

Assisted Reproductive Technologies in Contemporary Japan: Experiences and Perceptions of Some Japanese Mothers

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Abstract

Within a Japanese society grappling with low-birth rates, delayed marriages and late-in-life pregnancies, the use of natural and biomedical Assisted Reproductive Technologies (ARTs) has become an issue of critical public health concern. This article presents the opinions of and experiences with ARTs of 56 Japanese mothers, aged between 29 and 45. Hailing from Tokyo and Kanagawa, 45 of these women had accessed different forms of ARTs in order to become pregnant. All the respondents were interviewed twice for an hour each, and their responses were analyzed from a symbolic interactionist perspective. The analysis suggested the salience of gender, sexuality, and kinship as the three main axes along which it was possible to understand how ARTs impacted the daily social interactions and subjectivities of the group. Furthermore, sexlessness and biological essentialism were key to understanding the experiences and perceptions of these women, all of whom were married.

Keywords

Reproduction, gender, sexuality, asexuality

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Introduction

This article presents data from a larger research project on intimacy and reproduction in Japan, a country that is grappling with a “crisis of ultra-low fertility rates” (Jones, Straughan, & Chan, 2009), a fallout of delayed marriages and late-in-life pregnancies. The fertility rate has plummeted below the population replacement level of 2.11 in 1974, after which it took a downturn and plunged to the lowest record of 1.26 in 2005 (Ministry of Health, Labor and Welfare, 2010). In 2013, the mean age of first marriage for men and women stood at 30.9 and 29.3, respectively, while the mean age of mothers at first birth was pegged at 30.4 (Ministry of Health Labor and Welfare, 2014).

The number of newborn babies, in 2013, fell to a record low since the Japanese birth statistics were first compiled in 1899 (The Yomiuri Shimbun, 2014). However, although the global fertility rate dropped, it rose among women aged between 15 and 19 and 35 or over (Ministry of Health, Labor and Welfare, 2014). Late-in-life pregnancies or pregnancies in women aged 35 or more are conspicuous and accounted for about 27 percent of the national rate of newborn babies in 2013 (Ministry of Health, Labor and Welfare, 2014).

The 1990 “Angel Plan,” a government and media cause *célèbre*, embodied the first official attempt to cope with “the problem of low birth rate or ‘*shōshika no mondai*’” (Roberts, 2002). The Plan comprised a 10-year scheme, aiming to improve child-care facilities, encourage parental leaves from work, and provide support for working mothers. Pronatalism has witnessed several initiatives since the Plan’s inception, and the 2004 “New-new Angel Plan” or “Child Care Support Plan” is the most recent attempt to promote childbearing.

Despite having the potential to solve the shortfall in births, subsidies to ARTs have never been acknowledged as a pronatalist strategy. The knowledge of ARTs entails “a curious mixture of [Japanese] social practice, folk beliefs and medical advice” (Seaman, 2011, p. 157), including natural and holistic treatments (NHT), such as, beverages, food, clothes, and even good-luck charms, to enhance fertility, traditional Chinese herbal medicines (TCHM), and the timing method (TM) that calculates infertile and fertile periods based on women’s ovulation. Delayed marriage and late-in-life childbearing, however, have triggered the demand for biomedical interventions, such as, artificial insemination (AI), in vitro fertilization (IVF), and intra-cytoplasmic sperm injection (ICSI). IVF and ICSI in particular have “already become indispensable treatments for infertility” (Yanagida, 2009, p. 29).

An analysis of the past 10 years of media reports shows an increase in the number of married women who have postponed childbirth and are looking for ARTs. They do not accept a “life without children” (Shūkan, 2002), and their longings have led to many couples experiencing the “sorrow of infertility” (Shimbun, 2004), symptomized by serious psychological stresses and a heavy economic burden, which is spurring a general public advocacy for counseling services and subsidized IVF and ICSI (Shukan, 2004).

The government has established centers offering specialized counseling for infertility along with a special scheme of financial support for the treatments. Japanese married couples can receive as much as 100,000 Japanese Yen (JPY) for two years to cover the expenses of IVF or ICSI, if they have an annual income below 7,300,000 JPY and if a physician recommends it (Ministry of Health, Labor and Welfare, 2007).

The 2002 guidelines of the Japan Society of Obstetrics and Gynaecology (JSOG) for the use of human reproductive cells underpin the official endorsement of ARTs (Ministry of Health, Labour and Welfare, 2003b). The guidelines restrict the subsidies to healthy heterosexual couples both of whose partners are free from genetically transmitted diseases and in which the wife is less than 50 years old, the average age of menopause in Japanese women (Ministry of Health, Labour and Welfare, 2003a, 2003b). Furthermore, if the reproductive cells of the partners are unsuitable, donors have to be found, in the first instance from siblings, in deference to the overriding objective of *preserving one's lineage*.

Surrogacy is forbidden. However, anonymous third-party donations are permitted as long as they do not involve financial rewards that would abet the commercialization of human reproductive cells. Donors' profiles remain unknown except for blood type, thus enabling couples to “decide” on the blood type of the offspring (Ministry of Health, Labour and Welfare, 2003a, 2003b).

The actual number of couples who have accessed ARTs is unknown. However, the Ministry of Health, Labour and Welfare (MHLW) reports that subsidized treatments for IVF and ICSI increased from 161,980 in 2007 to 242,161 in 2010. Subsidized treatments for women aged 40 or older, in particular, also increased from 31.2 percent in 2007 to 35.7 percent in 2010 (Ministry of Health, Labour and Welfare, 2013).

It is important to highlight, however, that the guidelines merely provide a framework to ensure best practices, “there is no law regulating medically assisted reproduction” (Ishii, 2009, p. 175). Maree (2014) and Mackie (2014) describe how nonheterosexual couples, single women,

and transsexuals, for instance, have likewise accessed ARTs in Japan. The movement in favor of ARTs received another shot in the arm when Seiko Noda, a politician, went through a full IVF cycle and had a baby at the age of 50. Now, she has turned into a campaigner for the older woman's right to childbirth (Noda, 2011). Nevertheless, there are many biological and structural barriers that have made Japanese couples scout for ARTs in foreign countries (Ishii, 2009).

It is against this backdrop that this article aims to analyze the viewpoints and experiences of a group of Japanese mothers who have accessed ARTs. A look at the master narrative of the sexual and gendered self of the Japanese women is followed by a description of the methodology used in the study. The results are presented along three analytical axes: gender, sexuality, and kinship.

The Gendered and Sexual Self of Japanese Women

The gendered and sexual self of Japanese women has been scripted through the "Theories about the Japanese" that evoke the image of "the good wife and wise mother" or *ryōsai kenbo* (Koyama, 2012). That image has supplied a rationale for restricting women's access to the labor market, participation in which would impinge on their reproductive role in the family and correlative household management and childbearing duties. Nevertheless, the gendered and sexual self of younger women has contributed an element to the "*gender panic* in the 20th century Japan" (Kinsella, 2012, p. 72, original emphasis), because these women tend to postpone marriage or remain single, have few or no children, and exhibit a relative tolerance toward divorce and premarital sex (Muta, 2008). Media and academic surveys highlight that these women are more sexually active than the former generation (Kinsella, 2012). Conservative quarters call them "unpatriotic and selfish" (Holloway, 2010) because they do not espouse pronatalism and are less likely to devote themselves to homemaking and childrearing.

Nonetheless, marriage and childbirth have not lost social significance, and the booming of the ART industry partially suggests so. Women resist or refuse marriage because they cannot find a man with the three C's—a comfortable income, communication skills, and cooperativeness with housework and childcare responsibilities (*kaiteki na, rikai shiaeru, kyōchōteki na*) (Ogura, 2003).

Official rhetoric and political commitment to gender equality as well as journalistic and academic reports "inclined to celebrate diversity and

fluidity” (Jackson & Scott, 2010b, p. 72) have largely ignored the persistence of hierarchy in heterosexual relations and the existence of gender and sexual discrimination in the Japanese context. Cultural and social structures still underpin labor patterns, and women continue to stop working because of maternity and childrearing duties. While unmarried women and mothers grapple with a “sexist” labor market (Sugihara, 2011), married women are still chiefly responsible for childrearing and housework (Tipton, 2008). Wives who work full time spend “30 hours a week doing the housework, while their husbands contribute an un princely three hours of effort” (*The Economist*, 2011). Furthermore, official statistics point out that boys and girls older than 10 years spend 42 minutes and 3.35 hours doing domestic chores a week, respectively (Statistics Japan, 2011).

Recent international debates emphasize gender inequality and the deplorable conditions that limit the active participation of women in the labor market as a means of explaining the long-lasting recession in the Japanese economy. Locally, Seiko Noda has coined the terms “mancession” (*danseifukyō*) and “womenomics” (*ūmanomikusu*): the former suggests that high rates of male unemployment cause recession and the latter suggests that raising employment rates among women should help increase the gross domestic product (The Asahi Shimbun, 2013).

Methodology

This research is framed within the sociological tradition of “symbolic interactionism” (Jackson & Scott, 2010a) in order to deepen the understanding of reproduction and intimacy in Japan. The notion of scripts is vital to any exploration of how ARTs have become an integral element of the everyday interactions among Japanese mothers. Approaching ARTs from the way reproduction, intimacy, and sexuality have been scripted in society and daily life helps elucidate how practice and subjectivity relate to wider social and cultural contexts. The constructs of self and subjectivity broadly refer to the subjective sense of the self along with its inner thoughts and desires, which are equally restricted or enabled by structures, cultural sources, and daily interactions (Jackson & Scott, 2010b). Stressing the actualities of everyday social practices through sexual scripting also helps to locate agency in its social context so as to avoid reaching a level of unexplained voluntarism (Jackson & Scott, 2010a, p. 821).

Contemporary gender relations are hierarchically constructed into structures of power that govern the ways in which Japanese men and

women interact with one another. Nonetheless, masculinity and femininity are seen as “opposites in coalition” (Holland, Ramazanoglu, Sharpe, & Thompson, 1998) as they produce a regime of “normality” that largely contributes to the reproduction of patriarchy.

This article studied 56 married Japanese mothers from Tokyo and Kanagawa between the ages of 29 and 45. Their participation was secured through snowball sampling. Forty-five of the mothers had accessed NHT, TCHM, and TM, 20 had used AI, and 15 had used IVF, while seven had taken recourse to ICSI. Thirty of them hold a university degree, 20 have completed a two- or three-year junior college program (*tanki daigaku*), and six were graduate or undergraduate students when interviewed. Fifteen were full-time employees, and although the rest said that they were full-time housewives, 23 did part-time jobs. Thirty of them had quit their full-time positions after getting pregnant.

In accordance with the ethics approval granted by the Nanyang Technological University’s Division of Sociology ethics committee, the recruitment method included a complete explanation of research objectives and methods as well as the assurance that all the information given would be treated confidentially and included only as data in published academic manuscripts. The mothers knew that the information that could cause personal identification would be deleted or changed in any research report. Data were collected through individual, semi-structured, in-depth interviews that lasted approximately 60 minutes each. All participants were interviewed twice. Upon the agreement of the participant, interviews were fully recorded and conducted in Japanese. Topics, such as, childbearing, gender, sexuality, and ARTs, were not presented in a fixed order but introduced when deemed appropriate.

Interviews took place at quiet areas in coffee shops, where the mothers felt at ease and their privacy could be protected. One thousand JPY was offered as remuneration, but the payments did not compromise the interviewees’ rights to terminate participation at any stage or to skip any uncomfortable question. If ever the interviews became highly disquieting or emotionally charged, the mother was allowed to define how far certain experiences should be spoken about and the interviewer suggested sources of information and support when it seemed appropriate. All participants are identified by pseudonyms in this article to protect their privacy.

Data were analyzed by using systemic networks, a linguistic technique (Bliss, Monk, & Ogborn, 1983) that generates categories through an interactive process of induction and deduction, and the interview transcripts were seen as “reality narratives” or pieces of informants’ life history (Plummer, 1995).

Results

Gender

A major challenge for feminism has been to contest reductionist views of physical bodily differences between men and women that tie the gendered and sexual self to biology (Jackson & Scott, 2010b, p. 142). Nonetheless, the analysis of the interviews suggested that the significance of ARTs is closely related to a form of “biological determinism” (Ramazanoglu, 1989). The mothers insisted on the existence of instincts (*honnō*) that account for the appeal of ARTs. For most interviewees, the use of ARTs was linked to an internal force (*ikioi*) that made women want to procreate (*kodomo ga nokoshitai*). Nishiguchi-san, who was a 32-year-old mother of two children at the time of interview, and had tried NHT, TCHM, and TM, said:

Well, I think that many women have to use ARTs because there is something inside them that makes them want children.

What is that thing?

I think that we call that instinct ... it is like an internal force... women want to have children... they want to leave descendants... maybe...

What about men?

Some men want to have children too, of course... but that internal force is different... I don't know ... It is not as strong as in women...

What about women who don't want to have children?

Hmm... it is a bit unusual... I don't know... it is maybe that they don't want ... it is perhaps that they cannot... that is why ARTs is important.

What do you mean?

ARTs help women to fulfil their mission in life.

What is that mission?

I think that women still have this mission... to leave descendants.

Is that why you had children?

Hmm... maybe ... I think... it was something inside me...

The social significance of ARTs largely revolves around daily interactions concerning motherhood which suggest that despite demographic changes, “there is [still] a single scenario for happiness in Japan. You must get married by certain age. You must have babies” (Estomin, Gasha, & Jane Walmsley Productions, 2011). The interviews featured verbal

references to popular expressions, such as, “around 30” (*arasā*) and “around 40” (*arafō*), to imply that reproductive instincts reach the highest point when women are in their 30s, thus making it the age at which they are most likely to require biomedical help so that they can become pregnant when the “irresistible” desire arises. When asked why ARTs have become so important in the contemporary Japan, Yamanote-san, a 38-year-old mother of one who had tried NHT, TCHM, TM, AI, and IVF responded:

Hmm... I am not sure but I think it is related to women’s instincts.

What are those instincts?

It is something like inside women that makes them want to have babies, hmm.... Have you heard the expressions *arasā* and *arafō*?

No, not really. What does that mean?

Well... *arasā* means around 30 and *arafō* around 40...it is said that the desire to have children reaches its peak when women are in their 30s... and some women want to have children when they are in their 40s... but sometimes they cannot conceive... many women need some kind of help.

What is that kind of help?

Hmm... different ways to get pregnant... I think most women try natural methods first... but doctors say that the older you are the more difficult it gets... so many women have to use IVF, for instance.

Was that your case?

Yes, I tried AI and two IVF cycles.

The older women in the group, in particular, suggested that the “uncontrollable” desire to have children is actually manageable when women prioritize their jobs. The analysis suggested that they largely postponed marriage and childbirth because they wanted to build a career and because they assumed that ARTs could help them conceive. Nevertheless, similar to the research findings of Tsuge (2008), the use of ARTs turned pregnancy into a financial burden laced with uncertainty, sorrow, and desperation. Reflecting on her experience with ARTs, Meguro-san, a 44-year-old mother of one at the time of interview, who had tried NHT, TM, TCHM, AI, IVF, and ICSI, stated:

I definitively recommend that women should get pregnant when they can.

What do you mean?

Getting pregnant when you are older is really a quandary.

Why is that so?

Well, I did not want to have babies when I was younger because I became a manager in my company... and I was a bit naïve thinking that I could get pregnant by using ARTs... but no, getting pregnant when you are in your 40s is very difficult, expensive and disheartening... I don't think women should rely on ARTs... women should get pregnant when they can... at a younger age...

If it was so difficult why didn't you give up?

Hmm ... I don't know there was something inside me... my job was not enough... somehow I felt that something was missing in my life... I wanted to have a child... also everyone kept asking me why I don't have children... my friends, my colleagues... and I had always to explain...

Is that why you got pregnant?

No, not really... I really wanted to have a baby ... but somehow people around me make me feel that I should have babies, maybe...

The narratives suggested that the symbolism entangled with childbirth and motherhood revolves around the oft-spoken script that childbearing is largely *mandatory*, and “a woman who experiences infertility deviates from community and society’s norms because of not being considered a ‘full-fledged’ woman” (Tsuge, 2008, p. 395). The availability of ARTs seems to reinforce such understanding, which has serious implications for their sexual self.

Sexuality

The narratives showed how ARTs have become a niche market. Consuming drinks or food as well as wearing clothes that are meant to increase the chances of pregnancy was a common practice for the majority of the mothers interviewed. TCHM also offered a wide range of remedies to equilibrate the so-called unbalanced energy in the body that prevented pregnancy. All of the above remedies, although expensive, did not really pose a problem for the mothers because they did not require the direct involvement of the spouse. For most of them, the use of TM, however, turned into a grueling experience that involved unexciting and scheduled sexual intercourse organized around menstrual periods and “accurate” calculations of fertile days. Reproductive concerns tended to produce a heavily restricted sexual self, which largely caused disquiet among their male partners, who felt that they were being used for and

obliged to perform “insemination duties.” Reflecting on the difficulties in becoming pregnant, Kasuga-san, a 30-year-old mother of two at the time of interview, who had tried NHT, TCHM, and TM, said:

You cannot imagine how difficult is to get pregnant until you really see that no matter how hard you try... you still cannot conceive.... and it becomes a real problem for the couple.

What do you mean?

As I could not get pregnant at all... and tried everything that my friends and mother recommended... sexual positions and stuff that supposedly help... I kept drinking and eating so much stuff but nothing worked... I tried also TCHM that is a bit more expensive but did not work either...

What did you do then?

I went to see a doctor... and after checking that I didn't have any problem in my body... he said that we should try the TM first... I was very careful keeping records of my body temperature and stuff... to know when I was fertile... but then, asking my husband to have sex on those days was a bit of a problem...

Why was that so?

Sometimes he was tired... we had many fights... sometimes he even told me that he was not a machine to get me pregnant...

Why did he say so?

I guess it was because sex was not fun at all.

How did you get pregnant then?

Unexpectedly TM worked when we were about to start AI.

Prioritizing pregnancy becomes draining and leads to a biomedicalization of the relationship, which largely sidelines sexual intercourse. Biomedicalization signifies a growing biomedical dependency of women on biomedical knowledge and technologies to become pregnant, which reshapes their bodies and identities (Clarke, Mamo, Shim, Fosket, & Fishman, 2003). Biomedicalization renders childbearing into a biomedical project in which the chances of becoming pregnant can be boosted by using ARTs. The narratives suggested that the yearning for pregnancy turns into a biomedical matter and ARTs engineer the “simplest” way to cope with the “gruelling process of impregnation.” As suggested by advertisements and the ART industry, childbearing is largely a matter for women and the relentless pursuit of ARTs by some want to be mothers implies that biomedicalization is not entirely a top-down process imposed upon women, who are passive recipients (Bell & Figert, 2010). The

majority of the mothers, in particular, those who had used IVF and ICSI, saw ARTs as a productive and rather effective means to become pregnant. As the Japanese activists Yukako Ōhashi (2008, pp. 226–227) put it: We “saw IVF as continuous medicalization of the woman’s body and were hence against IVF and reproductive technologies in general, our critiques were somewhat softened as we realized that [there] were women who wanted IVF.”

Recalling her experiences and struggle to become pregnant, Hongosan, a 39-year-old mother of two at the time of the interview, who had tried NHT, TCHM, TM, AI, and IVF, said:

As I was 35 years old already... it was very difficult to get pregnant... I tried almost anything I was recommended... bought remedies and stuff to wear, even a corset that supposedly helps impregnation... it is amazing the amount of products in the market to help you get pregnant... but nothing worked in my case.

What did you do then?

We tried TM but did not work either ... having your sex live turning around fertile days is a problem.

Why was that a problem?

My husband was not available to have sex always on my fertile days... he was either tired or not willing to have sex... I sometimes felt sorry for him.

Sorry for him?

Yes, because I felt that I was imposing sex on him.

Does that mean that he did not want to have a baby?

I don’t think so, but still having sex mostly on my fertile days was not fun.

What did you do then?

We tried several times AI but did not work.

What did you do then?

Finally after trying IVF for about 2 years... I got pregnant... IVF was somehow the easiest way to get pregnant... it is expensive though and we had to stop it several times but it was a great success in the end...

Would you recommend the use of IVF?

Yes, it is expensive but it is somehow the easiest way to get pregnant.

Some of the mothers acknowledged that ARTs have become a strategy for coping with a growing tendency toward sexless relationships among Japanese couples. The ratio of abstaining couples increased from 36.5 percent in 2006 to 40.8 percent in 2008 (Shadanhōjin nihonkazoku

keikaku kyōkai, 2010). The interviews suggested that after marriage, sexual intercourse became somehow unappealing and difficult to fit into their hectic lives, especially when both were working full time. Intriguingly, some of the mothers, particularly the older ones in the group, became aware of their largely nonexistent sex life only after discussing the causes of their infertility with a gynecologist. Reflecting upon her conversations with her doctor, Ushigome-san, a 41-year-old mother of one at the time of interview, who had tried NHT, TCHM, TM, AI, IVF, and ICSI, elaborated:

Once a doctor asked me how I could expect to get pregnant if I did not have sex...

What do you mean?

It sounds stupid but you are too busy doing chores and working full-time outside the home so that you lose track and little by little your sex life disappears.

What did you do then?

Well, you know that you can buy a lot of remedies... I was particularly keen on TCHM because my sister recommended it but it did not work.

What did you do then?

I did try various remedies and followed my friend's and my mother's advice... following doctor's recommendation... we tried TM but my husband was always busy... "Scheduled sex" was always an issue that usually ended up in nonsensical quarrels... I made up my mind and we tried first AI but did not work, then we tried IVF and then ICSI ... it was expensive but I finally got pregnant.

Do you think that your situation is different from other Japanese women?

It could be... but something makes me think... well ... actually ... no, newspapers say that the number of sexless couples is increasing... many more couples could be sexless and using IVF and ICSI to conceive these days.

Kinship

Tsuge's research shows how grappling with ARTs has inflicted psychological depression and stress upon many Japanese women (Tsuge, 2008). Some of the mothers in this study suffered disheartening experiences that involved miscarriages, quarrels with their spouse, and the side effects of medications. Nevertheless, they did not regret undertaking the process, and in line with JSOG's guidelines that endorse the use of ARTs to maintain kinship relationships and preserve lineage within a household, the mothers insisted that using ARTs was absolutely relevant toward those

ends. This was the case with the mothers who tried IVF, and ICSI in particular. Explaining why she decided to try IVF and ICSI, Kuromae-san, a 36-year-old mother of one at the time of the interview, who had tried NHT, TCHM, TM, AI, IVF, and ICSI, stated:

Well, going for IVF was not a simple decision... and trying ICSI was even tougher.

Why was that so?

In the first place, it was not cheap. We really spent a lot of money... then to prepare my body I had to take some medications... then injections and stuff... sometimes I felt unwell because the medication was a bit too strong for my body... worse is when the treatment did not work... I felt gloomy and useless...

What do you mean?

It was a horrible experience to see that my period came because it meant that the treatment did not work... worse was when I thought that I was already pregnant but I had a miscarriage ... I felt sometimes that my life was losing sense and wanted to stop ...

Why did not you stop then?

Because I wanted to have my own child... somehow a child keeps the family together... your own child is part of the family ... it means that the same blood runs through our veins...

Are blood ties so important?

Things are changing but I think they are still very important... at least in my family we think so....

Some of the conversations became highly emotional to the extent that sometimes the interviewer had to stop for the mother to calm down. Recalling their experiences in dealing with ARTs was not easy for many. In this context, some of the conversations veered toward adoption, which appeared as a rational and logical option. However, the reflections of most of the mothers in this study mirrored the findings of Hayes and Habu (2006), who discovered the strong influence of the ART industry in underscoring the importance and “desirability of rearing a child with one’s own genes” (Hayes & Habu, 2006, p. 13), which in turn discourages attempts to adopt a child. Yurakucho-san, a 44-year-old mother of one who had tried NHT, TCHM, TM, AI, IVF, and ICSI, described how traumatic it was for her to become pregnant:

Nobody can fully understand what getting pregnant has meant in my life... we spent so much money... sure... but the worst is the sensation of emptiness

[sobbing] everything I tried seemed useless... every month the same hope... but when my period comes again I felt drained... the worst is when I had a miscarriage ... I really wanted to give up...

Why did you not give up then?

I don't know; it was a difficult decision especially when my friends who were trying ARTs like me showed me that there was always a possibility to get my own baby... I somehow felt that ICSI would work... and it did... I got pregnant.

Did you ever think of child adoption?

No, not really... although it was a difficult experience, I always thought that ARTs could help me have my own child... and somehow everyone in my family was expecting the same... my friends too... they actually encouraged me to keep trying... you might not know but ARTs is a fascinating world... overall I wanted to have a child with my husband's genes... and ARTs made it possible... It was a harsh experience but don't regret at all.

Some of the mothers noted that adoption is still a rather complex matter in the Japanese society. The interviews echoed the “Theories about the Japanese” which imply a press toward homogeneity and uniformity. “Japanese people themselves—give little or no recognition to internal diversity” (Gottlieb, 2006, p. 4), which makes adoption problematic. Despite the ancestral tradition of adult adoption known as “son-in-law-adoption” (*mukoyoshi*) (*The Economist*, 2012), adopted children do not have an accredited place in the Japanese society. The interviews suggested that being an adopted child always involves the risk of being stigmatized, bullied, and discriminated against because of the child's inability to trace blood ties. In line with Hayes and Habu (2006), the mothers interviewed agreed that adopting a child represents a huge challenge that not many childless couples would like to face, especially if they have discovered the “advantages” of ARTs, which allow for “technologically assisted genetic kinship” (Nash, 2007, p. 97). Morishita-san, a 37-year-old mother of one at the time of the interview, who had tried NHT, TCHM, TM, and AI, suggested that though becoming pregnant was a very difficult experience, she did not consider adoption:

Hmm... I do not think many people are willing to adopt a child in Japan.

Why not?

Things are different in other countries, maybe... but here blood ties are still very important in a family... the blood type is important... these days DNA and stuff seems to be important to prevent diseases too... I believe that we all think the same way... being Japanese is still somehow in your blood, I guess.

But the tradition of adult adoption exists, doesn't it?

Yes, it does, but that is different... and actually that is a tradition usually sustained by a family willing to preserve the family name. In case, for instance, the family has only one daughter... her potential husband is adopted so the daughter will not change her surname after marriage.

I don't see the difference between that and child adoption.

Hmmm ... I think that in Japan adopted children are seen in a different way... they have always a different place... these days children look for any excuse to bully each other... being an adopted child would be the cause of bullying ... I don't think that many couples would like to adopt children... especially nowadays that you can always have your own children by using ARTs... I think that many adopted children are always bullied... why would you want that if these days you can have your own children by using IVF?

So just like this, by highlighting discrimination and ostracism, adoption as an option for Japanese women is discredited. Instead, the ARTs industry offers the possibility of preserving lineage, which revolves around a biologized Japanese self, supporting “a newly embodied notion of race and nation” (Atkinson & Glasner, 2007, p. 8), implying that “Japaneseness” still lies in blood ties. The relevance of such biologized Japanese self is equally evident while analyzing the ideas underpinning the Japanese family registration system (*koseki*). Maree (2014) contends that the registration system reinforces the idea that Japan is ethnically homogenous. Mackie (2014) observes that the system promotes the understanding that a Japanese family is a heterosexual unit where its members are genetically related. Krogness (2014) coined the term *jus koseki* to emphasize the salience of blood ties to understanding the current family dynamics and relationships as well as issues pertaining to citizenship in contemporary Japan, because “a child, who is a citizen under *jus sanguinis*, is registered as such via its parents’ notification of birth...[which establishes]... parent-child relations” (Krogness, 2014, p. 161).

Conclusion

This article presents the viewpoints and experiences of a group of Japanese mothers, who used ARTs in their quest for pregnancy. The state-of-the-art reproductive biotechnologies find their place within a tradition of folk beliefs largely upheld by NHT, TCHM, and TM. The current trend toward delayed marriage has increased the demand for

biomedical ARTs, which have become both an ever-profitable niche market and a critical public health concern for the Japanese authorities who have produced guidelines to regulate and subsidize schemes for IVF and ICSI.

Despite subsidies to ARTs having never been officially endorsed as a pronatalist strategy, their effects could nevertheless impact the current demographic patterns. The guidelines try to limit the access to ARTs, but do not constrain Japanese citizens evenly. The agency of Japanese couples largely depends on their capacity to pay for ARTs and the options that the biomedical and pharmaceutical industries offer. Similar to the construct of “the Activist State” (Biehl, 2004), the Japanese government appears to be complicit in the commodification of childbearing through the strengthening of the ARTs market, which is “presented as a growth of individual freedom” (Connell, 2004, p. 9). This narrative enhances the power of local and international medical and pharmaceutical industries: “Japan will lift a ban on insurance policies covering fertility treatments as early as 2014 to ease the financial burden of couples and to help lift the nation’s birthrate” (Takeshita, 2013).

Plummeting fertility rates imply that patterns of heterosexual relationships have changed at least to some extent. By emphasizing diversity and fluidity, scholarly and journalistic investigation has strived to debunk the homogenizing master narrative that encloses the Japanese sexual and gendered self within the patriarchal family. “Diversity and difference are the new watchwords of sexual politics” (Altman, 2012, p. 11) and have facilitated a “celebration of diversity” that has helped to blunt the relevance of a number of “antinomies and [its] embedded-anxieties” (Jackson & Scott, 2004). There is no intention to generalize the findings beyond the scope of the subjectivities of this study’s participants. However, the appeal by the mothers interviewed to instincts and childbearing as a means of understanding the gendered self of Japanese women and the corresponding relevance of ARTs in their lives indicate that progress toward “liberalization” is very uneven. Recent rhetoric that regards women’s productive role as indispensable to a “womenomics” might team with other perceived obligations to “put an unbearable burden on women’s lives by their daily, quadruple shift (paid work, homemaking, child rearing, and night shift for the husband)” (Castells, 2010).

The interviews with this group of mothers suggest that ARTs are underpinned by both economic liberalism and traditional conservatism (The VOICE Group, 2010) that tend to reproduce the script in which the gendered and sexual self of women revolves around reproduction.

The symbolism underpinning ARTs suggests a “new” form of biological essentialism premised by the “argument that men and women have essential sexual natures rooted in their genes which help explain differences in the male and female social behavior” (Ramazanoglu, 1989, p. 193). The narratives also imply that the proliferation of ARTs is in tandem with current tendencies toward “sexlessness” among Japanese couples and the conventional understanding that Japaneseness is deeply rooted in biology and genetics.

Overall, the interviews with this group of mothers mirror the difficulties in understanding the current Japanese society, in general, and theorizing the use of ARTs in particular, because as Irwin proposes “a renewed focus on individual agency, on beliefs and values and on cultural processes falls short of any adequate specification of social structural process” (Irwin, 2005, p. 1). Mackie (2014, p. 217) opines that “the family in Japan is constantly changing,” and Mathews (2014, p. 77) says that “Japan has changed, with women’s increasing role in the workplace and wives’ increasing desire for their husband’s emotional commitment and communication skills.” However, Ronald and Alexy (2011, p. 17) contend that scholars are still challenged by the quandary of disentangling continuity and change in the Japanese society: [*p*]lus ça change plus c’est la même chose (the more it changes, the more it’s the same thing). The use of ARTs has the potential to “liberate” women by allowing them broader control over their reproductive capacities, thus providing them the liberty to plan their lives accordingly. The mothers in this study, nonetheless, imply that the actual use of ARTs is often underpinned by traditional ideas that might “oppress” women. The use of ARTs appears to be grounded in constructs that entwine the subjectivity of women to reproduction and endorse the notion that family members ought to be genetically related, which appears similar to the ideology that determines the prevalent Japanese family registration system and JSOG guidelines. As Ramazanoglu (1989, p. 4) elaborates “[I]beration need not be a uniform or non-contradictory process, [...furthermore...] the implications of liberation are [clearly] related to the actual contradictions of women’s lives.”

Methodologically, symbolic interactionism appears to be a reliable theoretical approach as it permits a theorizing of ARTs based on the daily lives of Japanese women. Though the mothers interviewed during this study discussed the use of ARTs and infertility, this issue needs to be examined in much greater detail along with male infertility. The article has only made a passing reference to the men/fathers in these arrangements due to constraints of space.

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