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Road of No Return: Uncertainty, Ambivalence, and Change in IVF Journeys in China

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ABSTRACT

In this article, I present how in vitro fertilization (IVF) journeys become “*bu gui lu*” (a “road of no return”) in China. I document the reproductive dilemmas intended parents encounter as they navigate and renegotiate the reproductive futures they desire throughout the process, and characterize the ambivalence caused by the space between individual struggles for conception and the wider demographic anxiety about national falling fertility rates. I argue that the ambivalence experienced by participants throughout their IVF journeys not only reveals the uncertainty they have about their reproductive futures and the ways to achieve them, but it also reflects the broader uncertainty of the demographic future of contemporary China.

KEYWORDS



Ambivalence; China; future; in vitro fertilization; reproduction; technology

At 6 am in the morning, I got off the bus and walked toward the entrance of the reproductive center of the P Hospital.¹ The main entrance was closed, but there was a long queue of people. Many people were holding a file folder. I assumed they contained materials prepared for their appointments, such as medical records and test reports. I was impressed by the long queue so early before the opening time; however, I was later told that the queue started as early as 4 am. Next to the main building, I noticed there was a new building ready for use. A quick thought flashed through my mind: are there so many patients that one building was not enough? Later I observed some people sitting in front of the main entrance and others pacing and talking on the phone, using jargon and reporting some indicators with figures. I was stunned when I heard those words but could not understand what they meant. This seemed a new but unfamiliar world to me. I would need to learn relevant knowledge to be able to chat with them.

(Fieldnotes, July 2019)

This vignette captures my very first visit to the P Hospital. A life world of in vitro fertilization (IVF) presented itself to me, with its towering wall of specialized knowledge and terminology – yet for women who were about to undergo complicated IVF procedures, the challenges seemed insurmountable. Only after intensively learning IVF-relevant knowledge did I have some sense of their world. I found that these women experienced ambivalence associated with changing perceptions of technology and their desired reproductive futures. Some participants portrayed this journey as *bu gui lu* (a road of no return): in one interviewee’s own words “once started, one cannot stop, not without a result.” The IVF journey required tenaciousness in the face of demanding treatment, reflecting individuals’ firm desire to have children.

Meanwhile, the antithesis of this scene – the ultra-low fertility society (Huang and Wu 2018)—is of great concern in China. Recent pronatalist changes in state population policies carve out a picture of demographic anxiety (De Zordo et al. 2022), and can be seen in media reports on the collapsing fertility rate (Wangyishudu 2018), and public concerns about low fertility intentions among people of childbearing age (Lei 2021; Wang 2021). Since 2010, the *jihua shengyu* (birth planning) policy²

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Media teaser: How do women in China embark on the IVF journey? What dilemmas do they encounter that make this journey a “road of no return”?

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(Greenhalgh 2008), has gradually relaxed, from a selective two-child policy to the universal two-child policy in 2016, which marked the end of three-decades of anti-natalist birth planning policy. In May 2021, the Chinese government announced the three-child policy and implemented supportive measures (Xinhuashe 2021), showing an encouraging attitude toward fertility while indicating a sense of anxiety about the national demographics. Although many scholars have called for the abolition of population control measures by the Chinese government (J. Li 2013; Ren, Xiong, and Zhou 2019; Zhang 2019), the state has continued to adjust its population policies within the symbolic framework of *jihua shengyu*. On the one hand, the essence of these changing population policies reveals an encouraging attitude toward fertility, which marks a salient turn from anti-natalism to pro-natalism. On the other hand, the Chinese state is deficient in supportive measures to encourage fertility, compared to other countries that have adopted pro-natalist policies, such as Singapore (Sun 2012) and Israel (Birenbaum-Carmeli and Dirnfeld 2008). This ambivalence toward population dynamics can be termed “ambi-natalism,” on which I will elaborate in the following sections.

Paradoxically, the reproductive anxiety experienced by individuals and families struggling for children, seen through the long queues at reproductive hospitals, stands in contrast with Chinese media representations of demographic anxiety couched in concerns about the continuing low national fertility rates. Individual anxiety in the IVF journey is embedded in the intersection between demographic anxiety and population governance (Jacka 2007). In this article, I present how IVF journeys become *bu gui lu*. I explore what hopeful parents-to-be perceive throughout the processes, and what this metaphor tells us about the wider ambi-natalist context.

Almeling (2015) conceptualized reproduction as a multilayered process, from individual embodiment to state policy. People not only reference their bodily experiences at the individual level when discussing their reproductive journeys; they go beyond that to investigate the social world in which they live. Through the “repro lens” (Inhorn 2020:111), I explore how Chinese women pursue IVF for their reproductive futures, and reveal the dilemmas they experience and the local complexities in which they are embedded. I characterize the ambivalence experienced by participants throughout their IVF journeys between their individual struggles for conception and the wider demographic anxiety about national falling fertility rates and argue that this not only reveals an uncertainty about their reproductive futures and the ways to achieve them, but also reflects the broader uncertainty about the demographic future of the Chinese nation. The lens of IVF reveals a multilevel reproductive dilemma, including individual, familial, societal, and national frameworks.

Contextualizing IVF journeys in contemporary China

“The ambivalence so profoundly associated with the technique of IVF” (Franklin 2013:8) has been widely discussed in multiple ethnographies in settings around the world (e.g., Becker 2000; Bharadwaj 2016; Franklin 1997; Thompson 2005). IVF has been regarded as “a rite of passage” through which individuals experience constant changes and need to make continual decisions in the midst of treatment (Franklin 1997:130). Smietana also indicates how perceptions of reproduction are changeable in the reproductive decision-making process and highlights the “dynamic and interactive context” (2018:103) in which we should understand that the process is not merely rational. Becker (2000) examines how men and women in the United States consume ARTs while ambivalently taking actions that influence the burgeoning industry, suggesting that their experiences become increasingly politicized as they confront a complex combination of social, cultural, and economic forces that shape this biomedical system. Bharadwaj (2016) unpacks the factors involved in the social processes of understanding the experiences of infertility in India, a densely populated developing country in which the political economy of health and the biomedical politics of public/private sectors are intertwined. As I will elaborate later, the Assisted Reproductive Technologies (ARTs) industry in contemporary China also comprises public and private sectors; however, the public dominates. These studies demonstrate how individuals’ infertility treatment is shaped by the larger context in which they are

embedded. Almeling (2015) specifies that the social context includes the power of states, medicine, and social inequalities in shaping individual bodily experiences. I show how these factors intersect in participants' IVF journeys in the Chinese context of a unique historical process of IVF development, and a complex and ambivalent politics that has long been concerned with population dynamics.

China followed its own path of “indigenous” (Jiang 2015) IVF development, working independently from the West where IVF was first developed in Britain and Australia. This narrative, with its hint of celebrating indigenous self-reliance, is part of the sociopolitical transition that took place in 1980s China (Jiang 2015). Wahlberg (2016:105) argues that “IVF emerged in China in response to local concerns” to improve population quality, and that the state has dominated the normalization of ARTs through its legislation and policies. Jiang and Wahlberg's work contributes to the Chinese “repronational history” (Franklin and Inhorn 2016) as it highlights the leading role of the state in a unique developmental path. IVF was born in the anti-natalist era, when reproduction was strictly controlled through policies mandating a limited quantity of children, who were to be of exceptional quality. The IVF research program successfully received state funding for its “eugenic” aspect, consistent with overarching policy aims of *yousheng* (superior birth) (Jiang 2015), and thus can be understood as “a technology of birth control” (Wahlberg 2016:105). This history of the state-led development of IVF in China has lent particular authority to its public hospitals and so Chinese patients often prefer to seek IVF treatment in public hospitals rather than private ones. This history contextualizes my research, given the changing population policy, the unmet demand of the IVF industry confronted with a surge in potential users, and changing kinship, family, and gender norms.

Although IVF has been available for more than thirty years in mainland China, sociological and anthropological investigation on its intersection with family, kinship, and society in this specific historical and political context remains rare (e.g., Handwerker 2002; Lai 2017; Wahlberg 2016; Yu et al. 2021). Chinese anthropologist Lai (2017) depicts how IVF brings hope yet creates reproductive anxiety (*shengzhi jiaolv*) especially in relation to knowledge acquisition. IVF patients cultivate practical reasoning by seizing every chance to learn professional knowledge and collecting practical experiences of the daily routine to overcome their anxiety, and this simultaneously becomes a source of new anxiety (Lai 2017). Yu et al. (2021) ethnographies of female embodied experiences of IVF treatment in China demonstrate how women become more anxious as they dedicate themselves to the treatment, but hope wins and out and they do not lose faith in the technology.

The existing literature leaves space for further investigation of people's changing perceptions during the IVF journey. Previous studies have explored individual anxiety about IVF treatment, yet my study extends the scope to concentrate on how this anxiety relates to broader demographic anxiety and pressures, to understand whether these anxieties are intrinsically linked and what these experiences reveal about individual and national reproductive futures. Inspired by Weis, who studied cross-border reproductive routes from China to Russia traveled by patients who are “structurally squeezed out of the Chinese reproductive health care system” (2021:8), I explore the rift between individuals' desires about their reproduction and the structural limitations of the reproductive care system within China.

In this article, I trace the IVF journey of no return (*bu gui lu*) to document multiple redefinitions that my informants undertake to achieve their imagined reproductive futures, and explore how their embodied experiences shaped their perceptions of technology, society, and the state. Two main themes appear throughout this journey. The first relates to how IVF patients identify the factors that will most likely lead to success: they move from faith in the “best treatments” to appreciating the role of luck. The second theme addresses how they redefined health as they confronted uncertain treatment and renegotiated their reproductive futures. These themes characterize the reproductive dilemmas they experience and reveal the changing visions of the future throughout their journeys.

Method

The fieldwork for this study was conducted at P Hospital in Beijing, capital of China, and a nearby group-shared accommodation. The reproductive medical center of P Hospital, one of the largest in the world, has the most comprehensive range of treatments. The hospital is well-known, and it attracts patients from all over the country.

At the beginning of my fieldwork, I attempted to recruit participants from the waiting room of P Hospital. However, the waiting room turned out to be crowded and noisy, leaving no place for privacy. Patients were busy queuing for registration, paying fees, undergoing tests, collecting reports, and receiving consultations. Many patients come from outside Beijing and leave in a hurry after the appointment. In front of the hospital, there is an open area where waiting people sit and chat. I spent several days sitting with people there chatting, introducing my research in an effort to recruit participants, but was unsuccessful. These conversations enriched my background knowledge of the IVF processes at P Hospital and their routines. During this stage, I learned about the availability of hostels for IVF patients from outside of Beijing.

Located opposite the main outpatient building of P Hospital is a residential block, about 600 meters from the reproductive center building. Because it is close to P Hospital, many apartments are rented to patients who travel for treatment on a daily or monthly basis. These “family hostels” are privately operated by landlords or secondary landlords, and are much cheaper than nearby hotels.³ Some family hostels target IVF patients. Landladies walk back and forth in front of the hospital and ask patients in low voices, “Do you need accommodation?” trying to avoid the attention of the hospital guard. Some circulate business cards showing “IVF hostels” and contact details. Running a family hostel belongs to the gray economy, and the official stance on this is ambiguous.

I was able to use one of the IVF family hostels as my recruitment site. The landlady Shan Juan, called Sister Shan by her tenants, is a 58-year-old woman.⁴ She has been in the hostel business for eight years, and provides food and accommodation to IVF patients only. At Shan’s hostel, women typically sit around a table to chat, often about their treatment experiences and personal stories. This was the scenario in which they discussed IVF treatment as a “road of no return.” My identity as a researcher was open and transparent to all women there, I clearly stated my research purpose to them. Sister Shan also introduced my identity and research purpose to her tenants for further clarification and confirmation of voluntary participation. There, I conducted participant observation and recruited participants for semi-structured interviews. Interviews were audio-recorded with the consent of participants; some interviewees were not willing to be recorded, so I took notes. I transcribed interviews verbatim and then adopted thematic analysis. In addition, I joined some WeChat group chats used by IVF patients and observed their interactions in the online community.⁵ I also collected materials from online IVF forums, media reports, and leaflets and bulletins from hospitals. This paper is mainly based on my interview material.

A conundrum: When the journey of seeking the best treatment needs luck

“*Quanwei*” in the making

Choosing a hospital for IVF is a crucial step for intended parents who have a strong desire for success. Before they start an IVF cycle, they seek background knowledge from their network, booklets from reproductive hospitals, online IVF forums, online groups of potential IVF patients, and official WeChat accounts of reproductive hospitals.⁶ Throughout China, ARTs services are underdeveloped, unevenly distributed, and of varying quality. Intended parents saw a good quality and trustworthy hospital as the most likely factor to influence the success of IVF and their desired reproductive future.

When I asked women why they chose P Hospital for IVF, the word *quanwei* (authority or authoritative) came up frequently. This self-evident truth resonated very much within the group when they shared treatment history. *Quanwei* means a person or thing with power, prestige, and status

according to the *Xiandai Hanyu* dictionary (Dictionary Editorial Office, Institute of Linguistics, Chinese Academy of Social Sciences 2016). In particular, *quanwei* combines the meaning of both “reputable” and “reliable” when describing P Hospital. All participants reported that they had heard P Hospital was outstanding, even “the best,” before they came, and they believed that they would receive the best treatment here. It is reputable because it pioneered IVF experiments and put them into practice in mainland China. This glorious history is often seen on the internet and mentioned to the study participants by acquaintances. Thus, they chose to travel to this hospital for treatment despite practical difficulties. Due to the vast size of China, long-distance travel is inevitable for some participants—one even said she traveled 30 hours by train. This common phenomenon of arduous travel enriches the meaning of “reproductive travel” (Inhorn 2020), as it occurs within a single country and is motivated by the pursuit of *quanwei*. Study participant Chen Xin selected P Hospital because “we should go to a hospital with a considerable success rate.” Herein, an assumed link between the best treatment and the greatest chance of achieving the desired result should be noted. To my interviewees, P Hospital is regarded as the one most likely to assist them in achieving their desired reproductive futures.

P Hospital is a public hospital, and this contributes toward its *quanwei*. Interviewees associated public hospitals with reliable treatment. There are public and private hospitals in China, but public ones dominate in quantity and reputation. There are 18 ARTs providers in Beijing that have been approved by the National Health Commission of the People’s Republic of China yet only three of them are private.⁷ The majority of people receive ARTs treatment in public hospitals, and this is not only because of the practical reasons that there are fewer private hospitals which are also more expensive. More significant was that participants trust public hospitals more than private ones. Informants assume that the government supports and governs public hospitals, and that profit maximization is the overarching goal of private ones (A. H. F. Li 2016). Public hospitals are seen as reliable, while private ones are distrusted.

I don’t believe in private hospitals. I believe in P Hospital. (...) Anyway, in fact, the techniques in foreign countries are more advanced than the domestic ones, you cannot deny it. But P Hospital is the most *quanwei* in China. Therefore, within China, I believe this hospital most. In China, P Hospital is the best.

(Ding Shufang)

I hold some distrust of private hospitals, all kinds of worries and disbelief. (...) I had already seen a doctor at A Hospital (a private one) at that time, and I told him I would go there [for IVF]. However, I didn’t show up that day [the appointment day]. I asked my husband, and he said that we should go to Beijing (meaning P Hospital), then I had more confidence.

(Bai Mengxi)

Assuming that the government strictly controls public hospitals, people hold much trust in them, which becomes a source of certainty that the study participants tend to chase. Herein, the government plays an invisible but dominant role in guiding the participants’ choices. The trust in the government is a significant factor that constitutes the conception of *quanwei*. IVF is regarded as a “hope technology” that provides a solution to infertility (Franklin 1997), yet here the “hope” seems to have some preconditions that IVF should be practiced in a reliable, preferably public, clinic. It seems a contradiction that participants try to seek certainty in an uncertain IVF journey.

Later, patients discovered the gap between what treatment they expected “the best” hospital should provide and their actual experiences. Given that the success rate from IVF procedures is only 50% and the infant delivery rate is 30–45% (Zhou 2019), failures usually occur, which may not be necessarily related to the medical procedures. To minimize the likelihood of failure in the next cycle, my participants reflected on the whole treatment they received and began to modify their pursuit of *quanwei*, showing changing perceptions and behaviors.

“Quanwei” is challenged

The expression “bad luck” was commonly used by women to explain their frustration with IVF treatment, and to reflect on the treatment they received at P Hospital. The first common critique of P Hospital was that IVF cycles are operated in a *liu shui xian* (assembly line). This assembly-line treatment broke the IVF cycle down into several steps. A patient may be treated by different doctors at each step, according to their shift schedule, as opposed to personalized treatment wherein one clinician is responsible for the full cycle of a patient. Some patients, especially those with complicated conditions, worry that doctors do not comprehend their situation well, given that time for appointments is always short. Duan Ruoyu, a 37-year-old, was undergoing her fourth ovulation induction when interviewed. Her three former cycles produced no qualified fertilized eggs for embryo transfer because of her weak ovulation function. It was difficult for her to retrieve eggs with adequate quality for fertilization. Before Duan came to P Hospital, two cycles at a local hospital failed. She traveled 700 km to P Hospital because she believed in its expertise. However, she now had doubts about the assembly-line treatment at P Hospital:

It was not the same doctor that treated you from the beginning to the end. Other doctors would also adjust your medication [during ovulation induction], but I think it is better to be treated by the same doctor from the beginning to the end. He would understand your situation better. In terms of this aspect, P Hospital is not good. I think this operation is exactly like the assembly line – you just move to the step you reach. You cannot have personalized treatments that vary from person to person according to your own body. (...) This method is suitable for those whose physical condition is common.

She blamed the assembly-line IVF treatment for the failure of the third cycle. Duan felt immense pressure over these failures, not just because of complicated conditions linked to her age, but also from peer pressure shaped by the universal two-child era. After the universal two-child policy was adopted in 2016, infertile people struggling for a first child might feel left behind when they saw people around them having two children. Duan believed that a personalized ovulation plan, where one doctor is responsible for a patient throughout all the procedures, was a potential solution. The P Hospital no longer offers this solution, but other public and private hospitals do. She considered that being seen by the same doctor who could monitor her ovulatory growth closely could help her reproduce qualified eggs and achieve her desired future. She reflected on the gap between her expectations of the best and *quanwei* treatment and the reality during the treatment. When the “best” treatment did not work, the authority of and trust in P Hospital was challenged.

Another critique of “the best” hospital concerns its IVF procedures, which seem to challenge its professionalism and call its *quanwei* into question. A number of preliminary examinations are normally conducted before a patient enters an IVF cycle, yet the requirements of these checkups can vary from one hospital to another. Ning Xiangru compared her experiences of treatment at an advanced public hospital in her hometown and at P Hospital. Ning suffers from polycystic ovary syndrome (PCOS), a hormonal disorder that can lead to infertility, while her husband suffers from balanced chromosomal translocation, a hereditary chromosomal disease that makes natural conception difficult. Chromosomal translocation is the primary reason for this couple’s infertility, so chromosomal tests can help to identify the exact problem. Ning’s local hospital, which she visited before going to P Hospital, required “many examinations that need to be done before starting IVF and the chromosome test is one of them.” These strict preliminary tests helped her identify the exact reason for their infertility and the most suitable solution – pre-implantation genetic diagnosis (PGD). Since PGD is a relatively new technology, few hospitals in China offer this option, so Ning went to P Hospital, which she believed would offer the necessary expertise, with a clear goal to do PGD to screen out unqualified embryo(s). However, P Hospital does not require patients to complete a chromosomal examination before starting an IVF cycle. Ning felt “lucky” to have made a step in the right direction at the very beginning of her IVF journey, thanks to the local hospital. Otherwise, the doctors at P hospital “would only have noticed the chromosomal problem” and suggested PGD after she “had experienced one or two failed embryo transfers” in the course of regular IVF treatment. Ning

criticized P Hospital because a failure to check chromosomes before starting an IVF cycle can lead to a delay in a patient's treatment. For patients with chromosomal problems like Ning, the procedures followed at P Hospital may delay the process of understanding the reason for their infertility, but for those without chromosomal issues, performing more preliminary examinations may simply delay the start of their IVF cycles and waste more money.

Patients might assume that the treatment provided at “the best” hospital will be perfect, but it is impossible for everyone to agree on the exact same standard of care due to the inherent ambivalence about IVF treatment, especially at a time when the hospital is faced with a huge number of ARTs seekers. Although it might appear to be a standardized technique, in practice, participants have to find an appropriate solution that may work for them. Scientific knowledge cannot explain everything in the process of assisted conception. In the Chinese context, patients often refer to local concepts—the homonym *haoyun* (good luck/pregnancy) and *yuanfen* (a predestined relationship)—to explain their choice of hospital or the success or failure of an IVF cycle.

Shifting when “*quanwei*” fades

The IVF journey encompasses not only uncertainty about whether the patient will ever have children but also about their beliefs and desires, the wider society, and the state. As women proceeded through the uncertain treatment, they believed that they needed to rely on elements such as luck if they were to achieve the future they imagined. Their recognition that other factors than *quanwei* were important to achieve success implies they had become disenchanted with the *quanwei* of P Hospital. Some interviewees perceived that there was no reliable system that could ensure they had children and became confused about where to find authority. Some began to turn toward private hospitals.

As mentioned earlier, Duan Ruoyu wished for a personalized treatment and finally chose a private hospital, showing that for her the *quanwei* of P Hospital had faded. This shift to the private healthcare system was seen in other older women with complicated conditions, including those seeking a second child. Lan Shuyi, a 45-year-old with a 19-year-old daughter, had always wished for a second child. Before the universal two-child policy, she had an unplanned second pregnancy. Fear that she would lose her job as a civil servant led her to have an induced abortion. Once the policy was passed, she tried to conceive naturally, but the pregnancy ended in stillbirth. She sought IVF, but had difficulties finding a doctor who would treat her. She recounted an obstacle at the beginning of her consultation at P Hospital, when she was almost refused by a doctor because of her age: “The doctor said that the hospital does not normally accept patients over the age of 45 to enter an IVF cycle. I begged her, and she agreed to give me one try.” Consequently, Lan ended up with no qualifying eggs, and she considered trying a new ovulation plan, if the doctor at P Hospital would take her. A 47-year-old woman Zeng Keting said she quickly registered at a private hospital, where there would be less waiting time, after her first attempt at P Hospital failed, because “age is not waiting for me.” Though these particular women are included in the target group of the universal two-child policy, they paradoxically encountered the structural obstacle when they sought ART within the public care system. This ambivalence shows the tension between the state's desire to dispel demographic anxiety and individuals' struggles to have children.

Private reproductive hospitals offer a personalized service and a comfortable environment. Due to the shortage of resources, public reproductive hospitals are usually overcrowded, and this is especially true of reputable hospitals in top-tier cities such as P Hospital. Patients usually have to wait a long time for an appointment with a famous doctor but only have a very short consultation. In contrast, private hospitals ensure a cozy medical environment, albeit at a high cost. An IVF cycle at P Hospital costs about ¥30,000–40,000 (about £3,500–4,700), equivalent to the average per capita disposable income of ¥30,733 (approximately £3,600) in 2019 (The Chinese Government 2020). In private hospitals, IVF treatment costs almost three times as much. Lei Panlin said she paid ¥86,000 (approximately £10,000) at a private hospital for a treatment package after two IVF cycles had failed at P Hospital. This private treatment package includes a full IVF cycle, three rounds of embryo

transfers, and a money-back guarantee if not successful. When she first visited a private hospital to learn about the treatment procedures, accompanied by a medical guide, she felt that “the environment was very nice and everything ran unhurriedly” compared to P Hospital. She described her previous experience at P Hospital as “under great pressure,” and had found it difficult to remain calm in its crowded and noisy waiting room. She and her husband decided to transfer to the private hospital “for the good environment.” Lei said the medical experience influenced her mood (*xinqing*), which she believed would influence the chance of pregnancy. Women are often told by other patients that a relaxed mood is good for pregnancy or successful embryo implantation, and they often blame failed embryo transfers on nervousness. Women said they were concerned about every detail in daily life during treatment, even including “whether laughing [after embryo transfer] will affect the implantation process,” as one woman mentioned. She explained how she “searched for information online immediately” after laughing. This tenacity reflects the women’s dedication to success outside of treatment, including their choices to shift to a better medical environment, if they were able to afford it.

I visited several other public hospitals and the three private fertility clinics in Beijing. The public hospitals I saw were usually crowded, while the private ones were quiet and beautifully decorated places where people kept their voices down. I once observed a member of staff from the information desk crouching down and gently talking to a patient in a private hospital, whereas workers on the information desks in public hospitals – especially big ones – had to simultaneously deal with questions from enormous numbers of patients. One participant compared private hospitals to “wet markets” and private ones to “boutique stores.” Although participants have a greater trust in public hospitals, they also want to experience a good medical environment and a caring service. To access the best resources patients must take frequent, exhausting, and arduous trip, and endure long waiting times and lines; sometime they blamed these conditions for the failure of their treatment. They believed the reduced pressure associated with a good environment to be helpful in bringing about a successful pregnancy. The interviewees both trusted and complained about public hospitals, but appreciated the comfortable environment and personalized treatment available in private hospitals, even if they harbored some doubts about their efficacy.

Only a small number of people can afford private hospital treatment, and many of my informants reported financial difficulties. Some received financial assistance from their family, and others borrowed money. Some interviewees, invoking the state’s emphasis on reproduction for the country’s survival and development, wished it would take responsibility for individual fertility, by including IVF in the national health insurance. Ning stated that “if no one could have children, wouldn’t the country go extinct?” adding that “The state has liberalized its policy and now allows people to have two children, so what about those of us who don’t even have a first child yet? The state cannot abandon us, right?” The women strongly felt the contradiction between the state policy and its current practice. In the universal two-child era, having children is promoted as “a family matter but also a national matter” in People’s Daily, the most authoritative newspaper in China (Zhang 2018), yet the neoliberal position treats reproduction as “a purely personal process with minimal public support,” transforming problems associated with reproduction into a family responsibility (Gu 2021:16).

ARTs-seekers experienced ambivalence in their IVF journey of no return – including, but not limited to, financial and structural obstacles and dilemmas. As the state shifted toward pro-natalism, their ambivalence reflects the gap between demographic anxiety at the national level and reproductive anxiety at the individual and familial level. Ambivalence toward medical services was reflected in the changing perceptions of *quanwei* and corresponding shifts in my participants’ IVF journeys. In the gap between the two anxieties, IVF works as a lens to examine the inconsistency between national efforts to encourage fertility and individual perceptions of the structural reproduction dilemma, while it also frames the societal reproductive future, featuring ambi-natalism. Trapped in a conundrum of ambivalence as they seek out certainty from an uncertain technology, informants acknowledge the gap between their expectations of the ideal healthcare system and reality, and thus strike a balance, given that ART provision in contemporary China cannot meet its surging demand.

Though *quanwei* is still considered essential for a successful IVF result, the concept of *quanwei* has changed. In the next section, I demonstrate a redefinition of key concepts in reproduction to exemplify how participants cross the barrier between their desired reproductive future and the constraints of reality.

Redefining health: From a binary conceptualization to a fluid spectrum

Since the 1980s, when the one-child policy was implemented, the aim has been to control population quantity and raise population quality. Implicit in the policy to fostering “superior birth” (*yousheng*) was a eugenic element, and population quality and health was incorporated into the more general notion of quality (*sushi*) (Greenhalgh 2010). The state developed a “quality-assurance regime” to avoid defective births and improve population quality through prenatal health care (Zhu 2013). However, the responsibility to deliver a superior child is socially constructed to lie with intended parents – particularly prospective mothers – which causes them further anxiety (Shih 2018). After a long period of advocating this policy, the quest for a child of “good quality” (Wahlberg 2018) has taken hold and, in a sense, become standard. In the context of ARTs, its meaning has even been expanded to the idea that the measure of “good quality” should be examined at the level of the population, the family, the individual, and the cell in China (Wahlberg 2018).

The IVF journey is considered to be a continual knowledge gaining and learning process, not only because of the effort to achieve a successful result, but also because of the expectation of a healthy child and its corresponding responsibilities. Lai (2017) is impressed by female patients’ diligence at studying a wide range of relevant information including professional knowledge, practical aspects of eating and drinking, and myths like the notion that you must lie down for 14 days after the embryo transfer to help it to settle. The process of eagerly gathering and absorbing new information helps patients to overcome anxiety, yet at the same time it can create new forms of anxiety (Lai 2017). I often heard participants reporting “I feel *you yali* (stressed) about my child’s health” and “I will only feel relief when my child is born.” Study participant Ping Anran described IVF as a journey of “becoming a half doctor.” Patients gain knowledge of biomedicine by themselves so they can find it easier to communicate with doctors, read reports, and make their own precautions. While living in the family hostel, they share advice to help each other such as the belief that drinking soy milk helps the endometrium to grow and improves egg quality. It is also popular among women to eat grapefruit – a rare and expensive fruit in China – after the embryo transfer because it is believed to help the embryo implant in the uterus and to provide folic acid for pregnancy. One woman said that she ate grapefruit for the first time when she went to Beijing for her IVF treatment. The pursuit of knowledge can be seen as a way to achieve a good future – to have a child of good quality rather than just a successful IVF cycle.

In an IVF cycle, numerous examinations are conducted to monitor the first stages of pregnancy and to visualize the quality of the embryo to the parents, who hope for a healthy child and believe that this is achievable with the assistance of technology. PGD is believed to result in healthy children because it aims to screen out pathogenic chromosomes. As mentioned previously, Ning Xiangru had to do PGD because her husband has balanced chromosomal translocation. In this condition, sections of two chromosomes have switched place and although it does not affect a person’s health, it does lead to recurrent miscarriages. Ning used to have a binary conception of health: “There were only healthy and unhealthy people.” Since her husband suffers from balanced chromosomal translocation, she assumed him to be unhealthy. However, Ning’s understanding of health was redefined when her doctor defined her husband as “a healthy and normal person.” When the doctor explained that “a balanced chromosomal translocation is like a cold, compared to other chromosomal problems,” Ning’s understanding of health was broadened from a binary to a fluid conception. Her husband’s translocated chromosome had caused the couple difficulties in natural conception, and so they seek the assistance of PGD to select certain embryos in order to avoid the risk of genetic diseases. Ning believed that the overarching goal of PGD is to screen out pathogenic embryos and to ensure that she gives birth to

a healthy child, which is the future she desired to achieve. However, technologies do not always achieve their established objectives. When gametes are ready, the first step is to screen the embryos, leading to three potential results. Ning illustrated:

If an embryo is screened out, then it is unhealthy; if it is transferred to the uterus, then a miscarriage might occur within three months. Another possibility is that the gamete is healthy, but it can be further divided into ones that carry and that don't carry [the chromosome with a balanced translocation].

The next step is to screen out gametes carrying the pathogenic chromosome, but the first step does not always smoothly lead to the second; only if two or more healthy embryos are selected from the first step can it lead to the second step. In Ning's case, only one healthy embryo was obtained from the first screening process, so she could not embark on the second screening. She had to decide whether to transfer this embryo or to start a new cycle. PGD eliminated the risk that she will experience recurrent miscarriages, but it might not prevent this risk for her future child.

PGD created new uncertainties and anxieties for Ning. She expanded her understanding of a genetically healthy child, but altered her expectation of having a "completely healthy" child to having a child who is "healthy" overall. The former understanding of "health" essentially considers "good quality" (Wahlberg 2018) at the level of the chromosome, whereas the latter focuses on health at the individual level, consistent with the policy aim of avoiding a defective fetus.

Having considered the uncertainty of a new cycle and the potential harm to her body, Ning decided to transfer the existing embryo. Her revised understanding of "health," meant that she was assured that she would still have a healthy child even if it carried translocated chromosomes. Her reproductive future was consistent with the emphasis on quality in the national birth planning policy.

Ning accepted the current limits of the technology and maintained an optimistic attitude toward scientific progress:

I feel okay, as long as the child is healthy. Carrying [balanced chromosomal translocation] or not is an issue of probability. (. . .) [My husband] felt that the technology is now so advanced that one can use ARTs. He didn't dare to think about it before. He thinks that this problem may become much simpler in the future. You see, PGD only began to be used in the past few years. Now, IVF is very common, and PGD will become common, too. I think he is right. The science will get better and better. Why should I be too concerned about the future?

This redefinition of key concepts in reproduction – i.e., moving from considering health and illness as a binary to recognizing that there is a fluid spectrum – can reshape the future that women imagine. Even if Ning's child were to carry a pathogenic chromosome, she does not think that it would necessarily be a big issue due to the likelihood of continued scientific progress in the future. The pressure she felt at not being able to ensure that her child did not carry a balanced chromosomal translocation has been alleviated by her changing perception of a healthy child. This optimism in scientific progress, and the ability to redefine their desired reproductive future, has become a way for these women to confront uncertainty.

To summarize, these patients are hoping to create a certain future with the assistance of reproductive technology, in line with the outcome that ARTs can in theory achieve. In practice, however, given the current limitations of this technology, the idealized future may not always be achieved. The gap between the pursuit of certainty and the inherent uncertainty of the technology causes new anxieties among individuals, and they may develop a belief in future scientific progress to address this uncertainty. They make sense of this gap by redefining concepts – in this case, health – and their changing perceptions alleviate the pressure of not being able to achieve their ideal future, so instead they reshape their reproductive future. Instead of striking a careful balance between a hope of success and a preparedness for failure (Franklin 1997), the strategy here is to redefine one's desired reproductive future from having a "completely healthy" child to hoping for a child who is sufficiently healthy. Just as Bryant and Knight (2019:134) argue that "hope emerges in the gap between the potential and the actual," the belief in scientific progress bridges this gap.

Conclusion

Throughout my fieldwork I saw multiple redefinitions take place in my interviewees' pursuits of their reproductive futures. First, they redefined the way to achieve their desired reproductive future with the help of assisted conception. They moved from pursuing *quanwei*—trust in public hospitals – to admitting the importance of other factors such as luck. Second, they redefined their understanding of health from a binary concept to a fluid spectrum. In the end, the future they desire is more than just a successful IVF cycle; it is the whole process of bringing a healthy child home. As they undertake their reproductive journeys, the interviewees renewed their understanding of health and came to redefine their desired reproductive futures. My findings indicate that *quanwei* and its associated political context hold particular importance for Chinese intended parents seeking IVF treatment to achieve their desired reproductive futures, which, however, are also changing.

The complexity of changing perceptions embedded in the ambi-natalist context shapes the IVF journey in contemporary China. The ambivalence that women have experienced in their IVF treatment not only represents individuals' or families' struggles toward having a healthy child, but also characterizes the structural dilemmas with regard to the demographic anxiety of falling fertility. As Andaya (2021:126) contends, reproduction as a lens helps reveal “the unpredictable and often unintended consequences of state policy, economic pressures, familial politics, and personal aspirations” by examining the gaps between policy and practice. My study reveals the tensions between reproductive anxiety – seen from reproductive practice at the individual and familial level – and demographic anxiety at the national level, through the lens of IVF. It further reveals ambi-natalism in a multilevel reproductive dilemma at the individual, familial, societal, and national levels, which leads to a demographic future filled with more uncertainty. This finding addresses the need to expand the scope of research on the relationship between reproductive practices and changing population dynamics as crucial components of ambi-natalism.

The recent announcement of the three-child policy indicates an urgent desire to increase China's fertility rate and the state's ambivalent attitude toward population governance. The most recent population census in China recorded a total fertility rate of 1.3 in 2020 (Reuters 2021). However, since 2000, the average ideal number of children for a couple in China has remained at 1.6–1.8, according to surveys (Hou et al. 2015). This is lower than the allowed number of children, indicating great challenges for the state to improve the fertility rate. How will reproduction fit into the state's future blueprint for addressing these challenges? Since the state played a pivotal role in controlling the population in the one-child era, what role will the state play in improving fertility, and will the state continue to intervene deeply in individuals' imagination of their reproductive future? When four decades of low-quantity-high-quality policies have left profound impacts on Chinese culture, how will ordinary people perceive the quantity-quality conundrum and how will they respond to the new population policy aimed at encouraging fertility? ARTs offer options to those who are able to afford multiple IVF cycles to achieve a big family and may reproduce a future of increased stratified reproduction (Colen 1995), given that people from higher social classes can afford multiple cycles of ARTs. Are ARTs going to reproduce more inequality in the ambi-natalist future, following the implementation of the three-child policy? Thompson (2005) has argued that fertility technologies can be regarded as a form of state-sponsored pro-natalism, but will the boom of fertility technologies in China unwittingly lead to a state-dominated selective pro-natalism?

IVF is not only about having children but also about reproducing a future. The ambivalence experienced by women throughout the IVF journey also reflects the doubts they have about their daily life world – an ambivalence that intersects with technology, medical practice, and the state in the ambi-natalist era. The IVF journey helps us understand broader social dynamics such as the social construction and stratification of health, technology, and state authority, while these processes also inspire us to see how people deal with uncertainty on their own, as well as with their anxieties about the future.

The presented research acknowledges several limitations. First, the data documents women's IVF experiences at one particular hospital. Given the diversity of ARTs operation models and the large disparities between regions in China, the findings should be understood as indicative rather than generalizable. Second, the fieldwork was conducted during the universal two-child era; thus, the findings contribute to understanding the Chinese IVF landscape in the context of changing population policies, yet the results may not fully reflect the nuances of potential changes in the three-child era. Future research is expected to map out a fuller fertility landscape to produce more generalizable conclusions.

Notes

1. For ethical considerations, I use pseudonyms for all the clinics and participants mentioned in this article. The reproductive center of P Hospital is one of the departments of P Hospital. Informants normally use P Hospital to refer to its reproductive center and I use P Hospital thereafter.
2. The birth planning policy, widely known as the one-child policy, was implemented in 1980 and limited each couple to have only one child. In 1984, the one-child policy was shifted to a one-and-a-half-child policy in the rural area; this was also called the daughter-only policy, because rural couples whose first child was a daughter were allowed to have a second child. For more information, see Greenhalgh (2008). The widely used "one-child policy" fails to accurately capture the urban-rural divide and gendered birth planning policy.
3. Actually, many secondary landlords sub-let many apartments from different landlords, and they rent to people who come for medical treatment at P hospital.
4. Shan Juan is a secondary landlord.
5. WeChat is a Facebook-like APP popular in China, according to Zhang Xiaolong, the founder of WeChat, 1.09 billion users open WeChat every day (Tencent 2021).
6. WeChat account is similar to Facebook fanpage. According to Zhang Xiaolong, 360 million users read articles published by WeChat public accounts every day (Tencent 2021). Many hospitals now have their official WeChat account and use it to post information and provide treatment-related e-services, such as booking appointments, paying fees, and checking checkup results, etc.
7. For more information, please see the official website of National Health Commission of the People's Republic of China: <http://www.nhc.gov.cn/fys/s3582/202105/0cf528f318f84eafaf19b6e18ac2c44f.shtml>.

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