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ORIGINAL ARTICLE

(Not) wanting to choose: outside agencies at work in assisted reproductive technology

Anne-Sophie Giraud

CNRS, Toulouse Cedex 9, France



Anne-Sophie Giraud, PhD, is a social anthropologist. She is a permanent researcher at the Centre of Social Anthropology (LISST-CAS, UMR 5193) in Toulouse (France), and was visiting research fellow at Queen Mary University, London (UK) on the project 'Remaking the Human Body' led by Dr. Manuela Perrotta. With other colleagues, she created the EnCoRe ('Engendrement, Corps et relations') research team. Her research deals with the constitution of personhood in the process of engendering in France, focusing on assisted reproductive technology. She works on two selective reproductive technology techniques: preimplantation genetic diagnosis and prenatal diagnosis.

Abstract Human choice and interventions that could seem to threaten the course of 'nature' or 'chance' are at the heart of controversies over assisted reproductive technology across Western countries. These debates focus predominately on so-called 'selective reproductive technology'. While today, the technique of in-vitro fertilization (IVF) raises few political and bioethical debates in France and other Western countries, concerns remain that human intervention might replace 'natural' processes, threatening human procreation. These polemics focus on situations that require a decision, notably embryo selection and the fate of spare frozen embryos. The choices involved are induced by the technology and organized by the law. In the French legal system, IVF patients and professionals have the opportunity and, to a certain extent, the responsibility to decide on the status of in-vitro embryos. This article shows that, in these situations, both IVF patients and professionals invoke outside agencies ('instances tierces'), both to avoid making decisions and to recover a world order in which procreation is not entirely subject to human decision. In short, there is a need to feel that procreation is not entirely dependent on human intervention; that individuals do not decide everything. It appears that the choices that are made, their nature and the type of outside agency that is invoked are highly situated.

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KEYWORDS: Decision-making, Embryos, France, IVF, Reproduction

Introduction

Biomedicine and biotechnologies create new obligations, new uncertainties and new risks by enabling new choices (Franklin, 2012). In the case of assisted reproductive tech-

nology (ART), many of the social, political and bioethical debates in Western countries are haunted by the spectre of eugenics. This concern focuses primarily on 'selective reproductive technology' (Wahlberg and Gammeltoft, 2018), which is viewed as changing our 'moral landscape', leaving procreation less to chance and nature, and

E-mail address: anne-sophie.giraud@univ-tlse2.fr

<https://doi.org/10.1016/j.rbms.2020.09.008>

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introducing more individual 'choices' (Sandel, 2007: 87). In the debates, 'choice' is often associated with increasing control over procreation, selection, consumer economy, commodification, parental desire and eugenics (Franklin and Roberts, 2006). The possibility for choice, and human and technical intervention more generally, are seen as problematic because they are considered to undermine the humanity of procreation (Franklin, 1997: 97–100). As such, it is claimed there is a need for regulations preventing future parents from 'designing' their babies.

Nevertheless, stressing the gap between public discourses and the practices of actors, many studies in social sciences in different national contexts show that people refuse to choose as much as possible, often using various choice avoidance strategies (Ehrich et al., 2008; Franklin and Roberts, 2006; Rapp, 1999). They are also reluctant to let technology enter procreation processes. These studies have mainly focused on selective reproductive technology concerning genetic diseases and other anomalies (Helosvuori, 2019). However, these strategies can even be observed in 'ordinary' in-vitro fertilization (IVF) treatment which has come to be treated as a 'commonplace' technique (Franklin, 1997) generating relatively little discussion in the contemporary French bioethical and political landscape. The choices that need to be made by people involved in IVF do not tend to be thought about in terms of ethical problems, as they are essential to the success of the procedure. This is the case with embryo selection or when patients decide what will happen to their spare frozen embryos.

However, ethnographic analysis reveals that these situations raise a number of problems for those confronted by them. The strategies depend on the national context. This article considers the situation in France, where the state's responsibility in procreation is central, and where bioethics laws are underlain by medical and traditional family norms. Drawing on three different studies in which I was involved, I show that different types of outside agencies ('instances tierces'), such as nature, chance or even the medical services, are regularly invoked to share the burden of responsibility of decision-making. It appears that the choices that are made, their nature, as well as the types of outside agencies that are invoked are highly situated. This study enables us to see that these outside agencies are used to recover a world order in which procreation is not entirely subject to human decision.

Materials and methods

This paper is based on three studies conducted in France between 2003 and 2015. Two were collective projects, and one was undertaken for my PhD research (Giraud, 2015). They were carried out in a context of constant technological innovation and intense debates about the revision of French bioethics laws governing ART – amended in 2004 and 2011 – and about research on embryos, authorized in 2013.

The first investigation was carried out in 2003 and 2004 by a team from INSERM (Institut national de la santé et de la recherche médicale) in Paris. It consists of 14 in-depth semi-directive interviews with IVF patients (three men and

11 women) and a quantitative questionnaire with 1391 patients (734 women and 657 men). The second study was conducted in 2010 and 2011 by a team from EHESS (École des hautes études en sciences sociale) led by Irène Théry on IVF professionals in two fertility centres in Marseille. Sixty-one semi-directive interviews with IVF professionals were also conducted. I have transcribed and analysed all the data produced in these two studies.

My own research, in 2014 and 2015, consists of semi-directive interviews with 27 IVF patients (four men and 23 women) using their own gametes, ethnographic interviews with IVF professionals, and 4 months of extensive ethnographic observations in the two centres in Marseille, including 64 consultations with biologists.

Situating choices

Compared with other countries, such the USA (Rapp, 1999; Thompson, 2005), where professionals and fertility clinics are largely autonomous, and procreative choices are a matter of private life, in France, the bioethics laws and the Public Health Code (PHC) set the conditions for access to ART very closely. In the 1990s, the first bioethics laws were enacted in a context where the potential dangers of ART and the temptation of eugenics were emphasized. These fears are still very current, relayed, for instance, by disability rights movements. The laws have been designed on a 'therapeutic model' (Théry, 2010) to thwart scientific and medical power, and the demands of patients. ART is thought to only 'cure' the 'pathological' problem of a couple who could procreate naturally – in the sense of 'biology' or what 'animals do' (Franklin, 1997: 54) – that is, a living heterosexual couple. These laws are also underlain by a traditional representation of the nuclear family (Mehl, 2001). That is why the status of the in-vitro embryo is entirely underpinned by the notion of a 'parental project', which is formulated by a living heterosexual couple of childbearing age whose infertility has been medically diagnosed (Art. 2141-S, PHC) – this might change after the ongoing revision of the bioethics laws.

Despite the significant role played by the state in procreation, the opportunity, and even the responsibility, to make the choices required by IVF techniques and, in certain situations, the status of the in-vitro embryo is delegated to patients and professionals. These choices are strictly regulated, and patients' right to 'choose' in this field is encompassed by the duty of the state and of those professionals to whom the state delegates its power to control the body (Memmi, 2003). The actors responsible for determining the status of the in-vitro embryo vary according to its 'state'. Before the embryo is frozen or transferred (i.e. while it is still fresh during 2–7 days of in-vitro culture), this responsibility falls largely on the professionals in charge (i.e. the biologists and laboratory technicians). Technical access to embryos has led to the need to introduce assessment (Mastenbroek et al., 2011) in order to increase the chance of live birth. During the entire period of culture, professionals have the responsibility and the duty to assess and select embryos for transfer, freezing or destruction. Embryo assessment negotiates and determines the destiny of the embryos (Svendsen and Koch, 2008: 99), changing

their status from potential human beings – ‘proto-persons’ – to ‘healthcare waste’ (Thompson, 2005).

The embryo assessment model used in the two laboratories I studied in Marseille, and the most commonly used, is based on morphological criteria (number and regularity of cells, shape, degree of fragmentation). This practice depends entirely on the knowledge and ‘professional vision’ of the biologists and technicians (Goodwin, 1994). It is made more difficult given the unpredictability of embryogenesis and the lack of guarantee of a correlation between classification and outcome (i.e. pregnancy) (Nel-Themaat and Nagy, 2011: S258–S259). All these elements lead professionals to assume decisions solely on the basis of their knowledge and expertise, they know to be partial and situated (Haraway, 1988; Merleau-Ponty, 2017) as they rely on their visual skills, and whose outcome is not certain. The professionals’ scope for action is strictly defined by law, as well as by professional ethics, recommendations for good practice and the scientific community, which establishes, among others, the embryo assessment systems. Their practices are also limited spatiotemporally, with their duration of action being limited to the current 2–7 days of embryo culture in the laboratory.

When embryos are cryopreserved, the responsibility for their future is transferred from professionals to the couple. If throwing away the less ‘beautiful’ embryos is commonly accepted before cryopreservation and remains at the sole discretion of the professionals, after cryopreservation, the formal agreement of both members of the couple is mandatory before any decision can be taken. The law provides couples with five choices regarding the fate of their frozen embryos. If embryos are still inscribed in a parental project, they may decide to extend cryopreservation for further transfer, keep them for a longer period to make a decision, or choose to transfer them. Once their parental project is completed or if the couple is dissolved (preventing embryo transfer and extension of cryopreservation, Art. L. 2141-2. PHC), they are asked to choose between destroying the embryos, giving them to another couple, or donating them for research. These choices are presented to couples in the form of an information sheet, shown before they consent to cryopreservation. They are also set out in an annual letter asking couples if they maintain their parental project and, if not, asking them to decide on the future of the embryos. The prerogative of couples over their embryos is not absolute, particularly when their cryopreservation no longer falls within the scope of the law (age limit exceeded, separation of the couple, death). Unlike professionals whose range of choices is limited to a relatively short space of time, the couples’ timeframe for decision-making can be extended for as long as cryopreservation and the parental project are maintained. In the absence of a response from couples to these annual letters, and if the embryos have been stored for more than 5 years, the law considers that the embryos are no longer part of a parental project and authorizes their destruction (PHC, Art. L. 2141-4). The parental project and these choices determine the status of the embryos, shifting them from ‘residue of a biotechnical process’ to ‘potential child’. Due to their potential multiple statuses, French law has provided a ‘by default’ status for in-vitro embryos once removed from a parental project

in order to avoid an unstable situation in the absence of choice: residue of a biotechnical process.

Patients: (not) deciding the fate of spare embryos

Due to the lack of space in cryopreservation tanks, the fate of spare embryos was a central issue in both centres I studied. Professionals told me of the problems that patients face when deciding what to do with their embryos once their parental project is over, and this issue has also been identified in other medical studies (Elford et al., 2004). This is more difficult given that decision-making extends beyond the sphere of the family into the medical field, and that the two partners may view the fate of their embryos differently (Bateman, 2009).

For this reason, the periodical choices instituted and materialized by the annual letter were often sources of anxiety for the research participants. As many professionals point out, patients are asked ‘impossible questions’. In the words of a psychologist, ‘all the choices seem extremely difficult to me’. One of her patients, a woman too old for her embryos to be transferred, is unable to decide what to do with them. For this psychologist, ‘it’s not people who are crazy, it’s these situations that are crazy. They are put in crazy situations’. This is a situation that Pascaline and her husband were facing. They had two children following fresh transfers. They did not want any more children, but they still had four frozen embryos left. The annual letters were very distressing for Pascaline:

It makes me sick because I’m 38 years old, I still have four frozen embryos but I’m not going to do all the four. It’s not possible. I blame myself because I say to myself, why this one, why not the others, and that hurts. Because I’m not going to be able to have them transferred and give them, I won’t give them, that’s for sure. I think about it all the time.

As Pascaline points out, the co-existence of multiple potential statuses of the embryos, produced by the range of choices available, changes the meaning given to one of them, which is finally just one of many outcomes. When a couple choose to destroy their frozen embryos, the fact that they could have chosen other possible options gives a specific meaning to this destruction. It gives it gravity. In addition, not all choices have the same weight and consequences. In particular, the decision to donate the embryos to another couple generates considerable reluctance from couples and professionals, mainly because of the potential for the birth of siblings (Mathieu, 2017). This path is particularly tricky in a model that hardly organises about the place of third-parties in assisted conception (Malmanche, 2020a). These choices are then highly situated. They depend on national regulations and the dominant models (Roberts, 2007). For instance, in some Christian circles in the USA, embryo adoption is valued because it ‘saves lives’ (Cromer, 2018). Similarly, if cryopreservation was not allowed, destruction would not have the same meaning.

The obligation to choose thus introduces a highly-charged dimension for couples. Many feel placed outside a normal situation, where they need to bear the burden of the human condition, both living and dead (Arendt, 1998).

The difficulty of choosing the fate of their embryos is perhaps more testing because, unlike the choice to abort, where the decision is urgent, with cryopreservation, time is suspended and it is their choice about their fate that initiates the action (Bateman, 2009: 113). Doubts about the best course of action can last as long as the embryos are cryopreserved. For this reason, some patients develop strategies to shift the responsibility away from themselves. Some, referred to as 'lost' by professionals, will stop replying to annual letters. It is then up to the professionals to destroy these embryos. The law allows them to refuse this responsibility. For one biologist, 'I think they're just people who don't want to make decisions, they would like us to make it for them (. . .). So that's what we end up doing'. Professionals also told me about couples requesting the transfer of their embryos out of IVF cycles, without hormonal stimulation, on the grounds that they will not implant. They could not stand the idea of destroying or abandoning their embryos, and preferred to return to a 'natural' situation which includes the possibility of miscarriage. The fate of spare frozen embryos introduces a notion of tragedy in the social sense. By these strategies, couples try to get closer to 'ordinary practices', to the 'natural' order, which is not the order of responsibility but that of the world. In an 'ordinary' situation, individuals are not enjoined by third parties to find out whether they have completed their parental project, or to decide on the fate of embryos.

Professionals: letting nature do its work

Biologists and laboratory technicians are also confronted with choices, and have the burden of responsibility for the outcome of the fresh in-vitro embryos they are responsible for selecting and discarding. Forced to reject embryos with a poor morphological aspect but still evolving – and therefore with the potential to develop – a technician exclaimed, 'It pains me to throw them away!' Professionals are well aware that what they handle are not just cells, but are at the intersection of 'biological', personal and substantial (Merleau-Ponty, 2017: 515). Embryo selection is one of the tasks the technician has to carry out in her work, but she considers this to be unethical because 'you don't know how you looked when you were in your mother's womb'. She added that even a very ugly embryo can make a baby: 'We don't know if we were full of fragments!' This waste designation process and the ethical issues it raises is a major political and logistical problem in what Thompson (2005: 263–265) calls the 'biomedical mode of reproduction', a new mode of production brought about by massive innovations in the life sciences, biotechnologies and biomedicine. Thinking of the destruction of embryos as an inherent part of their work, when their essential purpose is to create them, generates ambivalent feelings among some of the professionals I interviewed and observed, and this has also been found in other studies (Ehrich et al., 2008; Wainwright et al., 2006). In order to lessen their complicity in this destruction, different avoidance 'strategies' or 'moral tactics' have developed.

The development of embryo classifications helps to manage the disposal process, giving it legitimacy (Thompson, 2005: 198). Moreover, the constant comparisons that pro-

professionals draw with the 'natural' loss rates in pregnancy allow them to minimize and justify their actions, both for patients and themselves. In biological consultations and interviews, professionals constantly compared IVF with natural processes (Franklin, 1997; Thompson, 2005). This rhetoric allows professionals to re-introduce 'non-arbitrary' elements into the selection, and thus to accept the selection more easily. It is also a way of repositioning the 'artificial' process under the sign of the 'ordinary', the 'normal', of what happens every month in a woman's body without human or technical intervention. The 'natural' aspect is highlighted even in cases where the selection is very thorough, such as with intracytoplasmic sperm injection. They act 'just like nature' (Franklin, 1997) but, more importantly, they do not go beyond it: 'we do not do better than nature', 'anyway, nature only takes the best', 'it's not us, it's like what happens naturally'. Embryo classification reproduces in-utero natural selection. This rhetoric, if present in other national contexts, has a specific meaning in France. By inscribing their practices within the 'natural model', professionals also inscribe themselves into the scope of the law.

I also find some practices can relate to 'ethical boundary work' (Wainwright et al., 2006) to make them more ethically and morally acceptable. Some professionals, mainly female laboratory technicians over 40 years of age, working in one of the two centres studied and involved in the field of ART since its beginning in the 1980s, have developed a set of avoidance practices to try to exonerate themselves from any responsibility in decision-making. One tactic is to leave non-transferred and non-frozen embryos to deteriorate in the incubator. After a few days, the embryos degrade. It is only then that they discard them. By letting the embryos develop and die 'naturally', these technicians try to avoid having to anticipate their destruction (Giraud, 2015). Faced with a lysed embryo rather than an embryo with poor morphology but with potential for development and implantation, they have no option but to discard it. Before lysis, there is always the doubt that the embryo intended for destruction still has potential, a doubt that constantly haunts some professionals. While one biologist says that this practice is marginal and is mainly the continuation of an old practice they had of letting embryos develop in incubators instead of throwing them away immediately, similar strategies have been documented by other studies (Ehrich et al., 2008). However, I must stress that embryo selection is experienced as a 'non-choice' by some professionals. It is a 'human' and necessary act to prevent patients from enduring highly unsuccessful transfers. Thus, we are a long way from the image of scientists constantly trying to push back the ethical boundaries of their practice.

Outside agencies and choices

The words, gestures and attitudes used by both professionals and patients when they are in the situation of having to make a decision indicate that the weight of this choice is too heavy to assume individually. To deflect the burden of responsibility elsewhere, various supra-individual outside agencies are often invoked, although these are not always well defined. As seen above, this can be nature, chance,

destiny or something else beyond their control. As these cannot be controlled, individuals feel absolved of responsibility. These outside agencies are not always natural or supernatural. They can be institutional, embodied via medical institutions, through professionals. When having to decide what to do with surplus in-vitro frozen embryos, some couples will delegate their responsibility to the state or professionals. Professionals may anticipate the state's decision when some patients are unable to decide once their parental project is complete by deciding for them:

[Patients] can't decide to destroy their embryos, it's too hard for them. Sometimes I (...) tell them, 'I make the decision and we stop because you won't come and get them'. And then I feel a relief. They are not the ones who decided (Biologist).

However, the moral weight carried by patients and professionals in these instituted situations of choice is not the same on several levels. Patients have to decide on the fate of the embryos as individuals (even if this decision has to be made by a couple). Acting as potential parents, their choices are necessarily personal, closely related to their biographies. For professionals, moral and personal values can interfere with their choices, as seen when the technicians let embryos with poor morphology lyse in incubators. However, these decisions are made in relation to the rules of the medical institution, medical ethics and the law. It is in the name of the medical institution that has delegated this responsibility to them, or with reference to the scientific knowledge presented as 'objective', such as embryo classification, that professionals make these choices. This allows them to make a scientifically 'valid' decision, while shifting the burden of responsibility from themselves (Malmanche, 2020b). However, they bear the responsibility of deciding the fate of embryos that belong to others. When there is doubt about the best decision to make in embryo assessment and selection, this decision is always shared among professionals. Here, the outside agency takes the form of shared decision-making within the group. In contrast, while patients are never alone in the decision-making process, and while their choice can be forced (Rapp, 1999), they do not have an institutional framework to justify their decision. In line with the ideology of 'informed choice', they are expected to make this decision alone (Williams et al., 2002).

Making a fully-human procreation

Outside agencies not only avoid having to face tensions and ambivalence generated by situations and choices created by technologies. They also help to produce a 'fully-human' procreation (i.e. not entirely subject to human decisions).

In interviews, it was clear that people sought to limit human intervention. They insisted on the need for legislation and ethical gates. They were strongly opposed to any techniques allowing the selection of sex or certain physical characteristics. Some, such as this gynaecologist, were even opposed to techniques which did not mimic 'natural' procreation, such as single women or homosexual couples:

We don't make a child on demand. (...) Because this becomes manufacturing. I'm really into helping, to help people have children, but not making them on demand. After that, when you go into manufacturing, it's inhuman for me.

These words echo common critics in the French bioethical debates about the fear of having 'too much choice and control over procreation', the symbol of which is the repellent image of the 'designer baby' (Franklin and Roberts, 2006: 1). ART is seen to challenge an immutable 'natural order' as the 'beings' it helps to create, especially when they cannot fit into the 'natural model', are made artificial and inhuman by human and technical intervention. Paradoxically, the humanity of procreation itself is threatened when it is 'too' human, with excessively noticeable human manipulation. Underlying the gynaecologist's criticism is also her advocacy for the French bioethical model, presented as a bulwark against the capitalist model. The latter is embodied by the USA, seen as the realm of commodification and eugenics (Mathieu, 2013: 121). That is why chance and nature are valued in the French bioethical model.

Most people refute the idea that 'uncertainty' will be ruled out with these techniques because, in biological terms, uncertainty can never be abolished. The increasing biological control over life processes, that would mark the 'age of biological control' (Wilmut et al., 2000), remains partial and uncertain (Franklin, 2012). There is no way of predicting what a transferred embryo will become. Uncertainty and chance have been displaced but not eliminated, a point made by some patients, like Samia. All her former attempts failed. However, her failures are a reassuring sign for her that there is always something beyond human control:

So it's good that there's something of the order of mystery. We can control the psycho, we can control this, we can control that, but there is always the residue, and this residue they [professionals] do not control. So, from that point, it can be of the divine order, it can be of the order of many things, we don't know.

If the elusive mystery of biology (Franklin, 1997: 64) can be unbearable in some cases, it is what connects people to nature, inscribes them in humanity and distances them from artificiality; it is what finally allows them to place themselves in an ordinary framework in which not everything is controllable. Professionals cannot guarantee 100% success, which means that there is always something beyond their control. In Euro-American societies, uncertainty, and the mystery of genetics and biology, play the role given to 'transcendental and external entities' (Porqueres i Gené, 2014), or third procreators (Godelier, 2011; Weiner, 1978) in other societies. Always present, they contribute symbolically to separating humanity from animality (Collard, 2011: 22), artificiality and even inhumanity. They allow the creation of a fully-human and individual person. The need for outside agencies is revealed in these moments of dilemma and failure, when choice and humanity are seen as threats to nature and chance. People use them because they want to be related to a common model of procreation in a context

where, as users of these techniques, they are constantly suspected of participating in designing and commodifying babies.

Conclusion

This research depicts the lived experience in the French context of the difficult choices raised by biotechnologies, namely ordinary embryo selection and the fate of spare in-vitro frozen embryos. French laws delegate the opportunity and responsibility for choosing the fate of these embryos to both professionals and patients. However, while this individual decision-making is emphasized, the law provides a 'by default' status for embryos in cases where choice-making fails: residue of a biotechnical process.

This research also highlights the profound gap between public discourses and the practices of actors, which goes beyond the case of France alone. In public discourses, patients and professionals are suspected of wanting to choose 'at all cost'. This studies shows that, on the contrary, both need to feel that something is beyond their control. They do so by using different choice avoidance strategies, and by invoking supra-individual outside agencies of different types (e.g. medical institutions, nature, chance). It appears that the choices that are made, their nature and the types of outside agencies that are invoked are highly situated.

Finally, this article illustrates that the invocation of these outside agencies occurs at times when human choices are seen to threaten the humanity of procreation. Even in the context of a commonplace technique such as IVF, people fear an overly strong role for human decision-making. When involved in highly technical processes, people constantly need to infuse supranatural agencies into their practices in order to give them meaning and make them bearable – paradoxically, to humanize technology. There is a will to set boundaries in order not to feel alienated from a common humanity.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Received 13 January 2020; refereed 29 July 2020; accepted 29 September 2020.