

Lingering technological entanglements: Experiences of childlessness after IVF

Abstract

For over four decades, feminist studies of assisted reproductive technologies (ART) have been interested in the ethical, political and personal implications of *in vitro* fertilization (IVF) and other infertility treatments. Most work on the implications of ART for women has focused on the demanding cyclical process of trying to become pregnant by using the technology. However, less attention has been paid to the implications of experiencing IVF after the conception phase. This paper tackles the under-researched topic of the aftermath of IVF, and discusses the temporality of affective embodied experiences of infertility after one has stopped IVF. Drawing on an ethnographic study of peer support groups for the involuntarily childless in Finland, and on in-depth interviews with women suffering from infertility, this paper juxtaposes two groups of women who have had IVF: those who have had children as a result of the procedure, and those who have not. The paper proposes an exploration of experiences of childlessness after IVF as “lingering technological entanglements” – that is, as affective and embodied experiences of the effects of IVF, including after the cessation of treatment. It argues that the lingering of these entanglements manifests itself in the enactment of childlessness in relation to the available technology. Furthermore, this results in parents identifying themselves as childless, even after they have gained temporal distance from IVF practices.

Keywords

childlessness, infertility, reproduction, IVF, ART, experience, technology, entanglement, affect, ethnography

Introduction

For over four decades, feminist studies of assisted reproductive technologies (ART) have been interested in the ethical, political and personal implications of *in vitro* fertilization (IVF) and other infertility treatments.¹ Most work on assisted reproduction and its implications for women has focused on the conception phase, that is, the demanding phase – which can last for many years – when women go through the cyclical process of fighting the odds and trying to become pregnant by using the technology (e.g. Franklin, 1997; Roberts, 2012; Thompson, 2005). However, less attention has been paid to the implications *after* the conception phase of having gone through IVF (Hudson, 2017; Thompson, 2017).

This paper discusses the temporality of affective embodied experiences of childlessness *after the cessation of IVF*. Drawing on an ethnographic study of peer support groups for the involuntarily childless in Finland, and on in-depth interviews with women suffering from infertility, this paper juxtaposes two groups of women who have had IVF: those who have had children as a result of the procedure, and those who have not. I juxtapose these groups in order to analyse not only how IVF affects the experience of childlessness after treatment, but also how IVF shapes the meaning of reproduction in the era of ART.

Finland can be described as a rather treatment-oriented, liberal context for ART. In public discussions, and for example in Finnish infertility education materials, which are strongly directed towards heterosexual couples, childlessness is framed as a medical problem stemming from physical incapacities, and people *suffering* from childlessness are typically referred to as “involuntarily childless” (Helosvuori, 2013). Similarly, in the parliamentary debate prior to legislation to regulate fertility treatments in Finland (Act on Assisted Fertility Treatments

1237/2006), infertility was framed as a medical problem that could be resolved on an essentially medical basis (Eriksson, 2017).

Involuntary childlessness is not a monolithic issue. For example, it has varied implications for same-sex couples or single women compared with heterosexual couples, including in the field of ART. Taking a critical stance on the heteronormative and medical framing of involuntary childlessness in Finland, this paper nevertheless explores the infertility of (mainly) heterosexual couples, focusing on women. I will refer hereafter to the phenomenon of involuntary childlessness in this context as simply *childlessness*, and throughout the paper I will discuss the specific characteristics of childlessness *after IVF*.

My feminist exploration of how Finnish women retrospectively make sense of their technological experiences of reproduction contributes to scholarship by illuminating *the under-researched aftermath of IVF*. The paper shows how the technological experience of IVF treatments, and especially the negative affective relationships that women develop with practices and substances during those treatments, is embodied by women to such an extent that they physically remember these entanglements long after the treatments themselves have been terminated, and independently of their outcome. Moreover, the paper suggests that the emotional and affective reaction to the negative material experience of IVF treatments is what makes some women decide to give up treatment and remain childless.

The need for more active research on the post-conception phase of IVF has been highlighted in previous studies. For example, in the introduction to a special issue on ART and parenting culture of *Sociological Research Online*, Charlotte Faircloth and Zeynep Gurtin (2017) advocate research that addresses the gap between the literatures on “pre-conception parents” – that is, intended parents

still undergoing the process of treatment – and post-treatment families. To this end, multiple studies have explored the experiences of heterosexual and lesbian donor IVF families in managing donor kinship (e.g. Gabb, 2005; Nordqvist and Smart, 2014) and the range of family forms created by transnational processes of cross-border assisted reproduction by international egg and sperm donation (Hudson, 2017).

I aim to further analyse the *post-IVF phase* of infertility from a novel perspective, as this paper addresses experiences of childlessness after IVF as *lingering technological entanglements*; that is, as affective and embodied experiences of the effects of IVF, including after the cessation of treatment. According to Karen Barad (2007: ix), “to be entangled is not simply to be intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence”. Drawing from Barad’s definition, I suggest that post-IVF childlessness is inseparable from the practices of treatment, even after one has gained temporal distance from the experience of those practices themselves. By exploring the accounts and peer support activities of women who have had children through IVF and of those who have remained childless, I show how *decisions to leave IVF behind are also made in relation to, and even with the help of, the available technology*. Furthermore, I show how the experience of being directly affected by fertility treatments results in women identifying themselves as childless *even after having children*. The technological entanglements of ART, I argue, thus linger into the post-IVF phase.

Lingering treatment experiences

As noted at the beginning of this paper, the process of being affected by IVF *during* the treatment phase of childlessness has been extensively explored in previous work on ART. For example, feminist discussions have addressed questions of agency and objectification in the processes of

women's lives becoming highly entangled with reproductive technologies (Cussins, 1996), and have shown how the process of trying to get pregnant through repeated treatment cycles may become a "way of life" (Franklin, 1997), generating highly laborious treatment paths for women. Furthermore, previous work on the active phase of treatment has illuminated how physical things such as hormones and *feelings* become elementary companions in the lives of those trying to conceive (Meskus, 2015). Such work has also revealed the variety of *affects* during the different phases of the treatment process (Knoll et al., 2007).

To explore the lingering of the technological entanglements generated by the treatment process, I now turn to the analysis of affects as a way to highlight the embodied nature of IVF as a technoscientific phenomenon (see Haraway, 1997). Vinciane Despret (2004) builds on a theory of bodies "in the making", highlighting bodies' capacity for affects in terms of being affected by other human or non-human elements. Rather than an essence, the body can be defined as "*an interface that becomes more and more describable as it learns to be affected by more and more elements*" (Latour, 2004: 206, emphasis in the original). In cultural studies, affects have been used to approach bodily entanglements as "formative of the subject" (Hemmings, 2005: 548). Affects are often understood as non-discursive intensities and sensations – as when one senses things such as hormonal injections – whereas emotions refer to socially produced and culturally circulating discursive things, although many scholars have criticized this division for being overly simplistic (see Oikkonen, 2017: 3; Wetherell, 2015: 152; Ahmed, 2004: 6). By drawing on a strain of research on the emotional or affective responses of patients or users of technologies such as IVF, I place the experiences of being physically *affected* by IVF at the centre of this paper. I analyse empirically traceable and often discursive accounts of the affectivity of IVF, and I therefore do not wish to tie myself to a clear-cut distinction between emotion and affect.

Assisted reproduction is an example par excellence of the entanglement between human substance and technological matter (see e.g. Haraway, 2004). In the context of IVF, this entanglement is especially enacted in women who ally themselves with biological and medical processes in order to conceive: taking their drugs correctly, monitoring their menstrual cycle, committing themselves to doctors' appointments, and undergoing tests and operations. Early feminist researchers fiercely criticized ART for binding women ever more strongly to the duty to reproduce, by means of a technology whose long-term safety was questioned (see e.g. Corea, 1985). More recently, the importance of reproductive choice has been highlighted in "negotiations taking place around who will have access to ARTs" (Lie and Lykke, 2017: 6; on the development of the debate, see Franklin, 2013; Thompson, 2005). This paper aims to take seriously the characteristic ambivalence of reproductive technologies (see Franklin, 2013; Haraway, 1991) by analysing IVF as something that has "saved our lives", as one of my informants put it, but which nevertheless also has complex implications.

To explore these implications, I draw from new materialist approaches. New materialism, which is especially linked to Karen Barad, has been criticized as apolitical, in that it highlights the activity of matter (such as needles, cells and medical instruments) at the expense of sentient beings that are exposed to suffering (Braunmühl, 2017). Based on her expertise in quantum physics, Barad builds the theory of agential realism, according to which the world and its phenomena are in a continuous process of intra-active becoming. The process of intra-action, that is, "*the mutual constitution of entangled agencies*" (Barad, 2007: 33, emphasis in the original), only stabilizes in moments of what Barad calls agential cuts, which work as exclusionary boundaries that give entities their shape. Barad does not abstract (human) experience from other processes of becoming, and her theory can be criticized as difficult to apply in empirical work, although numerous projects in the field of feminist science and technology studies have aimed to do just that (e.g. Irni, 2017). By exploring

affective embodied experiences *that are embedded in the material practices of IVF treatment*, my aim is to gain an empirically tangible angle on the theorization of entanglements, and on IVF as affecting *how childlessness is experienced* in the era of ART. In doing so, I combine feminist concerns about suffering with a Baradian interest in materialism.

On research methodology

This paper draws from women's accounts of undergoing IVF. The data consists of 13 in-depth interviews with women experiencing childlessness. Five of the interviewees had had one or two children with the help of IVF. In addition, I draw from ethnographic fieldwork conducted in peer support groups organized by a Finnish infertility association. I conducted the interviews during 2013–2014, and I followed four peer support groups during a period of seven months at that time. These groups met monthly in a metropolitan area of Finland to discuss childlessness and fertility treatment.

The formation of the peer support groups was based on diverse premises, key criteria being whether or not the participants had had children after a period of childlessness, and whether or not their treatments had been conducted with donated gametes. In this paper, I focus on participants who had undergone IVF with their own or donated gametes. The numbers of participants at the group sessions varied between three and 15. Several individuals participated throughout the whole period, but typically in every session there would also be people who were new to me, and conversely some of the participants I knew would be missing. Six of the interviewees were recruited from the peer support groups, three through an email circulated by group coordinators to their networks, three through a call for research participants published in the newsletter of a Finnish association for the involuntarily childless, and one from a conference on assisted reproduction that I attended as an

observer (for more about the groups, see Helosvuori, 2019; for an extensive description of the research process, see Helosvuori, forthcoming).

In all the groups, the majority of members were women.² Several of the participants who had terminated treatment had done so because they now had what they considered to be enough children. A minority had stopped treatment without having had babies, for reasons such as divorce or repeated treatment failures. Those who were still in treatment, or who hoped to have more children, wanted peer support for that; those who had stopped treatment nevertheless wanted to discuss their past experiences, or assisted reproduction issues that were still affecting their lives – for example, the fact that their child had been conceived through treatment conducted with donated gametes. Peer support group participants were informed of my arrival beforehand and given an opportunity to object to my presence. All of my interviewees were given an informed consent form to sign. I use pseudonyms throughout the paper.

The broader study from which this paper is extracted also includes observations conducted in fertility clinics, and expert interviews (see Helosvuori, 2019). At the beginning of the study, my aim was to focus on the actual process of being in treatment, and the majority of the study explores the entanglement of clinical practices, laboratory labour and patients' experiences during the conception phase. However, during fieldwork I also got to see how the phase of stopping treatment and giving up hope – a hope that previous studies on ART have shown to be addictive (Franklin, 1997) – could be consuming for experts and patients alike. For example, members of clinical staff expressed their concern when patients who might eventually have children interrupted the treatment prematurely, while patients told me how “hellish” it was to keep repeating one treatment cycle after another, although they nevertheless found it difficult to stop. Although not all of the women I encountered had access to (or desire for) treatment, or any hesitation about stopping treatment, my

observation of the struggles that nevertheless occurred led me to focus on stories about stopping treatment without conceiving. The affectivity of these accounts ultimately prompted me to juxtapose these experiences with those of women who had had children but were nevertheless still affected by the enduring experience of childlessness. What seemed to bring these two groups together was the lingering of their entanglement with technology in the post-IVF phase: it either legitimized their decision to stop treatment, or it affected the ways in which their childlessness endured despite their becoming a parent. In other words, experiences in both groups seemed to testify to how childlessness and reproduction are being redefined in the era of ART.

Being affected by IVF after IVF

Sarah Franklin (2013) suggests that IVF has become part of our shared imaginary of what is possible in reproduction, and hence the technologically mediated urge for parenthood has displaced reproduction per se as a norm in the business of having babies. She argues that the reasons people pursue IVF can be interpreted “not only as a response to social expectations and conventions, but as a means of naturalizing and normalizing new means of responding to these conventions – thus paradoxically instituting a new norm of reproduction that does not necessarily involve having children” (Franklin, 2013: 228). Since the majority of IVF cycles still fail, Franklin suggests that, counter-intuitively, IVF is as popular as it is “in part because of its elusive and demanding requirements” (Franklin, 2013: 217). In other words, although participating in IVF treatments may not result in one’s becoming a parent, it may be important in terms of “being seen to try” (Franklin, 2013: 230).

My study is in line with Franklin’s argument that the normativity of IVF affects people’s choices about reproduction. For example, one of my interviewees described her motives for doing whatever

it took to have children in terms of avoiding “regret” later in life when she would be “sitting in a rocking chair”. However, as my analysis in this paper shows, some women who enter the loop of IVF cycles are able to resist the lure of IVF. Typically, in my study, this occurs in situations where undergoing treatments has become too difficult to endure. I will now focus on the accounts of women who ended up stopping the treatment cycle without producing any babies. In order to analyse the entanglement of childlessness and IVF, I aim to show that women who decide to stop treatment without having children nevertheless make sense of their own childlessness in relation to IVF technology and the affects it evokes. In line with Franklin’s analysis, I propose, these women’s accounts can be interpreted as descriptions of a mode of reproduction that includes taking part in reproductive practices – that is, fertility treatments – but not producing babies.

In my data, entanglements with IVF during and after treatment are manifested in accounts of being *negatively affected* by the technology. The sensory experience may provoke lingering feelings of disgust, as described by Mari, who in the following extract is talking about hormonal stimulant injections during her treatment:

Mari: Once I had to inject myself when we were at a gala, in a bathroom with my evening gown on. I had the injection in my purse and then, in the bathroom, I lifted the dress up to my underarms [laughter] and pricked there. And then that smell lingered in a funny way... For the rest of the evening I had the feeling that I smelled like that medicine, that everybody could smell that.

Interviewer: Is it that sort of sterile smell, or what kind of?

Mari: Well, it’s really, that medicine has a very signature smell, I have not smelled that ever before. A long time after the treatments I threw those used needles away, and then when that smell came again, it was just like, *yuck, this is exactly that smell*. (Interview, January 2014)

The extract shows how the “yuck” affect provoked by the smell of the medicine used in the injections lingers into the post-treatment phase. The persistence of sensory experiences related to IVF came up in interviews and peer support discussions as physical reminders of the holistic experience of undergoing IVF and being entangled with a particular medicine used in it. I suggest that the lingering of these experiences is an example of the ways in which IVF physically affects women’s lives long after they have undergone any treatment cycles, and that as such it implies an enduring entanglement (Barad, 2007) with IVF.

To further explore the intensity of the process of being affected by IVF in treatment, and hence to understand how women are also affected by it after treatment, let us now turn to Saara, a 31-year-old woman. When I first met her in the peer support group for the childless, Saara had been in treatment for three years. She had first undergone four inseminations – a “lighter” treatment, where sperm is injected into the uterus and fertilization ought to happen *in vivo*, compared with IVF, which additionally contains operations such as egg-harvesting and embryo transfer. After the inseminations, Saara underwent four IVF cycles with her husband. As a result, she experienced three early miscarriages. First her own and her husband’s gametes were used in the treatments, but after disappointing results they moved on to donated eggs; they were awaiting receipt of the eggs at the time of the peer group session. The choice to use donated eggs usually takes place after many rounds of IVF (Homanen, 2018). Saara and her husband had decided to conduct one more treatment with a donated egg, and after that to end the treatment. “This is going to be the absolutely last treatment”, Saara stated in the group session. She described how she could not take “this bullshit” any more, and how “relieved” she was to know that “this is it”. She described all the things she would be happy to leave behind:

“I’m selfish for saying this, but I am so happy I don’t have to go to demanding treatments any more”, Saara says when the conversation is running smoothly, after everyone has introduced themselves and shared “their stories” at the beginning of a peer support session. Saara refers to her selfishness in the fact that other members of the group may still have many treatments ahead of them. She describes seeing in her refrigerator the remaining nasal-spray drugs for the hormonal stimulation of the ovaries. One of the participants does not know what she is talking about, and the others explain it to her. “I cried two weeks in a row after using that medicine”, Saara adds. She explains that it feels good to look at the nasal sprays and know that her time with them is coming to an end. (Peer support session for the childless, January 2014)

This snapshot from a peer support session further exemplifies how women are affected by things such as hormone injections. I suggest that Saara’s account of feeling relieved at not having to go through another cycle shows how the decision to stop treatment without having children is enacted in relation to lingering feelings of repulsion, feelings which nevertheless make the decision possible, or at least easier. This is another example of how IVF’s role as a looking glass onto reproduction (Franklin, 2013) also encompasses moments when it is declined.

Unlike Saara, who was still at the phase of stopping treatment, Mari had ended her treatment two years before I interviewed her. She had been in treatment with her husband in the public healthcare sector for a little over a year, undergoing one insemination and three IVF cycles during that period. Before the treatments, she had felt that assisted reproduction was “definitely” something she wanted to try. During her year of medical interventions, however, she began to think that “they made no sense”, and before the last cycle she and her husband had decided that “this is enough”. Over a year after she had stopped IVF, she scheduled a phone call with a doctor at the public hospital concerning her endometriosis, which was presumably the original reason for her infertility, and

which still required treatment after IVF. The doctor, who also worked in the hospital department where she had had her fertility treatments, offered her a donated embryo. However, her reaction was that she was “really not interested”. She explained that she could no longer handle the roller coaster of hope and despair.

By the time I met Mari, she and her partner had begun an adoption process. Saara was also positive about the possibility of becoming a parent through adoption, despite this being another long and heavy process. For the time being, however, both Mari and Saara were still childless. Their progress from treatment to the possibility of adoption was marked by negative feelings about being affected by IVF. It was not only that they had wanted to try the medical road before other options, but also that their childlessness was redefined by their unpleasant memories of the treatments. Because of those past experiences, their minds were set on aiming for parenthood through other means, or remaining childless, rather than going through another IVF cycle and being further attached to the technology.

The examples in this section testify to how decisions to leave IVF behind are entangled with the technology and made in relation to it. Indeed, it has been argued that ART has become the new normal in the arena of reproduction, to the extent that it has become “not normal” not to venture into medical examinations and treatments in cases where becoming a parent might require them (Ravn, 2017). For example, according to Lie, Ravn and Spilker (2011) the general understanding in Norway is that one can only truly be considered involuntarily childless *after* one has pursued parenthood with the help of IVF.

I suggest that the post-treatment experience of childlessness is made sense of in relation to lingering negative feelings provoked by IVF technology that, paradoxically, make the decision to give up

hope easier to bear. Saara was able to leave IVF behind only *after* getting to the point where she was disgusted by it. She could accept her childlessness because she could not bear IVF any more, and because IVF made her feel sick, as she stated in an interview with me. But she had had to try it. This is one example of how ART has changed what it means to be (in)fertile, and of how the process of treatment may itself be an important or necessary mode of reproduction, even in cases where it does not lead to childbirth (Franklin, 2013). Reproduction in the era of ART, then, refers additionally to the process of *trying to conceive*, rather than just to the process of actually having babies.

As I hope the discussion above has demonstrated, the point of aligning the analysis of lingering affective experiences with Barad's (2007) theory of intra-active becomings is to engage the materiality in the human experiences of suffering. Furthermore, if we are to understand how ART also affects women's lives in the post-treatment phase, I propose that it is important to view affects in relation to their material groundings. The physical experience of *being affected* is mediated by the technological entanglements of IVF treatment, in all its different dimensions – affecting bodies, entering and residing in women's experiences, and directing their conduct even years after they stopped treatment. Thus, as I will now show, there emerges the category of being *childless with children*.

Childless with children

The practice of undergoing fertility treatment entails substantial efforts that include experiences of technologies that directly affect women's bodies. In the case of IVF, these technologies include practices such as ovarian response monitoring through ultrasonography, the injection of hormones, and the transfer of *in vitro* embryos into the uterus (cf. Mol, 2002 on the practices of “doing disease”). I therefore argue that the intra-active process (Barad, 2007) of being affected by IVF

takes place through patients undergoing treatment practices and adopting medical information about their own reproductive biology during treatment.

The phenomenon of women identifying as childless regardless of having had children as a result of IVF has been noted in a psychological study on the construction of motherhood after involuntary childlessness in Finland (Lehto, 2017). I first came across the concept of “childless with children” after seeking information about peer support groups organized by an association for involuntary childlessness. One of the group types was specifically directed at people who were experiencing childlessness *even though* they had children. Furthermore, a common topic in the interviews I conducted was that one could still envy other pregnant women, and that it was still painful to see other women’s round bellies, even after one had experienced pregnancy and childbirth oneself.

Some of these interviewee stories had to do with the obvious fact that even if a woman has one child, she might still want another, and she might then face difficulties in getting pregnant again. However, such problems account for only a part of the experience of being childless with children after IVF. In interviews and peer support groups alike, I heard testimonies from women who had had as many children as they had hoped for, did not want another baby, but nevertheless still experienced childlessness and defined themselves as childless. I suggest that these accounts can be made intelligible if we analyse them as entanglements of experience and technology that linger in the post-IVF phase.

Some of my participants who had children described being confused by the feelings described above. Sonja was a 33-year-old mother of two small children. She had been through three IVF cycles – one followed by the hyper-stimulation of ovaries after hormonal stimulation, and one by an ectopic pregnancy and emergency surgery – before finally giving birth after a full-term pregnancy.

Despite her expectations, the experience of childlessness *did not end* when she became a mother. Nor did it disappear after she had a baby that was not conceived through fertility treatment but was a so-called spontaneous pregnancy. In the following extract, Sonja describes her experience of childlessness after conceiving children:

I somehow thought, after the experience [IVF] was over, that now we are a family with children. But then I realized that it wasn't that simple. [...] I always thought that it was weird before, when people [who had experienced childlessness] said that they were childless with children, I always thought that, well, you are not childless if you have children. But right after I had a child, I realized that that experience wasn't going away, that you always carried that sorrow and pain of childlessness on your shoulders. (Interview, February 2014)

Even though Sonja, to her own surprise, had become pregnant spontaneously and given birth to another child after deciding “never again” to enter the world of IVF, she still described herself as experiencing childlessness. She experienced herself as childless even though she had two children, did not want more, and now used contraception to prevent further pregnancy. Her experience of childlessness lingered even though her intense relationship with IVF technology had apparently ended, and even though her body had produced a spontaneous pregnancy.

By the time I interviewed Sonja, five years had passed since her last treatment cycle. Despite the fact that she had had her firstborn with the help of IVF, and even though she had also had another child without IVF, she told me that the heavily affective experience of treatment was still present in her life, and she took part in peer support activities to handle that experience. She described how, following the treatments, she still felt like “a different kind of mum”. At the time of our interview she had just taken a new job, and she felt the need to “come out of the closet” to her co-workers,

who she felt treated her like a perfectly normal mother of two children. She felt that they could not understand what was special about her parenthood, because they did not know how many cycles, medical examinations and operations she had gone through. Although she had not undergone IVF for five years, the entanglement that she once felt still lingered strongly in her present life. Her experience of being childless with two children, I argue, was inseparable from her experience of treatment, and her lingering childlessness was experienced in relation to the technology she had once undergone.

Sonja's "story" – the term used by participants in my study to refer to their experiences of treatment – was tough, in that it included more than one complication and emergency surgery. She felt that the treatment had "dominated" her life for a couple of years. Hence, the technological entanglements of the past were not easy to leave behind, even after she had conceived children. However, in addition, some participants whose stories were apparently easier were also familiar with the experience of being childless with children. Sanna, a 38-year-old mother of two-year-old twins, had a relatively encouraging story. She became pregnant from her very first IVF cycle, three months after entering a private fertility clinic. Even though Sanna's time in treatment had been relatively short, she nevertheless felt "bitter that it was so difficult for us to have children". And even though she felt "like, two children is basically nice", she was still in the process of making sense of her experiences, and was also a member of a peer support group for people who were childless with children.

In the interview, Sanna explained how she and her male partner had sought public healthcare services after trying for a year to get pregnant. After undergoing examinations, they received "hopeless results" from the doctor. Sanna's spouse had very little sperm in his semen. The couple then sought out a private clinic. In the next extract, Sanna describes her first treatment:

It proceeded so fast that we got to the clinic in March and by June I was pregnant. [...] Only one treatment was conducted. [...] So I was injected with the hormones. At the ultrasound I think the physician thought that I might produce four or five eggs. But in the puncture [ovarian pick-up] there were only two. I was totally... It was a horrible day. Since everything was supposed to be fine, and in a normal situation [i.e. a non-medical menstruation cycle] there should be one, and now after putting 600 euros into these hormones, and after horrible effort and pain, there were only two. But then our luck turned and we got those two children from those eggs. But I really didn't believe in it that day. (Interview, September 2013)

Although Sanna's time in treatment was relatively short, the above extract shows that she nevertheless experienced disappointment – for example, about being able to produce only two eggs after spending 600 euros on the medicine alone. I suggest that these feelings explain why even after giving birth to twins, Sanna felt “bitter”, as she put it, about her reproductive experience.

The physical sensations of undergoing IVF dominate discussions on the Internet, as Mianna Meskus (2015) has shown in her research on a Finnish online peer support forum. Like Sonja and Sanna, many of the participants in my study had experience of face-to-face peer support sessions. Those who identified themselves as childless with children described having mixed feelings about listening to others' IVF experiences during these sessions. Some felt that they did not want to wallow in such memories, whether their own or other people's, but in the groups in which they participated, the discussion easily slipped into the details of IVF: what kinds of drugs everybody had used, how heavy the doses had been, how they had felt at first about injecting themselves, how they had got used to it along the way, their experiences of heavy mood swings due to hormonal medicines, their wanting or not wanting anaesthesia for operations such as egg-harvesting, how the doctors had been saviours or disappointments, and how horrific it was to conduct a pregnancy test

two weeks after an embryo transfer into the uterus. Although the non-technological dimensions of childlessness were also discussed during these meetings, these discussions of medical operations and of being affected by them testified to how the technology lingered into the post-IVF phase.

The examples given in this section show that the experience of having or not having children is not a clear-cut issue in the post-IVF state, and that the boundary between having or not having reproduced is blurred in the era of ART (cf. Franklin, 2013). In other words, although ART broadens the possibilities for reproduction, it curiously also produces a childlessness that endures beyond the phase of having babies. The fact that “it is so hard” to conceive children has implications even after one has had them and has gained temporal distance from the process of treatment. Identifying oneself as a “different kind of” (i.e. childless) parent, I suggest, is rooted in one’s affective dependence on the practices of IVF.

The feminist point of this paper lies in its elaboration of the ways in which experiences of childlessness become technologically mediated in the era of ART, and of how, through being affected by these technological entanglements, people can become not only parents but also childless in technologically assisted new ways. Affects, then, link the material aspects of ART to human experience, and also provide an angle onto the political aspects of the routinization of ART – that is, the ways ART is altering battles over reproduction not only pre-conception but also post-conception. By aligning a focus on affects with a Baradian new materialist focus on the intra-active becomings (Barad, 2007) of the treatments, we can also shed light on (in this case) human experience, and can provide empirical grounds for understanding what it means for a human being to be a part of intra-active becomings.

Conclusion

While conducting the interviews and observations for this study, I encountered a common discourse among my informants that having a baby eliminates all one's past sufferings, and gives meaning to all one's struggles during the conception phase. According to one quantitative study in the field of clinical medicine, women in Finland who become pregnant after medical interventions have higher life satisfaction than those who fail to conceive through ART (Kuivasaari-Pirinen, 2013). However, according to the same study, most childless women do adjust to infertility, and the adjustment takes place around six to nine years after the last treatment (Kuivasaari-Pirinen, 2013). Most of my research participants had not reached this time limit by the time of my study, and more research is needed on the *long-term* lingering of the post-IVF phase. However, and in relation to feminist concerns around ART, my study is a reminder that even technologies whose use can have the most positive outcomes for sentient beings nevertheless bear with them complex implications that should be taken seriously in current new materialist discussions of ART.

Karen Throsby (2006: 77) argues that the failure of IVF “fragments the category of childlessness, and redefines what constitutes the (in)fertile body”. Throsby's argument is based on her study of women's experiences of their own post-IVF bodies, which for example bore the marks of hormone injections. Although these women had not become pregnant or given birth, Throsby argues, their bodies could not be described as unaltered. In line with Franklin's (2013) thinking, we might add that Throsby's participants had taken part in reproduction even though they had remained childless. This exemplifies the blurring lines of what it means to reproduce in the era of ART.

In this paper, I have focused on how childlessness is affectively experienced after IVF among two groups of women: those who have had children, and those who have not. My study broadens the analysis of post-IVF childlessness as embedded in the practices of infertility treatments: continuing

one's life as a factually childless person is made sense of in relation to the nevertheless exciting possibilities of ART, whereas the experience of childlessness lingers as an enduring entanglement with the affectivity of IVF even after one has had children. Both of these experiences are technologically and materially mediated through and through.

According to Thomas Lemke (2018: 45), politically relevant new materialist analysis requires an investigation of “how material human and nonhuman forces come to be determined in one way or another”, and elaborations on “how matter is differently mobilized and to what ends”. In the field of reproduction studies, my paper illuminates “how matter makes itself felt” (Dolphijn and van der Tuin, 2012: 59) through the practices of ART and their retrospective affective effects. These practices shape not only the experience of childlessness, but also what it means to reproduce post-IVF: having or not having reproduced becomes a separate question from having or not having had a baby. Furthermore, the lingering technological entanglement of life with IVF testifies to how material practices exceed the settings of their situated conduct and merge with the human experiences that the affective accounts in this paper bring to our attention.

¹ In a basic IVF procedure, the cycle begins with medication and the hormonal stimulation of the ovaries, which lasts up to four weeks depending on the protocol used. This is followed by ovarian pick-up, an operation to harvest the hopefully mature eggs from the ovaries. Egg-harvesting is followed by fertilization *in vitro*, and by the transfer of an embryo if at least one viable embryo emerges. Finally, a pregnancy test is conducted two weeks after the transfer.

² Only a few men attended the groups during my fieldwork. Those who did so participated in sessions with their female spouses – not by themselves, as the women did. In Finland, treatments are available for male-female couples, female-female couples and single women. However, no same-sex couples attended the groups during my fieldwork.

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