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Between Gift and Commodity: Blood Products in France

By **Sophie Chauveau**

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Since the end of WWII, in France, the Blood collection relies on voluntary and unpaid gift. This principle was implicit in the first law about the Blood collection organisation that was enforced in 1952: the Blood collection, the preparation and the distribution of blood products are non-profit activities. Nevertheless, a minority of donors were still paid in the beginning of the 1950's: these were donors who might answer to emergency callings. Following the enforcement of the 1952's law, paid donors quickly disappeared in France.

Forty years later, in 1993, the new law about French Blood Agency defines precisely the rules of Blood collection: donor must be voluntary, the gifts remains unpaid and anonymous¹. The change in Blood collection and blood products management requires that the law sets the principles of the gift. Another important change concerns the blood products status: in 1952, they were considered as biological products with a therapeutic use; in 1993, some of the blood products are considered as drugs – and submitted to the whole legislation on drugs (AMM, etc.). The new category of “blood derived products” is a testimony of the transformation of the whole Blood organisation and production. It is representative of the phenomenon of “commodification” described by several sociologists and economists².

Change in the law reflects part of the whole transformation of Blood organisation. The definition of blood derivative drugs is an issue of the industrialisation and standardisation of several products, for which the Blood organisation was adapted since the end of the 1960's. More generally we can consider that an economy of Blood products appears in France during the last forty years. This modifies the conception of Blood itself and the status of Blood products, these are now between the gift and the market. In the same time, it becomes necessary to preserve unpaid gift. The shift from gift to commodity refers to the change of the Blood economy in France between the 1950's and the 1990's.

We would like to explain the transformations of the Blood economy. The most well-known causes are the technical improvements relying on scientific research, the discovery and the definition of many therapeutic uses of blood products. In the same time, the demand for blood products increases also, not only in quantities but also for different therapeutic indications. The analysis of this demand helps to understand why part of the Blood production turns into a market. Last, as Blood collection and production remain a non-profit organisation, the French State defines transfer prices: these contribute to the formation of an original Blood economy and create important problems for the whole Blood organisation.

In a first time, we will describe some of the scientific and technical change of Blood transfusion organisation in France. Then we will analyse the main characteristics of the Blood economy and the reasons of the dysfunctions in Blood organisation.

In a few decades, the therapeutic use of human blood has changed dramatically.³ Before WWII, blood was used in case of emergencies, mostly for problems during birth or accidents, and usually in arm to arm transfusion. Twenty years later, blood could be conserved outside the human body thus becoming an independent therapeutic entity of unclear scientific, legal, regulatory and economic status. The collection of blood became increasingly organized since the 1950s, and developing infrastructure was accompanied by the enhanced therapeutic recourse to blood products following significant advances in haematology. These two developments were not, of course, independent. On the one hand, research in haematology identified new products derived from total blood and indicated their potential uses, implying the development of techniques for collecting blood adapted to providing a reliable supply of these derivatives. On the other hand, the use of machines specifically designed for collecting the first such derivative products, which included the technique of plasmapheresis, contributed to the refinement of these products, making them better adapted to their diverse clinical uses. These changes in

the modes of collecting blood and preparing blood products were largely the consequence of the elaboration and diffusion of techniques for separating plasma from blood and for fractioning plasma that were developed in the US during WWII.⁴ Starting around 1950, the fractioning of plasma permitted the separation of different proteins; first, albumin and immunoglobulins at the beginning of the 1950s, then fibrinogen, and at the beginning of the 1960s clotting factors. By the 1960s and 1970s, collected blood use and status were thus further re-orientated becoming raw materials for numerous blood and blood derived products used for both prophylactic and therapeutic purposes.⁵

In the 1950s, thanks to the development of plasma fractioning and various associated laboratory techniques, haematologists were able to identify different constituents of blood. Then, in the 1960s, the work of immunologists, notably Jean Dausset and his team, helped to define new uses for these blood derivatives.⁶ At the same time, haematologists became more interested in blood diseases, notably haemophilia and drepanocytosis (particularly in Britain and the U.S.).⁷

Just like medicaments and biological preparations, blood-derived products required clinical trials and the standardisation of their therapeutic use, whether the use be prophylactic, as in the case of immunoglobulin that helped to prevent infectious and autoimmune diseases,⁸ or curative, as for the early use of anti-haemophilic products in the 1960s. Initially used for the emergency treatment of haemophilia crisis, indications moved from curative to preventive treatments during the 1970s. Young patients were educated to be able to treat themselves, injecting the product when they 'felt' they needed it. The generalization of this therapeutic practice relied on the development of products that were easier to keep at home or to carry around. Prophylactic clinical protocols were defined leading to the systematic injection of anti-haemophilic products with the aim of keeping a stable concentration of clotting factors in the patient's blood.⁹ In the beginning, differences between the dosages prevented adequate treatment and it remained impossible to compare different products and different protocols. By the end of the 1970s, discussions among physicians about therapeutic protocols took into consideration the differences between products, including the use of concentrates or super concentrates.¹⁰ Therapeutic evaluation demanded that the CTSs (*Centres de Transfusion Sanguine* or CTS) overcome this heterogene-

ity of products, improving the standardisation of quality, dosage and conditioning.

The problems encountered in convincing those in charge of the CTSs to impose controls on their blood derivatives have a number of roots: insufficient financing, personal insecurity with respect to their own authority, and a refusal to see blood products treated like medicaments. While blood derivatives could not be readily reduced to either medicaments or biological products, the heads of the various CTSs were torn between their aspiration to scientific respectability, their desire to be fully integrated into the healthcare system and a need to run a viable, if not profitable business. These various tensions constituted so many obstacles to the normalisation and standardisation of blood products at the end of the 1970s.

Following the Second World War, the organisation of blood collection and the preparation of its derivatives was carried out by the centres for blood transfusion, with on average one per department. The operations of desiccation (separation of plasma and its preparation as a powder) and fractionation were limited to a few regional centres that possessed the necessary equipment. The National Centre for Blood Transfusion (*Centre national de transfusion sanguine*, CNTS) was at the same time a regional centre for the specific needs of the capital city, Paris, and had an overarching authority with extended prerogatives. Thus, the fifteen regional centres that carried out the desiccation in 1953 were supplied by the local CTSs.¹¹ At the beginning of the 1970s, this number was reduced to seven, although they were now veritable industrial centres of production with several hundred employees each.¹² Controls carried out on blood derivatives by the National Health Laboratory (*Laboratoire national de la santé*) in the 1970s revealed considerable variability between these establishments in terms of the dosages of products that were supposed to be identical.¹³ These results triggered pressure to reform the organisation of blood transfusion in France at the end of the 1970s, but the '*affaire du sang contaminé*' (tainted blood affair) revealed that problems persisted throughout the 1980s, leading to the transformation of the structures for handling blood imposed by the law of 4 January 1993.¹⁴ This law brought all the regional centres together under the aegis of the French Blood Agency (*Agence française du sang*), which imposed uniform rules on all the individual local establishments,

which had hitherto been independent bodies. In 1998, this unification process was completed by the creation of the French Blood Establishment (*Établissement français du sang*) and the simplification of blood collection and treatment centres, with a principle of one per region. Finally, in 1993 the French Fractionating Laboratory (*Laboratoire français du fractionnement*) became responsible for preparing all the stable blood products derived from plasma.

Since the end of the 1940's, the French State controls the Blood organisation: for example, the Ministry of Health delivers the approvals of CTSs and the authorisations to collect blood or to prepare blood derivatives. The price setting of the blood products is other one of the responsibilities of the State. This price policy influences in a decisive way the functioning of the economy of the blood products. This policy shapes also the French Blood organisation.

The economy of the French blood transfusion is based on sale prices determined by public authorities. These prices are calculated according to the cost of the collection and the preparation of products: propaganda for the gift, the salaries of the staff of collection, equipment, preservation, tests made on the blood bottles, etc. The transfer price is the sum paid by hospitals for the supplies in blood and by regional centres of dessiccation then regional centres of fractionation. The centres of dessiccation pay the CTSs in cash either retrocede an equivalent in plasma of the blood which was delivered to them.

This system of sale prices is set up between 1947 and 1953, date of publication of the first orders of the sale prices of the blood products¹⁵. From the 1960s, this valuable system shows itself stiff and unsuitable for the realities of the blood transfusion. In most of the CTSs and because of a defective management, the cost price of the blood bottle is upper to the transfer price fixed by public authorities¹⁶. This price does not allow to make profit, in the respect for the spirit of the law of 1952. But in the facts, from one establishment to the other one, the situations are very variable and certain CTSs kicks away surpluses of their activity of collection. The revaluations of transfer prices are negotiated between public authorities and representatives of the CTSs: between 1953 and 1970, the upward of these price rate is very lower than the increase of the French price index.

Public authorities forbid to have reliable accounting data behalf of the CTSs justifying the required rises in prices.

At the end of 1960s, the price rates of transfer become a real stake in the relations between the Ministry of Health and the persons in charge of the establishments of transfusion. The CTSs diversify their activities and in particular prepare a larger variety of blood products, often at the price of expensive equipments. Many of them face cash shortage. Besides, public authorities do not supervise all the transactions: the transfers of plasma are made by mutual agreement till the end of 1970s between the establishments of transfusion.

In the 1970s, the needs for more specific and scarce blood products, for example, as factor VIII necessary for the treatments of the haemophilia, oblige the centres of blood transfusion to elaborate policies of products. The preparation of labile products is imperative to the supply of hospitals especially since these products have a brief life expectancy. The stable products, among which the treatments of the haemophilia, have a niche market: in the case of the factor VIII, the French production does not satisfy the needs of all the patients. However, the choices of the CTSs are determined according to several variables: the availability of blood and plasma, the complexity of the processes of production, the controls on products, the request, cost prices and transfer prices. These variables help to understand the reorientations of the French Blood organisation in the 1970s. The necessity of arranging big quantities of plasma for the fractionation, and thus the preparation of the factor VIII, incites to facilitate the use of the packed cells instead of the 'complete' blood used in transfusion. The transfer prices of the treatments of the haemophilia are the highest: CTSs worried of improving their finance turned to the preparation of these by-products which appear the best paid activity¹⁷.

So in the 1970s in France, the centres of blood transfusion proceed to arbitration between blood products according to their sale price, even if it has to generate imbalance. The preparation of the factor VIII comes along with the production of immunoglobulins in large quantities which it is impossible to sell on the national market. The search for financial resources incites to a valuation of the blood pack which is not still in compliance with the needs of the population even if the national self-sufficiency in blood products remains a priority.

These reorientations of the Blood organisation activities according to price policies generate grave dysfunctions at the end of 1970s¹⁸. On the one hand, stable products such as factor VIII are in France paid at a higher price than the international market price. So, numerous French patients choose imported products which are less expensive and more easily available. Conversely, labile products are much more expensive abroad than in France. On the other hand, transfer prices did not increase very much during 1970s while the prices of equipments and conveniences of the CTSs underwent the effects of the inflation. Finally, centres of blood transfusion are often confronted for lack of payment of their customers: it is in particular the case of the hospitals submitted to budgetary discipline.

The difficulties of the CTSs come mainly from the vagaries of the price policy. The transfer price of blood products is in principle based on a full cost basis. In fact, the price is negotiated between the representatives of the blood transfusion organisations, the Ministry of Health and the Ministry of Economics. The resulting price is subjected to several contingencies: a general financial constraint related to the fact that a third party (la Sécurité sociale) pay back the cost of blood products bought by patients; a local financial constraint since many hospitals which were already in a difficult financial position. This explains that many demands to reevaluate transfer prices did not succeed.

The revaluation of transfer prices of blood products collides with several internal obstacles within the organization of the blood transfusion. The Ministry of Health indeed requires that demands be justified by accounting data: however, these data are often incomplete and do not reflect the variety of the situations of the CTSs. Besides, the persons in charge of the centres of fractionation are most of the time in a strong position and obtain more easily an increase of the transfer price of stable products to the detriment of the prices of labile products, which are the main production of numerous centres. Changes in prices of blood products are thus linked to the balance of power between the various actors of the blood economy marked by the prominence of the activities of fractionation. Nevertheless this reality remains widely ignored and hidden by the rhetoric of blood donation.

Even before the tainted blood affair, this economy changed¹⁹. International competition made necessary an

adjustment of the prices of the French blood products. From the middle of the 1980s, the price of labile products steadily increased whereas the price of stable products decreased. This harmonization was necessary all the more as the stable products were becoming medicines that should be managed in compliance with European regulations. This new price policy aimed as well to make less attractive the production of blood derivatives which the sanitary quality was then most difficult to guarantee.

Simultaneously, a process of industrial concentration was at work: by the end of 1980s two centres (Lille and Paris) were in charge of the production of factor VIII instead of seven previously. From 1993, the determination of the prices of the stable products escapes public authorities: it is within the competence of a new actor, the French Fractioning Laboratory. It becomes easier to determine the cost prices of these products in the presence of a unique producer.

The organisation of the blood transfusion system in France radically changed since the 1960s, contributing to the "commodification" of blood products. This commodification went along technical changes related to the production and consumption of blood products. However, this commodification deserves to be scrutinized to get a better understanding of the stakes in the economy of the blood products. First, prices of blood products are crucial for understanding the transformations of the Blood transfusion organisation in France and its shortcomings in the beginning of 1980s. Second, transfer prices introduced very early into the world of blood transfusion something that looked very much to market principles. The French Blood organisation was thus quartered between an industrial and commercial point of view and a strong commitment to the policy of free, voluntary and anonymous gift. The reforms adopted after the tainted blood affair reduced the gap between these two approaches. Finally through the EFS and the LFB, endorsing the responsibility to offer safe blood products, the French State acknowledged the existence of a market in blood derivatives while working at the conservation of the gift.

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Last article (forthcoming): L'épreuve du vivant : santé publique et marché en France depuis les années 1970. In: Le Mouvement Social, octobre – décembre 2009, 79-101.

Endnotes

1Loi 93-5 du 4 janvier 1993 relative à la sécurité en matière de transfusion sanguine et de médicament, *JO*, 5 janvier 1993, article 2.

2Waldby, C. and R. Mitchell, 2006: *Tissue Economies : Blood, Organs and Cell Lines in late Capitalism*. Durham: Duke University Press; Cherry, M.J., 2005: *Kidney for Sale by Owner. Human Organs, Transplantation and the Market*. Washington: Georgetown University Press; Scheper-Hughes, N. and L. Wacquant, eds., 2002: *Commodifying Bodies*. London: Sage Publications; Strasser, S., ed., 2003: *Commodifying Everything. Relationships of the Market*. New York: Routledge; Ten Have, H. and J. Welie eds., 1998: *Ownership of the Human Body*. Dordrecht: Kluwer Academic Publishers.

3Ruffié, J. and J.-C. Sournia, 1996: *La transfusion sanguine*. Paris: Fayard; Chauveau, S., 2007: Du don au marché: politiques du sang en France (années 1940-années 2000), In: *Mémoire inédit pour l'HDR*, Paris: École des hautes études en sciences sociales.

4Surgenor, D.M., 2002: *Edwin Cohn and the Development of Protein Chemistry, With a Detailed Account of His Work on the Fractionation of Blood During and After World War II*. Harvard: Harvard University Press.

5The terminology used throughout the contribution uses the designation 'blood' to refer to whole blood as obtained after blood-letting and only combined with substances to avoid coagulation. 'Blood products' refers to the fractionating of cellular elements, separating or concentrating them. From a medical point of view these products are considered as cellular and labile since their living tissular nature significantly limits their conservation. 'Blood-derived products' refers to the more stable entities that are purified from human plasma and that in the 1990s received the label of medicaments of human origin.

6Rigal, C., 2003: *Contribution à l'histoire de la recherche médicale : autour des travaux de Jean Bernard et de ses collaborateurs sur la leucémie aiguë, 1940-1970. Thèse en histoire des sciences*. Université Paris VII; Dausset, J., 1998: *Clin d'œil à la vie : la grande aventure HLA*. Paris: Odile Jacob.

7Carricaburu, D., 2000: *L'hémophilie au risque de la médecine. De la maladie individuelle à la contamination collective par le sida*. Paris: Anthropos; Wailoo, K., 1997: *Drawing Blood. Technology and Disease Identity in Twentieth-Century America* Baltimore: The Johns Hopkins University Press; Wailoo, K., 2001: *Dying in the City of the Blues. Sickle Cell Anemia and the Politics of Race and Health*. Chapel Hill: The University of North Carolina Press.

8The preparation of immunoglobulin began in the 1950s, in particular within commercial enterprises. This production was rather peculiar in that it required the donation of a special type of blood. Donors were chosen for having already been immunised against the disease that was targeted. Sometimes they were also immunised artificially in order to get plasma of a satisfactory quality. These practices were organised starting in the early 1960s, with the vaccination of donors being regulated. Immunoglobulins were prepared following very precise protocols which meant that these blood derivatives were practically considered to be medicaments. The ambiguity of the status of these products is evident in the history of the Mérieux Institute, but this story is too long and complex to present here. See Chauveau, S., *Du don au marché...*, op. cit., 85 sq., 545 sq., 603 sq.

9Carricaburu, D., 1993: L'Association française des hémophiles face au danger de contamination par le virus du sida: stratégie de normalisation de la maladie et définition collective du risque. In: *Sciences Sociales et Santé*, XI, 3-4, 55-81; Carricaburu, D., 2006: *L'hémophilie au risque de la médecine*. op. cit.; Fillion, E., 2006: *À l'épreuve du sang contaminé. Expérience des acteurs de l'hémophilie et reconfiguration du monde médical*. Thèse en sociologie, Paris, Ecole des hautes études en sciences sociales; Bastin, N., J.-M. Stievenard and M. Vinchon, 1977: Épilepsie et hémophilie : la lutte contre leurs effets de stigmatisation. *Revue française de sociologie*, XVIII-4, 651-677 ; Chauveau, S., *Du don au marché...*, op. cit., 550-577.

10Carricaburu, D., *L'hémophilie au risque de la médecine*, op. cit.

11Chauveau, S., *Du don au marché...*, op. cit., 82 sq.

12*Ibid.*, 82 sq.

13*Ibid.*, 502 sq.

14*Ibid.*, 775 sq.

15*Ibid.*, 78 sq.

16*Ibid.*, 282 sq.

17*Ibid.*, 425 sq.

18*Ibid.*, 605 sq.

19*Ibid.*, 750 sq.

Debt and Gratitude

By Lea Karpel

The great difference between blood or organ donation and gamete donation, namely in France, oocytes, sperm or embryos donation, is the fact that reproductive cells are linked to the sexuality of donors and recipients. The symbolic value of reproductive cells isn't exactly the same for a kidney that for a spermatozoid. Those reproductive cells are linked to sexuality and filiation. The second difference is that gamete donation allows giving birth to someone whereas organ donation allows to keep someone alive. The third difference is that gamete donation can effectively be discovered on the face of the baby born through gamete donation whereas a kidney is invisible outwardly. We go from donation of a tiny cell (an embryo = 0.16mm) to a person which brings up more important issues: identity and filiation. The last difference is in the French system of gametes donation. As for blood donation, gamete donation has to be free, anonymous and voluntary. However, new discussions arise to abolish anonymity in the case of gametes donation in the next bioethics law in France.

This paper focuses on oocytes donation. The first birth through oocytes donation was obtained in Australia in 1983. To give birth through oocytes donation, the infertile woman has to receive an embryo formed by the sperm of her husband and the oocyte of a fertile and unknown woman. The donor, the fertile woman, must be a mother and must be less than 38 years old. She receives hormonal stimulation to give several oocytes. Those oocytes, which are picked-up under general or local anaesthesia and are mixed with sperms, will give several embryos. Due to the hormonal stimulation, some women are at risk to develop "hyper stimulation syndrome".

Until 1994, couples could choose between anonymous donor or non-anonymous donor. Since the first bioethics laws in 1994 in France, only anonymous donations have been authorized. Couples are facing difficulties: lack of spontaneous donors. Therefore, they have to find a volunteer woman to increase the number of donors in their IVF center. This penury is due to a lack of public information about gametes donation. Information cam-

paigns are very discrete on the subject, as opposed to the campaigns for blood or organ donation.

When a couple finds a women willing to donate her oocytes, they become priority in the waiting list of their reproductive unit. The delay can be reduced from 5 years to 2 years for obtaining oocyte from an unknown donor. The older you are, the more difficult it is to find a young mother willing to give her oocytes and open to accept the treatment freely.

These long delays in France push couples to "medical tourism". In Belgium, Spain or Greece, in 3 months, private IVF unit can offer an anonymous donation for 4000 to 8000 Euros.

In France, couples have to deal with the implication of two oocytes donors: the real donor, the unknown woman from which they will receive oocytes to make their baby and the symbolic donor, the woman they recruit to give her oocytes to their IVF unit. The real donor will be unknown to them and their child even though she contributed half of their child's genetic capital. She is chosen by doctors according to her phenotypic resemblance (colour of eyes, of hair, of skin and the size and the weigh) with the infertile woman. The symbolic donor will give her oocytes to a second unknown couple but she will still be in contact with the first infertile couple. The name of this system is the crossed donation.

One important issue arises within this system: How do relationships develop between donors and recipients? To answer this question, we realised a research in the reproductive unit directed by Pr René Frydman of the hospital Antoine Bécclère in Clamart (France). We contacted all parents (n=83) who gave birth to a child through oocytes donation between 1988 and 1998, before and after the first bioethics law (1994). We established a questionnaire incorporating questions about the attitude towards the real donor and the symbolic donor: the type of relationship before and after the donation.

Results:

60 couples of 83 participated in the research (14.8% lost by sight). Couples waited an average of 8.5 years (3-14 years) to give birth. For 68%, it was the first baby. All couples were still together. All couples but three chose anonymous donation. After 1994, if they had the opportunity 15% of the couples say they would have chosen non-anonymous donation. The medical indications for oocytes donation in this population are premature ovarian failure (52%), ovarian dysfunctions (14%), genetic disease of the mother (14%), IVF failures (12%), absence of ovary (6%) and chemotherapy (2%).

We studied the parents' feeling about the *real donor*, (the unknown woman). Results show that 63% of the parents don't want to know anything about her. 37% prefer to obtain information about this woman: 20% of parents want to obtain only medical information. 13% want to know everything about her. Only 2% want to know her name and 2% to meet her.

Table 1: Parent's attitude regarding the real donor

<i>Parents willing</i>	No information	Medical Information	All kind of information	Identity information	To meet her
<i>Rate</i>	63%	20%	13%	2%	2%

The relationships between the couple and the *symbolic donor* (recruited donor):

The recipients, in our study, found a donor for their center in their closest entourage and more and more far from their entourage. Half of the couples found a woman of their family: a sister, a cousin, a sister in law. 34% of the couples found a woman among their friends. 6% found a woman among their professional relationships. 10% of couples didn't know the donor before the donation. Someone among their family or friends found them the donor.

Table 2: Type of relationship with the symbolic donor

<i>Type of Relationship</i>	Family	Friends	colleague	unknown
<i>Rate</i>	50%	34%	6%	10%

At the question: "How did you thank the volunteer donor?", 57% of recipients answered that they thanked them by compensation: a piece of jewellery, restaurant invitation, or travelling. 10% of volunteer donor refused presents offered by the infertile couple. 33% of the couples preferred "continuous" thanking toward the volunteer donor or her family. They said that they are always ready to help her family by baby sitting her children or by others gestures, even many years after the donation (3 to 13 years).

Another unexpected way to thank the symbolic donor was to give her an important role in the baby's life. 41% of parents offered a role of godmother to the volunteer donor or a place of godfather to her husband, even if they were already aunt or uncle to the child (18%). This form of recognition encouraged us to call the volunteer donor: symbolic donor. The function of godmother- this word contains the word "mother" in many languages- is almost symbolic. It means that she is the mother in front of god. She bears the child on the baptism day and follows his spiritual development. The function is to ensure a protection to a child. In case of parental death, they could be the replacement of the parents although this relation no legal value. Another symbolic thankful behaviour was to inform first the volunteer donor of the child's birth, to the point that they would be first to arrive to the hospital sometimes even before the very close family, for instance the grand-parents.

By contrast, one quarter of the recipients at the moment of the study (3 to 13 years after the donation) had a broken off relationship with the volunteer donor. This rate exceeds 10% of the unknown recruited people originally.

Discussion

Anonymity:

Results show a great preference for anonymity, as 85% of the couples said that they preferred anonymity. Only 15% of the couples would have chosen the direct donation, non-anonymous if it had been possible. Moreover, we know that medical tourism for gamete donation is important. A large number of French couples choose oocytes donation abroad. It may not be free, but couples don't have to find a young mother willing to give her oocytes to their IVF unit. Abroad, the donation is direct, anonymous or not.

Secondly, the majority of parents (66%) preferred not to have any information about the real donor. Even if part of them wants to know the medical past of the donor, it is in respect of her anonymity. Only a small part of them were curious about her. Only 2% would have liked to know the real donor's identity. Putting the results show us that: even if recipients are in debt to the real donor forever, there is a defense mechanism. Parents' conscious or unconscious reaction is due to a fear of closeness between the real donor and the child, a fear of attachment, regret or even ownership of the donor.

The symbolism of donation:

Oocytes donation is not harmless. An oocyte is not only an object, but also a proof of love, of friendship that binds volunteer donor to a couple. A donation expects a *counter-gift* otherwise a debt remains. Receiving "the gift of life" from a close person involves a sense of gratitude, or even of debt. A life debt, according to the French psychoanalyst, M. Bydlowski, is usually the obligation of gratitude that children feel toward their parents. The debt settles at the conception. The particular place dedicated to many recruited donors at the moment of delivery shows an attempt of settlement of this debt. As mother themselves, the donors hold knowledge about motherhood that the young mother doesn't hold yet. Sometimes, symbolic donors are invited to come to the maternity hospital before the baby's grand-parents.

With the oocytes donation, it is not only to their own mother that those women can give life but to several people: the real donor, the symbolic donor and doctors from the IVF unit.

Couples attempt to settle their debt by offering compensations. But is there a gift equal to a life donation? In this manner, offering a compensation is a way to affirm that this receipt doesn't put infertile couples in a passive stance. By the offer of an important material or symbolic gift, couples attempt to reverse the situation of weakness and necessity. A material present has the advantage of including only donors and couples before the arrival of the baby. However, no amount of money, no jewel or trip has a sufficient value to equal a life donation.

Offering the symbolic place of godmother can be another symbolic way to settle their debt. The recruited donor is only a symbolic donor because she doesn't give her oocytes directly to the couple. Therefore, the compensation is, in turn, symbolic. Historically, the godmother was, first the grand mother, then an aunt and today a person that the parents judge able to be a symbolic mother for their child. By giving the volunteer donor a symbolic place, she enters the familial relationships.

However, we perceived an ambivalence infiltrating this symbolic return: many mothers described their symbolic donor as very (too) applicant of a place close to their child, recalling the picture of their child among other children of the donors, invitations almost inevitable to the anniversary of their child, or at the Christmas day, etc.

Other couples try to settle their debt in being always ready to do a favour to the donor's family. S. De Mijolla, a French psychoanalyst, says: "All kinds of donation bind the recipient ... in a relationship of gratitude, it means favour vis a vis the donor". Certainly, but during years, favours continue. Isn't it a way to pay more than they received? They pay to prove that the debt is inexhaustible.

Regarding the quarter of couples in this study who decided to cut off relationships with the symbolic donor, we may think that they want to escape from the feeling of debt. Their attitude is close to what S. De Mijolla describes: "The person who offers is stigmatised as a rich person, it costs nothing to give, he possesses so much that he doesn't pay attention to the fact that what he gave is entrenched". Thus, there is no debt, no favour or present to give. Regardless of their attitude towards the debt, everyone has to learn and pass over the relationship of dependence and gratitude toward their parents in order to become parent at their turn. It is the same thing for those parents with children born thanks to oocytes donation toward the real and the symbolic

donor. An eternal gratitude could damp their flowering ability to be parents. Even if the real donor is pulled away by the Law that lay down her anonymity, parents feel gratitude toward her. However, couples are facing with a double hindrance: "we take the real donor out but we open the door to the symbolic donor". Basically, whatever the involvement, real or symbolic, it requires an emancipating work, not only from the recipient toward the symbolic donor but also from the symbolic donor toward the recipients.

Filiations:

The great difference between blood or organ donation and oocyte donation is the fact that oocytes are not neutral. With the oocytes, the question of filiation emerges. The baby born through oocytes donation will keep the trace of this donation on his face and perhaps in his identity. The traces of the donation can be read on the face of the child. Parents cannot forget this act. What will happen if the child knows the circumstances of his conception? How to explain to a child this strange way to born?

Three kinds of behavioural reaction in the relationships developed between volunteer donor and couples of recipients. The first one is denial. Parents stop the relationship with the symbolic donor. Recipients don't want to have a reminder of their inability to conceive children on their own. Her presence would remind the couples of their need of a donor to become parents. They also have the fear of revelation to their children. Could she eventually tell the truth to the child? The second one is an unlimited debt. Recipients are unable to pay back their debt to the volunteer donor. Sometimes, the donor doesn't accept it. She doesn't need gifts because she pays something to her own life through the donation; for example an abortion. Sometimes, couples don't succeed in limiting the gratitude to her family. In this case, couples feel always in debt toward the volunteer donor. The third way is symbolization of the act. Couples are able to succeed in limiting the return to the donor. Couples offer a symbolic place for a symbolic act.

Putting the symbolic donor as godmother is an attempt to humanize the technical process. Couples choose a religious means that organizes the human life, from the very beginning to the end of the life. The religious means is a way to symbolize birth. It seems that where there is a temptation of reducing oocytes donation to a

simple gamete exchange, couples humanize the process. Godmothers and godfathers are registered in the database of a church or town hall during a religious or a non-religious baptism. This submission is literally and figuratively an inscription in the history of the family. This choice to give a role of godmother or godfather to her husband sets the idea that far away from thinking oocyte donation as a simple neutral process or to deny the importance of this act, couples find a symbolic way to humanize this new mode of procreation. However, whatever the way to pay back the debt to the volunteer donor, it is a displacement because the real creditor is an unknown person. Couples cannot repay their debt toward the real donor.

In the procreative world, oocytes, sperms and embryos can be exchanged. Since the new French bioethics law (2004), research on supernumerary embryos can be experimented during 5 years. Supernumeraries' embryos come from IVF attempts. In fact, IVF treatments allow the production of many embryos through ovarian stimulation. The good practice in France is to transfer in uteri two embryos and not more. Half of the couples keep on supernumerary embryos. The laboratories can deep-freeze embryos with a view to doing a new transfer. And yet, among the population with supernumerary embryos, we observe 40% of twins. Therefore, a large part of the couples doesn't know what to do with their frozen embryos. Law authorizes their destruction but they can be given to an infertile couple or to the scientific research too. Only few couples accept to give their embryos to research. They fear that researchers use a cloning technique on their embryos.

The reality is different. From embryos, researchers can obtain cell stems. An embryo is the original cell of the future human body. From 5 to 7 days after the fecundation, we can develop cell stems. Embryo at this stage measures 0.16 mm. Cell stems hold an important potential of regenerative cells, very interesting for the pharmaceutical industry. Today, therapeutic indications are diabetes, Parkinson's syndrome, heart attack, and some degenerative diseases. Those cells could be interesting for the production of virus for the vaccines. Laboratories could test their products. Cell stems can be used as a disease model because they can be reproduced with no limit and they are an important source of experimental tissue. However, the French bioethics law forbids any industrial production in a long course. This attitude provokes a scientific and an economic delay.

How can a couple bare the idea of his old baby dream, embodied by embryos, being transformed into future drugs? Giving their embryos to science is another way to pay back their debt to the society by helping science. The medical staff that helped them to have a baby is the same medical staff that now needs embryos to be efficient. There is a kind of moral contract between the medical staff and the couple. It is a take and give process. At first, these couples were eager to get embryos for being parents. Now they can be a source of embryos to help their medical staff to be efficient in the fields of medical research. Couples return the situation. Yesterday, they were

in need of embryos, today they have a surplus and they can be donor. They return a situation of passivity to a situation of activity. They accept, they don't have to give their embryos. Those embryos were so precious for the pregnancy but they became obsolete, troublesome. Now biologist and doctor need embryos. They are waiting for this object that becomes precious once again.

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