Wackerly and Kreiger (2014) established that individuals undergoing (in)fertility treatment maintain notions of their own "competence, autonomy,

and relatedness" through metaphors (p. 615), and the use of these metaphors assists individuals in the maintenance of psychological well-being.

Biomedicalization Theory, ARTs, and REI

Feminist analyses of the marketing, development, treatment of, and patients' response to ARTs continue to evolve. A radical feminist stance represented by the Female International Network on Resistance to Reproductive and Genetic Engineering (FINRRAGE, 2016) contends that ARTs represent the total disempowerment of women as the medicalized, "pro-fertility" mechanism of bodily (particularly reproductive) control.

In her review of feminist positions on ARTs consumption, Donchin (1996, p. 480) hypothesized that the demand by FINRRAGE (2016) for all infertile individuals to forego the use of ARTs for the "sake of women as a social group" is another way of removing women's choice and constraining agency. An extreme view of the potentiality of fertility treatments demands that women "ought" to use ARTs at whatever economic, emotional, and physical cost until pregnancy is "achieved." This overtly pronatalist perspective is disempowering to individual women, but others have a deep desire to engage in biological reproduction (Donchin, 1996; Sandelowski, 1993a). Hence, the assertion by FINRRAGE that women with an infertility diagnosis should forego treatment is as controlling as the biomedical model the collective sought to deconstruct. As another option, FINRRAGE suggested removing the causes of infertility instead of treating symptoms with ARTs (Donchin, 1996). Other feminist theorists have noted the empowerment ARTs provide to individuals with structural or hormonal infertility diagnoses and to lesbian couples who are redefining the contours of the traditional nuclear family (Donchin, 1996; Mamo 2007, 2010). Those who agree with technological intervention also want to remove the causes of infertility but are unwilling to sacrifice personal choice to that end (Donchin, 1996).

However, neither the pro-fertility or anti-fertility perspective offers a nuanced view of the agency of individuals with an infertility diagnosis (Breitkopf & Rubin, 2015; Clarke et al., 2003; Donchin, 1996; Sawicki, 1991). The biomedicalization of infertility and (in)fertility treatments remains at the core of Fertility, Inc. Feminist scholars, as well as others who study the biomedicalization of (in)fertility, its categorization as a "disease," and the increasing market sophistication (e.g., infertility apps, personal IVF coaches, testing of human uterine transplants) of Fertility, Inc., may disagree about who is actually "infertile."

Patients—particularly the bodies of cis-female patients—have long been referred to as machines within the capitalist economic system (Jensen, 2015; Martin, 1997); what remains to be examined is the utility of market-based metaphors for patients describing practitioner–patient communication during (in)fertility treatment. Spar (2006) analyzed the network of REI practices and ARTs as an industry, and Sterling (2013), Lupton (2006), and others referred to the "infertility-industrial-complex." Mamo (2010) described the industrial-infertility complex as "Fertility, Inc.," and Breitkopf and Rubin (2015) suggested that biomedicalization theory highlights the commodification of all of health care and provides a lens through which to examine cis-women's responses to the experience of Fertility, Inc.

The present study

To date, fertility patients' metaphorical conceptualization of practitioner–patient communication within REI practices remains relatively unexplored. The present study was an attempt to address this research gap and to prompt dialogue on doctor–patient communication in

REI clinics. Our study focused on the use of metaphors that reflect the infertility-industrial complex known as Fertility, Inc. We conducted 22 one-on-one interviews with cis-women who experienced treatment for infertility, which is defined as the inability to conceive within 12 months of unprotected heterosexual sex.[2] Our participants had experienced treatment(s) within the previous 3 years or were currently in treatment.

Two research questions guided the study:

RQ1: How do cis-gender female patients diagnosed as infertile perceive communication with doctors and other medical practitioners while undergoing (in)fertility treatment?

RQ2: How does the perceived success or failure of communication impact the experience and/or outcomes of (in)fertility treatment?

Method

Participants

Data collection occurred in three phases. During Phase 1, we recruited through a local acupuncturist's office. Recruiting proved difficult because many participants had overlapping cycles (e.g., IUI or IVF) after unsuccessful treatment, more than 10 potential participants delayed their interviews and/or declined to participate. When groups of women received news of a failed cycle (negative pregnancy test), they declined interviews and requested we contact them at a later date. After a series of interviews were postponed by treatment outcomes, we began Phase 2 of recruitment by asking participants from Phase 1 to identify potential candidates (snowballing). Over the course of 3 months and with permission, we followed up with Phase 1 contacts who had initially declined or delayed scheduled interviews; a total of 20 interviews resulted from Phases 1 and 2. During Phase 3, we recruited participants by placing a research call on the national RESOLVE website;[3] five women contacted us, and two of them finished the interview process.

Our sample was fairly heterogeneous regarding of social characteristics. Table 1 provides a summary of demographic information. Fourteen of the women indicated a medical diagnosis (see Table 1 for a summary of reported diagnoses), and all 22 interviewees had had a form of medical treatment for a fertility problem (e.g., hormone injections, surgery, IVF). During all three recruitment phases, we clearly outlined the purpose of our research, which was to gain an understanding of the communication process between patients, doctors, and other medical practitioners in offices that specialize in REI.

Procedure

To begin each interview, we sought informed consent and invited the women to ask clarifying questions about the study. All 22 participants consented to the interview and were then asked a series of open-ended questions about demographic information, (in)fertility diagnoses and treatment(s), and experiences communicating with a range of practitioners in various REI office settings. The first and second authors asked questions about how participants attributed meaning (e.g., thoughts, feelings) to complicated and, at times, painful matters, which could not be readily observed. For example, "Can you remember a time when you were confused about a treatment/diagnosis/procedure?" and "Can you describe an interaction involving 'bad news' that went well?" Though we were unable to observe interactions between patients and

Table 1. Participant characteristics ($n = 22$).

Characteristic	Data
Age	30 to 50 years (M = 35)
Martial Status	All participants had partners at the time of the study.
Race/Ethnicity	Caucasian/"White" ($n = 17$), African American ($n = 2$), Native American ($n = 1$), No response ($n = 2$)
Religious Affiliation	Jewish ($n = 1$), Christian ($n = 10$) (including Presbyterian, Catholic, lapsed Catholic, Methodist, and Episcopal), Spiritualist ($n = 1$), attempting Buddhism ($n = 1$), Undecided ($n = 1$), and None ($n = 4$), No response ($n = 4$)
Occupation	The women were employed in a variety of occupations: five professors, six in health-related fields, one lawyer, one in human resources, a marketing manager, and two others in marketing or sales, one in academic administration, one running a small business, and one working as a receptionist in alternative health. Finally, three worked in the home.
Diagnoses	The most frequently reported diagnoses were: Polycystic ovarian syndrome ($n = 3$) Unexplained infertility ($n = 1$–4) Age-related infertility ($n = 2$) Diminished ovarian reserve ($n = 1$) Endometriosis ($n = 3$) Additional diagnoses include (each of these were included only once): Premature ovarian failure Ovarian failure Blood clotting disorder Early onset menopause Autoimmune disease High LH (luteinizing hormone) At least two indicated they had not received an official diagnosis for a fertility problem
Average Household Income	$125,000
Male Factor Fertility Issue	1–2 [Unconfirmed in one case]
Geographical Locations	Midwest: CO ($n = 2$); Northeast: NY state ($n = 7$), MA ($n = 1$); West Coast: CA ($n = 1$); Southwest: AZ ($n = 2$); South: NC ($n = 7$), FL ($n = 1$), No response ($n = 1$)

practitioners due to ethical considerations, we believe that the in-depth interviews allowed participants to retrospectively examine their interactions.

Interviews occurred either in person at a private office or private home ($n = 7$) or via telephone ($n = 15$). The interviews ranged from 35 to more than 130 minutes, with a mean of 90 minutes. Each interview included one interviewer and one interviewee. Most interviews conducted by the second author were done by phone. She was pregnant at the time and did not want to emotionally trigger or alienate interviewees. Later, we also decided it would be best to have the second author conduct interviews only with women who had children. The first author became pregnant during Phase 3 but remained unaware of it for the first 6 weeks of the pregnancy, after which time she, too, conducted interviews over the phone (Johnson & Quinlan, 2016). Participants chose a pseudonym to be used in transcripts and publications; if participants could not think of a pseudonym, they were informed that the research team would pick one on their behalf. Digitally recorded interviews were transcribed verbatim. We double-checked each transcript against the original recording for purposes of accurate data analysis. Each participant received a $25 retail gift card as compensation for her time. The study procedure was approved by the Institutional Review Board of the University of North Carolina at Charlotte.

Data analysis

Our analysis was iterative (Strauss & Corbin, 1998), in that we made notes about codes, categories, patterns, and conceptual associations as we conducted, transcribed, and analyzed the

interviews. We typed detailed field notes after each interview to gather initial impressions and observations on methodological concerns to construct theoretical associations and practice self-reflection. This process is consistent with our concern for both giving voice to the experiences of our participants and recognizing the systematic nature of data analysis (Strauss & Corbin, 1998; Taylor & Bogdan, 1998).[4] Based on our field notes, review of the transcripts, and earlier coding of compiled data, we noticed several instances in which women used metaphors to describe practitioner–patient communication. Our data analysis comprised two phases, and, throughout both, we diligently ensured the rigor of our data by engaging in continual analysis, which helped us to decide when we reached theoretical saturation and no new themes emerged (Leyser-Whalen, 2014; Lincoln & Guba, 1985).

Phase 1. During the first stage of analysis, the first and second authors read and listened to each other's interviews, and they met to discuss major themes that emerged from the work (Glaser & Strauss, 1967). After compiling a list of major themes, all three authors created a codebook, which included approximately 30 codes that referenced practitioner–patient communication in REI practices. During subsequent research meetings, the research team identified recurrences of several metaphors within the data, and, as a result, we produced another codebook to examine metaphors that referenced security, industry, and commerce. Thus metaphors were a deductive finding. The third author returned to the original transcripts to code all 22 interviews for metaphors; the final metaphors-specific codebook contained seven categories and a total of 11 codes.

Phase 2. During the second phase, we analyzed the 11 previously established metaphor-based codes, and we aimed to verify the existence of the themes gleaned from the first round of analysis. Although we remained open to additional themes, the focus of the final reading expanded the themes in the initial metaphor analysis. To complete Phase 2, we engaged in member checking. We sent a draft of our findings to the 13 study participants quoted in this article and received approval from all of them (100% of quoted interviewees). Two asked for edits related to their pseudonyms, and two participants offered further clarification (albeit not disagreement) regarding their statements. The first and second authors also appeared on the local National Public Radio station to speak about our research, including the use of metaphors, and then sent a link to this broadcast to the participants. We sent the link to all 22 participants to complete a layer of member checking with those not quoted in this particular article and to share our research informally with our participants (Sandelowski, 1993b). Several of our participants shared the link to our radio show on social media. Similar to Sandelowski (1993), we did not expect our participants to agree with all of our conclusions or to maintain static opinions on their own experiences or our scholarship, although we did strive to represent their perspectives as accurately as possible. From the beginning of the present study, and given the emotional nature of our topic, we discussed our research goals (e.g., publication, community education) directly with participants.

Results and discussion

Our interviewees used economic metaphors to describe communication with practitioners during treatment experiences; these metaphors reflect processes inherent to biomedicalization, including globalization, corporatization, and commodification (Mamo, 2002). Indirect, market-based metaphors allowed patients to critique Fertility, Inc., even as they (willingly or unwillingly) helped maintain the power of the multibillion-dollar-a-year global fertility

market. Interviewees employed negatively valenced metaphors to describe what they perceived as undesirable care. During the process of data collection, we highlighted three themes within participant metaphor use: commerce, industry, and security. Within each of these metaphor categories, we examine specific exemplar metaphors and their use by and meaning for participants.

Similar to the participants in deLacey's (2002) study, our participants considered themselves informed, engaged health care consumers, with at least a rudimentary understanding of ARTs. Reflecting on participant understandings of Fertility, Inc., and the particularities of (in)fertility treatments at individual REI practices, we examined the following metaphors: "industry," "factories," "conveyor belts," "stalls," and "cattle yards" or "calls." Participants also metaphorically referenced economic sectors such as "security," which included metaphors such as "secret service," "handlers," "gatekeeper," and "top secret." Still, other participants used metaphors to construct their communicative experiences as impersonal economic exchanges, in which they were reduced to "numbers."

Commerce: A pregnant bottom line

Some participants verbally reduced their treatment experience to a zero-sum economic interaction. They routinely used metaphors that reflect notions of commerce, including "bottom line" (suggests that the ultimate outcome of their treatment was money for the REI practice), "just a number," and "investment." Each of these metaphors alluded to negative, impersonal, or emotionally detached experiences with treatment providers. Here are some examples of "just a number."

> Leah: Don't want to feel like you're just … like a number … .You really want that personal attention because it's such a personal issue.

> Harper: I feel fine, but it's always so busy … so I think sometimes you kinda feel like a number.

> Samantha: [Laughs] It's all about the numbers.

Similarly, Erika did not want to be "just a number," and, for her, the alternative was individualized care:

> … quite honestly, that's the reason why I selected him [doctor] because I thought that I would get … more personalized attention … I wouldn't be a number … I would see him for continuity of care. Like I wouldn't be tossed around from this doctor one visit and this doctor another visit … I thought that I would be seeing him every single time. And so there'll be more of a personal relationship developed.

Samantha suspected that since her insurance company was paying for treatment, the practice decided to continue treatment cycles despite hormone levels that indicated that cycles would fail. Erin reported that her practitioner "let [her] keep going, despite how awful it was." Erika felt that the economic "bottom line" trumped the emotional health and well-being of patients:

> I would hope that … those doctors would treat their patients knowing that it's a highly … emotionally charged medical issue and … your bottom line and your profit shouldn't matter more than … helping your patients achieve their dreams of becoming a mom and a dad.

When patients understood their care primarily as an economic exchange within Fertility, Inc., they expected medicalized commerce to be mutually beneficial. Even when participants experienced "just a number" or "bottom line" care, they sought to act as savvy consumers.

Unwilling to become or to remain powerless, participants felt they deserved their "money's worth," or to get the most "bang for their buck," or at least "what they paid for." Most participants who framed their care in this way thought that the more one spent, the better care one could expect. One participant even framed her monetary investment statistically, as her best "chance" at conception and live birth:

> Jess: … [I]t's a big deal, it's a huge investment, it's a lot of money … you just want the best outcome and you just want to feel like you're getting the most for what you're paying. If that doesn't sound too cold … it becomes very calculated and you're like: "Well, this has to be my best chance."

As a result of biomedicalization, patients as well as practitioners calculate the economic returns on their "investment." Hazel understood the concept of fees for service but balked at the idea that every patient would not or could not have access to competent care. She stated bluntly: "Well, if you're willing to pay the extra money, you get better service." The desire to receive a bodily return on investment from treatment (pregnancy) and the co-optation of economic terms and structures upends the conclusion of complete powerlessness by FINRRAGE activists. Further, these economic calculations reveal the parallel constraints and opportunities inherent within Fertility, Inc.

The notion of "getting what you pay for" in an economic exchange was also used by practitioners. Leah's doctor invoked the "Holy Grail" metaphor to explain the fees for service construct:

> luckily … everything was covered—in terms of money … he said: "Well, you have coverage for IVF, why don't we forget these IUI cycles and just go right for IVF?" So, I was like: "Okay." So, I was getting geared up, I was like: "This is gonna be it" … he called it … "The holy grail of fertility treatments."

To maintain profit margins, an REI practice needs to maintain a certain number of treatment cycles, and IVF may provide the best profit. Participants mentioned feeling "pushed" toward IVF; doctors "sold" the treatment as the best chance. Although IVF does have the highest success rate (at this time), if an REI practice chooses to (or feels forced) to focus on the number of cycles, this can create a climate in which the patient becomes a cog in the wheel, a symbol of output, a return on investment. Success is pregnancy, but the process can become disembodied. As biomedicalization theory posits, referring to the socioeconomic inequities of and impersonalized treatment within Fertility, Inc., offers patients a way to flag the dissonance of their experience. Metaphors are a socially acceptable way to discuss negative treatment experiences referentially. Although patients must engage with the capitalist fertility market to receive treatment, metaphor use allows open critique of the system without an embrace of a radical anti-capitalist stance that demands a full withdrawal from the economic system and, with that, access to treatment.

Industry: The body as a cog

Beyond basic commercial transactions, our participants made specific references to familiar industrial sites and machinery, including factories.

> Leah: It's like a different world … like a freaking factory; people coming in, people coming out, you're getting your appointment, you're in, you're out …

> Elizabeth: I didn't like [name of hospital], it was a factory.

Hazel: I was never allowed to talk to him again, but because [name of practice] is run like a factory … after never speaking to Dr. W again … he's done, like, five more vaginal ultrasounds on me.

Meghann: … yes, we're your job … this is your profession … it's kinda like a factory.

A number of interviewees compared their treatment experience to a "conveyor belt," a common technology within factories. The "conveyor belt" metaphor appeared most often when we asked interviewees how practitioners should share information.

Jess: On a personal level, from the practitioner that's treating you. … it needs to be real—it needs to be related to the person … there were some points where it felt like a conveyor belt, and nobody wants to feel like they're on a conveyor belt.

Liz: They make that pretty evident as well … you kind of feel like you're in a—I don't know—a conveyor belt sometimes, like: "Next!"

Later, Jess referred to the conveyor belt a second time. When we asked interviewees for suggestions about what practitioners should not do during treatment, she said not to "treat people like they're on a conveyor belt."

Bobbi Sue's experiences during treatment prompted her to recall the cattle yard, a reference to meat processing. She also mentioned a "revolving door," which suggests an impersonal experience at a large shopping mall or mega-store in which clientele come in and out unnoticed:

  … it was a revolving door, girls just one after another after another, coming in … as soon as someone's stall was cleared, someone new was coming … right into the stall; it must just be the only couple days a week or a month where they do this, because it was just slammed.

Regarding her involvement in treatment, Catherine referred to a "cattle call":

I felt like when I was going in for my ultrasounds it was pretty much a cattle call. I mean that's … actually what I called it … it was always full … women going in and out very quickly.

Although the "cattle call" metaphor is often used to describe an open audition for the performing arts, our member checking procedures allowed Catherine explain the term further. She noted that a "conveyor belt" was another effective description of her experience and continued: "I guess another description of cattle call could best be described as going through a drive-thru at a restaurant." Jess also referenced the restaurant industry: "Like … at a restaurant … you're always like, "Oh, I don't want them to spit in my food," well, I don't want them to screw up my embryo." In this metaphor, doctors and embryologists represent "back of house" (restaurant) workers in the large, often murky structure of the service-based economy. Embryos are removed and fertilized "behind the line"; away from the patient and out of eyesight, anything can happen.

Security: Protecting embryos and getting "Handled"

Factories/plants and factory equipment, malls, meat-packing, and restaurants are recurring commerce and industry-based metaphors in our interviews, but participants most often alluded to the security industry. Interviewees often spoke with frustration about their inability to access their doctors directly, either for advice or with questions about treatment, test results, and so on:

Harper: I did feel like [doctor] … was almost like the President … it's hard to get to him … even on the days that I would go for … an ultrasound and he was there and I didn't see him and I wanted to see him, it was almost like: "Can I get Secret Service to let me through?"

Elizabeth was similarly aware of access issues, and she recounted this personal triumph:

… I also did have access to Nurse A, Dr. B's nurse, by email. She gave me her personal email address and she said: "If you have any questions after hours, you can always ask me questions via email." And top secretive information, that's highly coveted information, Nurse A's email address, but that was awesome.

Participants were aware that direct access to practitioners is not necessarily to be expected, and any "breakdown" in security is seen as an accomplishment or special treatment. Other participants invoked the security industry through references to "handlers" or "middle men," which demonstrated not only the impersonal nature of routine visits at some practices, but also the power differential between the REI specialist and the patient receiving care. As Arleen recalled:

I chose [doctor] because she was the only woman out of the four doctors practicing there. And she was lovely, very kind, really good bedside manner; with that said I saw her three times through-out my entire treatment. It's a very high-volume clinic and they have nurses who are sort of … handlers per se.

It is clear Arleen admired her REI specialist but wished for more contact during treatment. In Arleen's experience, the doctor's nurses perform crowd control, and she is just one of the crowd. Liz recalled:

Gosh, I've been confused so many times … .I just basically end up calling the nurse and leaving a message and … she'll call me back after she … talks with the doctor and gets a game plan. She's kind of the middle-man—between him and myself.

The notion that participants were being "handled" or had to have special status to gain "access" to their doctors speaks to the organizational structure of many infertility practices and, thus, to patient experiences and perceptions of care. Varied levels of access leave patients feeling frustrated, whereas successful contact with or regular access to practitioners suggests rule breaking or special treatment. In Fertility, Inc., access to practitioners can equal "person-alized" care.

Theoretical and practical implications

All of our participants were reflexive regarding their own and their providers' communication needs and styles. Participants used metaphors to describe negative, disempowering, or painful communicative experiences with practitioners, whereas positive and/or supportive communi-cation experiences elicited direct descriptions, including complimentary language. The par-ticular metaphors that emerged in our data set reflect the commodification of infertility care (Clarke, 2014) with references to various industries, including manufacturing, meat-packing, restaurants, brick-and-mortar stores, and the security industry. Patients remained very aware of how economic values were communicated within REI practices, such as considering the "bottom line" of the practice, the return on investment, or the "opportunity cost" in choos-ing some courses of action over others. Where there are economic considerations to be made, both practitioners and patients factor them into their decision making (Kumar, 2000; Rycroft-Malone, Latter, Yerrell, & Shaw, 2001). However, from the patient's perspective, economic or

commerce-based metaphors delineate undesirable communication and/or unsupportive care; they act as clear demarcations between support desired and support received (Willer, 2014).

Theoretical implications. Historically, infertility and its treatments are defined, created, and organized around a socially constructed norm of White, heterosexual (married), middle-to upper-class individuals (Bell, 2010). Wealthy, White women remained the main cultural representation of (in)fertile individuals who are infertile throughout the twentieth century, despite the reality that women of color have higher rates of infertility (Bell, 2010; Mamo, 2007). Thus we acknowledge that the overarching experience of infertility is shaped by structures of inequality in regard to race, sexual orientation, gender, and socioeconomic status (Harwood, 2007; Sandelowski, 1993a; Sterling, 2013; Thompson, 2005), which are part of a system that encourages reproduction for some but not for others. As Mamo (2007) proposed, the biomedicalization of fertility and (in)fertility treatments concretize U.S. race, class, and gender hierarchies, which impede individual agency and access to care. As such, race, class, and gender privilege allow some patients access to the newest, most effective treatments, whereas others may not even know what treatment options are available (Breitkopf & Rubin, 2015; Mamo, 2007). In our research we continue to cast a wider net in terms of race and class representation, and we suspect that our investigation of practitioner–patient communication at private (thus economically exclusive) practices makes an economically diverse sample difficult to obtain.

Patients within "Fertility, Inc." may internalize notions of empowerment and choice as a result of their access to this market (Mamo, 2007). However, messages of choice can obfuscate the constraints placed on patients by the infertility-industrial complex (Mamo, 2007). For example, limits on treatment and funding options within a particular REI practice, as well as the limits imposed by one's age and fertility diagnosis, can produce frustration. A "can-do" attitude is still pseudo-agency, which does little to overcome these limits. In our study, participants practiced agency within the infertility-industrial complex by taking their consumer power (money) to another practice or practices that might provide more personalized care. Still, pursuing treatment with another specialist does not guarantee success; if successful treatment outcomes remain elusive, patients may feel more frustrated and disempowered, even as they practice agency by critiquing Fertility, Inc. Metaphor use provides a safe way to externalize frustration about the biomedicalization trend in medicine—and in REI care in particular—but biomedical trends do not, at this time, bend toward personalized, emotionally engaged care.

Our research suggests that patients use metaphors, particularly metaphors that describe the economic characteristics of Fertility, Inc., to depict unsupportive care and negative communication or treatment experiences with practitioners. Perhaps metaphors act as a type of psychological defense mechanism against disappointment or impersonal treatment. Metaphors can prevent direct, personal attacks on medical practitioners who are, despite their inept bedside manner, assisting patients to achieve a pregnancy. The use of metaphors may offer some control as patients attempt to manage their privacy (Petronio & Sargent, 2011). Further, metaphors allow patients to make specific claims about their communication and treatment experiences without directly challenging the practitioner–patient power dynamic.

Practical implications. Unfortunately, access to adequate information, treatment, and support are not consistent among individuals with infertility (Inhorn & van Balen, 2002; Letherby, 2002; Sterling, 2013). In our study, individuals in the upper or middle class often felt powerless during the process, despite their inherent economic and, in most cases, educational privilege (Letherby, 2002; Sterling, 2013). From a pronatalist perspective, in a society that celebrates the

attainment of a biological child, or motherhood as part of being a "successful" or "complete" woman, our concern is that the divisions between those who can and cannot have children will continue to widen as a result of the practices of Fertility, Inc. (deLacey, 2002; Johnson, 2016). Moreover, given the economic means to have full access to available technologies, those who "can" and "cannot" have children are defined, in part, by their structural privileges, whether class or race or even fertility privilege (Johnson, 2016; Sandelowski, 1993a).

Our findings indicate that some metaphors express anxiety, and others provide a way for patients to cope with difficult diagnoses and treatment(s).[5] The use of metaphor is one way to narrate the lived experience of (in)fertility treatment. A patient diagnosed as "infertile" may already feel stigmatized, and may have a fear of future stigmatization (Willer, 2014; Wirtberg, Moller, Hogstrom, Tronstad, & Lalos, 2007). Furthermore, metaphor use offers patients a "bottom-up" linguistic interruption of Fertility, Inc., even as they participate in the machinery of the industry by continuing to undergo treatment cycles. To revolutionize health care practices in the infertility community, we encourage health care providers to create space for patient-centered dialogue during assessments and treatments. As patients are well aware of the economic pressures of treatment and conduct their own cost–benefit analysis when they choose doctors, treatments, and protocols (Sandelowski, 1993a), pairing this conceptual reality with adequate emotional and social support can empower patients rather than alienate them. By examining why people use certain metaphors and combinations of metaphors during infertility treatments, medical professionals and other support individuals may be able to deconstruct the meaning that individuals attach to infertility diagnosis and treatment. Learning from this deconstruction process and crafting actionable responses can help increase the overall well-being of those receiving infertility care.

One way our interviewees experienced a collaborative, empowered dialogue rooted in the consumer model of health care (for good or ill) was to negotiate the cost of care, both in individual treatments and in treatment cycles. Understanding their care as part economic exchange and part embodied, emotional experiences empowered some women to engage in the infertility-industrial complex as a consumer. For example, when Erin's doctor offered her and her husband a treatment cycle at one third the normal rate, which Erin perceived as a "deal," the couple decided they could not pass up the "chance." Meghann also negotiated the cost of care with her doctor; the extensive number and intensity of treatments seemed to allow Meghann to transcend normal financial protocol at the office. Here, economic negotiations fostered emotional loyalty. Perhaps economic negotiation represents patient empowerment and hints at significant shifts in doctor–patient communication. Alternatively, economic negotiation may simply be pseudo-agency for patients forced to operate within the strictures of Fertility, Inc.

Recommendations for future research

The use of metaphors to protect emotional health should be studied further. Ginsberg and Rapp (1995) and Sterling (2013) reported that (at times) women felt trapped in the infertility-industrial complex, which relies heavily on medical technology and which fosters technologically driven, disembodied, or distant communication. Biomedicalization theory may be a useful lens for future scholars, with metaphors as a type of "flag" through which patients mark dissonant experiences within the medical-industrial complex. We wonder whether metaphors are fissures in the process of biomedicalization, or whether they are simply evidence of the success of the corporatization, commodification, centralization, and stratification that characterize health care today (Clarke, 2014). Another important question is: How can

patient-centered communication cause disruptions and transform biomedical knowledge (Clarke, 2014) within Fertility, Inc.?

Future scholars should also study the notion of "concierge health care" as it intersects with (in)fertility treatment. Infertility requires individualized treatment and timely monitoring, and some fertility practices are appealing to new patients by using the language of concierge health care as a way to take market share from other practices.[6] These practices might also attract patients frustrated by the impersonal "factory-like" nature of previous care they have experienced, but concierge care does not necessarily promise patient empowerment. Instead, concierge care could further stratify, commodify, and corporatize an already expensive-to-access health care specialty.

Although our study identified metaphors used within infertility contexts, we did not address coping or healing, particularly in the event of unsuccessful treatment. Future researchers should examine the ways individuals use metaphors to cope, not simply with unsupportive communication during treatment but as a method of explaining failed treatments, long-term infertility, or the choice to end treatment.

There are other areas in which metaphors may be analyzed, such as print and visual media (e.g., newspapers, films and television shows, blogs). How do media-based metaphors impact patients' perceptions of infertility and (in)fertility treatments? Within U.S. culture, the exploration of metaphor use to describe practitioner–patient communication remains largely unexplored outside private clinics and could be analyzed in relation to a host of other medically complex diagnoses (e.g., irritable bowel syndrome, chronic fatigue, fibromyalgia).

As new reproductive technologies develop, so must resources for communicative, supportive care and for the continued negotiation of agency by patients within Fertility, Inc. If "normal" fertility is interpreted as a successful pregnancy and birth, patients may exhaust their physical and emotional and financial resources in an effort to (re)produce "normalcy" (Sandelowski, 1993a). As a result, remaining attentive to and cognizant of patient metaphor use may help practitioners guide individuals within and through the complexities of Fertility, Inc.

Notes

1. We use the term *(in)fertility treatments* throughout the article to reflect a lack of consensus among scholars, medical practitioners, and patients as to the correct terminology for treatment. For example, some physicians may refer to "fertility treatments" for an "infertile diagnosis," whereas some patients never self-identify as "infertile" or are never given a formal diagnosis and thus refer to "fertility treatments." For the purposes of our research, "(in)fertility treatment" captures the range of conceptualizations.
2. The heteronormative conception of cis-women and 12 months of unprotected sex (Chandra, Copen, & Stephen 2014). The authors stated: "Infertility is defined only for married or cohabiting women and indicates that they have been exposed to the risk of pregnancy with the same husband or partner for at least 12 consecutive months, but have not had a pregnancy" (Chandra, Copen, & Stephen, 2014, p. 19). As such, "infertility" as defined in their study would not address the conception issues faced by members of the LGBTQ community. However, the term *impaired fecundity* may be a more inclusive term. Chandra, Copen, and Stephen (2014) defined "impaired fecundity" as "comprised of the following three subgroups: nonsurgically sterile, subfecund, and long interval without conception" (p. 19). It is unclear if "subfecund" may be used to describe the particular situation of queer couples who simply need a gamete for conception but do not have a particular fertility diagnosis.
3. For more information, see http://www.resolve.org/?referrer=https://www.google.com/.
4. Johnson has an infertility diagnosis, Quinlan is fertile, and Myers does not have a child and is uncertain of fertility status (Johnson & Quinlan, 2016).

5. Perhaps this is where our findings deviate from Sontag's (1989) conclusions on metaphor. She argued that metaphor can stigmatize and disempower patients, in particular military metaphor, which she said "overmobilizes, overdescribes … [and] powerfully contributes to the excommunicating and stigmatizing of the ill" (p. 182). We agree—metaphors have the potential to disempower the ill, though Sontag (1989) studied metaphors generated by the medical field and the media, whereas our study examined metaphors describing practitioner–patient communication. Moreover, many patients do not perceive infertility as an illness (Sandelowski, 1993a), particularly a chronic, long-term, and potentially deadly illness such as HIV/AIDS, which is the focus of Sontag's (1989) work. Finally, we argue that biomedicalization theory allows for metaphor use that both constrains and empowers patients. Even as patients are forced to contend with the inequities of Fertility, Inc., individuals are empowered to make choices regarding specific treatments and providers—in short, to "shop around."

6. For example, Laurel Fertility Care, which promises "concierge service." For more information, see http://laurelfertility.com/concierge-service/.

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