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ORIGINAL ARTICLE

Shall we stop talking about egg donation? Transference of reproductive capacity in the Spanish Bioeconomy

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Abstract More than 8% of babies born in Spain in 2014 were conceived through assisted reproductive techniques (ARTs); almost four out of every 10 babies born that year after direct-IVF depended on egg donation according to data from the Spanish Fertility Association. Drawing on qualitative fieldwork with 25 professionals linked either to researching reproduction or practicing reproduction using IVF (five researchers from universities and 20 professionals from 10 reproductive clinics), this paper suggests that the complex role of eggs, indeed what they actually are today within these bioeconomies, cannot be completely understood by relying solely on the concept of egg donation. Their roles are understood to be much better apprehended and visualized using the broader idea of *transference of reproductive capacity*, a concept that facilitates our understanding of the socio-technical practices in which eggs are currently entangled, signified, and made sense of. Thus, I argue that we ought to stop talking about egg donation (particularly when identifying it as a "technique") and talk instead about the socio-technical practices of *transference of reproductive capacity*.

Keywords Feminist STS · Reproductive bioeconomies · Bioeconomies · Egg donation · Assisted reproduction

> It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what descriptions describe descriptions, what ties tie ties. It matters what stories make worlds, what worlds make stories (Haraway 2016, p. 12)

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Assisted reproduction has expanded exponentially over the last 40 years. The range of practices taking place under the label of assisted reproductive techniques (ARTs) is immense and many of them are linked to third-party reproduction. Increasingly, the reproductive material and processes of people not involved in prospective families are being used. This article focuses on egg donation in Spain: it asks why the term *egg donation* is used to describe very different practices around both egg provision and treatments with those eggs.

The term egg donation is neither neutral nor innocent. This does not mean its use is intentional, but rather that it has effects, effects we need to handle responsibly. The very words we use, the language we set in play to describe ongoing realities is key for their existence, for what they actually are, and so too are mutations in language, as many authors have pointed out (Butler 1997; Cooper and Waldby 2014; Haraway 2016). This article questions the widespread use of the term egg donation to talk about a myriad of practices and suggests the idea of *transference of reproductive capacity* (TRC) as a better term for the different practices linked to third-party reproduction, as I suggested (but did not elaborate on) in my previous work on the configuration of egg donors in Spain (ANON).

The current investigation stems from qualitative fieldwork focusing on the Spanish reproductive bioeconomy and consists of semi-structured interviews with 25 professionals working at reproductive clinics and research units in the area of reproduction.

Drawing on the literature around egg provision and my own research I argue that the concept *transference of reproductive capacities* could be a better fit than egg donation as it is (1) a broader term which aims to helps us see and study current practices around third-party reproduction without pre-establishing the framework in which these practices take place. It is also meant (2) to operate as a less deeply signified concept, particularly in emotional or moral terms, and (3) to reflect the inescapable relational dimension of these interchanges of bodily material or processes, in which all the parties involved need to be considered in order to have a clear understanding of the realities they shape.

These investigations' main questions are the following: what is the role of egg donation in the clinics studied? How are donated eggs "assisting" reproduction? And, is the idea of "egg donation" the best concept to describe this set of practices? Following the eggs with these questions in mind, this study has found that the roles and potentialities for reproductive capacity these oocytes entangle assist in many more ways than the mainstream narrative around egg donation (as helping women with fertility problems) indicates. This article suggests that these eggs are assisting (mainly older) women, men (in their quest for maintaining genetic relatedness to their offspring), clinics (which are able to treat many more patients thanks to those eggs and whose success rates are increased by their use), and ARTs themselves (by, again, enhancing the success rates of ARTs). Finally, these oocytes currently assist heteronormativity in the workings of the clinics' studied, due to the particular ways gametes, families, and reproduction are constructed and understood there. In this context, the idiom "egg donation" packs a very complex socio-technical practice into a rather simplifying term, which not only reduces its complexity, but also

highlights the idea of donation as altruistic and free in a non-innocent, politically loaded manner.

This paper aims to find an alternative way of naming egg provision with a will to broadening the scope from which to think about it, drawing on literature which for years has highlighted the tensions around egg donation and other forms of TRCs, such as surrogacy (Nahman 2006, 2018; Thompson 2005, 2007; Almeling 2011; Rudrappa 2015; Vora 2015; Weis 2017). Moreover, it hopes to offer a more in-depth understanding of the role of oocytes' reproductive capacity in this particular market.

Gendered (assisted) reproduction: narratives, techniques, and bioeconomies

Oocytes are signified, made usable, and shared through complex semiotic-material entanglements. This research follows previous work on the semiotic-material (and semiotic and material) aspects surrounding biological discourses on reproduction, biomedical practice (within fertility clinics), and reproductive markets.

Since Emily Martin's (1991) piece "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male–Female Roles," it is clear that the stories that we learn about gametes are deeply rooted in gendered ideals. Other studies have looked at how gendered narratives tend to present bodies and their parts through gendered heteronormative schemes, particularly in the case of gametes (Moore 2008; Oikkonen 2009). Recent studies show how these narratives change alongside changes in social expectations around gender across space and time, for example how egalitarian discourse around sex cells (albeit gendered) is found to be more common in Norway (Lie et al. 2011, p. 235). This investigation is concerned with whether these different understandings of gametes are entangled in the ways in which treatments in Spain are conceived and given, and in the expectations that professionals have of eggs and sperm.

As Sarah Franklin states "there is a significant amount of evidence from the empirical literature on new reproductive technologies that assisted conception technologies, and the culture of which they are part, are reproducing much more than children per se" (Franklin 2013, p. 226). The use of these technologies may be reproducing gendered expectations around reproduction, markets, and economic configurations, among other things. This paper confronts gender expectations (and their material-semiotic consequences) around egg provision. To do so, it draws on feminist literature on care work, altruism, and reproductive work (Waldby and Cooper 2008; Strathern 2010; Hewitson 2014; Nahman 2018; Marre et al. 2018). Many authors have studied the different ways in which gender interacts with how patients and donors relate to ARTs, and their ideas around parenthood, biology, family, femininity, and masculinity (Thompson 2005; Friese et al. 2006; Álvarez Plaza 2008; Kroløkke 2014; Barnes 2014). Their discussions of these experiences inform my approach, sparking further questioning as to the role of gender in making TRCs.

The understanding of the practice of egg donation as a simple *donation* has been challenged in several works through discussions around commercialization and the development of new concepts with which to think about these transactions. These works have focused on the commodification of body parts (Sharp 2000), the generation of biovalue (Waldby 2002), and the expansion of bioeconomies (Birch 2006; Birch and Tyfield 2013; Pavone and Goven 2017). Catherine Waldby and Melinda Cooper identify "reproductive biology as one of the most important machines for the bioeconomy," a bioeconomy whose development relies on "the compliance, negotiability and general agency of female populations" (Waldby and Cooper 2008, p. 58). The concepts of clinical labor (Waldby and Cooper 2008), vital energy (Vora 2015), and market in life (Rudrappa 2015) are fundamental for an analysis of egg provision. Waldby and Cooper study the particularities of egg provision pointing to how "women's participation in the sale of eggs involves a very literal form of bodily, reproductive labour, a kind of labour that has been traditionally available to women but which has only recently been medicalised, technologised and standardised to an extent where it can be organised on a global scale" (Waldby and Cooper 2008, p. 59). Even though Kalindi Vora's work does not focus on egg donation but rather on surrogacy alongside other types of outsourced work, her unique perspective facilitates an understanding of the current dynamics within egg markets. Her work analyzes the commercialization of "vital energy" through a particular construction of "surplus." She frames the whole reproductive debate through the lenses of the colonial project, which she describes as ongoing and currently operating through the extraction of "the substance of activity that produces life" (Vora 2015, p. 3). The idea of vital energy, and its connection to both biological and affective work, is key to the way in which TRCs work and facilitates an understanding of some of the key problems with calling the provision of eggs worldwide "donation." Finally, the idea of "market in life" (Rudrappa 2015) helps face the contradictions at work in attempts to understand the realities linked to third-party reproduction from the perspective of reproductive justice. It is through following on from their efforts to find new terminology that moves beyond the limits of previous dichotomies (like altruism vs economic motivations) that I aim to introduce the idea of transference of reproductive capacity.

Turning to previous texts on markets around gametes, it makes sense to consider the work of Rene Almeling (2011), who showed how gendered markets have expanded around third-party reproductive practices, shaping egg, and sperm provision in very different ways. She observes how, in the USA, "a woman's donation is considered a precious gift and a man's donation a job well done" (Almeling 2011, p. 166). And thus that "social scientists working in this arena need to analyze precisely how it is that the structure and experience of bodily commodification is shaped by social categories and social inequalities, as economic valuations intertwine with cultural norms in specific organizational contexts" (Almeling 2011, p. 172). In Spain, neither the idea of egg selling or egg donation accurately describes the practices found. Previous work showed that the dichotomy of altruism vs economic motivation does not work and that the discourse of altruism

is not enough to account for the easy availability of donated eggs there (Orobitg et al. 2013; Marre et al. 2018).

The fact that a market, inscribed within a larger bioeconomy, functions around donated eggs in Spain prompts many questions worth addressing: what is the role of egg provision in the expansion of these markets? Are gendered expectations, roles, and inequalities intertwined in their functioning? What is the best way to name these not-so-new realities in order to better understand them?

Aims and methods

This research focused on the role of eggs or oocytes within current Spanish bioeconomies. We focused on the private sector as 74% of the clinics in Spain are private and most treatments with donated eggs take place there (according to the information provided in the online Registry of Centers and Services, updated in 2015 by the National Human Reproduction Group). This is the case due to the fact that the public sector does not have the resources to pay economic compensation to donors in most cases (Andalusia is one exception). Therefore, at present, the private sector is the most important arena for understanding the dynamics of the Spanish Bioeconomy of reproduction, particularly for considering egg donation.

The study, which was part of a broader nationally funded investigation whose IP was Vincenzo Pavone and counted on collaboration from Pilar Nicolás, Flor Arias, Cathy Herbrand and Sergio Romeo, consisted of semi-structured interviews with 20 professionals from nine different private clinics and one public hospital; three of those nine clinics were part of big groups that account for around half of the clinics in Spain. The clinics are located in five cities in four different regions (Basque Country, Catalonia, Andalusia, and Madrid). The professionals interviewed were either directly linked to egg donation programs (doctors, program coordinators, and one marketing director) or working in laboratories (embryologists). The interviews tried to reconstruct the whole process of egg provision (donor recruitment, selection, treatment, retrieval, etc.) and of treatments carried out with those eggs (charting when a couple is eligible for their use, what the matching process involves, what laboratory practices are employed, etc.) Most of the interviews were carried out by the author, though some were done by Vincenzo Pavone and Flor Arias, as part of the broader project. The author conducted another five interviews with key informants linked to reproductive research in three different universities, whose knowledge about gametes and embryos contributed to a more profound, critical understanding of oocytes' roles in assisted reproduction. The first clinic was contacted via one of the university researchers involved in the study, and the other clinics were contacted via phone calls; specific professionals were contacted via e-mail. On making contact, we explained the national research project and asked them to collaborate by giving interviews. Some clinics never replied, others replied, but did not end up getting involved in the research. The project was fully explained to the people who participated, along with its possible outcomes, and all of them signed informed consent forms and data protection agreements. All the interviews were transcribed and anonymized with codes and names in the place of real

identities. The transcripts were analyzed through a combination of thematic analysis (Marshall and Rossman 2011) and critical discourse analysis (Alonso 1998; Wodak and Meyer 2009). We did not interview donors in this project and we did not have the opportunity to observe the ways in which professionals talked to patients and donors, so clinics' webpages were analyzed to get an idea of how discourses were deployed towards donors.

Introduction to the Spanish case

Assisted reproduction in Spain has, for the most part, developed in the private sector. This in itself is interesting in a country in which public healthcare is the leading medical sector across most fields. Private sector leadership has had a clear impact on the shape of the Spanish reproductive bioeconomy (Coroleu Lletget 2011; Pérez Milán 2011), and a key role in setting the agenda for regulations.

The Spanish bioeconomy, and its success, is largely dependent on what is here referred to as the *transference of reproductive capacity*. This becomes clear by consulting the data from the registries of clinics and cycles (SEF 2014). Spain has more than 300 reproductive clinics, and ARTs were involved in the conception of 8% of the babies born in 2014, a year that saw 156.865 cycles start (counting IVF and AI). That same year, 38% of babies born after being conceived from fresh IVF cycles came from donated eggs. Moreover, the vast majority of treatments for non-residents, 84,5%, were dependent on third-party gametes (53,5% on donated eggs and 31% on donated sperm) (data source: SEF 2014 and INE—Spanish National Institute of Statistics).

These numbers allow us to glimpse the current reproductive market in Spain and donated material's centrality therein. The widespread use of eggs from younger women makes sense in a country in which the average age for women to have their first child is as high as 32, and where previous studies indicate that women are worried by the difficulties they "have to overcome in order to have desired children" (Alkorta Idiakez 2003, p. 165). These difficulties are described as "social causes" driving women to postpone motherhood and to using ARTs: "women's incorporation to the paid job market has taken place in precarious conditions and without protection for working mothers: many women have had to delay their motherhood to keep their jobs, and have renounced having more kids" (Alkorta Idiakez 2003, p. 178). This has been named "structural infertility" by Diana Marre (2009) who, elsewhere and alongside San Román and Guerra, reflect on how many women in Spain "face unfavorable work hours, low wages, job instability, and a lack of policies to support working mothers" (2018). In fact, the latest fertility study from the Spanish National Survey Institute (INE) indicates that almost three out of every four Spanish women want to have more children than they have[1] (the natality rate is at 1,3). Within this context reproduction has tended to be kept outside of public debates, and the development of reproductive markets has been accompanied

[1] The full report of the survey has not been released at the time of writing the paper. I use the data offered within the press note the INE used to show its main results 28/11/2018 https://www.ine.es/prensa/ef_2018_a.pdf and an interesting report about this is published in CTXT by Eva Ferreras: https://ctxt.es/es/20190109/Politica/23786/Eva-Ferreras-maternidad-en-espana-dificultades-costes-edad.htm.

by a lack of social debate. This could be related to ARTs being initially approached by women as part of their (newly achieved) reproductive rights in the 1980s and 1990s (Alkorta Idiakez 2008) or to the trust that Spanish society at large bestows on science and the medical system and profession (Rodríguez and Campo 2008), which tends to leave the biomedical sector unquestioned. Even if we can trace some debates within feminist groups during the (Feminismo Autónomo 1990),[2] the topic has never been central to feminist or other types of groups (not even Catholic groups).[3] The development of a huge private market surrounding reproduction has been almost undetected by civil society (except for the patients, and they themselves very rarely form patient associations). Nonetheless, surrogacy has recently brought a new debate to the media and the public, as well as feminist and patient associations. With this debate on the table an urgent question arises: how is third-party reproduction taking place in Spain now? How important are egg transferences in particular within this context? How do they work, who do they assist, and through which interpersonal and economic arrangements?

Reproduction fueled by (younger) oocytes

Spain has a fundamental role in the European reproductive market mainly because it's a leader in egg donation.[4] This paper aims to better understand what is taking place under the label of *egg donation* and argues that the *transference of reproductive capacity* is a better term for describing this reality and for addressing it critically. In so doing, we must engage in a broad, extended debate on how to name or label these practices, in which several authors have used terms such as egg vending, clinical labor, gift economy, and egg provision to refer to different parts of this practice, as explained above. Egg donation is banned in several European countries and in those countries in which it is legal it tends to suffer from what has been referred to as *egg shortages*. In this context, most people within Europe who travel abroad for donated eggs go to Spain (Calhaz et al. 2016), an internationalization that has been addressed from social and feminist studies (Kroløkke 2014; Nahman 2018). These movements, addressed as reproductive tourism, exile or as Cross-Border Reproductive Care (Pennings 2002; Matorras Weinig 2005; Hudson et al. 2011) are key in the configuration of the Spanish oocyte markets.

Drawing on the fieldwork discussed above, I now introduce two of the main findings from the investigation. First, that *egg donation* is made meaningful in the clinics studied through a narrative that rests on two main ideas. Firstly, egg provision functions through altruism, and in vitro fertilization (IVF) with donated

[2] As can be seen in the fanzine *GenCrítica*, written and published by the autonomous feminist movement in 1990.

[3] Of course, certain sectors from the Catholic Church have expressed their dislike towards ARTs or embryo cryopreservation, but their discursive focus has never been around ARTs. That is, the centrality that Catholicism has given to abortion and same sex marriage in Spain has never been extended to assisted reproduction.

[4] It is also distinctive because of its use of PGD, but fundamentally PGS, whose role has been previously analyzed and will not be studied here (Pavone and Arias 2012; Lafuente-Funes 2017b).

eggs is a *technique,* rather than a socio-technical or a relational practice. Second, the way in which treatments with donated eggs work in practice shows that the reproductive capacity of oocytes from younger women is assisting a myriad of processes, people, and economic interests which actually tend to be obscured by presenting it as either a donation or a technique. So, based on these findings we can already begin to ask ourselves: shall we stop talking about egg donation?

Egg provision as egg donation

Egg provision is represented as donation in Spain by linking it to altruism (Kroløkke 2014; Lafuente-Funes 2017a). The donation frame is maintained in professionals' narratives by highlighting altruism even when acknowledging that economic compensation is central for attracting donors.

> [We find] Two main motivations, one economic and one altruistic. I think that here in Spain both are very much present. Int. BB1

> they tell you that their major motivation is altruistic, helping another woman. Sometimes they tell you… well, I help someone to have a baby and I also get an economic compensation. Very few, very few, tell you that is only an economic thing. (Int. F1)

Asked about why they thought that so many women were willing to donate, professionals talked about economic compensation (set at around 1,000 euros per completed cycle) and compulsory anonymity. This becomes clear when they explain why other countries, like the UK (prior to their latest regulation) have a shortage of donors:

> Their problem is about it being anonymous and free, those are key. Because it can be that it [donation in a country] is not anonymous but you get paid a lot, and thus that compensates the non-anonymity. But if it is not anonymous and you are not paid, or paid a very low sum, well… the number of donors would decrease. Those two are very important factors, anonymity and [economic compensation]. (Int. A1)

Some professionals refer to a sort of generalized altruism linked to Spanish leadership in organ donation, as already noted by Charlotte Kroløkke in her study of CBRC in Spain (2014). Donations of other bodily material in Spain, however, take place through a different scheme. The National Organization of Transplants is an entirely public organization which has a non-commercial approach towards donors; interestingly enough it has never managed gamete donation.

The idea that the human body and its parts need to be kept away from commercial logics present in the current regulation on ARTs was already present in the first regulations around organ donation in Spain. It states that "it will not be possible to obtain any compensation for organ donation" (Spanish Law 30/1979). These regulations understand donation as a practice that must function outside

market logics, and depict economic compensation as somehow incompatible with that.

Gamete donation, on the other hand, has been regulated through the law around ARTs (dated 2006). This regulation is also guided by the idea of donation being altruistic and free, but it allows for economic compensation, which is currently at up to 1,000 euros per cycle. Nonetheless, the law establishes that "gamete donation is a free, formal and confidential contract arranged between the donor and the authorized center" (Law 14/2006). Economic compensation should be used to "strictly compensate the physical inconveniences and the travel and work expenses that might derive from the donation, and there cannot be an economic incentive to it" (Law 14/2006).

In order to have a measure of what 1000 euros mean in Spain, we can compare it to other potential ways of earning money by looking at general economic data. In particular, data from young women, as they are the targets for egg donation. Minimum wage at the time of the interviews was 752 € a month.[5] According to the 2016 data from the National Institute of Statistics,[6] the average annual salary for women under 20 was 5733 € (478 € per month) and 9746 € for those under 25 (812 € per month). Thus, the idea that economic compensation is not an incentive for donation does not seem plausible, particularly while looking at young women in a country in which this quantity is superior to both the minimum and the average salary per month for women under 26. Nonetheless, egg provision is presented as altruism like in the USA (Almeling 2011).

Egg donation or *ovodonación* as a technique or treatment

Spanish clinics have coined a specific word to describe reproductive treatments with donated eggs: *ovodonación* or *ovodón*. This word (which simply unites the word *ovo* from óvulo (oocyte) with *donación* (donation)) is frequently used to talk about reproductive treatments with donated eggs in professional's narratives and webpages for patients. Most of the webpages of the clinics studied introduce the information for donors in different sections of their portals, or in different web portals. The webpages designed for patients tend to use the term *ovodonación* and present egg donation as a technique or treatment in a myriad of ways.

One of the professionals interviewed stated that "the technique of in vitro fertilization without donated eggs is a technique that has limitations in itself. And one of its main limitations with respect to pregnancy rates is women's age" (Int. F). That is, not only is IVF with donated eggs seen as a technique, but also as a technique with the ability to overcome the *limitations* of IVF. The limit of women's age is not located in the reproductive potentiality of the woman or the couple, but on the ability of the technique to obtain a pregnancy. Moreover, men's age or the quality of their sperm is not even mentioned. This shift locates both failure and success in the techniques themselves. Webpages directed towards patients present egg donation as a technique: one defined egg donation as "an assisted reproductive

[5] This amount has been recently raised to 858 euros per month now.

[6] These data are Open Access and can be consulted here: http://www.ine.es.

technique consisting in the donor being subjected to an ovarian stimulation to obtain some oocytes that the recipient is going to receive." Thus, "more and more couples turn to this technique to achieve their goal: to have a child" (A). In a similar way, another clinic states that "*Ovodonación* helps you to become pregnant in an easy and secure way; many women have already managed to become mothers thanks to this technique" (H).

Thus, both within professional's narratives and clinics' webpages, egg donation was framed as a technique or treatment. Indeed, professionals say egg donation is their *most successful technique*. But, is egg donation a technique? Is it a treatment in itself? Here I contest that talking about egg donation as either treatment or technique has neutralizing effects, as it works by highlighting the agency of both technology and biomedicine, undermining the role that donors, eggs, and their reproductive capacity play in the success of these treatments. It also undermines the fact that the socio-technical practices taking place involve people sharing, using and manipulating biological material, highlighting the technical side of it instead of the interpersonal one. Even though determining where a technique starts and where it ends is a delicate and almost impossible task in ontological terms, it's still important to analyze how calling processes techniques rather than relational practices produces different effects. Here, these gestures and practices render providers less visible and construct egg donation as a more aseptic and less relational practice.

Changing the egg: the central role of oocytes' reproductive capacity

According to the Cambridge Dictionary "capacity" is "the ability to do a particular thing." Here capacity is understood thus, as well as in the sense of having the ability to perform. What are donated eggs doing or performing within the current bioeconomies of reproduction in Spain?

Looking at professionals' narratives allowed me to see that donated eggs, apart from attracting non-residents, make three things possible: first, they offer many women the chance to go *back in time*; also—even if this is never explicitly said—these eggs function to guarantee male heredity; third, eggs provided by donors increase the success rates of ARTs and of particular clinics, whose success rates are used for marketing purposes.

In a context in which women are seen as the main subjects made accountable for reproductive problems, particularly those linked with age, egg donation is presented as a way to go back and regain some of the *time lost*. Professionals present women's age as the most common cause for ending up in egg donation programs:

> There is a clear social phenomenon, especially in the developed world, which is that true motherhood is postponed. Thus, part of our patients that need *ovodonación* need it because there is not an ovarian reserve that guarantees enough oocytes in number or quality to achieve a pregnancy (Int. BB).

Even though there is plenty of scientific evidence that oocytes' quality decreases with women's age and this is certainly a central factor in infertility, it is also true that in recent years several studies indicate that male fertility problems are increasing and that some of these problems are also linked to age (Humm and

Sakkas 2013; Santiso et al. 2010). Nonetheless, age-related male infertility was never discussed in these clinics. But age and low ovarian reserves are not the only reasons couples are advised to use donated eggs. Regarding reasons why certain couples are sent on to egg donation, we find another slippery cause: that of *unknown problems* or *repeated IVF failure* (Matorras and Hernández 2007). That is, when IVF fails with gametes from a particular couple and professionals are not sure where the problem comes from, many turn to donated eggs. Therefore, reasons to go for donated eggs are multiple:

> The role that egg donation plays is essential in couples in which there is a premature menopause, menopause or the quality of the oocytes is not good or… if there is low ovarian reserve or when previous treatments with their own oocytes have failed (Int. GG).

Some professionals explained that it was straightforward that when "there is a couple that has undergone in vitro fertilization and has not achieved a good embryo development (…) I need to change a gamete, and I do not know which one it is… and when facing that dilemma one always tries to change the egg first, because the egg is like the one who is *in charge*" (Int. GG). In a similar way, another embryologist stated that "the gamete that we hold responsible for pregnancy rates is precisely the egg" (Int. C1) and therefore the egg would be the one to be substituted first in cases of doubt. This is rather interesting, as an unknown failure could be caused by either the male's problem, the female's problem, or a problem stemming from the combination of that particular couple, and all these options have a similar probability percentage according to the biologists interviewed.

This practice of *changing the egg first* when the cause of the problem is unknown requires further attention. In exploring this preference two ideas prevail: first, the logic of this narrative is very different to most found around gametes, as it gives a much more active and important role to the egg than to the sperm. Second, this idea of *changing the egg first* conveniently sits well with an assumption commonly found within professionals' narratives: that heterosexual couples deal better with egg donation than sperm donation.

Donated eggs as agents: the *system in the egg*

Focusing on the narrative level and on the recognition of eggs' central role in embryo development, two important observations were made: instead of highlighting the role of the sperm or presenting both gametes as equally important, this narrative highlights the importance of the egg. Thus, this narrative understands that eggs have a role in development that is rarely mentioned or explained in more detail and which ARTs are incapable of assisting. It is important to note here that the gendered narrative found by Emily Martin (1991) was partially present within both clinics and biologists' discourse.[7] It was only when facing the dilemma of what

[7] It does not follow it in exactly the same way (romance, for example, has not been that common in my fieldwork, but gender roles and expectations are).

gamete to change that professionals made it clear that the egg is the essential entity for pregnancy success, the first gamete they change when in doubt.

> Let's start by looking at the size: if one looks at an oocyte in comparison to the size of a sperm, it is clear who is in charge. I mean, the sperm activates the system, but the system is within the egg (Int. GG).
>
> The embryo quality is always given, or fundamentally given by the age of the maternal egg. It is related (Int. C3).
>
> In reality almost everything depends on the egg, the sperm only contributes with the nucleus, the chromosomes (Int. FL).

What is the system that exists within the egg? Only in one interview with a researcher was part of this system explained, the part linked to the incapacity of the sperm to fix its own DNA fragmentation:

> Sperm per se cannot but what happens is that the oocytes can. I mean, the oocyte is the one that repairs it. That means that when DNA is not too damaged but has some level of harm, the oocyte's environment has an enzymatic system ready to be able to fix those holes" (Int. Gonzalo, researcher).

From the clinics, one biologist, when asked directly about this, stated: "I mean, we do assume that [the egg] repairs [damaged sperm] but we do not have a way of… we do not have a way of… Because you get to know that the embryo does not go on, but… Was it only due to the fragmentation? Did it not implant due to some other problem? That is difficult to say" (Int AL). Another professional, before being directly asked about it, said "many times even problems that the sperm has, when the egg is healthy it has the capacity of repairing these problems" (Int. GG). Literature around the topic does indeed explain that eggs from younger women help damaged sperm make its way towards fertilization (Santiso et al. 2010). As the aforementioned researcher said: "In fact, you can clearly see this in donors (…) you can see that the capacity to repair the same sperm is different [in donors and older patients]. As they age, the capacity to repair decreases. This is probably one of the reasons why when women reach a certain age, her oocytes are not as effective in getting embryos to develop" (Gonzalo).

Following this logic, in which the egg has a key system for embryo development, it is surprising that there are no techniques or treatments in these clinics to assist it. ARTs seem to be trained to mimic the tasks presented as fundamental within the discourse of fertilization studied by authors looking at its gendered narratives (Martin 1991; Moore 2007). That is, ARTs individualize sperm and egg (the former by selecting either groups of them or one to be introduced by a needle; the latter by picking it apart from the rest and getting rid of its cumulus), transport the sperm to the egg, insert the sperm into it in the case of ICSI, etc. From this perspective, assisted reproduction, through the combined actions of ARTs and the biomedical staff and settings, seems to be assisting the tasks linked to sperm contribution more than those linked to eggs. If this is the case, much of that which is not assisted by ARTs in relation to pregnancy success still relies on oocytes' reproductive capacity.

This might well be related to how easily accessible eggs are in this context. These easy-accessible eggs, and the potentiality that they have to overcome IVF *limitations*, say a lot about the strength of their reproductive capacity, as well as about their value (beyond the economic).

The ideal nuclear family within the clinics: heredity and fatherhood

The practice of *changing the egg first* fits nicely with how professionals link masculinity to heredity and raises the question of how this could be affecting professionals' choices on which gametes to keep. That is, the fact that professionals do not try other alternatives first might also be linked to a shared logic in which *fatherhood* is linked more closely to genes and *motherhood* to nurture or care. This logic assumes that motherhood might be constructed through nurturing (where the term nurturing is expanded to include gestation), while genetic bonds are seen to contribute more towards constructing fatherhood. This is the case at the legal level in Spain, as motherhood is defined through giving birth and fatherhood—in legal terms and when in doubt—is genetically determined. All this can be seen in the following quote:

> Sperm donation… I mean, in an oocyte donation women provide the crib, they provide their uterus, they are going to give birth… but in a sperm donation… they do not contribute, they contribute nothing physically (Int. A1)

Clinics hold on to this discourse, which empathizes more with male's desire to maintain the genetic link than with potential arguments to avoid egg donation (like those in favor of avoiding medicalization for a third person, maintaining the mother's genetic bond, and using already existing embryos). In so doing, they reinforce an idea of motherhood as something more processual, linked to the idea of nurture. They also reinforce a particular idea of fatherhood linked to broader ideas around heredity (Bock von Wülfingen 2012a), which will, of course, be reconstructed and reoriented for cases in which couples require sperm donation, but that may be in operation where donated eggs rather than sperm are the first resort.

Based on these analyses, it seems that eggs, particularly donated eggs, have a broader role within ARTs than they are often attributed initially. These donated cells work as biological devices with the potentiality to solve multiple problems. They have the potentiality to compensate time for older women, allowing them to rejuvenate (in exchange for giving up their genetic bond to a potential child). They guarantee male contribution to heredity if the treatment works and improve success rates for couples, clinics, and ARTs (techniques that, for now, are unable to assist eggs' reproductive capacity). Thus, donated eggs are assisting ARTs, clinics, women, men, and the maintenance of the nuclear family's imaginary—alongside many materialities—(and for the clinics, men, and women involved, this help is profited from and met with resignation to vastly different degrees). These donated eggs are also assisting the bioeconomy of reproduction and the current market model of private clinics by attracting many women and couples from abroad to have their reproductive treatments carried out in Spain.

Moreover, these TRCs, if the literature is taken into account, assist the reproduction of whiteness through social class, migratory status and geopolitical differences, particularly where donors from the margins of Europe are considered, as Michal Nahman's (2018) work has recently shown. These TRCs are helping global care chains to expand into new domains, enlarging the areas covered by feminized care work, alongside the inequalities those chains reproduce (Pérez Orozco 2014; Pérez Orozco and Gil 2011). An example of this can be traced in Charlotte Kroløkke's work looking at the experiences of Danish women who underwent IVF treatments with donated eggs in Spain. The very interesting "affective assemblages" made by these women are reminiscent of those discussed in relation to domestic work (Pérez Orozco and Gil 2011).

Transference of reproductive capacity

Based on the ways in which egg donation works in Spanish clinics, calling it egg donation or *ovodonación*, which, respectively, evoke gift-giving and a technique carried out by professionals, does not seem to correctly describe what is taking place. Instead, the fact that egg donation is being used to refer to a huge variety of different practices around the globe seems to work towards highlighting one particular aspect (that of altruism, or feminized giving) which might not be the main facet signifying the practice (and clearly is not so everywhere) and which is neither a neutral nor an innocent term, particularly so if looking at it from a feminist reproductive justice perspective. Furthermore, using the same term to describe many different contexts makes it difficult to understand the particularities of each case, and leaves almost no space for adopting critical stances around it.

Broadening the focus from biomedical and technical assistance in the process of fertilization and early embryo development enabled this research to gain more knowledge about the oocytes' potentialities. It made it easier to see how, in the broader narratives and explanations, doctors, and embryologists tended to focus on the technical aspects of their work and that in discussions around details, the capacity of the oocytes appeared with more emphasis. Focusing on the agency of the oocytes themselves, even though they are entangled in complex grids of human and non-human agencies, highlights the key role that these oocytes have in the expansion of a particular bioeconomy.

For all these reasons, I now turn to the socio-technical practices in the transference of reproductive capacity (TRCs). These practices are possible thanks to ARTs but could not be solely described as yet another ART, and their specificity ought to be addressed. TRCs can take place locally, nationally, or within cross border reproductive care. TRCs can involve eggs, sperm, uteruses, and biological processes such as pregnancy, gestation, and birth-giving. TRCs can take place through a mutual agreement or under coercion. TRCs can be paid or unpaid, can take place under the so-called *altruism with economic compensation* model, or within a relational context in which the different parties share a personal relationship. In all these senses, the idea is for TRC, as a broad concept, to help place under scrutiny the differences between the diverse models for these

transferences. It aims to make it easier to (1) highlight the central roles that people, bodies, and cells' reproductive capacities have when TRCs are involved; (2) facilitate a conversation around third-party reproduction without pre-establishing the socio-economic terms in which it happens; and (3) highlight the idea of *transference* as a reminder of the involvement of several people whose type of relationship is central to the way in which we can think around these practices, making us wonder who is transferring and who is receiving, in a direct conversation with previous work around stratified reproduction (Colen 1995; Weis 2017).

Above I have focused on explaining how this idea helped me analyze egg donation in Spain. My aim, however, is to contribute to current debates using the idea of TRC to see if it might help us think about other practices such as surrogacy, sperm and embryo donation, or uterus transplantations (and all of them at the same time). Thinking about how transferences and reproductive capacities were tied to one another gave me a better grasp of the significance of the fact that these eggs are *produced* through the combined effect of medication and women's biological and clinical labor, forming yet another "ontological choreography" in which gender, bodies, and biomedical technologies interact (Thompson 2005).

Finally, I suggest three main ideas for distinguishing between different types of TRC (and evaluating their impact in terms of reproductive justice): (1) we need to evaluate the relationship between the different parties involved, including the presence or absence of monetized relationships. This must not be done by assuming that altruism and money are incompatible (Folbre and Nelson 2000; Strathern 2010; Orobitg et al. 2013), but rather through approaching, in a coherent manner, the different logics that might be introduced when monetary exchange takes place within contexts shaped by economic inequalities (Vora 2015; Waldby and Cooper 2008; Weis 2017). And we could use this evaluation to name each particular case of TRC accordingly (even if we need new terms to do so). (2) We need to take into consideration the degree to which the transference has an impact on the body, taking into account whether something new is being created/produced, if it implies the use of medication, and the available studies (or lack therein) regarding both short- and long-term side effects. Following Almeling we might consider "the characteristics of the good itself, whether it is present in all kinds of bodies, if it is renewable, if it is separable from the rest of the body, and if its provision entails risk" (Almeling 2011, p. 171). This particular point helps to render visible the differences between practices such as embryo, sperm, or oocyte provision in clear ways. The third aspect to be considered involves (3) identifying the tasks, duties and work implied in TRCs processes. This pushes us to scrutinize what it is that each of the transferences imply, particularly important in the cases of surrogacy and uterus transplantation. For this identification it remains important to think through the concepts of reproductive and clinical labor, which were coined precisely "in order to make their contribution more visible and valued, and to test its implications for better conceptualizing justice and equity for the tissue providers within the bioeconomy" (Waldby and Cooper 2008, p. 60). Finally, all the above must be studied taking into account in which areas of the Globe do this practices take place, and with what consequences, considering previous work on cross border reproductive care (Mitra et al. 2018).

Concluding remarks

The framing of compensated egg donation as a donation in Spain challenges previous meanings of *donation*, opening up urgent questions for dealing with this polysemic conundrum: shall we call this way of providing biological material something else? Shall we continue calling it donation? Is it to be expected that other donations will follow and change along these lines? Is this desirable?

I argue that *donation* might not be the right word to name something that has developed as an important practice within a growing market like Spain's. As Marilyn Strathern points out, donation in Euro-American narratives "is invariably opposed to the commodity" (2010, p. 121). While she contends that practices of donation like those illustrated here are changing the traditional model of donation, I argue that regulations are still clinging to that idea of "donation" as implying a limit to economic logics. And yet, it is now impossible to deny that economic logics are shaping egg provision in Spain. Therefore, we ought to change the terms we use to better address these new realities and prepare to face the challenges they pose. Even if in some cases egg provision comes as a *donation*, why do we use the same term to refer to such a wide variety of situations? How well does it do the sociological job of describing what actually takes place? Who does it favor?

Discussions about egg donation in Spain get entangled in various issues. In terms of the law, the idea of economic compensation potentially becoming the incentive for women to donate is problematized, shifting the focus away from analyzing whether oocytes are being commercialized by clinics and towards donors and their *motivations*. Presenting egg provision as a donation, but reproductive treatments that use them as part of a broader business model, leaves the motivations of other actors unquestioned, making analysts critically address donors (what are their *real* motivations? Are they definitely *willing to help* or do they do it *just for the money*?) rather than the clinics or the markets that commercialize treatments with their eggs.

All in all, presenting egg donation as a technique/treatment highlights the biomedical and technical aspects of it, undermining the rich and varied ways in which oocytes' reproductive capacity is playing an active role in enhancing ARTs' success. In this sense, more transdisciplinary research—involving embryologists, sociologists and feminist academics—around oocytes' roles within IVF labs would be both needful and enlightening. Further research on how heteronormative assumptions and imaginaries might be entangled in the way in which professionals give reproductive advice to couples should also be carried out.

For all these reasons, and with a will to broaden the framework from which to consider third-party reproduction, I have here suggested the term transference of reproductive capacity or TRC. This idea aims to highlight the role of the reproductive capacity of the "third-parties" part in new forms of reproduction, as well as contribute to a broader debate about how to deal with these transferences in a globalized world in which the advancement of the bioeconomies is reinforcing unequal and unfair regimes of both distribution and recognition.

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