

# **Organs Gift Giving**

## **As Commerce Between Human Beings**

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Organs transplantation is most often considered under the light shed by the growing discrepancy between the number of people waiting for a graft and the number of body parts that are made available to them. This situation entails a huge amount of hope for patients that would have found no relief from the medical world some few decades ago; however, this situation entails as well a huge amount of pains and despair for those who await anxiously to the kidney, the liver, the lungs or the heart that would save their life. Throughout the following communication, this emotional dimension of the present topic of enquiry should be kept in mind; however, my socio-economic enquiry puts it at a distance in order to focuss on different layers of the transplantation and organ gift giving processes: the solidarity for cause of death and the organizational dimension of the processes. As it turns out, organs transplantation and gift giving involve a set of social relations that fall under the category of solidarity and it is thus possible to consider this issue in a way similar to the one that Émile Durkheim has set when he studied suicide in France and in Europe by the end of the 19<sup>th</sup> Century (Durkheim 1897). The first part of this communication will thus consider organs gift giving under this Durkheimian approach and will suggest to consider organs gift giving as an example of the social solidarity that living people have made up as a new way of dealing with death, whether actual or imminent, of strangers or their close relatives. This will lead me to considering the material dimension of the gift and the form of transplantation that could be inferred from it. The last part of the paper will focuss on the organizational dimension of this form of social solidarity since, contrary to common representations of gift giving, the organs gift giving does not occur during ceremonial feasts, gathering friends and kins, but it occurs in clean and over lighted operating rooms, full of sophisticated machines, in which professionals monitor the social relations that bind together the people confronted to death.

### **Commerce, Social Solidarity and Organs Gift-Giving**

I consider organs gift giving as a « commerce » between human beings. I use the word commerce in its old meaning, the meaning that was common in the 18<sup>th</sup> Century French language when commerce meant generally social relation. In that period, one could speak of the commerce of men and women, the intellectual commerce, the commerce of the world, etc., when one was

speaking of the gendered social relations, whether sexual or not, of the social relations among learned people in the Salons or the relations that one country entertained with the rest of the world. Commerce meant as well market commerce, that is market social relations and, in certain cases, this latter relations could have an explicit self interested component. Today, commerce is a word which meaning is mostly limited to the world of the market.

The ambiguity conveyed by this word, is precisely the reason why I have picked up to phrase the title of this communication. I have no particular taste for ambiguity — which is foreign to the scientific ethos — but this ambiguous word captures the ambiguity which is, according to my understanding, at the core of the issue. As it turns out, commodification of organs and marketization of the transplantation process is the big issue of many debates about organ transplantation, about this strange and scaring commerce that emerges out of the progress in medicine by the end of the 50's, and jumped after the discovery of immunosuppressive drugs (cyclosporine) in the beginning of the 80's.

However, the word commerce conveys the idea of social relations, an idea which is basically at the root of any sociological enquiry. This reason as well is important to consider at the beginning of this presentation. What are the main characteristics of the commerce involved in organs transplantation? Organ gift giving is a very specific form of gift giving since it is not a minor gift when one gives a kidney, or many organs after his/her death. As Kieran Healy puts it, this gift is the « last best gift » (Healy 2006), that is to say, as far as we consider the form of gift which is the most common — *post mortem* gift — this is the last gift since the donor is (brain) dead. Furthermore, in any case, *inter vivos* gift giving included, this gift is not a minor gift since the organs given will save the life of one or several people severely ill, some of them being on the verge of dying. Accordingly, the commerce involved in organs transplantation is a commerce deeply intertwined with death: most of the time the death of the donor and, almost always, the high risk of dying for the patient. Thus, the first main *social characteristic of gift giving in organ transplantation is the social solidarity due to the death, actual or potential, of one of their relatives.*

It is useful to add some few data at this point of the presentation. These data are important to convince the audience that organ transplantation is now a common surgery, at least in the wealthy countries of North America, Western Europe, and some countries of the Pacific Area such as Australia. In many other countries, this surgery is taking momentum (as it seems to be the case in Brazil) and is becoming a growing concern for the professionals and the population. Data gathered and published in the *Newsletter Transplant* by the Council of Europe for the last decade of the previous century show us that transplantations amounted to no less than 241,000 transplants of kidney, liver, heart and lungs in North America, Western Europe, Turkey, Australia and New

Zeeland. In 2004, the last year for which international data are available, these transplantations amounted to 55,800 and 58,500 if one adds transplants of pancreas and intestine<sup>1</sup>. It is important to emphasize that these data do not take into account the numerous grafts of corneas, skins, bones, and other tissues which are quantitatively more important. Out of these data, one can conclude to the normality of transplantation in these societies: normality in the Durkheimian sense, that is there is no wealthy country in which transplantation is not offered to the patients. To this, one can add the fact that the number of organs that are entering the field of transplantation is increasing (intestine for example) and it is also easy to trace out this increase in the countries which entered the field more recently in the successive annual data published by the Council of Europe. Consequently, I would like to stress the second main characteristic of organ transplantation: *the commerce and social solidarity associated to organs gift giving is a normal commerce in modern wealthy or developing countries.*

There is a third characteristic which is as well important for this preliminary definition. The commerce associated with organs gift giving and organ transplantation is in no way similar to the classical accounts of gift giving that everybody knows. This commerce is very different from the one described by Bronislaw Malinowsky or Marcel Mauss; it is very different not because of the nature of the gift, but because of the social environment within which gift giving occurs and is made possible. Organs gift giving does not happen during a ceremonial feast, gathering various kins, friends, and people political or socially bounded to the central characters of this commerce. Of course some of them are present, but this should not prevent us to take fully into account all those people who are instrumental in the process, all these people without whom the process could not occur at all: the professionals and all the technical machinery, logistic networks, expertise which are at work. They are at work for deciding who can receive a graft, and who can give an organ, which organ is given to whom, and how the organ will reach the patient. To sum up, I would like to make clear that *this gift is an organisational gift*. As it turns out, *organs are given to the medical organization and, then, the medical organization allocates it to the patient.*

My preliminary definition is thus: *organs gift giving is a normal commerce between human beings belonging to wealthy or developing countries. This commerce is a form of social solidarity*

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<sup>1</sup> Data concerning Brazil indicate that transplantation is significant. The number of transplantations (heart, liver, pancreas, kidney and lung) amounted to a total of 4,762 in 2004 and 4,745 in 2005 (data provided on the website of the Associação Brasileira de Transplante de Órgãos, [www.abto.org.br](http://www.abto.org.br)). These data are of interest as well for two reasons. Firstly, they indicate that Brazil is following suit to the American strategy fostering living donations (178 and 197 for liver and 1,604 and 1,594 for kidneys ; that is about 19-20% and 48-47% of liver and kidneys transplants come from living donors); secondly, a non sophisticated comparison between Brazil and France shows that Brazil is still beyond the European and North American rates of transplantation (number of transplantations / population). This rate amounts to 56 transplants per million people in 2004 in France, whereas it is less than the half in Brazil, with 25 pmp.

*related to death or the prospect of death, a social solidarity that entails the mediation of professional organizations to which the gift is actually given before being allocated to patients.*

This definition is built in order to study a specific, but most important issue, the issue of commodification and marketization of the organ transplantation process. In organs transplantation literature, whether coming from individual persons or from the academic and the medical organization worlds, there is a strong emphasis on the gift, an emphasis which becomes stronger when market is suggested as a possible solution for the lack of organs by economists and legal scholars and the few professionals favorable to this option. However, this strong emphasis should not prevent us to understand that the issue of commodification is the important social and political issue of the moment. In order to study this confrontation between gift giving and the market, I suggest to take into account the four basic ways according to which resources are transmitted. In his *Système de politique positive*, Auguste Comte (1851, II: 155) noticed that wealth can be transferred from persons to persons through war, exchange, bequest and gift. I have tried to elaborate on this idea and thus I have endeavoured to take into account the law of bequest and life insurance since both are transfer of resource related to death, as I take organs gift giving to be. It is not by chance that the first law enacted in France (in 1949) for transplantation of corneas was built up as an extension of the law of bequest; furthermore, it is not by chance that the fiction of presumed consent introduced by Senator Caillavet, a former lawyer, was directly related to the fiction of parents equally loving their child which was set up for legitimizing equalitarian bequests in France in the beginning of the 19<sup>th</sup> Century. Similarly, it is not by chance that market architectures proposed these two last decades are looking like life insurance markets since contracts would decide what would happen in the case of the future death of the person, and who would receive the money corresponding of the value of the organs harvested. Such a contract would thus look like a life insurance contract for both the seller and the persons to whom the money would be offered.

Finally, I take this issue as a political issue in the following sense. According to Max Weber, sociology — and this applies to economic sociology, of course — has to deal with the social construction of institutions (markets for example), it has also to deal with the functioning of institutions, because, it is not enough to know how an institution was created, we have to know how this institution works, how it is monitored, etc. Finally, sociology has to deal with a last issue, a cultural or axiological issue: what kind of society will emerge out of the generalization of given social relations? This *Menschentum* issue was raised by Weber when he was wondering about the consequences of the generalization of market relations; in a similar way, we can raise a *Menschentum* issue wondering about the consequences of the generalization of body parts market relations and of the « optimization » of death as a resource for the medical organizations (Steiner

2007a). For these different reasons, I consider that this enquiry about of organs transplantation falls in the domain of economic sociology.

### **Which Organs For Which Commerce?**

In the introduction of this presentation, I have have considered that Durkheim's sociological enquiry on suicide could be helpful in order to study the social solidarity which is at the root of organ transplantation and the commerce between human beings for cause of death. However, in the present case, one has to consider something that Durkheim did not have to consider, but which plays an important rôle. In organ transplantation we cannot consider that organs are of minor importance: quite the contrary, following Bruno Latour's insight (Latour 1994), we must take into consideration the object, be it a body part, which is at the center of the commerce between human beings. Thus, I suggest to build a typology according to two dimensions of the organ as object in the commerce under consideration .

**Table I**  
**Organs as Material Constraint**

		<i>"Graftability"</i>	
		<i>Within Cold Ischemy</i>	<i>Delayed</i>
<i>"Harvestability"</i>	<i>Living Donors</i>	Lung, Kidney, Liver	-----
	<i>Dead Donors</i>	Lung, Kidney, Liver Pancreas, Intestines, Heart	Corneas

The first dimension is related to the use of the organ in a graft, thenafter the "graftability"; the second dimension is about the harvesting of the organ, thenafter the "harvestability" of the organ. Graftability introduces a basic difference among organs according to the possibility or impossibility to use them in a delay that goes beyond the cold ischemy (i.e. the time during which, once out of the donor's body and once placed in a cooling box on ice, the organ keeps its functional capacities: 36-48 hours for a kidney, 3-4 hours for a heart). The crucial element is whether or not the organ can be spared in an organ bank thanks to technologies of cryogenization. Harvestability depends of the possibility to harvest an organ on a living person without lessening in a significant respect his/her vital capacity. According to these two dimensions, we have the following typology (Table I) for solid organs (blood, bones, skin, semen and eggs not included).

The material element conveyed by the organ is important for understanding the form of

commerce between human beings. This is the case when one takes into account the logistics of the transplantation process. With a dead donor, transplantation must take place in the short period of time given by cold ischemy: the process falls thus under a strong time constraint. Time becomes the real concern of all the professionals involved, and the feeling of urgency is an overwhelming feeling from top (the people in charge of monitoring the software which determines who will get the organ) to bottom (the nurses working for the organs procurement organization). There are two reasons for such a concern. Firstly, the professionals have a very limited control over the death of the patient; secondly, most of the time, a dead donor involves the harvesting of several organs and thus several transplantations should be organized in a very brief period of time<sup>2</sup>. The situation is quite different in the case of a living donor. Then, the professionals can plan the transplantation according to the disponibility of transplant teams, operating rooms, the health status of the patient and of the donor. The organizational constraint is also less difficult to manage because there is only one organ which is harvested and thus only one transplantation to plan.

The strong time constraint disappears as well when the organ harvested can be spared in organs banks. For the present enquiry such a situation occurs for corneas. As a consequence of the intervention of an industrial process, transplant teams may plan their work compared to what happen with organs that do not offer this possibility.

There is more to say about this typology. An important point comes from the fact that several organs can be harvested either on living or on dead donors. This introduces a major « choice » for the societies that offer transplantation as a therapeutic technique to their citizens, and this choice has important consequences. Firstly, when living donors enters the field, then the possibility of commodification of organs becomes a real concern<sup>3</sup>. Secondly, living donation entails that transplant teams harvest a kidney to somebody who is at risk with the surgery and who cannot benefit in a direct way from it: thus the old medical moto *Primum Non Nocere* (First, Do No Harm) is violated. Thirdly, living donation raises the most complicated issue of the motivation of the donor. Finally, one should be aware that the only country, Spain, in which waiting lists are decreasing, is a country in which living donation is most uncommon (about 3 %); an example that

2 Data provided by the French organization (L'Agence de Biomédecine) indicates that about 3 transplants follow the harvesting of organs from a dead donor. Data from the UNOS, in the United States, are of a similar magnitude. But the actual number of transplantations to perform under a strict time constraint can be much larger, 5 or 6 is quite common.

3 This claim comes from the fact that organs procurement on dead donors are very strictly regulated by the medical and legal organizations. If one adds to this decisive fact the second decisive fact of urgency, the commodification of *post mortem* organs gift giving can be taken for a very improbable situation. However, such a situation cannot be straightforwardly ruled out, since commodification could take place as soon as a government would be ready to make a market out of the use of the cadavers of people condemned to death penalty. Many rumours of such situation are spread about China which is suspected to sell organs to patients coming from Israel, Japan or the United States, advertising that the period of execution is a fairly good period to get a good graft. But, for the moment being, I have been unable to get piece of evidence that are credible enough to document accurately this situation.

can make think twice before entering this process.

Out of these elements provided by the material dimension of the organ, it is possible to define two forms of commerce involved by transplantation, and these two forms can be considered as the two poles between which the other forms will take place.

*Post mortem* gift giving raises the issue of the will of the « donor » (actually, in most case, the donor is the family and not the person whose organs are harvested, since very few people have indicated what their will is in the case they turned to be brain dead). This commerce involves the harvesting of several organs and thus the performing of several transplantations under a strict time constraint; the length of the relational chain is long because the allocation of organs implies the working of impersonal software devised to achieve some kind of social justice and because the geographic and social distances between the donor and the patients may be important. The gift is thus a gift to strangers, unknown to the donor. *This commerce involves a societal solidarity with a plural gift to strangers.*

*Inter vivos* gift giving raises the issue of the motivation of the donor. This commerce involves the harvesting of only one organ (most often a kidney, even if giving one lobe of the liver becomes more and more common, for example here in Brazil). The gift is allocated to a patient, known to the donor, usually a member of the kin or a close relative; the relational chain is thus short. *This commerce involves a familial solidarity with a single gift dedicated to a specific patient.*

### **Forms of Commerce and Forms of Commodification**

Each of these two forms of commerce goes along with specific forms of commodification. The crucial point is the existence of *inter vivos* gift giving. When such a gift is possible or, better, when the political and medical organizations are exhorting the population to consider the idea of living donation, then the marketization of the transplant process becomes a real issue. However, there is as well a second form of commodification which is already at work in actual transplantation systems. This form involves organs banks that are offering the possibility of a delayed use of some organs thanks to the technique of cryogenization. Accordingly, there are two different forms of commodification: one through industry, one through the market. Let's consider further these two different cases.

In the case of a pure market relation, that is to say a relation in which one person sells his organ to a buyer, either the patient himself or an agent of the patient, the general reaction is negative. The American reaction to the creation, in 1981, by Dr Harvey Jacobs of a company — International Kidney Exchange Limited — which aim would have been to trade kidneys is clear enough: a federal law (the National Organ Transplant Act, 1984) was enacted in the following years

to rule out the marketisation of organs<sup>4</sup>. Even economists eager to give the largest extension of market relations are aware that such market relations are of a dubious value because of the probable negative reaction of a large part of the people. So, they do not consider the so-called « spot market » as a possible solution (Steiner 2004).

The commodification of organs is nonetheless easily accepted in a specific instance. As we mentioned earlier, *post mortem* gift giving may involve the organ banks as a mediation between the donor and the medical organization. In that case, commodification steps in through the market relations between professionals as soon as the organ banks are for profit companies. However, this form of commerce does not make a great stir. Why is it so? There are two reasons that may explain this situation. Firstly, commodification of the gift occurs among professionals, that is among the people working in the organs banks and the hospitals. The laypeople are not directly involved and, most of the time, it is likely that they ignore the existence of this market step within the chain going from the donor to the patient. Secondly, the intervention of organs banks means that stricter norms of quality are implemented: this can be ascertained with the data related to the percentages of tissues and organs that are ruled out because they do not meet the quality required for cryogenization<sup>5</sup>. The importance of purity is central in organs transplantation, a process for which it is relevant to use Harrison White's approach in terms of Arena and matching processes (White 1992; Steiner 2007b). Accordingly, commodification of the commerce between human beings meets a strong demand of the professionals and the laypeople, on the one hand, and is less visible on the other hand.

However, the issue of commodification does not stop at this point. The reason is straightforward: everywhere in the world — but in Spain — the number of people waiting for an organ is growing every year. Accordingly, in the academic milieu of lawyers and economists and in the medical organizations, a current argumentation runs as follow: due to the shortage of organs for transplantation, due to the existence of wealthy people ready to pay for an organ, due to the presence of poor people ready to sell a kidney for making a living for them or their family, sooner or latter a set of prices will permit self interested behavior to enter illegally this commerce between human beings. It will happen that a high price will be offered by the rich, so that the illegal

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4 It is a another question to ascertain that such market relations do not exist in some parts of the world. Some countries (Turkey, China, South Africa, India, etc.) are a concern for people trying to prevent such market relations. However, the issue is to know whether these countries have created a market or if there are tolerating some kind of black market, or worse, if they are more or less officially trading the organs of the poors, the people condemned to death penalty, on an international level.

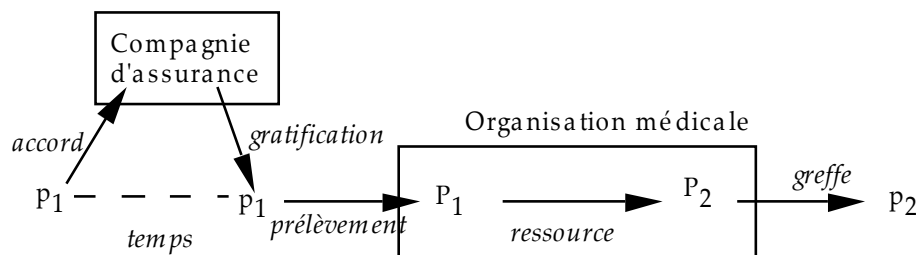
5 Attrition rates are high in the organs banks: 46 % of the corneas, 14 % of bones, 26 % of femoral heads, 24 % of the skin, 63 % of the veins received are eliminated in the French organs banks (EFG 2004: 451). Attrition rates are much lower in the case of solid organs: 13 % for hearts, 7 % for liver, 12 % for lungs, 6 % for kidneys, with an exception for pancreas which attrition rate amounts to 38 % (*ibid*: 140).

organization will make a profit of the transplantation while paying a (relatively) low price to the seller who will get, nonetheless a huge amount of money compared to his annual revenues<sup>6</sup>. Thus, black markets are more than a concern, the rational account of their possible existence considers that they do exist<sup>7</sup>.

Accordingly, the fear that such a market exists have led to the creation of two intermediary forms of commerce related to organ transplantation. The first form, which is actually gaining momentum, is what I will call the pseudo-market; the second form comes with sophisticated *inter vivos* gift giving, in which the difference between a gift and an exchange is blurred.

The first form of commodification is what I call a pseudo-market (Graph I). A pseudo-market is characterized by the intervention of an insurance company or an organization belonging to the welfare state which will « buy » from the citizen the right to harvest their organs in the case they die in the appropriate conditions (brain death). The revenue of this transaction will be given to the people designated by the seller: his family or any charitable association he may wish to choose.

**Graph I: pseudo-market**



Pseudo-market have some specific advantages. Firstly, the expression of the seller's will is made in a quiet setting, foreign to the pain that is associated to the present process in which grieving families are asked to consider the gift of organs of a suddenly died relative. Secondly, the « price » will be an administrative price set by the administration of the medical sector in such a way that the cost of a transplant will stay lower the cost of dialysis in the case of kidneys — as it is presently the case (Charro & Witt 1997; Kaló 2003). Thirdly, pseudo-market offers the advantage to enlarge the distance between the profanes involved in this process: there will be no contact between the seller and the patient, the professionals will not be involved in this transaction and, finally, the seller

<sup>6</sup> The Council of Europe mentions in its rapport the following prices: 10,000 \$ for the seller and between 100-200,000 \$ for the buyer. The difference is large enough for the illegal medical organization making a profit.

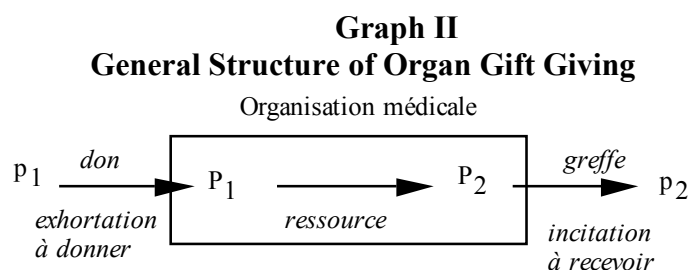
<sup>7</sup> Whether or not they really exist is a different story. It is unlikely that such markets can exist without the (passive) acceptance of the political administrations of the countries involved. Firstly, transplantation involves a complex logistics for getting the organ, for the various biological tests to be performed, and for the follow up of the patient after the transplantation, notably for dealing with the various episodes of rejection. In brief, there is an issue of trust: are the foreign professionals professional enough so that I can take the risk to get a graft from them? Secondly, when the grafted person comes back in his country, he still is in need of the aforementioned follow up, not to speak of the pharmaceutical drugs that he has to take on a daily basis. This last element of the situation renders quite easy to know who have got a graft in a foreign country and to trace out the existence of an illegal market.

himself will be put at distance of his own decision since the harvesting is only a possible, unlikely, future event<sup>8</sup>. One can add to this description of a pseudo-market, the further possibility to provide incentives to the professionals in order to get from them a higher attention to the possible donors that are brain dead in their intensive care units.

Innovation in the commodification of the gift is also at work in the case of *inter vivos* gift giving. Among the recent developments in this field, I would like to single out two of them. Firstly, *inter vivos* gift giving is no longer associated with familial solidarity since societal solidarity is now explicitly considered with the so-called 'Good Samaritan' live organ donation or with the gift of friends and any emotionally related person. Secondly, the recent development of exchange of donors among non compatible pairs of patients-donors open the way to a generalized exchange of gift which departs from strict familial solidarity; but this innovation will be considered more precisely in the final part of this presentation.

### Organizational Gift and the Social Capital of the Patients

So far the presentation has focussed on the possible way through which commodification can enter the field of organ transplantation. This presentation has led us to consider as well situations which depart from the polar opposition (*post mortem* versus *inter vivos* gift giving) that I have used in the beginning of the paper. I will consider further one of these intermediate situations in order to stress the organizational dimension of the gift in the case of organ transplantation. In all the schemas that I have used in this presentation, one may notice that the medical organization is always at the very center of the process and this explain why I said at the outset that the gift of an organ is a gift to the professionals (graph II): the single exception being *inter vivos* gift when the gift is a direct and personal gift from a member of the family to another one. However, even in this exceptional case, it remains that the medical organization is still central for deciding if someone may give, what and to whom.



Organ gift-giving is thus an organizational gift in the sense that two persons cannot entertain such a commerce without the intervention of the medical organization and its professionals.

<sup>8</sup> The similarities between organ transplantation and life insurance are then most important to notice.

Accordingly, the central place in which this commerce occurs are operating rooms and rooms in which highly sophisticated machines are gathered in order to define the condition and possibility of a given commerce. In this sense, I would suggest that *organs gift-giving is embedded in an organizational context*. This statement is worth considering further, even if recent works have converged for providing some lights on this important dimension of organ transplantation (Healy 2000, 2004; Steiner 2001, 2004).

The gift is organizational as well because it put the organization under the pressure to succeed in its exhortation duty, that is to say in its capacity to convince persons to give their organs or the organs of their relative to the organization. This is not an easy task, and it is common knowledge that organizations involved in organs transplantation are spending a lot of their resource for achieving this goal<sup>9</sup>, through informational campaigns, financial support to living donors, etc. There is as well a second dimension of this exhortation duty with the work in direction of the professionals themselves. As surprising as this may be, the compliance of the professionals cannot be taken as granted: it is necessary to induce them to do their job and, for example, to induce them to comply with the required request procedure, a procedure that some finds difficult to implement when the family comes from an ethnic minority whose language or whose attitude towards the organization appears too foreign to the culture of the professionals. The same may happen when the brain dead donor is a child who has suffered from family bad treatment or abuse. Nonetheless, as the Spanish experience demonstrates, this exhortation duty appears instrumental in the general success or failure of the medical organization when the number of organs available is used as a benchmark.

Finally, in a Colemanian way (Coleman 1984, 1990: part IV), this gift is organizational in the sense that persons are directly confronted to the medical organization. Accordingly, in such situation persons' support is either some kind of organization (for example, an association of transplanted people) or their own social capital. This last resource is instrumental in some specific instances, and particularly in *inter vivos* organs gift giving since in that case, the patient has to get a sibling or a relative willing to give. Let's consider a new form of our commerce between humans being that will exemplify the importance played by social capital.

As the present situation in organ transplantation is dominated by the lack of organs compared to the rising number of people waiting for a graft, some countries, and notably the United States, have made a great effort to get kidneys from living donors. Living donation in the United States is now more important than *post mortem* donation (6,648 kidneys versus 6,326 in 2004). Nonetheless,

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<sup>9</sup> Data on the budget of the Spanish Organización Nacional de Trasplantes indicate that 16 % of its budget (that is 2 millions €) are dedicated to this task. In the United States, the recent Organ Donation and Recovery Improvement Act (April 2004) allocates 25 millions dollars to this exhortation task, 15 millions being dedicated to paying back the cost of donation in the case of living donations.

the number of organs available is still too meager to meet the medical use of them. This has created a situation favorable to innovation in the medical and in the academic fields. Among these innovations, I would like to consider a most recent one because of its novelty and because of its interest for the present reflexion on the rôle of social capital. This recent innovation is labelled *Non Compatible Pairs of Patient – Donor Exchange*; and this innovation is now implemented in New Jersey on an experimental basis — two other states are considering this possibility as well.

What it is all about? *Inter vivos* gift giving is based on a patient in end stage renal failure (ERSD) who has a sibling or a friend willing to give him a kidney. However, the will to give is not enough, because there are biological constraint to be met. Among these constraints are blood compatibility (A, B, AB and O groups) and tissues compatibility (HLA histocompatibility, with six main groups). So, it may happen that a pair of patient – donor are incompatible. Confronted to this situation the American Medical Association has suggested, some few years ago, to consider exchange between incompatible patients – donors pairs: that is donor A will give to patient B and donor B will give to patient A. This is direct exchange and this does not work very well because it takes a lot a chance for an incompatible pair to know that there exists a non compatible pair that could make these two grafts possible. How to go beyond this unfortunate situation? The innovation was provided by a mathematical economist from Harvard, Alvin E. Roth (*et alii* 2004, 2005a,b; Saidman, Roth *et alii* 2006), who has proposed a matching process for this situation, creating thus a new organizational setting for organ transplantation.

How does it work? The first step is to create a data base, ideally at the national level, to register all the non compatible pairs. Then, a «Kidney Exchange Clearinghouse» will organize exchanges between these pairs of non compatible patients – donors. The patients choose the most fitted kidney among those available on the database or they choose to be on a priority position on the waiting list in order to get a good match from a *post mortem* harvested kidney, or finally they can choose to wait for the next matching process if they believe that there is not yet a good match for them. It is further supposed that donors have the same preference than their patient. On this basis, the mathematics of pure economics has given birth to a software looking for cycles (a closed set of patients – donors exchanging their donors) or w-chains (an open set of patients – donors since the head of the set will receive a kidney from the waiting list and the tail of the chain will give a kidney to the waiting list). When such cycles and w-chains are discovered, the transplants occur and the matching process goes on until there are no longer cycles or w-chains. Simulations built on the data provided by the United Network of Organs Sharing (UNOS) show that this matching process greatly enhances the number of transplantations, diminishes the pressure on the waiting list (because the patients that formerly could not exchange their donors were entering the waiting list)

and meliorates the position of type O blood patients (type O are universal donors; however, they cannot be received but from O donors, who are always compatible whatever the blood type of their patient).

This proposition is most interesting, even if Roth's account is unsatisfactory on several points, points which may appear irrelevant for his brilliant « economic engineering » but which are most relevant from a sociological point of view. One should take into account the fact that this organizational gift is meaningless without the existence of people willing to give to a friend, a sibling, a child or a spouse a kidney and who is still ready to give it to a stranger in order to help the patient. In other words, without the relevant social capital this most interesting piece of social (rather than economic, since this is a curious economics in which there is no money, no price, no rate of exchange) engineering would not exist. Social capital is then the basic fuel of the whole organization and this is the resource of the persons and not of the organization, even if the latter can help the former to enlarge his/her social capital through appropriate campaign in favor of organ gift giving.

### **Conclusive remarks**

I would like to emphasize the differences existing between *post mortem* and *inter vivos* gift, since these two forms of commerce may give birth to very different forms of commodification, either through industry or through market.

I would like also to stress the growing importance of intermediate situation in which gift and trade are intertwined in such an extent that the best is certainly to come back to Marcel Mauss' own words. Any reader of Mauss' famous study on the gift knows that his words were *échange-don*, exchange-gift, that is an hybrid form between pure gift and pure exchange: of course, Mauss was aware of the ambiguity conveyed by the term. But the ambiguity is in the world out there and not in the mind of the scholar. What we have seen about some new forms of gift giving (between non compatibles pairs; for enhancing the position of a relative in the waiting list) and the growing tendency to cover the money costs of the gift show that this ambiguity is still present in the commerce we are dealing with.

I take the organizational dimension of the gift as an important point in organ transplantation. As I said earlier, from a practical point of view the gift is given to the medical organization — as far as the organization agrees with this gift — which then allocates the gift to a patient or the patient that the donor has in mind. This exemplifies the role played by social capital notably in the case of *inter vivos* gift giving, as this resource appears to be the main resource for the patients to enter this commerce between human beings. So, the issue of commodification should not make us forget that

the present society is made of a growing number of organizations as much as it is made up of market relations.

Finally, I would like to stress the solidarity involved in the two polar situations considered here. We have first a *post mortem solidarity* in which some people give to medical organizations the organs of a relative in order to save stranger's lives. This may entail as well the wish to give a meaning to a sudden and unexpected death. This solidarity goes through a most painful episode for the family involved. And there is no escape to this pain. Would the pain be less intense when the family would discover that the dead relative has sold his/her organs? Would the grief be less painful because the organs harvested will be paid 30, 60, 100.000 \$ (but to whom?)? Would the family be pleased with a « last worst escape » situation — to mimic Healy's title — in which one of them did not trust his/her family enough to let it decide whether or not to give his/her organs? Then, we have an *inter vivos solidarity* in which one is ready to make an important sacrifice in order to save the life of a person, a person who is known to the giver. This solidarity occurs in a different social setting, what I have called here the *social capital* of the patient, *a resource without which one must rely on the former type of solidarity, the societal solidarity*.

In any case, the commodification of this commerce between human beings would introduce a major change in the way people are ready to help others when confronted to death: a fate that nobody can escape. This commodification would bring the usual result that market brings: the elimination of social relations. Or, more probably, the fiction of such elimination, because, I cannot believe that the commodification of the resources that death offers through the progress of medical science can really rule out the social relations related to death.

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