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**Social Interactions and Enabling Institutions:  
The Economics of Microfinance**

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**Social Interactions and Enabling Institutions:  
The Economics of Microfinance**

*to Franco, Grazia Maria  
and Monica*

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*An economist who is no more than an economist is a danger for his fellow men. Economics is not a thing on its own; it is the study of an aspect of the life of man in society [...]. The economist of tomorrow (and sometimes of today) will certainly be aware of what to ground his economic advice on; but if [...] his economic knowledge is detached from any background of social philosophy, he runs a real risk of becoming a cheat, capable of implementing enterprising stratagems to find his way out of difficulties, but incapable of staying in contact with those fundamental virtues on which a sound society is founded. Modern economic science is subject to a real risk of Machiavellianism: the treatment of social problems as mere technical issues and not as an aspect of the general quest for the Good life.*

*Sir John Hicks*

*("Education in Economics", 1941 pp 6-7, Bulletin MSS)*

## *Introduction*

The aim of this thesis is to analyse how different relational structures, in the field of social interaction, can generate different institutional arrangements. A specific focus of research will be the development of relationships through credit markets, and the specific contribution of microfinance institutions.

The exploration of the linkages between ‘horizontal’ (non-hierarchical) and ‘vertical’ (hierarchical) relational structures is required in order to bring out the basic determinants and features of alternative institutional arrangements. In this area of research, the emerging ‘practices of trust’ as well as the identification of different levels and dimensions of interactions, play a critical role.

A central area of interest will be how specific institutions tend to enable and sustain the formation of social capital. The analysis of those institutions ‘that would enable people to have a good chance of pursuing well-lived lives’, will carry significant policy implications as to the governance of market institutions and the process of social capital formation. In this respect, some features of microfinance institutions will be considered.

Moreover, the provision of an analytical framework for the study of social and economic interactions will allow to reconsider the microfinance literature presented towards a relational approach. In this direction, it will be recognized that the economics of social networks could be a useful frame in which to consider both the concept of social capital in its multidimensionality and the credit-debt relation.

This thesis is structured in four chapters.

In chapter I, the conceptual analysis will be supported by historical considerations of different practices of ‘relational credit’.

We will examine some experiences from the past, such as the late medieval Montes Pietatis in Italy, up to Muhammad Yunus's system of group lending or Maria Nowak's individual methodology, in which the community takes up a fundamental role. The aim of this chapter is to provide an overview of the phenomenon of microfinance and to focus on the structural problems that the credit-debt relation presents.

The solutions to these informative problems developed in microfinance institutions, especially by establishing an overlapped credit-debt relation, will be considered both in an analytical and empirical frame. At this point, the idea of social capital as a sort of 'social collateral' will emerge.

This result leads, in chapter II, to a critical analysis of the concept of social capital. The framework proposed by Partha Dasgupta and the concept of 'enabling institutions' will be proposed and deeply analysed also with respect to microfinance literature. Moreover, just the development of the idea of 'enabling institutions' and the relevance of 'multiple and overlapping memberships' will underline the relevance of civil society, particularly of the 'model of open proximity'.

The aim of chapter III is to introduce an analytical framework for the study of economic and social interactions in view of assessing the phenomenon of microfinance and the working of enabling institutions. This effort will be conducted by distinguishing different levels and dimensions of interaction. The interplay between objective and institutional features of economic structures will be the first relevant aspect to study. Following this line of analysis, theories of non-selfish economic behaviour and the role of trust will be studied. Finally, this framework will allow the identification of a fundamental level of interaction. At this level, Adam Smith's concept of 'fellow feeling', developed in his *Theory of Moral Sentiments*, will emerge for its centrality.

In chapter IV some reflections will be proposed in order to understand the credit-debt relation. This objective will be pursued by overlapping those analytical instruments considered in previous chapters. These conceptual schemes will found a frame into the economics of social networks that provides a starting base of understanding.





## ***Microfinance: towards a new paradigm in economics***

### **1.1 Starting from history: new ideas looking for a new paradigm of relational credit**

#### **1.1.1 From history to economic theory: reasons for a methodological approach**

To understand the reasons of the birth and worldwide diffusion, since the seventies of the twentieth century, of microfinance institutions so that some have spoken about a real revolution (Robinson, 2001), it is necessary to look for in history the original ‘genus’ of this process which has very old roots. Such a study will give the possibility to analyse the innovation introduced in practice, particularly concerning credit and saving, understanding the original intentions and inspirations. In this paragraph attention will be focused on some institutions and organizations, particularly: the Mons Pietatis, the rotating savings and the credit associations, up to the most advanced types of cooperative credit banks, trying to show how these ones form an organically congruent cluster of historical experiences, which is at the basis of the modern microfinance.

As Hicks suggests in his *Theory of Economic History* (1969) the effort to be done is to identify those events that may be situated inside the groups of events which have a common interpretative

scheme, still remaining conscious that each one has its own specificity. Only making use of such interpretative structure, it is possible to get the dynamics and the way in which some transformations take place in the historical process. The analysis of such phenomena will also be focused on that imperfect great number of non market organizations which were born in order to satisfy some specific economic and coordinating needs. These ones are to be considered as 'living things', that means they are to be thought not as some simple systems of rules that will 'reduce them to some formulas', but as to some structures of 'rules and understandings by which the various grades in its hierarchy are fitted together' (Hicks 1969, 11). The way in which such structures of rules are formed, articulated and sustained, as we will see afterwards, may have a decisive weight.

According to Hicks, the first central stage in the historical process of elaboration of the credit-debt relation is constituted by the birth of the market and of trade skilled figures, the merchants. For them, still before the introduction of money, the contractual relations of commercial type had as natural extension those ones of credit/financial type. For these persons the need of a legal or a quasi-legal context, of a system of rules, which granted the protection of the property rights and the enforcement of the agreement, was an immediate need. As Hicks underlines (1969): 'The bargain has three constituents which soon become distinguishable; the making of the agreement, the delivery one way, and the delivery the other. As soon as this distinction is made, the agreement itself becomes no more than a promise to deliver. Trading is trading in promises; but it is futile to trade in promises unless there is some reasonable assurance that the promises will be kept'.

Such a need of granting that the promises will be kept, necessary condition for the development of a market economy, found its own answer within the same mercantile community. As a matter of fact,

the merchants, both in terms of commercial relations and of credit relations, based the possibility of taking up relations on credibility and so on the reputation they had within their own professional community. A reputation of good or bad contractor, related to previous relations, was sufficient to grant the creditor and, at the same time, gave to the 'credit worthy borrowers' the possibility of seeing practiced an interest rate lower than that one he would have got elsewhere.

It is important to observe, for the successive development of the analysis, how such type of credit relation implied a repeated and horizontal type relation among the merchants. They were linked by a system of relations, first of all of commercial nature, that strengthened to such a degree the credit-debt relation to make it possible without using other legal systems of enforcement. Moreover, they were put within that society called by Hicks the 'society of merchants', inside which any possible conflicting relations came to composition.

The process of development of a mercantile economy found therefore 'inside' the market what the legal institutions, the courts of laws, were not able to offer, that is a system of enforcement of the credit-debt relation. Such process has its own moment of turning point with the Renaissance, when the foundations for the development of modern finance were laid through the creation of a series of instruments fit for the composition of the credit relation (Hicks 1969; Bruni, Zamagni 2004).

First of all there was a problem to be solved, that is to make possible an enlargement of the group of those who were considered credit worthy and this initially was realized through the creation of a system which used an indirect knowledge. The use of the so-called 'bill of exchange' in the commerce and then the specialized use of personal guaranties was the first way through which the group was enlarged. A person could exploit the fiduciary and informative relation which had with another one who became the guarantee, in order to get

credit from a third person with whom he had not a direct relation. This kind of relation will be examined more deeply because it presupposes a not at all immediate relational structure and that presents elements of circularity among the three persons involved. The other way used was the specialization of 'middle men' that is of financial brokers who receive as a loan some money that they lend again to persons they trust in. The institution which specialized in such intermediation transaction is the bank whose existence is however fully linked to the possibility of applying an interest rate (1).

The credit relation outside the community of merchants appears even more complex. In such context the legal institutions are those which try to give an answer to the same problem of enforcement of the contracts. The instruments which are introduced to answer the demand for 'security' are mainly the pledge or the mortgage. Such material guarantees constitute, both from a legal and economic point of view, a very good instrument of insurance for the creditor. The first one, the pledge, even provides for a profit for the creditor who, in the event of insolvency, will have gained the right of property on a good which has a value higher than the loan itself. In the second case, that concerning the mortgage, the condition of the creditor appears weaker because the mortgaged property remains in property of the debtor and only the recourse to law enables him to acquire possession of the goods.

But such instruments showed immediately their intrinsic limit. As a matter of fact, those who have not sufficient goods to guarantee their debt are automatically excluded from the possibility of setting up a relation of credit. The other possibility is that they suffer the absence of guarantee with the payment of particularly high interest rate, usurer, because the transaction in absence of guarantee appears riskier.

Actually, as we will better notice dealing with the rotating savings and the credit associations (ROSCAs), at the same time and sometimes even before the development of credit relations inside the

community of merchants and the birth of the first financial brokers, informal methods of access to credit developed mainly in the village communities in a rural context. If for the merchants the financial relations are co-structured to those ones of exchange, at the same time in an agricultural economy, credit relations were present from the beginning. They were often “material” relation of credit necessary to give an answer to the needs concerning the productive process (2).

This kind of needs can hardly find an answer in the informal and not at all structured practice of mutual loans among members of a family or of a little community. Although very frequent, these relations substantiate in little prepayments and compensations without the practice of interest. Although this limit diffusely recognized, these practices, as recent studies show (Morduch and Rutherford 2003), are a very widespread and complementary instrument to the formal sector of credit.

This ‘historic-theoretic’ picture has shown how the birth and the development of the market and of those institutions necessary to its working ‘is largely a matter of finding way of diminishing risks’ (Hicks 1969, 48). In the following subparagraphs attention will be focused on three answers which have been given to the fundamental problem that the credit-debt relation presents. Such problem substantiates in the need of finding structures of relation and rules, institutions, inside which the relation between the lender and the borrower can take place.

### **1.1.2 The institutional innovation of “Mons Pietatis”**

From the 11th century, with a significant acceleration between the 13th and 14th century, the increased dimension of commercial relations encouraged, together with the figure of the merchant, the rise of the merchant banker. Particularly two figures of ‘bankers’ were

taking shape: on one side the great merchant banker who was able to mobilize huge resources for a large quantity of goods bought or sold in the various European markets as well as in the fairs of exchange; on the other side the smallest lenders who had a smaller ray of action often circumscribed to the urban context. On these last one who had as referent target the social categories of lower level, the condemnation of the church was stronger. This opposition reduced the credit supply creating a gap which was for a long time filled by specialized Jew agents. In such context the *Mons Pietatis*, which is considered ‘the first great institution of civil economy’ was born (Bruni, Zamagni 2004 personal translation).

Though there were some previous similar experiences, the first model of this new ‘institutional species’ can be found in Perugia in 1462. It started a long series of foundations, at first in the regions of Umbria and Marche and then in the Centre-Southern Italy, and then slowly it expanded in some European regions. Instead of focusing on the numbers of such phenomenon and on the evolution which will cause their transformation and will inspire the phenomenon of cooperative credit and of the popular banks, I will try to identify the inspiring principles and the newest methodologies which derive from the Franciscan reflection.

In my opinion, the decisive intuition which comes back as a fundamental element in the revolution of microcredit, considered as an instrument of economic inclusion, is that ‘the good Christian charity’ was not sufficient to support the less leisured classes in conditions of marginality in the great urban centres and generally all those who could not established a credit relation. Such intuition is very well expressed by Muzzarelli (2001, personal translation) when she says that ‘it was necessary to sensitize and convince that to invest one’s own money in taking care of men who needed an economic support, not of charity, was good for the others and themselves. It was a very good thing not only because a spiritual advantage would come from it

[...] but also for the concrete and immediate benefit consisting in making society more balanced and the city safer”.

Therefore, money was lent with a different “disposition”: the client was an active and virtuous person towards whom the city felt a debt of attention. The community, the civic, seems to enter in the affair as an element which certifies legitimacy not only to exchange, but also to credit. For this reason the civic community was led by the “Franciscan hammerers” to constitute a starting fund from which to draw for loans and the municipality to offer places where the Mons could be instituted. Reading the statutes ‘which seems to be written by A.Sen’ (Bruni, Zamagni, 2004) we can detect the instruments and the procedures used to ‘cure’ the need of credit.

Following San Bernardino’s (from Feltre) inspiring reflection, at the centre of the transaction which consisted in the anticipation of small sums of money, there was a pledge whose value had to exceed at least one third of the loan. If at the due date the loan had not been honoured the attached object was sold in periodical auctions. The Mons had as institutional duty the task of heading off such eventuality, making use of a high level of professionalism in the transaction which, at the same time, was charitable and banking. Let us examine how these two characteristics translated into practice.

The loans had to be of little value and the applicants had to swear to be really needy persons. The borrower’s revealed aims had to be lawful and virtuous. Such criterion was further limited excluding the strangers and all the applicants who did not present personally at the Mons (sometimes an intermediation was accepted on condition that guaranties were given on the borrower’s respectability) stressing besides an unavoidable condition which was the aim of the loan.

The loan which was typically of short term, from six to twelve months, could be honoured previously and, even when it had been put up to auction for default, the possible profit of the sale was given back to the owner. Finally, the features of efficiency and professionalism of

the banking transaction which had to be fully documented and follow standards of openness of the transaction, excluded from the credit-debt relation the typical usurer behaviours.

Immediately it can be understood how such structured organization had some significant costs of management. For this reason the Mons Pietatis practiced a lower interest rate compared to the market (generally from 4% to 12%, in the first period) and moreover it was calculated, unlike the private banks, considering the effective number of days.

The description done, could lead to a misunderstanding: the Mons, actually, had not as customers only the needy but also little artisans and farmers, that is ‘micro economic actors’ at different levels who, thanks to a small loan, could get through a period of crises relating to the economic situation or vice versa could lay the basis of the development of their business.

At the end of the 19th century in Italy there were 596 Montes Pietatis with huge capital that were no more only addressed to micro credit but also, together with Popular banks born, as Luzzati says, ‘with the same enthusiasm’, were a propulsive factor in the process of growth of Italy. Although the idea of constituting saving banks is the daughter of the passage to the manufacturing and industrial society of the 19th century, it shares with the Mons Pietatis not only a strong territorial attachment but also general social aims and a practice of credit on fair basis in terms of low interest rate.

### **1.1.3 Rotating savings and credit associations (ROSCAs)**

Notwithstanding the multiplicity and the variety of forms that such organizations have assumed in all the regions of the world, from tontine to the hui in Tapei, form tanda and polla in Mexico to the chit in India, from the “merry go rounds” in Africa till going back of six hundred years in Japan, the analysis that will be developed will try to



highlight the main features of the model to which these experiences refer to. The study concerns how a group of persons, tied by any degree of proximity, can put together some sums of money in order to make them then available to the members of the group.

A useful scheme to a better understanding of these structures is given by Rutherford (2000) who distinguishes three possible ways of saving/access to capital:

- (i) Saving up: that is to accumulate some savings in a continuative way in order to have then an amount of capital to draw from; this methodology is generally adopted through the help of deposit collectors who grant safe the accumulated money;
- (ii) Saving down: that is to get into a debt by a “money lender” to pay it off with a series of successive installments;
- (iii) Saving through: in this category we find the ROSCA’s or more in general all types of Saving Clubs which are based on a very simple and efficient structure.

The main element of this last modality is given by a group of persons (from 15 to 100 members) who together set in motion a continuous action of savings collection and transformation of savings into credits. Considering the simplest case, the fifteen members of the group meet regularly and deposit a pre-concerted fixed sum creating a capital which is given by turn to each member of the group. After fifteen rounds, all the members of the group will have deposited their fifteen shares of saving and received the deposited amount. At this point the cycle closes and it may start again with the same or other members. Such structure presents some extraordinary advantages: it is a transparent process which does not require costs of management (mainly of safe deposit because savings are immediately transformed into credits) and it is also based on horizontal relations inside often

homogeneous groups of persons. The sequence with which the members of the group receive the fund collected at each round is fixed in various ways: according to a previous agreement, a lottery or, finally, putting the members in the condition of gaining the right to get first to the fund, compensating the others for their patience in waiting for the successive rounds. But it is clear that such mechanism presents two main points of weakness:

(i) all the participants except for the last one have an evident advantage compared to the saving outside the group: in fact, for example, the one who obtains the sum in the fourteenth round can have the same amount of money that he would have obtained alone after fifteen periods of saving. In this sense for the last one it is the same to save into the group or alone in fifteen periods, that is to recognize that there is no economic incentive;

(ii) once that for a member of the group the turn to receive the collected fund of the round arrives, what is the reason that makes him to remain and pay all the shares of saving which will enable the others to have the same fund he had previously received?

(iii) From a theoretical point of view the first objection should make impossible the existence of the ROSCAs. As a matter of fact, the last member should have no incentive to take part in a mechanism which imposes him a rigid scheme of saving and that allows him to obtain a fund that he could accumulate autonomously in the same time (Armendariz de Aghion, Morduch 2005). That is there is a lack of what Anderson, Baland, Moene (2003) call the “early pot motive”.

Really the same authors speak about the existence of other advantages in being members of the group in which also the last one benefits and which explain the diffusion of the ROSCAs. The first one highlighted is the so called ‘household conflict motive’: the members, in the most part of the cases are women, find difficult to succeed in

saving in a domestic context ‘it is difficult to keep money at home as demands are high’ (from an interview to a member of a ROSCAs in Gugerty 2003), mainly because of their husbands’ pressure. For this reason, in order to take care of their sons’ education or to ensure their commercial activity a continuous flow of commodities to sale (Rutherford 2000) they prefer to take out of their houses, moreover in a surer place, the little sums set apart daily.

Starting from a sample of ROSCAs examined by Gugerty (2003) in his study in Kenya, it is possible to add another motive called ‘commitment to savings’. When one is not forced to save or better one is not put inside a containing system, structured according to some rules which stimulate and motivate continuously to the saving of little sums, saving becomes more difficult. Such empirical observation is supported by contributions of behavioural economics (Thaler 1994) in which the role of such mechanisms of commitment, especially in the case of weak self control, is stressed. Finally, the first problem highlighted comes partially to be solved with mechanisms and internal rules, for example the lottery for the settlement of the order, which reduce the perception of the inequity and leave space to certain degrees of flexibility.

As for the risk of not respecting the agreement by a member, several mechanisms of enforcement have been created. As I have previously underlined for the merchants, the first one consists in making the relation among the members of the group continue, that is to do so that there is the disincentive to defect from the game because this would involve the exclusion from future relations and so the loss of possible future gains. Therefore, cycle after cycle, would be selected only the “good” members excluding the others. For this reason Rutherford (2000) speaks about a relation of trust which is built through action: ‘trust is something that has to be built and rebuilt and thereby reinforced over and over again’. The role of trust, that will be deeply examined later on, remains a basic point to sound in the

analysis of the credit-debt relation in any form it occurs. It is interesting to observe how in Kenya the order, according to which the members of the group get to the fund, is decided on the basis of a sort of scale that puts in the last position those who are considered less reliable, that means less trustworthy (3).

This first instrument of enforcement could not be sufficient. The anthropologist Ardner (1964) remembers us that ostracism and exclusion from the participation to the public, social and religious life, also only potential, could constitute a further instrument of disincentive to defect. Finally, certainly the incentives to be part of a group of which we were speaking about, combined with the impossibility to accede to other financial basic services, constitute a great push to be and remain part of the group.

Some of the problems pointed out as well as some limits that the ROSCAs present, as for example the small amounts of money to which it is possible to accede, the impossibility of having some forms of long term insurance savings as well as the little flexibility of the system, are partly solved in more advanced institutions. These are for example the credit associations (also called ASCA) or the recent SafeSave group in which the greater capacity to answer to these needs discounts the introduction of a third subject external to the group who manages the fund (Harper 2002; Armendariz de Aghion, Morduch 2005).

The ASCA (accumulating savings and credit associations) presume the presence of members some mainly as borrowers and others mainly as savers. They are disengaged from the rigidity of the ROSCAs and can therefore save and accede to some capitals, according to the needs and not to a fixed program. In their more formal and advanced arrangement the ASCA are nothing but credit cooperatives.

#### **1.1.4 Credit Cooperatives: more complexity towards more flexibility**

The credit cooperatives, for a lot of aspects similar to ‘village banks’ promoted by FINCA, Pro Mujer and other ONG in the seventies, are rooted in Germany during the second half of the nineteenth century. Still before the known experiences of the credit cooperatives based on Hermann Schulze Delitzsch and Fredrich Raiffeisen’s models, in Germany at the end of the eighteenth century, the so called Sparkassen spread with the aim of offering a place where it was possible to accumulate in security savings receiving a modest interest (Guinnane 2002). Though these ones present interesting aspects and are often undervalued, we will concentrate in a comparative analysis of some aspects of the two main experiences referable to the two mentioned figures. These two models, the first one more linked to an urban context while the second to a rural one, spread in Germany during the 19th century and inspired the birth of a lot of similar experiences in Ireland, Italy, Japan, America, India as far as Bangladesh, where symbolically the birth of microcredit is recognized today.

The cooperatives of credit, based on Raiffeisen’s model, were private local institutions owned and controlled by their own members who acceded mainly to financial services of deposit and credit, but also to integrated services of providing and access to market. The decision-making process was based on the rule of ‘one head one vote’ and all the decisions concerning interest rates, amount of the loan etc., were taken in a democratic way within the frequent meetings organized. All those who came from the same local parish could enter the cooperative, regardless of income. A significant datum is that in 1912 over the 70% of these cooperatives were situated in places with less than 2000 persons (Guinnane 2002). Besides as the members were almost always active in the agricultural sector, a feature of the

loan, which met the needs of the productive process, was given by the structure of the loan with a period of amortization usually of ten years.

On the contrary in the case of the cooperatives based on Hermann Schulze Delitzsch's model, being mainly addressed in an urban context to artisans, merchants and small business men, short-term loans were practiced so as to meet the needs of more dynamic activities. But the substantial difference between the two models consisted in the fact that the Raiffeisen's model cooperatives presumed an unlimited responsibility of all the members which was not present in the urban credit cooperatives. This undoubtedly influenced greatly the institutional arrangement both on the decision making process in terms of participation and in the efficiency and enforcement of the creditor - debtor relations. Some signals of this can be found noting how in general, in the Raiffeisen cooperatives, there were mainly long term deposits granting an almost constant interest rate and that, unlike the others, did not need a considerable availability of liquidities (Guinnane 2002; Prinz 2002). Besides the unlimited responsibility of the members led these ones to a constant participation to the life of the cooperative so that to make them feel 'the Raiffeisen cooperative more and more an extension of their own business' (Prinz 2002).

The constant relation "face to face" in a context of proximity inside the village, the fiduciary links among the members and so the great weight that possible social sanctions acquired, were all mechanisms of enforcement which made stable and lasting such institutional models. Together with these mechanisms, which we can collect in the concept of "long term interaction", it is necessary to consider also the peer monitoring which was initially examined by Stiglitz (1990) and which then was developed by Banerjee, Besley and Guinnane (1994) specifically in the context of credit cooperatives. Their model focalizes the attention on the intervening relations among the members of a cooperative, in which, against a subject who obtains

a credit in order to make a productive investment, there are others who have a role of guarantee and of monitoring. It is evident that such model is potentially applicable also to a group of microcredit where each stands surety for the other one. In fact each member has an incentive to control because, from this, his future possibility to accede to credit will depend. We will go back to the problem of peer monitoring analysing recent contributions which try to individuate the fundamental dynamics and mechanisms of the group lending methodology.

## **1.2 The microfinance revolution**

### **1.2.1 From pioneers experiences towards a global phenomenon: leading concepts**

The slow and complex process of birth and diffusion of microfinance in the world has seen such a multiplicity of actors, as well as a variety and a richness of answers to the problem of credit access, and more in general to basic financial services, that it would be difficult to describe it in an exhaustive way. The aim of this paragraph is to provide a picture to the phenomenon which then allows a reading and a systematic comprehension of some of the most interesting experiences and methodologies.

In the seventies the approach followed by the international institutions in the creation of policies for development, specifically in the sector of credit, was based on the constitution of governmental agencies able to offer a subsidiary and low cost credit to productive activities in conjunction with the creation of credit cooperatives on the

Raiffeisen's model which were involved in the raising and management of saving. The modest results, especially the great losses and inefficiencies accumulated by the governmental agencies, brought the system and the methodologies adopted into question leading to a new 'bottom-up' approach.

At the end of the seventies the first pilot projects were set up by Muhammad Yunus in Bangladesh (1976) and in Brazil by ACCION (Americans for Community Cooperation in Other Nations), while in Africa the first saving and credit banks spread. With a decade of delay the first experimentations arrived in the north of the world in the United States in Chicago with the South-shore Bank and in Europe mainly thanks to Maria Nowak's initiative in France and in Eastern Europe (mainly Bosnia and Albania).

The microfinance was born, therefore, starting from an afterthought of development economics so that Ledgerwood (1999) clarifies that microcredit 'is not banking, it is a development tool'. It substantiates in the creation of institutions that recognize the right to the access of basic financial services to all those who are excluded from the financial system. It does not realize therefore only in granting credits, in such case we speak of microcredit but also in saving services, insurance, payment, money transfer and generally services to the productive activities. To such services others of non financial type are added. These are as decisive in the process of development such as for example the direct or indirect supply of social services (education and health), training and consulting services to enterprise. Such integrated approach has been adopted by a lot of institutions leading them to have the role of "social intermediation" especially for those persons who were in situation of social and economic marginality.

At about thirty years from the first loan in the village of Jobra in Bangladesh by M.Yunus, we analyse some data which allow to understand the dimension of the phenomenon and suggest some instruments of analysis. In the following tables are reported some



significant data taken from the *Microcredit Summit Campaign Report 2005*: the numbers (see Table 1.2.1) speak about a rapidly growing phenomenon which involves about 92 million of persons in the world with a current loan, 66 million among the poorest (about a half of these persons, before getting a loan were under the line of poverty in their country or received an income lower than 1 US \$ a day). Considering this last category of poorest it is significant that the 83% are women, that in absolute term means 55 million of persons.

If we separate the world aggregate datum into a regional one (Table 1.2.2) emerges how in Asia, a continent with huge needs (the 67% of the poorest in the world live there, that is of those under the poverty line of 1 US\$), it is possible to find about the 90% of the beneficiaries of microfinance services even if probably the data on Latin America are underestimated.

Table 1.2.1: Dimensions of the phenomenon and trend of growing from the first MSC Report 1997

Year	Number of Programs Reporting	Total Number of Clients Reached	Number of "Poorest" Clients Reported
12/31/97	618 institutions	13,478,797	7,600,000
12/31/98	925 institutions	20,938,899	12,221,918
12/31/99	1,065 institutions	23,555,689	13,779,872
12/31/00	1,567 institutions	30,681,107	19,327,451
12/31/01	2,186 institutions	54,932,235	26,878,332
12/31/02	2,572 institutions	67,606,080	41,594,778
12/31/03	2,931 institutions	80,868,343	54,785,433
12/31/04	3,164 institutions	92,270,289	66,614,871

Source: State of the Microcredit Summit Campaign Report 2005

With regard to the microfinance institutions, about three thousands in the world (even if there are a lot of small dimension not quoted), a great variety in the dimensions and in the forms emerges. This is

immediately visible from the data concerning the number of beneficiaries of each institution (Table 1.2.3).

Table 1.2.2: Microfinance on regional base

Region	Number of Programs Reporting	Number of Total Clients in 2003	Number of Total Clients in 2004	Number of Poorest Clients in 2003	Number of Poorest Clients in 2004	Number of Poorest Women in 2003	Number of Poorest Women in 2004
Africa	994	6,438,587	7,004,840	4,725,912	5,062,166	3,180,419	3,271,510
Asia	1,628	71,585,413	81,009,798	48,797,590	59,939,638	41,272,188	51,212,061
Latin America & Caribbean	388	2,519,299	3,854,401	1,121,324	1,429,360	719,191	1,020,992
Middle East	34	106,464	168,575	54,039	92,568	22,785	61,804
Developing World Totals	3,044	80,649,763	92,037,614	54,698,865	66,523,732	45,194,583	55,566,367
North America	48	53,147	56,911	24,817	28,638	10,782	17,696
Europe & NIS	72	165,433	175,764	61,751	62,501	37,360	38,343
Industrialized World Totals	120	218,580	232,675	86,568	91,139	48,142	56,039
Global Totals	3,164	80,868,343	92,270,289	54,785,433	66,614,871	45,242,725	55,622,406

Source: State of the Microcredit Summit Campaign Report 2005

Table 1.2.3: Institutions of microfinance and their dimension

Size of Institution (in terms of poorest clients)	Number of Institutions	Combined Number of Poorest Clients
1 million or more	8	22,451,770 or 33.7 % of total
100,000-999,999	41	10,037,363 or 15.1 %
10,000-99,999	276	7,195,883 or 10.8 %
2,500-9,999	515	2,498,206 or 3.8 %
Fewer than 2,500	2,321	1,258,301 or 1.9 %
Networks <sup>16</sup>	3	23,173,348 or 34.8 %

Source: State of the Microcredit Summit Campaign Report 2005

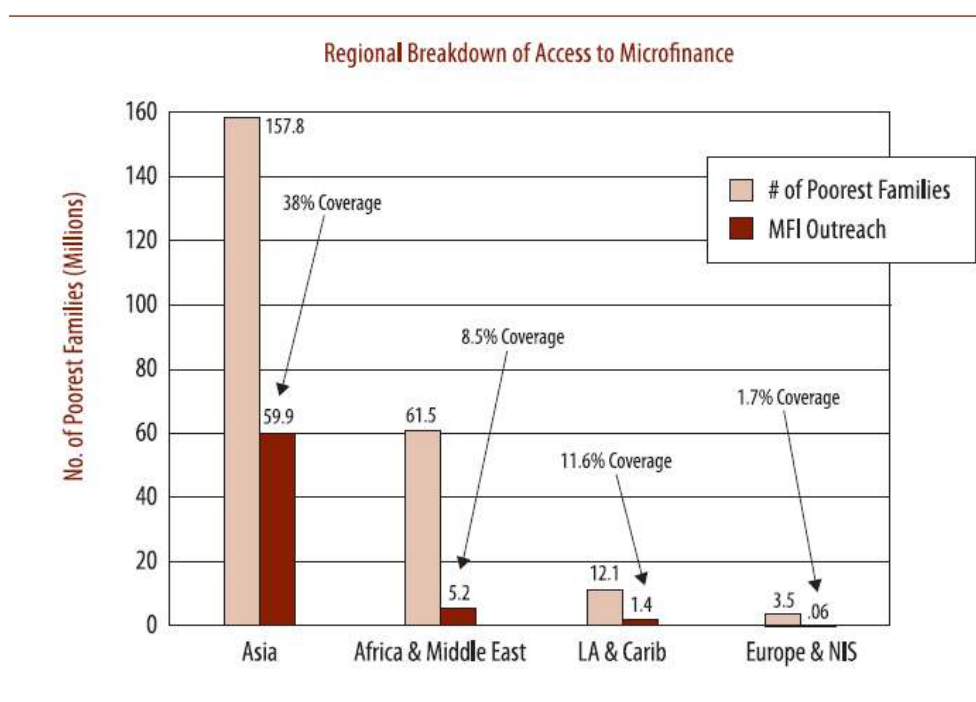
\* into networks are considered three great net institutions: NABARD (the National Bank for Agriculture and Rural Development) in India; ACCU (the Association of Asian Confederation of Credit Unions) in Asia and BRDB (the Bangladesh Rural Development Board) in Bangladesh.

Finally, if we consider the estimated number of families for each region in the world under the line of poverty and compare it with the

number of families reached by the microfinance services, we can understand how there is an enormous unfulfilled demand and a huge potential of development for such institutions (table 1.2.4).

Although a great expansion, a lot of institutions still meet big difficulties in reaching acceptable levels of sustainability exposing in this way the process and the same beneficiaries to a strong weakness. Though the problem of sustainability has become one of the main issues in the debate on microfinance it will not be the object of our analysis, which, on the contrary, will try to focalize on the interactions inside the institutions and precisely on the relation of credit-debt and on the methodologies used to realize it.

Table 1.2.4: Number of families reached by the microfinance



Source: State of the Microcredit Summit Campaign Report 2005

As the only knowledge of data is not sufficient to understand a phenomenon, afterwards we will concentrate briefly on the exam of

the typologies of clients who are reached, the institutions that offer microfinance services and finally the products and methodologies adopted. In this way, when the analysis will get to its main focus, it will be possible within this frame to understand why some choices and methodologies are adopted. Let us give then a face to the numbers.

#### **1.2.1.1 Analysis of demand: beneficiaries/clients**

The demand of basic financial services is constituted by all those persons excluded by the traditional financial system, from the poorest workers in the informal sector to the self-employed workers and finally to the small entrepreneurs in the various sectors from trade to services in general, from the agricultural sector to the artisanship.

Some of these, mostly of them are women, ask for a credit in order to start some activities or to invest in their already existing small activities to make them stable and not occasional. The context in which they operate maybe of an urban or a rural type, typically it concerns villages so as it may concern contexts of developed or developing economies. This is reflected both on the types of activities, which present different needs of credit and are addressed to different markets and on the applicable methodologies.

Though different levels of poverty are present, the lowest common denominator has to be looked for in the fact that they are “active poor”. This means that they are able to use the received credit for the creation of productive activities and are able to express a “debt capacity”. In other terms they can generate a flow of income which enables them to honour the loan and to develop their activity. So it is not the level of poverty that is particularly significant but, on the contrary, the possibility of making full use or not of the credit in order to produce their own income and reach an economic autonomy.

The target of the so called “ultra poor”, requires therefore an integrated and coordinated approach with other forms of intervention

able to grant the satisfaction of the functionalities of such persons before offering a possibility of development of their capabilities.

The acknowledgment of the heterogeneity and multidimensionality of the poverty phenomenon is a fundamental starting point for the creation of appropriate instruments of struggle (4).

### 1.2.1.2 Analysis of supply: institutional typologies

It is possible to detect a scheme of the different institutional typologies inside which to consider the experiences of microfinance which have been developed. In the following scheme (table 1.2.5) they are distinguished on the base of the fact that they are their part of the formal or semiformal sector of credit (it depends on the system of rules, authority and laws to which they are subjected). In the last column we have considered those informal circuits of credit and saving which are still complementary and widely practised, especially in places in which the communities have maintained strong their systems of relations and live also the memory of old practices.

Table 1.2.5: Institutional typologies

<i>FORMAL SECTOR</i>	<i>SEMIFORMAL SECTOR</i>	<i>INFORMAL SECTOR</i>
<b>Public Banks of Development</b>	<b>Saving and Credit Cooperatives</b>	<b>Rotating Savings</b> <b>Credit Associations</b> <b>Self-help Groups</b>
<b>Private Commercial Banks</b>	<b>Non banking organizations</b>	Moneylenders and saving collectors
<b>Microfinance Banks</b>		Family and neighbour circuits

Let us consider some features of these typologies.

### *Public Banks of Development*

They are public banks formed in the seventies thanks to funds of international institutions with the aim of giving mainly a state-sustained rural credit. They have known deep crises but some succeeded in learning from their mistakes. It is the case of the BRI (Bank Rakyat Indonesia) which just in 1983, from the reorganization of the base level of the bank, 'desa unit', followed a different commercial approach which led it to reach two millions and half of current microloans in 1999 and to give a service to the rural areas of Indonesia where the 80% of the population live. Other banks of development opened special counters often looking for some partnerships with commercial banks in Latin America and Central Eastern Europe.

### *Private Commercial Banks*

In the last years, mainly in the industrialized countries, commercial banks have started microfinance projects in a direct way or as second level institutions financing ONG in the south of the world. On the contrary the institutions of microfinance which have the legal form of commercial banks to all intents and purposes are few. Among these the experience of Banco Solidario (BancoSol) in Bolivia, born in 1992 from Prodrem a non banking association, emerges. It financed more than a million of microenterprises and counts in 2004 almost eight thousand of current loans and almost as many deposits. It offers all the financial services: from individual loans to in a little part group loans, loans to the production and consumption, guaranties, saving accounts, international transfers, services of current account and bank cards. It has been quoted at the American financial market since 1994.

### *Microfinance Banks*

Such category includes all those banks born as microcredit bank on the model of the Grameen Bank and which have often special legal statutes. The “rural bank” founded in 1983 by Muhammad Yunus, who is called the “banker of the poor”, counts more than five million of beneficiaries. Such experience will be widely examined in the following paragraph. In Bangladesh we can find also two other organizations, the ASA and the BRAC, both with a number of clients which is about from three to four million. Other experiences of those ones we could call “quasi-commercial banks” which follow a commercial approach and operate thanks to special state laws can be found in Peru for example with the MiBanco (Accion Comunitaria del Peru) and in Bolivia with Cayas de Ahorro.

### *Credit cooperatives*

The diffusion of such cooperatives, as we have seen above, dates back already to the 19th century, on the inspiration of the Raiffeisen’s model. For this reason, given their strong identity, the process of cooperation and integration with microfinance institutions has been almost slow. Such relation has been particularly profitable and allowed for example in France the rise of ADIE which is recognized today as the guide institution in Europe. They are wide spread in America, in the form of Credit Union, in Africa ( suffice it to think to the Credit Mutuel in Senegal or to the bank of cereals, which reminds us the idea of “mons” of cereals and pietas) and obviously in Europe both in Western and Eastern Europe (Bosnia, Albania, Poland, Rumania) where they had a main role in the process of transaction to a market economy, as Maria Nowak testifies (5).

### *Non banking organizations*

For the most part they are projects born from non governmental organizations (ONG) and private and public foundations. As the

collection and the saving management require a quite structured legal form, often such organization are mainly concentrated in the exclusive disbursement of microloans adding to them training services of “social intermediation”. In general, however, it can be said that the institutional type which commonly has been used in microfinance is just that one of the ONG independent and non profit oriented. If they have in common with the cooperatives and the Self Help groups a strong territorial and local rootedness unlike these ones, they are managed by microfinance operators and not by the same beneficiaries of the services. If these characteristics make them particularly flexible and sometimes more effective than governmental institutions, unfortunately often they are very weak realities because of their dimension and little efficiency and professionalism. However some of them have succeeded in giving themselves a long term prospect in a process of institutional development. In this direction they have become significant realities, recognized by governments, up to be able to influence national laws. In Europe, some case studies of particular success can be found such as the ADIE in France, First Step in Ireland, the WEETU and Street UK in England etc. All these are members of the most important network of microfinance institutions in Europe, the EMN (European Microfinance Network)

#### *Rotating savings, credit associations and Self Help groups*

We have already widely spoken about this institutional type and its diffusion. Particularly they have a main role in the rural economies, such as in Africa, where they have constituted, together with the Peasant Banks, the only possibility to accede to credit and the only way to get over the problems in agricultural production. There are different levels of complexity and specificity that such institutions can reach from the simple rotating savings of tontine to more developed forms of credit associations which in addition to the collection of money allow forms of saving investment. They are so solid structures




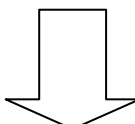
that in Nigeria the person who does not respect the agreement is considered “dead”, that is definitely excluded from the social group.

In such a complex situation there are some networks of support and inter-institutional cooperation. They are interested in diffusing the knowledge of the “best practices”, in guiding the process of development of little realities and in providing guaranties and emergency funds coordinating the strategies of intervention. A symbolic case is given by the network of financial and technical support that Accion has created. It involves 15 countries in Latin America, 5 in Africa and a lot of cities in the United States for an amount of almost one million active clients. FINCA shows a comparable experience operating in three continents where it has spread the model of village banking. Another international network is CGAP (Consultative Group to Assist the poorest) constituted by the World Bank, while in Europe we can find EMN in the West and Mfc in the East since 1998. The last example is given by the Grameen Trust, which supports replication programmes on the base of the Grameen model all around the world.

#### **1.2.1.3 Analysis of services and commodities offered**

It is possible to consider a synthetic scheme (table 1.2.6) of activities which a microfinance institution can do. Such consideration is basic because it allows us to distinguish two approaches: the “minimal” one followed by some microfinance institutions which presumes the almost exclusive supply of basic financial services; the “integrated” one which starting from a multidimensional view of the client, provides for additional services to the person and to the activity financed. Such choice is congruent with the belief that poverty is a multidimensional condition and the only way to slip through the trap that it generates consists in acting on several fronts.

Table 1.2.6: Integrated and minimal approaches

<p style="text-align: center;"><b>INTEGRATED Approach</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p><b>MINIMAL approach</b></p>  </div> <div style="text-align: center;">  </div> </div>	
Financial intermediation	Enterprise development services
<p>Credit</p> <ul style="list-style-type: none"> <li>- for the investment in productive activities</li> <li>- for consumption (to a lesser degree)</li> </ul> <p>Collection and saving management</p> <p>Insurances</p> <p>Credit and smart card</p> <p>Payment services</p> <p>International transfer of money (remittances)</p>	<p>Business plan development</p> <p>Technological and marketing services</p> <p>Commercial and accounting consulence</p> <p>Production and selling services</p> <p>(facilities in the access to market both for the relation with providers and final clients and the creation of support networks )</p>
Social intermediation	Social services
<p>Training courses and investment in:</p> <p>Development of Human capital (through the financial and economic literacy, the development of entrepreneurial and professional skills)</p> <p>Development of Social Capital (management of group resources and incentives to the formation of parallel systems of assistance, coordination and cooperation)</p> <p>Creation of a relation on fiduciary basis between the client and the microfinance institutions</p>	<p>Educational programmes</p> <p>Literacy programmes</p> <p>Health and public welfare programmes</p>

(Scheme adapted from Ledgerwood 1999)

We can distinguish four classes of services corresponding to two different approaches. Just because they are financial and non financial services it is necessary that the approach in the supply of each one is inspired by different specific criteria, in other terms, not all the institutions are due to offer the complete range of services considered.

As it comes to be evident each of these services gives an answer to different aims and this may cause difficult settlements of trade off. As Ledgerwood (1999) suggests, it is necessary to pass to a systemic approach which presumes an inter-institutional cooperation in order to obtain different goals through different institutional typologies.

The category of services particularly interesting for the development of the analysis of interactions and relational structures, to which, in my opinion, none of the microfinance institution can renounce, is that one of the social intermediation.

In fact it concerns ‘the process of creating social capital as a support to sustainable financial intermediation with poor and disadvantaged groups of individuals’ (Bennett 1997 quoted in Ledgerwood, 1999). If for social capital we refer, as we will see in the second chapter to those networks, systems of norms and trust that facilitate coordination and cooperation, then it is evident how it is central to study in which terms microfinance institutions can be considered “enabling” institutions in the development of the endowment of social capital of a given community. But at the same time it is necessary to consider in which way, the social capital and the existing relational structures influence the credit methodologies adopted and more generally the credit-debt relation between institution and beneficiary.

In the following paragraphs we will deal with the analysis of the methodologies developed by microfinance institutions, particularly concerning the distinction between group and individual lending. In

the second chapter the complex relation between microfinance and social capital will be considered.

### **1.2.2 The system of Group lending: a new methodology of credit**

Although the most known methodology of group lending is that created by M.Yunus, at least other two can be identified: the first one, often called “solidarity group” has been created by Accion; the second one, the “village banking” has been promoted by FINCA since its origins. The basic idea which gets inspiration from informal systems of credit and savings, is to allow people without collaterals to obtain an individual loan through the constitution of a group. Although the loan is individual all persons in the group are linked: in fact if one member of the group meets some problems in repayments each member will suffer the consequences.

Starting from this common basis we are going to describe the main features of each methodology considering as case studies the three institutions mentioned before. The economic problems, typically of informative nature at the basis of the credit-debt relation and the possible set of methodological answers, will be considered in the paragraph 1.4.

#### ***The Grameen Bank: the creation of the “grameen group”***

M.Yunus’s experience started in 1976, at first in the ‘laboratory’ of the village of Jobra (near the University of Chittagong) where he tried ‘to unlearn theory and to draw lessons from reality’ (Yunus 2001). It was just this experience that offered him an economic problem, often mentioned as ‘Sufia’s problem’ (7). The woman was in a condition which the development economists call “poverty trap”, that is a trap that makes impossible to go out from a condition of poverty because the possible process of saving and capital accumulation is stopped. The story, told by M. Nowak (2005), clarifies the problem:

“in a street of Ouagadougou, in Burkina Faso, I have known a little bootblack called Moussa, who wanted at all costs to polish my sandals. I have asked him:

How much do you earn?

Three hundred francs Cfa

How do you use this money?

I keep a half to eat and give the remaining part to my employer

Who is your employer?

The shoe brush owner

At first Yunus tried to rediscover the deep as well as etymological meaning of the word credit, that is to believe, to trust that the borrower is able to create richness. The following step was to devise ‘an institutional system’ that allowed to set up the credit-debt relation following some new methodologies which would have given the unbankable persons the possibility to get a loan and to honour it. Such system materialized in the Grameen Bank founded in Bangladesh in 1983, then it spread thanks to Grameen replication programs all over the world.

The basic unit is represented by a group of five persons, ‘like the fingers of a hand’, who choose to constitute autonomously in group. The members of the group, almost the totality are women, are persons that have no possibility to access to credit from the formal financial sector (so they are called unbankable) and want to start autonomously a productive activity. All the members of the group must come from the same village but not from the same family group. Moreover generally they must constitute groups homogeneous with regard to the sex and the assets they are endowed. Eight groups, coming from the same village constitute a ‘Centre’ which can be considered their ‘big group’ of reference; in turn 60/70 centres form a ‘Branch’ until to arrive at The Head Office in Dhaka through a branched system.

After the group has been formed and trained by a Grameen operator, they start to meet weekly. The meetings take place in a building of the village; a Grameen operator, generally a man, and the eight groups that form the Centre participate. Belonging to the Grameen family implies to adhere to a series of rules, called the 'sixteen decisions' that aim to carry on an educational process that would have an impact in their living habits. The loan, individual and generally annual, is given to the members of the group in a sequential way 2-2-1 (temporally the sequence occurs with a scheme that presumes an intermediate time from four to six weeks).

Each group appoints its own president, who at the beginning is just the person who will be the last to receive the loan. He has the task of collecting and giving all the group's instalments to the Grameen operator. The sequence carries a well definite responsibility: if those who have received a loan do not respect the rules and the weekly repayments during the meetings, they exclude automatically the other members of the group from the possibility to access to any other loan from the Grameen Bank. For this reason all the decisions concerning each funds and the sequence of the loans are taken inside the group.

In addition to the weekly instalments, the members of the group have to set apart some saving amounts half of which will be put on a personal account and the other half on the so called Centre Fund. Besides in this last one they deposit the 5% of initial loan when they obtain the credit. Each member of the group can accede to such common fund only after the repayment of the loan or if at least five years have passed. The Centre manages this fund and uses it to cover contingent emergency situations (scarcity of food, natural calamities, etc) or also sometimes to do so that the repayment of the instalments is complied. Such fund is the only financial link between the 'little group' of the five and the Centre, but not the only relational link as we will see analysing the role of the mechanism of peer pressure.

The Grameen Bank is a typical example of integrated approach because other types of loans can be practiced (housing loan, higher education loan, beggars' loan) with different interest rates and times of refunding. Moreover 'the Grameen family', as they use to call themselves revealing a perception of community entity, presents in addition to the Grameen Bank some institutions which offer other services. For example the Grameen Uddog offers channels of trade to the textile producers, while the Grameen Phone allows to introduce communication technologies among the villages and finally the Grameen Shikkha develops educational programmes. Such methodology, inspired by the great success obtained in terms of capillary growth and of rates of refunding always around 98%, has shown some problems and rigidity that made necessary to rethink about the classical model and produced the so called Grameen Bank II in 2002. As such new methodology implies the introduction of the individual loan outside the group we will deal with it later on, comparing it to other experiences.

### ***The solidarity group***

Such credit methodology was initially created and experimented in Latin America by ACCION international. Today it is spread all over the world, especially in Africa and Latin America. In this case the group is composed by three/ten members, mainly women, active in the informal sector of trade. They need little amount of working capital, that is a loan that they repay in almost short terms with weekly instalments. Their impossibility of giving some collaterals is overcome through the self constitution of a group in which each member is jointly responsible for the repayment of everybody's loans. Only in the case of regular payment of all the instalment the group can have access to further loans. These ones will tend to increase in their amount and in the repayment schedule as the beneficiary will demonstrate to have increased his/her debt capacity.

The total amount of the loans is given by the operator to the leader of the group who immediately gives it to all the members (the amount of the first loan is equal for all the members while there is flexibility for the successive loans). Therefore there must not be a direct relation between the operator and the beneficiaries even if the operator has the task of evaluating the profitability of the economic project for which the loan is required and sometimes he/she goes directly to examine the running of each activity. Besides, social intermediation and training programmes, in which the operators have direct contacts with the beneficiaries, are provided.

Finally, it is constituted an initial saving fund, as in the Grameen case, that functions as guarantee to a part of the loan but, instead of using compulsory saving, they prefer to encourage the formation of informal nets of saving.

### ***The village banking***

They are credit and saving associations, particularly common in the rural communities, that make use of self-constituted big groups from 30 to 100 members. The village bank, is managed by some of its elected members who are then trained by microfinance institutions which besides have the task to lend the initial funds to the village bank. The bank, in turn, with those funds issues the first loans to its members who will have to save the 20% of the loan received step by step. The first loan is usually of short-term and the repayments are weekly. The microfinance institution goes on financing for ten/twelve cycles the village bank proportionally to the process of capitalization that follows that one of accumulation of saving of its members, until the bank starts an autonomous path. Such institutions present a high level of independence and democratic nature in the decisional processes which realize during frequent weekly and monthly meetings. There are a lot of different variations to this scheme created



by FINCA in the second half of the 80s that then spread in Africa, Latin America and Eurasia.

Though the ‘original and old’ idea of setting up the credit-debt relation on a group methodology is considered the braking off element with the ‘tried-and-true banking practices’, really the revolutionary idea of a new practice of credit and of financial services is also expressed through a series of devices and innovation in the individual ‘credit technology’. The element of identity of microfinance consists in the recognition of the right to have access to credit and in the belief that adapting the services to the persons’ needs, it is possible to set up a credit relation also with those who are excluded by the traditional banks. In the 90s the practice of group lending and the discovery of some of its limits led a lot of its original promoters to elaborate new approaches based on the use of the individual methodology.

### **1.2.3 New ideas and approaches looking for best practices**

The methodology of individual loan, adopted together with the group lending scheme in the last years by a lot of institutions all over the world (as Bancosol in Bolivia), has had a particular success in the urban context with heterogeneous population or in rural areas with a low density of population. The loan is on average bigger in its amount than the group loan and is addressed to unbankable persons who want to start or invest on an autonomous enterprise.

The access to credit takes place only after an accurate analysis of the business project to which the client works followed by an operator of the microfinance institutions. At such phase, the preliminary investigation of credit places a great role as the Irish experience of First Step testifies. The credit received covers a great part of the investment in working capital even if generally a contribution, even minimal, of borrower’s own capital is required.

As for the guarantee in the absence of joint responsibility, an almost flexible approach is adopted:

- (i) no request of guarantees but analysis of the subject's debt capacity and of his/her family group;
- (ii) 'notional' collateral: the guarantees are given by some goods which are estimated not on the basis of the expected value of their selling on the market, but considering the value that they have for the borrower. It is the case of the BRI in Indonesia or of the BancoSol in Bolivia where, for example, an inventory of minimal assets possessed by the beneficiary is made and documents of property rights or commercial contracts are excepted as guarantees. Looking back, such approach was adopted also by the first *Mons Pietatis* that, as historians testify, had a very flexible approach to collaterals. Because of the high cost of a legal action relatively to the market value of goods, very often these guaranties are not used by the creditors;
- (iii) Guaranties or 'moral-relational collateral': they are normal contracts of guarantee, as we have seen already practiced by the first merchants. In such case the credit-debt relation becomes of triangular type and the guarantor warrants first of all the beneficiary's morality and then he applies himself in monitoring the beneficiary in the repayment of the loan. Only in the extreme case of not repayment he also stands surety for the loan materially. Such approach is adopted with success in France by the ADIE. A significant element which we will recall, is that the guarantor can also be an association of which the potential beneficiary is member and mainly the microfinance institution does not investigate on the goods owned by the guarantors.

In all these experiences the loan follows a progressive dynamics, as in the original Grameen model, that means the borrower can accede to

loans with growing amounts proportionally to the development of the enterprise and the improving of his/her debt capacity. The repayments take place on a weekly or monthly basis and sometimes it is made use of the so called public repayment. Generally the contractual clauses are inspired by criteria of flexibility so as to give a better answer to the productive activities providing for pre-amortization periods together with rearrangement of the debt as in the case of Grameen II model. Finally a particular attention is given to the services of consulence and mentoring to the productive activities mainly in the first years.

A recent research presented by Microbanking Bulletin 2002 proposed by Armendariz de Aghion and Morduch 2005, shows as the microfinance institutions that adopt the individual loan tend to have the following characteristics: a) they are on average smaller in terms of number of clients; b) they give loans on average of a greater amount; c) the payees are fairly distributed between women and men with a light predominance of these last ones; d) they practice some lower interest rates in view of lower costs (the significant datum is that for each dollar lent in the individual loan the operative costs affects of 20% while in the group loan of 37%).

Though these data highlight important differences, they present a very strong bias given by the place of greater/lower diffusion of the two methodologies and by the different type of target they are addressed to. It is significant the fact that the Bancosol uses the group loan (Solidario) for persons with more modest enterprises providing them little sums and the individual loan (Sol individual) for persons who come from medium high segments of poor and also want to develop more structured activities.

### **1.3 The credit-debt relation: structural problems, new solutions**

The study and the comprehension of the ratio at the basis of the new financial methodologies and particularly of practices of credit elaborated, require a structural analysis of the credit-debt relation. This will permit the settlement of an analytical frame inside which to detect the problems and the answers of the different approaches, as well the results and the limits that each of them presents. Besides it will allow us, after giving space to the description of the phenomenon of microfinance starting from its inspiring origins, to analyse in a comparative way credit relational structures on vertical and horizontal base, as well the role of the collateral and the way in which the group compensates for its absence.

As it has been widely highlighted, the sector of credit is characterized by a considerable complexity that requires the analysis not only of its formal horizon, but also of the informal one where the moneylenders play a first level role. On this point literature particularly pose over starting from Amit Bhaduri's works in the 70s of the 20th century.

The root problem which such field of research detected concerns the position of moneylenders' monopoly, that would allow the practice of usurer interest rate. This situation puts in motion mechanisms of expropriation and disincentive to the innovation and development (Bhaduri, 1973). On the other hand, as some assert, the problem of high interest rates would reflect high transaction costs as well as the risk of the financial venture in the absence of collateral.

Though in the course of the analysis we will not pose over such wide debate, it must be taken into account that microfinance and its methodologies were born to give an answer not only to a difficulty of the formal sector of credit to grant the request of the so-called unbankable subjects, but also in order to deactivate mechanisms

present inside the informal system of credit in which the credit relation is invalidated by an imbalance between the two contractors.

The analysis will focalize on the study of the informative problem which the credit-debt relation presents in the vertical relation (creditor-debtor) and the way in which the setting up of a relation creditor-group, that uses the horizontal relation inside the group, can move on a different level the informative problems so as to compensate to the lack of collateral.

At this point it is essential to analyse the horizontal relational structure inside the group in order to understand the possible dynamic and the effect that these ones generate on the relation with the creditor. The study of problems which such intra group relations can present will lead to highlight possible strategies of answer and possible new methodologies.

In this area the development of overlapping relations and triangular relations combined with the adoption of dynamic incentives and mechanism of monitoring that the modern technologies of individual loan are developing, become interesting.

### **1.3.1 The ‘Informative problem’ behind the credit-debt relation**

The credit-debt relation presents two main actors: a subject who wants to invest in a project or in general wants to have access to a capital of which he/she is not the owner; another subject who has an availability of capital that under certain conditions he/she is disposed to lend.

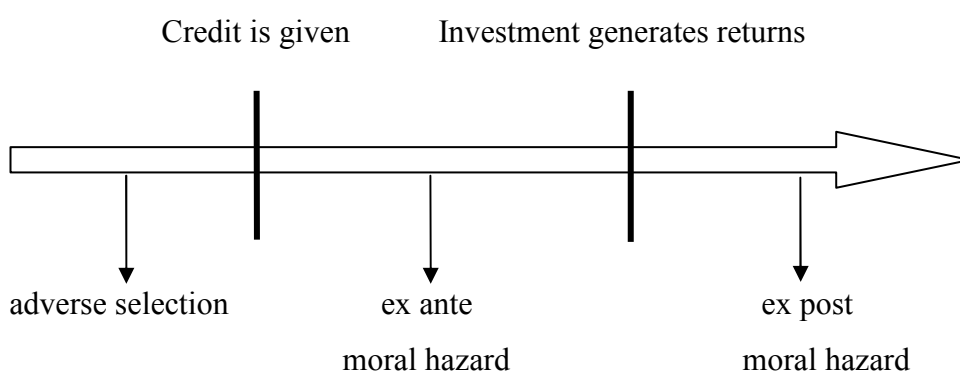
The interaction between these two actors who decide to set up a credit-debt relation can be analyzed as a problem of agency: the principal (the person who disposes of the capital) has to face a series of informative problems.

The first one is related to the difficulty and often impossibility because of high costs that it would entail, to know deeply the characteristics of the potential borrower (the agent) both on personal terms and for what concerns the investment.

The second one is given by the difficulty of observing and monitoring the agent's actions and non actions when, received the credit, he/she carries out the investment. The last problem is represented by the impossibility to check the investment return and to obtain that the credit is honoured.

In literature the first problem which substantiates in the difficulty of selecting the potential credit worthy beneficiaries is called of adverse selection, while it is used the term moral hazard to define the problem of monitoring and enforcement in the repayment of a loan. Such informative problems, at the basis of the relation, therefore realize in three times as it is possible to see in the following scheme:

Figure 1.3.1: Dynamic of the credit-debt relation and of informative problem



The request of collateral, as well as the constitution of legal institutions aimed to grant the enforcement (for example the court of law), were born just from the necessity of giving an answer to problems of informative nature. At the same time from history we have seen how such problems were less present in contexts in which the actors involved in the credit relation belonged to a group, for example the ROSCAs or the society of merchants. In both these cases, they were linked by a set of relations which reduced the problem of the valuation of the credit worthy as well as that one of monitoring and enforcement of the relation. Moving from this observation it is possible therefore to detect two types of relational structures: a vertical credit-debt relation and a horizontal one.

The vertical credit-debt relation has been already described using the interpretative scheme of the principal-agent. It is characterized by the fact that the subjects involved are “strangers” that is they are not linked by other relations besides the credit-debt one. For this reason they are unable to reduce the informative problem and the problem of adverse selection is maximum. Moreover, the enforcement of contract realizes thanks to a mechanism external to the relation that is implemented by institutions and norms, as well thanks to the presence of a collateral. This is the relation that typically is present in the formal sector of credit, where not only persons are unable to offer a collateral but also the costs to obtain information are very high. In this way they become unbankable subjects.

The relation on horizontal base, that for example we find again in the credit associations, is characterized by the fact that the subjects directly or indirectly involved in the relation are more than two. In fact such subjects belong to a group, inside which the members are linked by a system of relations that precedes the credit-debt one. This allows to use the existence of an informative stock of knowledge which reduces the problem of adverse selection as well as enables mechanisms of monitoring and enforcement among peers. In other

words each member of the group has a story and a future.

Besides, unlike the credit-debt relation of vertical type, the credit which is given often comes from the same group in which each one is in different times creditor and debtor. Finally, it is to be noticed that enforcement is realized internally to the horizontal structure through the same group and the system of internal rules recognized among peers.

The credit-debt relation that microfinance institutions have developed, as we have already seen, can be considered coming from an overlap of the two structures just described. The microfinance institutions which adopt the group methodology do not establish a vertical relation with a single subject but with a subject who is embedded inside a group that takes up a form joint responsibility. Therefore, it is possible to think to a creditor-group relation in which the group is a subject that has internal resources capable to solve the informative problem.

As a matter of fact it is on the system of horizontal relations inside the group that the informative problems, emerging in the vertical principal-agent relation, are transferred. The fact that the members of the group are called to assume the responsibility of self forming in a group, and so of self selection, makes the microfinance institution to get through the first problem of adverse selection. Not only the costs of finding some information on borrowers are eliminated but also the selection is more effective, because the existence of a reciprocal responsibility leads each member to choose carefully his 'mates of adventure'.

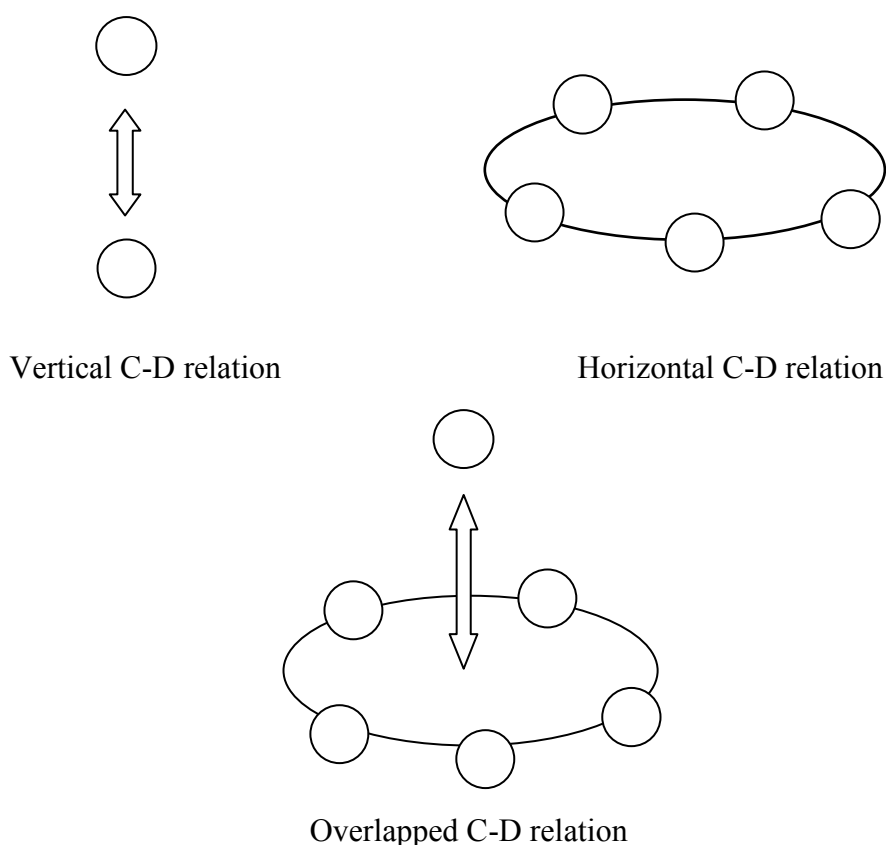
Besides, as the possibility of having access to credit of each member depends on the others' behaviour in the Grameen group, or even there is a joint liability, in the case of the solidarity group some mechanisms of peer monitoring and peer enforcement begin automatically.



A possible graphic of the three structures of the credit-debt relation is the following:

Figure 1.3.2: Three different credit-debt relations

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On the basis of this distinction, in the following paragraphs the informative problems present in a vertical credit-debt relation will be studied. The aim is to detect how the problem of agency is solved by the methodologies of group lending. Such study will require then to concentrate on the horizontal relation inside the group to understand its dynamics. Also we will focus on the theoretical models presented through recent empirical contributions which have underlined how in

reality such methodology realizes. This will enable us to highlight the potentialities and the limits that the group lending presents and to analyse the possible strategies and methodologies which in the last years a lot of institutions of microfinance are creating and experimenting.

### **1.3.2 Group lending: the solution of the informative problem**

The analysis of the informative problems highlighted finds in literature its model of reference in Stiglitz and Weiss's contribution (1981). It is necessary, therefore, to take into consideration this analytical scheme because it will allow us then to analyse those successive contributions in which the credit-debt relation is studied considering the mechanisms of peer selection, monitoring and enforcement inside the group (Ghatak 1999; Ghatak and Guinnane 1999; Armendariz de Aghion and Morduch 2005).

In the presentation and development of these models will be adopted the formulation proposed by Armendariz de Aghion and Morduch (2005) in which at first the problem of adverse selection is considered and then that one of moral hazard. These informative problems are studied in a context of limited liability, that is a situation in which the debtor is not able to give a collateral and therefore the repayment of the loan will depend exclusively on the investment return. This model shows the reason why the formal financial system excludes those subjects that are unable to offer some collaterals. This implies that the credit relation will present high operative costs.

#### ***1.3.2.1 A model of Adverse Selection***

Let us consider an economy in which only two subjects, neutral with regard to risk, are present. They want to maximize their profits and are distinguished for only one characteristic: their 'inherent' risk for which one will be safe debtor-investor and the other one a risky

debtor-investor. Both of them want to invest 1 US\$ and not having the necessary capital have to apply to a bank which we assume operates in a competitive market (in such way it is avoided to analyse the case of monopoly from the side of the credit offer). The fact that both of them are not provided of collaterals implies that the repayment of the loan will take place only on the basis of the income flow that the investment produces.

The bank is not able to distinguish the ‘types’ of subjects, in other terms it is not able to select the risky subject from the safe one. Besides, let us suppose that the investment returns can be of the type:

(i) in the case of the safe subject:

Investment = 1 US\$  $\rightarrow$  Certain return =  $y^S$

(ii) in the case of the risky subject:

Investment = 1 US\$

$\rightarrow$  Return =  $y^R$  with probability  $p$   $0 < p < 1$

$\rightarrow$  Return = 0 with probability  $(1-p)$

In order to simplify the model, let us suppose that the expected returns for the two types of investors are equal ( $y^S = py^R$ ).

Besides we know that the risky subject with probability  $p$  will obtain a  $y^R$  greater than  $y^S$ , while if he is unlucky he will not be able to pay back the loan having a return equal to zero. On the contrary the safe subject will be always able to repay his/her loan.

The bank supports a cost for unit of dollar lent equal to  $k$  because it will face transaction costs and will have to pay some interests to the savers.

The presence of these costs implies that  $k > 1$  US\$. In a competitive market these are the minimum costs which the bank must cover and which define the minimum level of expected return that an investment must have to be financed. In other terms the condition of efficiency requires that:  $y^S > k$  and  $py^R > k$ .

If in the economy considered only subjects of ‘safe’ type were present, the bank should have to apply an interest rate equal to  $k$  because subjects are always solvent. But since also ‘risky’ types are present and the bank is not able to distinguish the types of debtors, it will have to apply an interest rate  $R > k$  that allows it to cover the costs. This interest rate applied irrespective of the type of debtor must be such that the expected return from the lending activity is equal to  $k$  for unit of dollar. In fact the bank only knows that a part  $q$  of the subjects who apply for the loan is of safe type and the remaining  $(1-q)$  of risky type therefore it will establish:

$$[q + (1-q)p] R = k$$

from which we will derive an interest rate:

$$R = k / [q + (1-q)p]$$

Collecting from that, we will have:

$$R = k + A \quad \text{con } A = [k(1-q)(1-p)] / [q + (1-q)p]$$

It means that the interest rate the bank will have to apply to both types of subjects will be greater than in the safe situation. If  $R$  becomes very high this might discourage or even prevent the safe subjects from applying for a loan, even if their investment would be to be financed because it is ex ante efficient: ( $y^S > k$ ).

It is the same type of inefficiency that is present in Akerlof’s model of ‘the market of lemons’ (1970). This inefficiency comes from the fact that the safe investors are forced implicitly to support the risky investors. The problem that this model highlights is therefore of credit rationing so that, in the presence of adverse selection, the bank is not able to practice an interest rate which at the same time makes possible to cover the costs and allows the access to all the credit worthy subjects.

This model also suggests how the increase of the interest rate from the bank is not always profitable because this strategy

exacerbates problems of incentives. On the basis of this model then we can consider how the group methodology solves the problem of adverse selection and leads the problem to an efficient solution.

### ***1.3.2.2 Adverse selection and ‘Peer selection’***

Let us suppose that the bank decides to adopt a methodology of group loan with the aim of solving the inefficiency and differentiate implicitly the interest rate for the two types: safe and risky, such as it is lower for the safe investor.

Though the bank continues not being able to distinguish the types of costumers, the fact that they are required to constitute autonomously into groups linked by any form of responsibility makes the problem of adverse selection moved on a horizontal plan. At the group level, as each subject is not conditioned by the information problem of the bank, knowing the ‘types’, the bank will be able to select those with whom constitute into a group. This possibility implies that the safe type will form groups of only safe types through self selection, so that they do not have to support the risky types in case of insolvency. Consequently the risky types will be able to constitute only into groups with as many risky types. This process, called of “assortative matching”, enables the bank in the lack of information to operate applying the same contract to the two types and at the same time reducing the risk.

The fact that the bank is greatly insured against the risk depends from the fact that through the responsibility of the group the risky investors come to pay more often than in the case in which the relation was vertical: creditor-debtor. This implies the possibility for the bank to reduce the interest rate practiced, facing at the same time a smaller risk, permitting the reintegration of safe investors who previously were excluded.

Taking again the same formulation, let us suppose that the bank asks the persons to constitute into groups of two persons. If a fraction

$q$  of the population was of safe type when they will constitute into a group, the number of groups (safe, safe) will still be  $q$  and consequently we will have  $(1-q)$  pairs of type: risky, risky.

Given the joint liability, in the case of groups (s,s) there are no possibilities of insolvency, while in the case of the groups (r,r) the activities are risky.

Therefore there are two possibilities:

- (i) one of the members runs into a failure (this may happen with probability  $(1-p)$  ) and the other one pays for both, under the assumption that the investment return will allow him to do so ( $y^R > 2R$ );
- (ii) both the members run into a failure and this may happen with probability  $(1-p)(1-p)$ .

This last probability is of default for the bank and we call it

$$g = (1-p) (1-p) = 1-(1-p)^2$$

From this scenario the bank has expected payments equal to:

$$[q + (1-q)g] R^G \quad (R^G: \text{interest rate with group methodology})$$

which implies the application of an interest rate

$$R^G = k / [q + (1-q)g]$$

in order to cover the costs  $k$ .

This interest rate is lower than that one the bank can apply without joint liability:

$$RG = k / [q + (1-q)g] < R = k / [q + (1-q) p]$$

This depends mathematically on the fact that  $g > p$  , that is the risky borrowers pay more often (with an high probability) compared to the individual loan.

In the opposed case in which the bank chooses to require a collateral, it will be able to offer two different types of contracts: one with a high interest rate and a limited collateral; one with a low

interest rate and a higher collateral. In such way the two types of clients will self select themselves because the risky types would choose the first form of contract while the safe types the second one. Following this line Ghatak (1999) shows how it is possible to activate a mechanism of “assortative matching” using the group methodology and replacing the collateral with a different level of joint liability. This allows the bank to know which type of customers are by the company they keep.

### ***1.3.2.3 A model of Moral Hazard***

As it has been highlighted, the problem of moral hazard realizes in two moments. In the first one the bank is not able to monitor if the borrower is doing all the possible so as the investment has a good end and he is able to refund the loan. In such case it is spoken of ‘ex ante’ moral hazard.

In a second moment, once the investment has produced a return, the bank could not be able to know the true return because the agent would have an incentive to declare the failure of his/her investment and in such way to free him/herself from the repayment of the loan. Such problem is in literature also called ‘auditing costs’ referring to the informative costs.

Besides, even if the bank knew the value of the return, it ought to be able to have such legal instrument to force the debtor to refund the loan. But if the loan is granted to a poor the bank will not be able to apply any form of financial sanctions because of the client’s condition. This second problem is called “ex post” moral hazard or also “enforcement problem”.

Taking again the same formulation presented for the problem of adverse selection we see what is the role played by collateral. We have in this case only one type of debtor-investor, as before lacking in collateral. He/she wants to invest  $I$  US\$ and applies to a competitive

bank which practices an interest rate  $R > k$  ( $k$  is again the cost for unit of lent capital supported by the bank).

Unlike before when the riskiness was a characteristic intrinsic to the subject, here the agent can do actions or non actions which have an influence on the degree of riskiness of the investment and therefore on the possibility or less for the bank to have the loan refunded.

### Ex ante

The debtor-investor may choose:

- (i) to bear a cost in terms of working effort equal to  $c$  and to obtain with certainty ( $p=1$ ) a return equal to  $y$  and therefore to be able to refund with certainty the debt of  $1$  US\$. In this case the investor will have a net return equal to  $(y - R - c)$ ;
- (ii) not to bear any cost in terms of effort and obtain a return equal to  $y$  with probability  $p < 1$  to which an expected net return equal to  $(y - R)p$  corresponds.

Comparing these two possibilities the debtor-investor will decide to bear the cost  $c$  only if:

$$(y - R) - c > (y - R)p$$

which for the bank results in a commitment on the interest rate ‘incentive compatible’ (IC):

$$R < y - [c/(1-p)]$$

That is if the rate is higher to this level the subject is incentivated not to make working efforts.

The ex ante condition of efficiency for the investment is obviously that  $y - c > k$ . The bank has no instrument to force the agent to support  $c$  except that one of fixing a rate lower than that incentive compatible. Here the problem comes: if the application of this rate does not allow the bank to cover the costs that is

$$k > y - [c/(1-p)]$$

the bank will be obliged to fix an interest rate higher than that incentive compatible so running into a higher level of risk ( $p < 1$ ).



Facing this problem the collateral appears as the possible solution because it represents a credible commitment, a guarantee for the bank that the borrower will do the possible for the good result of the investment. Let us examine how the possibility of offering to the bank a collateral of value  $w$  modifies the terms of the problem. Even if the collateral has a value  $w < k$  so that, in the case of the borrower's insolvency (with probability  $1-p$ ) the bank can not cover all the costs, the only existence of the collateral solves the incentive problem. In fact for the agent the commitment becomes:

$$(y - R) - c > (y - R)p - w(1-p)$$

In such way the bank will be able to practise a higher interest rate

$$R < y + [w - c / (1-p)].$$

In the case in which  $w > k$  the bank will be able to apply a rate to some levels which always allows to grant any loan.

### Ex post

The enforcement problem substantiates in the difficulty for the bank to obtain the payment of the loan legally, given the possibility for the agent to adopt the strategy "take the money and run". Let us suppose that the investment is always successful because the problem ex ante has already been handled and let us consider the role of the collateral. Let us suppose that the debtor has given the bank a material guarantee of value  $w$  and that the bank is able to tackle this object in guarantee with probability  $(1-s)$ . In fact there is a probability  $s$  of default for the bank when the debtor succeeds in taking the money ( $y$  and  $w$ ) and run. Comparing the payoffs ex post for the debtor:

- (i) if he/she does not escape and pays:  $y + w - R$
- (ii) if he/she escapes and does not pay:  $(1-s)(y + w) + sy$

It is possible to notice how the incentive commitment becomes:

$$y + w - R > (1-s)(y + w) + sy$$

which is satisfied for values of  $R < sw$ . This shows how in the lack of collateral ( $w = 0$ ) or in the case in which the value of  $w$  is not such to

allow the bank to apply a rate  $R$  to cover the costs  $k$ , the bank can not grant a loan.

#### ***1.3.2.4 Moral Hazard and the mechanisms of ‘Peer Monitoring’ and ‘Peer Enforcement’***

At this point it is possible to notice how the group methodology finds in the horizontal relations an effective substitute of the collateral, activating mechanisms that solve the problems *ex ante* and *ex post* of moral hazard.

##### *Ex ante*

Let us consider the case in which the bank requires the debtors to constitute themselves into groups of two persons linked by a joint liability. Each debtor-investor, as before, may choose to support or not the cost  $c$ , but this time belonging to a group, he/she will have to do this choice knowing that in the case in which he/she will not pay shuffling off the responsibility on the group he/she will incur in social sanctions. The existence of joint liability produces inside the group a mechanism of peer monitoring, because each person wants to be sure that the other one is doing the possible, that is he/she is supporting the cost  $c$  in order to reduce the risk of failure. The possible pay-offs associated to the choices of the members of the group are:

- (i) both apply in the economic activity and sustain a cost  $c$ , so the return of the two activities will be  $(2y - 2R) - 2c$
- (ii) both decide not to apply and not to support the cost  $c$ . In this case, as they are unprovided of collaterals, they will pay back the debt with probability  $p^2$  because if a person does not make the effort  $c$  the probability of success will be  $p < 1$ . Their expected return will be:  $(2y - 2R)$  with probability  $p^2$ . If only one of the two subjects incur in a failure, the other one will be jointly responsible to the bank. In this case it is assumed that his/her investment return will

be completely used to honour the two debts.

The incentive compatible commitment with the group methodology becomes:

$$(2y - 2R) - 2c > (2y - 2R)p^2$$

which for the bank results in an incentive compatible interest rate:

$$R < y - c/(1 - p^2)$$

but as  $p < 1$  then  $(1 - p^2) > (1 - p)$  which means that the bank, thanks to the joint liability, has seen relaxed its commitment on the interest rate.

In this analysis following Stiglitz's assumption (1990) the costs of monitoring and enforcement are not considered, while really they influence the choice of the agents and the capacity of the group methodology to reduce the inefficiency previously pointed out.

#### Ex post

Once the bank is able to satisfy the IC commitment and so to fix a  $R$  which allows to cover the unitary costs  $k$ , the borrowers linked by the joint liability will find convenient the cost  $c$  and therefore both the projects will be successful.

At this point let us consider how the group is able to monitor and to oblige to payment each one of its members. Let us suppose that each member of the group is able to know the true return of the investment with a probability  $q$  and in the case in which one of the members tries not to pay, a social sanction equal to  $d$  is applied. In this case each member of the group will decide to pay only if:

$$y - R > y - q(d + R)$$

$$R < [q/(1 - q)] d$$

The case in which  $q = 0$  is that one the bank faces in a vertical relation where there is no possibility of knowing the true investment return. The presence of a group gives the possibility of having such piece of

information with a probability  $0 < q < 1$  and makes possible the imposition of a sanction  $d$ .

As the joint liability leads to a peer monitoring in the problem *ex ante*, in the same way and for the same reason, that is to pay for the insolvent member, *ex post* mechanisms of peer monitoring and peer enforcement will begin. Even if the group methodology is not based on the joint liability as in the case of Grameen group, all that matters is that there is a reciprocal responsibility in the horizontal relation according to which the consequences of the actions/non actions of the members affect the others. This consequence may be the repayment of the insolvent subject's loan (as we have considered in the model) or the impossibility of having access to a loan and to benefit of other advantages.

This model could be considered in a context where the monitoring as a certain cost  $z$ . Here in order to have an incentive to monitoring it is necessary that the cost  $z$  is not too high: in other terms the information cost would not exceed the benefit that this information produces.

### **1.3.3 Going inside the group: the horizontal relation, problems and some issues from evidence**

After analysing the informative problem and how at the level of the group mechanisms of peer pressure are applied, it is necessary to focus on the relational structures inside the group in order to find out the origin of these mechanisms.

The aim of the analysis is to understand the nature of the horizontal relation and to discover how the dynamics which they generate impact on the single persons involved and on their relations both on terms of efficiency and of well-being.

With reference to the first aspect, we will examine the role that social capital has at the level of the horizontal relations inside the group and therefore how the existence of social ties permits to microfinance institutions to set up an overlapped credit-debt relation.

In this first part we will consider the principal contributions (Karlan 2003; Gomez and Santor 2003) which recognize in the social capital the basic reason that would explain the functioning of the group lending methodology. We will also examine other researchers that bring into question the role of social capital, underlining the possibility of opposite effects in terms of guarantee and solvency (Wydick 1999; Abbink and al 2002; Ahlin and Townsend 2003a,b).

The relation between social capital and microfinance institutions will be developed in the second chapter where the social capital will be considered both as an important element in the development of microfinance institutions and also as a possible ‘emergent result’ of them. In this sense it will be spoken of microfinance institutions as ‘enabling institutions’.

The study of the second aspect, that is the dynamic of relations and mechanisms of peer pressure into the group, will allow us to evaluate the impact of these methodologies in terms of:

- (i) efficiency: it concerns the functioning of the mechanism of group lending and its possible points of weakness in the cases of “too weak” or of “too strong” horizontal relation into the group (8).
- (ii) well-being: it takes into consideration the initial aim of economic and social inclusion, for example in the cases of excessive pressure and/or sanctions of the group (Montgomery 1996).

The contributions presented will try to throw light on the main variables occurring and the problems deriving from the relational structures inside the group. These problems have led some institutions

to experiment new forms of credit-debt relation on an individual base. These methodologies will be considered in the subparagraph 1.1.4.

#### ***1.3.3.1 Relations as ‘social collateral’***

Contemporaneously to the development of theoretic models which could give a conceptual scheme to consider the structural problems of the credit-debt relation, in literature a debate has opened in order to individuate the factors that could explain the functioning of the group as ‘collateral’. In other words it has been made the attempt to understand the conditions necessary to the functioning of the mechanisms of peer pressure.

In this debate some have recognized in the social capital and in the possible role played by the social sanctions the main reasons of success of the group lending methodology. The thesis is that these institutions ‘provide credit on the basis of social collateral, through which borrowers’ reputation or the social network to which they belong, take place of traditional physical or financial collateral’ (Van Bastelaer 1999, 4). In such case the peer monitoring would realize for example through the control of everyone’s activity and the possibility to report to the community the behaviour adopted by the subject.

To this mechanism, another of enforcement would be added given by the fact that each subject wishes to defend his/her own reputation. This is because to preserve a good reputation is a necessary condition to avoid various types of repercussions: economic as for example the loss of future contractual relations, social as the exclusion from the communitarian life or finally psychological as the loss of self esteem.

Karlan’s contribution (2003), based on data collected in Perù in some projects of village bank, seems particularly significant for the resilience of the result obtained. It will confirm the thesis of a positive correlation between high level of social capital and high rates of repayment as well as high rates of saving accumulation. In this

analysis the concept of social capital which is used refers to that by Adler and Kwon (2000) according to which social capital has to do with that set of links ‘which can give these collective actors cohesiveness and its associated benefits’ (9).

The methodology developed by FINCA in the city of Ayacucho presupposes the creation of groups of thirty women that constitute a village bank according to the basic methodology explained previously. The peculiarity of the group examined by Karlan consists in the initial mechanism of formation of the group: the women typically go to the FINCA office and register themselves on a list. When the list reaches the number of thirty persons, many of them may not know each other, the village bank is constituted. During its life the future new members generally are on the contrary relatives or friends of those who have constituted the bank initially.

Excluding from the sample these last ones, Karlan secures the possibility of being able to consider that set of the initial groups which present an exogenous level of social capital. Only in this way it is possible then to see how much some proxies of the social capital as the ‘cultural heterogeneity’, the ‘geographic dispersion’ and an ensemble of demographic variables (matrix  $X$ ) can explain the dependent variable given by the rate of default. So the econometric instrument used is:

$$Default = \beta_1 \text{ Geographic dispersion} + \beta_2 \text{ Cultural similarity} + \gamma X + \varepsilon_j + \varepsilon_{ij}$$

The results obtained not only show how both the explicative variables are significant in the case of default, but also how applying a similar model, a positive relation between social capital and communitarian level of savings exists. A possible explanation may be according to Karlan the increased level of safety of the deposits inside the village bank. Finally, it would be highlighted how the social capital helps the groups to distinguish some insolvent debtors in good faith from those ones in bad faith. This permits to introduce some

intermediate sanctions or some possible strategies of recovery before arriving to the exclusion of the subject from the group.

Some very similar results are those obtained by Gomez and Santor (2003) for whom both high levels of trust and social capital and the self selection of the group will reduce the probability of default. But these results present a basic limit because, as Armendariz de Aghion and Morduch (2005) underline, they depend in a critical way on the type of explicative variables put in the equation. For example their analysis implied the comparison of experiences developed by two Canadian microfinance institutions that applied both the group methodology and the individual one. The result obtained, according to which the group would have better performances than in the case of individual loan, seems not to keep into consideration the fact that different persons, for example with a different level of riskiness, might choose different contractual conditions, such as for example the individual loan rather than the group one.

Apart from the problems that these empirical models present, the basic thesis is that it is possible to get through the structural problems of the credit-debt relation as well as the possible inefficiencies deriving from it, using some 'small scale institutions' characterized by a certain degree of social capital, that is by networks of social relations and pre-existing social ties.

At this point Widick's contribution (1999) enables us to introduce the terms of the debate. Together with him others put in doubt the fact that 'social cohesion' is the basic explanation of the functioning of the group lending. Precisely for them it is necessary to understand the basic role that pre-existing social ties and therefore social capital can play and how much, on the contrary, the group holds on internal self sufficient mechanisms.

The results presented by Karlan (2003) can be criticized starting from this point of weakness: considering the geographical proximity and the homogeneity of the subjects as proxies of the social



capital we can not know how much the default variable is explained by the social ties among the subjects. As a matter of fact instead the default variable might depend on the fact for example that the geographical proximity and the similarity of the activities and conditions of life allow a process of more effective peer monitoring.

With regard to this point Widick distinguishes in his analysis three different concepts of 'social cohesion': (i) peer monitoring, (ii) social ties and (iii) group pressure. His object is to find out which degree of correlation they present compared to the performance of payment of the group. Using data collected in a programme of Grameen replication in Guatemala, he finds out that the pre-existing social ties do not affect the dependent variable, that the group pressure has a light significance while the mechanism of peer monitoring has a central role. The fact that this last one is not linked to the initial endowment of social capital and therefore may be established also in a horizontal relation with persons initially unknown, seems to configure a different conceptual scheme of reference: 'via peer monitoring, borrowing groups appear to function both as miniature insurance networks and as juries' (Widick 1999).

The imagine which is presented to us is therefore that of a group which may function regardless from previous ties among the members and that we only need an institution of microfinance which legitimizes the operating work of the 'internal jury'. This last one can, in this way, credibly value and take actions against each one of its members. Moreover in this case, as the members of the group would not be tied by relations of friendship, the menace of exclusion would be greatly credible. These arguments could appear therefore to discourage those institutions like FINCA which for example promote the formation of social capital and trust at the horizontal level among the members of the village bank through programmes of social intermediation.

Most of the contributions and empirical results obtained however are influenced by a substantial bias linked to the data collection and to their comparison. For this reason, as Murdoch (1999) highlights it is necessary to improve the empirical set of instruments used in order to understand how the different methodologies affect the performance of microfinance institutions looking for the best practices.

An interesting attempt in this direction is that one of Abbink, Irlenbusch and Renner (2002). They propose the approach of experimental economics, which in spite of some of its intrinsic limit, allows in a controlled setting to analyse a lot of the factors involved as the role of social ties as well as the dimension of the group and the efficacy of the dynamic incentives. The principal limit consists in an artificially built context where the persons involved are students who do not live the potential condition of a beneficiary of a microfinance programme. Moreover they are asked to take part to a process of strategic interaction, a game, but without a real granting of loans and a real start of economic activity. Instead the laboratory is made the most possible isolated by external influences and for this reason there is no mention of the aim pursued and of the backstage of microfinance.

As the aim is to value in which way the social ties influence the performance of the group, two cases are considered: in the first one the groups of four persons self select and for this reason tendentially they will choose among known persons, while in a second case it is followed the FINCA methodology of the 'list' that allows to obtain groups constituted in a random way.

The advantage of the laboratory emerges just at the moment in which these two different cases are compared because it is possible to modify an only variable, for example the way in which the group is formed or the dimension of the group, leaving all the rest unchanged. The game realizes in ten rounds: in each one the members of the group receive a loan and they will have the possibility to participate to

the successive rounds only if, in the previous rounds, all the members of the group have been solvent.

The possibility of repaying the debt in each round depends exclusively in the investment return of each person's activity which in the 'lucky' case has a payoff that will enable him/her to pay; in the "unlucky" case he/she will obtain a payoff equal to zero. This last possibility implies that the other members of the group have to pay for him/her if they want to have access to the successive rounds. The significant element is that each subject could be incentivated to cheat, that is to have a free rider behaviour declaring failure of his/her activity in the round. In order to study the role of social ties each member of the group is not in the condition of verifying that it has really been a failure of the activity.

The result obtained do not keep into consideration the last round where obviously there is no longer the incentive from the subjects to honour the joint liability because the game has no future.

A part from some critics to this approach the results obtained are particularly interesting. First of all it can be seen how in general the two types of groups considered, the one formed by persons tied by previous relations and the one of strangers, obtain some performance of payment very similar lightly better than in the case of groups of known persons. Nevertheless these last ones would show a greater instability in the payments compared to that of strangers. The explanation is that among friends the free rider behaviour is more unexpected and therefore, when it occurs, subjects show less tolerance. In other terms the cheating of the trust has a certain impact in the interpersonal relation. In any case the main result in line with Widick's study (1999), reduces a lot the role of social ties.

The data collected by this experiment would support the thesis of a general better performance of the group methodology compared to the individual one in payments as well as a critical role of dynamic incentives. This last observation is related to the fact that the incentive

to pay decreases, even if not dramatically as they come closer to the last round.

If we consider the issue of the group dimension, the growing number of members implies from one side a greater presence of incentives to free riding, at the same time this problem would be counterbalanced by a greater differentiation of the risk. Therefore the final results that could be obtained with a different group size will be not so much different. Finally it would be reconfirmed the gender effect: women in general show a greater attitude to pay compared to men.

A further aspect which could be considered adopting such approach is the role played by the diversity inside the group. As a matter of fact, if the thesis of the role of social capital and therefore of the necessity of forming groups the most possible homogeneous, it could be thought that a certain degree of diversity may have some positive effects. This both in terms of reduction of the possibility of colluding among the members and in terms of differentiation of the risk (Sadoulet 2003).

Besides the group must be considered a dynamic subject, mainly when each member pursues his/her economic project and for this reason the initial homogeneity could, in the different moments of the life of the group, fade. The consequence in this case is that the horizontal relation will be no longer balanced so creating possible tensions or centrifugal forces (11).

The last contribution which suggests an interesting element to keep into account when we try to explain the mechanisms which permit the functioning of the group is that one by Ahlin and Townsend (2003a,b). First of all, they show how in different contexts different explicative factors can be detected: some are more relevant than others but surely an external factor which reflects in the dynamics of the horizontal relation is the existence of alternatives, that is of other possible sources of credit. In the moment in which the members of the

group have different outside options the enforcement mechanism becomes much less effective and this reflects in the rate of suffering of microfinance institutions.

Some of the issues raised by the debate will be re-examined in the following chapters where we will try to apply to the study of the horizontal relation inside the group some conceptual scheme which will call into question in detail the role of different dimensions of interactions among persons and the role of trust in interpersonal relations.

#### ***1.3.3.2 Peer pressure: problems of efficiency and congruence with the objectives***

Moving the attention on the dynamic of the relations inside the group, we can detect a series of problems that put into question the results of theoretical models which find in the group the solution of the informative problem.

The first one, as it has been anticipated, lies mainly in the fact that the monitoring such as the application of sanctions presume a cost even when the subjects are tied by very strong relations and we are in the presence of a high level of proximity. The first signal of such problem comes from the cost represented by the weekly meetings of the group that can cause, as some studies underline (Women's World Banking 2003) the outgo from the group of some members. This prescind from the acknowledgement of the utility of the meeting, in terms of offering possibilities for the creation and strengthening of the relations (as results from the interview to the sample of women in Uganda and Bangladesh). But these benefits come to be counterbalanced by a cost.

These problems become more marked particularly in the urban context where the cost of the monitoring, given the low degree of proximity and the presence of more complex activities, grows

enormously. To this it is added a great degree of mobility of the subjects which reduces the level of cohesion of the group and the strength of the relation as well as it raises the risk of the single persons.

As a matter of fact, because of the ‘overlapped’ relation permits to shift on an horizontal level the informative problem and the risk of insolvency, the single persons belonging to the group will have to face not only the risk of their own activity but also that one of the other members’ activity. In the case of subjects particularly adverse to risk this can constitute a deterrent because being part of a group would imply a significant raising of the cost perceived.

Besides the fact that the loans must be covered by the joint liability implies that their dimension remains almost low. This could create strong difficulties for those who, inside the group, have a great developing activity and in order to follow their process need a higher loan for the investment. For this reason in the presence of a certain level of income and dimension of the activity, in a lot of institutions some clients ask for the possibility of going out from the group in order to obtain a loan individually (Madajewicz 2003b).

Another source of tension comes from the possible elements of lack of homogeneity inside the group due, for example, to the fact that the fundings are of a different amount while the responsibility is divided into equal parts.

Therefore in the presence of a horizontal relation ‘weakened’ by the high costs and the emerging tensions as well as discouraged by an increase of the risk, the microfinance institution would see highly limited its possibility of using the social collateral. The group would no more reduce the risk of the moral hazard because of the low level of mutual monitoring and the menace of social sanctions could be not credible or not have such a weight to counterbalance the incentive to defect. In fact, in the urban context, characterized by a stronger degree

of anonymity, the group often has not a communitarian external reference, as the village or the 'Centre' in the Grameen model can be.

This argumentation finds support in Montgomery's study (1996), which underlines how in Bangladesh also in a rural context, the peer pressure to which the persons are subject is not mainly that of the members of the group but that one of the village or in other terms of the big group, the community.

For this reason a lot of projects, for example of Grameen replication in the USA in an urban context, turn to the group only in the presence of a linguistic religious community of reference for the members of the group. Such community, as we will see later, presents an informal system of social rules which permits to reduce the risk making predictable the other subjects' actions and permits the application of social sanctions external and internal to the person.

The result is that the microfinance institution is no more having a dialogue with a group as a unique subject, but instead with its single members to which it would remain linked only by mechanisms of dynamic incentives which prescind from the group.

The mechanisms of peer monitoring and peer enforcement are moreover applicable in an imperfect way also in the opposite case of a 'pre-existing too high' horizontal relation. In this context, as a matter of fact, the menace of social sanctions or of exclusion from the group could not be credible. This hypothesis, that inspires the Grameen Bank rule according to which groups composed by closer relatives are not allowed, finds an empirical confirmation in Ahlin and Townsend's study (2003a,b).

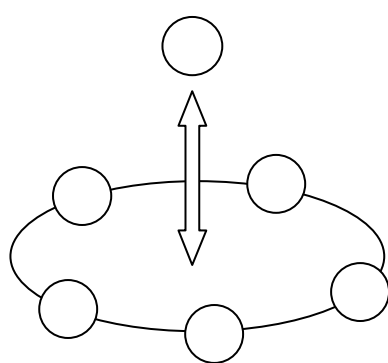
Therefore an excessive level of social capital, as also Wydick underlines (1999), might weaken the role of the group as instrument of 'social collateral'. Just the presence of very strong social ties and of a high degree of information exchanged, so that the cost of peer monitoring is reduced, lead to an opposite paradoxically situation. Being the group so cohesive, the relation between the microfinance

institutions and the group comes again to be of vertical type because inside the group the mutual control is no more present. In the extreme case this could lead the subject to collude establishing a one to one relation with the institution, as the theoretical model developed by Laffont and Rey (2003) shows.

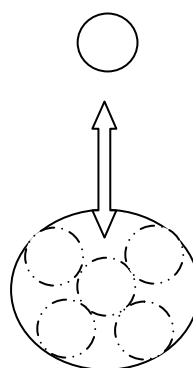
Taking again the scheme previously proposed we can visually configure the two inefficient situation in the following way.

Figure 1.3.3: two extremes cases: collusion and weak relation

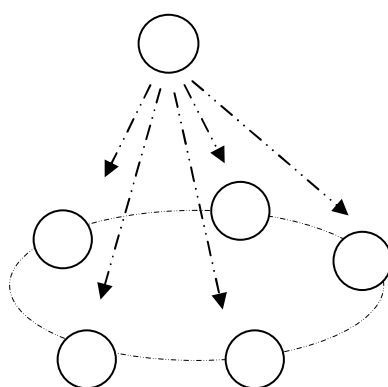
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Overlapped C-D relation



Vertical C-D relation: possible collusion



Weak relation

Going again to the ideal case in which the horizontal relation is able to activate efficient mechanisms of peer monitoring and peer



enforcement, it is necessary to take into consideration if, aside from the problem of justice, it is efficient to impose to the subject a so strong punishment as for example the exclusion from the group or the social ostracism.

As a matter of fact, the subject could run in difficulties in the payment of the instalments because of exogenous factors, that is which prescind from his/her behaviour and his/her good faith. The economic activities may be subject to a series of risks, linked to the running of the productive process as well as to negative economic trends making impossible the repayment of the loan. A crisis of liquidity might, even in the presence of a sound activity, make the subject run an enormous risk.

Perhaps just in such context comes again into play the role of social capital in the sense of allowing a more flexible use of the group which becomes a containing scheme of reference. In modern microfinance institutions such problem is faced with the recourse to some forms of micro insurance which protect the subject especially in the case of external disasters or other calamities.

However it is to be solved the problem of the mechanism of a too rigid monitoring, which has to be made the most possible rational. One of the possible theoretical suggestion is the adoption of a system of 'cross-reports' such as to make possible a more effective and preventive process of monitoring. This also can be combined with frequent repayments (Rai and Sjoström 2004).

Until now the consideration of this aspect has not taken into account problems of equity and congruence with the final object which the microfinance institutions want to obtain. As Montgomery (1996) reminds us, in fact, it has been often asserted how 'the social objectives of mutual self help and poverty alleviation remain fundamental to the broader goals of these peer group lending schemes'.

Montgomery's contribution (1996) is particularly interesting because he proposes the comparison of two institutions, the BRAC in Bangladesh and the SANASA in Sri Lanka. This analysis allows to consider in the first case some degenerations of the group lending methodology and in the second one allows to consider virtuous processes of development on horizontal relational basis.

Even if the BRAC makes use of groups from 5 to 7 members linked by joint liability, in reality it does not exploit peer pressure inside the group but it uses an indirect mechanism of pressure through the village. In fact, if one of the members of the group in the village is insolvent, the BRAC agent addresses to the whole village to cover the insolvency, treating the possibility of closing the future line of credit not only to the members of the group with the insolvent subject but also to the other groups. This creates a so high psychological and social pressure on the single persons that in case of no repayment often leads the weaker and more vulnerable subjects in the village to suffer forms of material expropriation or of social exclusion.

This degeneration has been the result of a process of vertiginous expansion in the 90s which has seen these institutions to give prominence to the numbers of loans and to the reduction of the rates of suffering.

In the accounts given by Montgomery, it is significant the changing of the beneficiaries' perception of the BRAC operators: in fact there is a shift from a 'bhai (brother) culture to a sir culture'. This is strengthened by the fact that often the agents are men while the beneficiaries are women and this implies a certain degree of verticality in their system of norms of behaviour. In addition to the indirect hierarchization of the relation borrower- microfinance operator which produces a high social cost, another problem is given by the lack of flexibility in the financial instruments adopted.

The credit cooperatives show on the other side the possibility of using the horizontal relation to create some 'small scale institutions'

managed with democratic criteria and with a high degree of flexibility and variety. In this case the SANASA plays a role of a second level microfinance institution that provides the network of credit cooperatives with an initial external capital, as we have seen in the case of the village banking. Just thanks to the high level of democratic nature in its management which is done by some of its voluntary and elected members, each cooperative succeeds in developing high levels of social capital as well as a great capacity of adaptation to the context.

This produces a great variety of financial instruments adopted which goes from the individual loan to the ‘instant loan’ for consumption, as well as personal deposits and flexible systems of repayment of loans. Besides it is registered a high capability of inclusion of marginal subjects.

A particularly interesting element (which presents some similarities with the ADIE methodology) is given by the fact that in SANASA it is encouraged the adoption of a system of moral relational guarantees. This mechanism permits the new member to become part of the cooperative thanks to two or more friends already members, as guarantors.

Another element of guarantee is given by the so called ‘member pressure’ which is based on the corporate ideology that animates the members of the cooperative. The idea of being members and therefore the recognition of the existence of a society, has been already met in the Raiffeisen cooperatives where members were engaged in the life of the cooperative, considering it ‘as an extension of their own business’ (Prinz 2002).

In the case of SANASA cooperatives it is used a metaphor that, in a very clear way, explains the difference between a vertical credit-debt relation in which the subjects are ‘strangers’ and a horizontal relation in which the subjects involved are ‘members’. The metaphor distinguishes two different types of money: the “hot” and the “cold”

one. For hot money they mean that one which circulates in the horizontal relation. It belongs to the members of the cooperative who, in different moments, are savers and so creditors, investors and so debtors. Money is made hot by the fact that it belongs to a large extent to a 'neighbour' with whom there is an interpersonal relationship of trust and cooperation and for this reason such money has to be respected and used with attention. The cold money, on the contrary, comes from the outside of the cooperative, that is from donors or from the formal system of credit.

In this sense, the "overlapped" credit-debt relation exploits the group introducing some money at a horizontal level in which the subjects, being tied by some forms of joint liability and social ties, will consider the insolvency not as an external damage but as an internal one. Therefore they will do everything to prevent it.

In the SANASA experience the cooperatives are organized in a pyramidal way, as a federation of 'states' or a sort of holding. It has on the top some subjects who relate with the external, take care in raising of funds and in the relations with the formal system. They are concerned with supplying with all the cooperatives of the federation services of financial and technical consulting and with making possible credit relations among cooperatives inside the federation. They also fulfil a fundamental role that consists in guaranting that the system remains 'hot'. This means that they operate so as a high quantity of 'cold' money (external), which could incentivate the members to default, does not circulate in the internal network.

Undoubtedly the SANASA experience shows the possibility of creating some institutions which set in motion processes of creation of social capital as well as networks of cooperation that link a local level to a greatly spread higher one.

### **1.3.4 Trying to solve problems: new ideas towards an individual methodology**

The problems concerning the group methodology, which have been analysed, have led a lot of institutions to reconsider this approach and to embrace a new methodology of loan on individual base.

Before analysing the results of a recent empirical study which presents some performances of the two methodologies (Karlan and Ginè 2006), let us consider the alternative mechanisms of monitoring and guarantee applied in the individual methodology.

Many of the new ‘technologies’ of credit-saving introduced, in reality, take again a great part of the innovation adopted by the first institutions of microcredit, such as, for example, the progressive lending and the repayment plans on a weekly base. This analysis will enable us to think carefully on the possibility of setting up a different credit-debt relation which does not exclude relational elements and does not blight the fundamental objectives of economic and social inclusion.

Though the Grameen Bank has not been the first to do this afterthought, we will start just from this bank. In 2002 it created a new model: the GGS (Grameen Generalized System), also called ‘Grameen Bank II’, that introduced elements of flexibility just renouncing in part to the adoption of the group.

This new approach is not simply the result of a period of difficulty that the Grameen Bank met at the end of the 90s, but mainly of the experience gained. It has allowed to understand how an excessively rigid system could motion mechanisms opposite to the objectives for which it has been created.

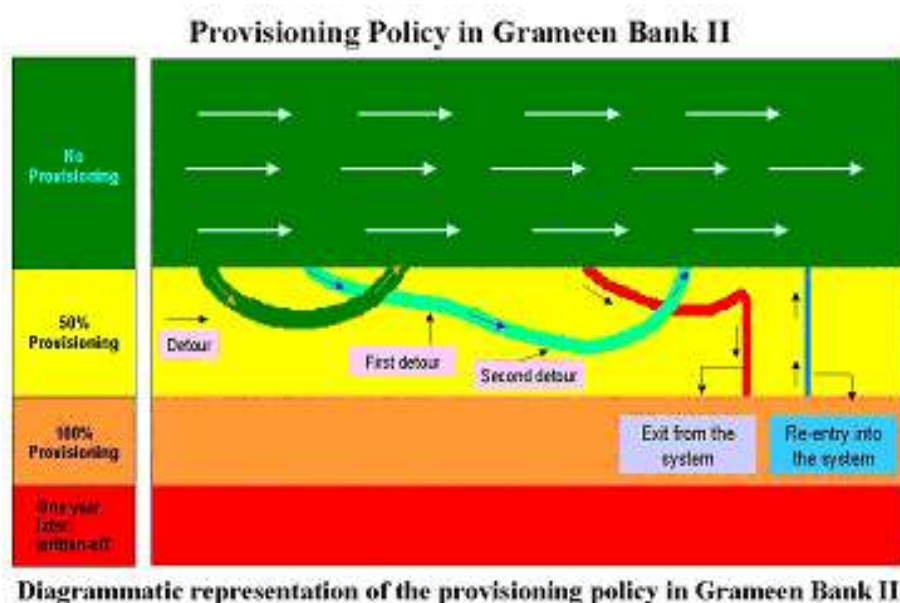
The principle innovation is given by the introduction of a third possible way in addition to the two extreme cases that are present in the classical model. In the first one the borrower can pay regularly the instalments; while in the second one he can not pay for various causes

and consequently a series of repercussions for his/her group and for the subject himself will derive. It had to be offered the possibility, in the case of exogenous factors (often linked to the productive process) which made temporarily impossible the repayment, not to incur into a so strong and inefficient sanction. The following strategy is adopted.

All the beneficiaries starts with the ‘Basic Loan’ (in Bengali ‘Shohoj’) of the classic methodology even if elements of flexibility and creativity are introduced: “[the staff] can design his loan product to make it a best fit for his client in terms of duration, timing of the loan, scheduling the instalment, etc. The more a staff becomes a creative artist, the better music he can produce” (Yunus 2002).

The members of the group who do not present difficulties in payments, cycle by cycle, will have the possibility of having access to loans of a greater and greater amount. In the case in which they find themselves in difficulties, it is offered an ‘exit option’ or, using the metaphor proposed by Yunus, an ‘emergency lane’ who substantiates in a ‘Flexy Loan’ (in Bengali ‘Chukti’).

Figure 1.3.4: The Grameen Generalysed System (source Yunus 2002)



This last one is nothing but the basic loan renegotiated in order to enable subjects to overcome the difficulties and go back to the Grameen microcredit “highway”. This flexy loan is obtained, this time, in an individual way that is without implicating a form of any type of group responsibility.

In spite of this, some mechanisms of enforcement and dynamic incentives are provided. The flexy loan does not give the possibility of increasing cycle by cycle the loan which, on the contrary, tends to decrease in its amount. Besides, when the debtor succeeds in going back again into the basic loan, the credit history is wiped out so he must start again to accumulate a good credit history to obtain greater and greater loans. Moreover, this mechanism plays on reputation factors. It is interesting the distinction made between ‘unwilling defaulters’ and ‘willing defaulters’. While these last ones are those that have not accepted to use the flexy loan option and therefore come in default, the unwilling defaulters are those who use the flexy loan option but, in spite of this, are not able to repay the loan because of external causes.

As Yunus (2002) underlines: ‘Now both the bank and the borrowers can be free from all tension - no more chasing of the problem-borrowers or defaulters. Nobody needs to look at anyone with suspicion. Group solidarity is used for forward-looking joint-actions for building things for the future, rather than for the unpleasant task of putting unfriendly pressure on a friend. [...] There are many exciting features in GGS, but I think removing tension from micro-credit and permanently establishing full dignity to the poor borrowers, are the two most important features of them all’.

In the GGS the progressive lending is the principal mechanism of enforcement adopted. It introduces a dynamic incentive that prescind from the use of the group. As it is shown in Armendariz de Aghion and Murdoch (2005) it is possible to study such mechanism

and to detect the compatible incentive commitment which makes the choice of default irrational.

In general, as we will see for example for ADIE, it must be introduced the most possible dynamic elements in the creditor-debtor relation, according to a scheme of successive and progressive loans. Besides, in order to make effective the menace of not receiving a successive loan, it is necessary that the first loan is not of an excessively high amount or, in other words, that the activity being financed needs in a vital way of a flux of successive loans. Such instrument, used in the group loan as well as in the individual one, introduces not only an incentive but creates the condition of testing the beneficiary's debt capacity and reduces the creditor's economic exposure to the risk (Ghosh and Ray 2001).

As we have seen, the weekly repayment is another mechanism which has remained present in the GGS also in the case of individual loan. The reason is that it makes the creditor-debtor vertical relation more dynamic. A first confirmation of the fact that the payment of the debt, divided into little frequent instalment, is an effective solution comes for example from the BRAC experiences in Bangladesh and Bancosol in Bolivia. After adopting the system of monthly instalments, they have registered a significant worsening in the payments that have obliged them to turn back. The main reason which makes the frequency of the payments a practice of success is to be found in two mechanisms which this system generates (Gonzales-Vega et al 1997).

The first one is the so called 'early warning system': the frequent meetings between creditor and debtor would enable the microfinance operator to monitor and intervene at the early signals of difficulty in the payment.

Besides it implies the creation of a regular and continuous 'face to face' relation with important relational implications which, in their turn, would contribute to the reduction of the informative problem. In



a certain way the relation between the microfinance operator and the clients would become similar to that of the moneylender or of the 'susu' collector in Ghana with the customers of the villages. Just on this base some have considered the possibility of creating, between the formal and the informal systems of credit a link which exploits the direct contact of the moneylenders with the debtors.

This form of monitoring could be strengthened also maintaining in the individual loan some forms of group meeting for example with the public payment. For this reason Karlan and Ginè (2006) make a distinction between those who adopt the group methodology using the joint liability and those who give individual loans but adopt the group as an instrument of enforcement and monitoring of the relation. With regard to this last aspect, it is interesting the idea of the 'cross-reporting' according to which a debtor takes care of informing the bank regularly about another debtor's behaviour (Rai and Sjöström 2004).

The other reason which would be at the basis of better performances of payment lies, as we have underlined in the ROSCAs, in a problem 'internal' to the debtor that is on his/her capacity of setting apart some savings (Thaler 1994). The education to saving plays such a decisive role in the struggle to poverty and in the processes of development so that some have suggested the idea that more than a revolution on the front of credit, it has to do with a revolution on the front of saving (Rutherford 2000).

It is interesting to see how the saving capacity can be used to make a selection among the subjects asking for a loan. This is done in the 'SafeSave' programmes where, before securing the loan, a subject must set apart regularly a certain amount of money which will grant also in part his/her future loan. The constitution of a credit or a saving history can function as deterrent and as guarantee giving the subject the possibility of showing his/her own intention and capacity, as well as the possibility that he/she has to have access to other informal

sources of credit. For example, the fact of being able to face with a short situation of no liquidity, asking for help to family members and friends, as well as to be able to reckon on other sources of income are other important elements of security.

The saving commitment can act not only as an instrument which reduces the adverse selection, but combined with the access to credit it can create some hybrid and complementary financial products to such extent to induce the subjects little by little to self sufficiency. To this it must be added the fact that the setting up of a 'double channel' creditor-debtor would reduce the incentive to default, so acting as guarantee. Karlan (2003) registers, for example, how among those who have accumulated more savings less defaults are present and moreover the defaults decrease, little by little, in the successive loans.

These methodologies suggest that it is possible to improve the credit-debt vertical relation without making use of any type of guarantee. As a matter of fact, it is possible to make the relation more dynamic through more flexible amortization plans and with accesses to more frequent credit/repayments of loan. The credit-debt relation can be intertwined with other relations offering other services such as savings, micro insurance, and enterprise development, creating a 'bundle of relations' which reduces those elements of verticality that make stronger the informative problem.

A particularly significant experience is the ADIE in France. In an urban context, for a lot of years, a methodology of individual loan has been applying with success. Besides some mechanisms as the progressive lending, the most interesting and innovating idea which we can detect in their methodology is the introduction of a moral relational guarantee. The subject that wants to invest in an economic activity must present to the ADIE two or more subjects as guarantors for the loan. But this guarantee acquires a form which is different from the traditional one: the guarantors, usually friends and persons

who have a long relationship with the beneficiary, enable the bank to have some valuable information about the subject. Just the fact that a subject has the possibility of presenting some guarantors who attest his/her morality, that is he/she is credit worthy, is a significant element which allows a first selection of the beneficiaries.

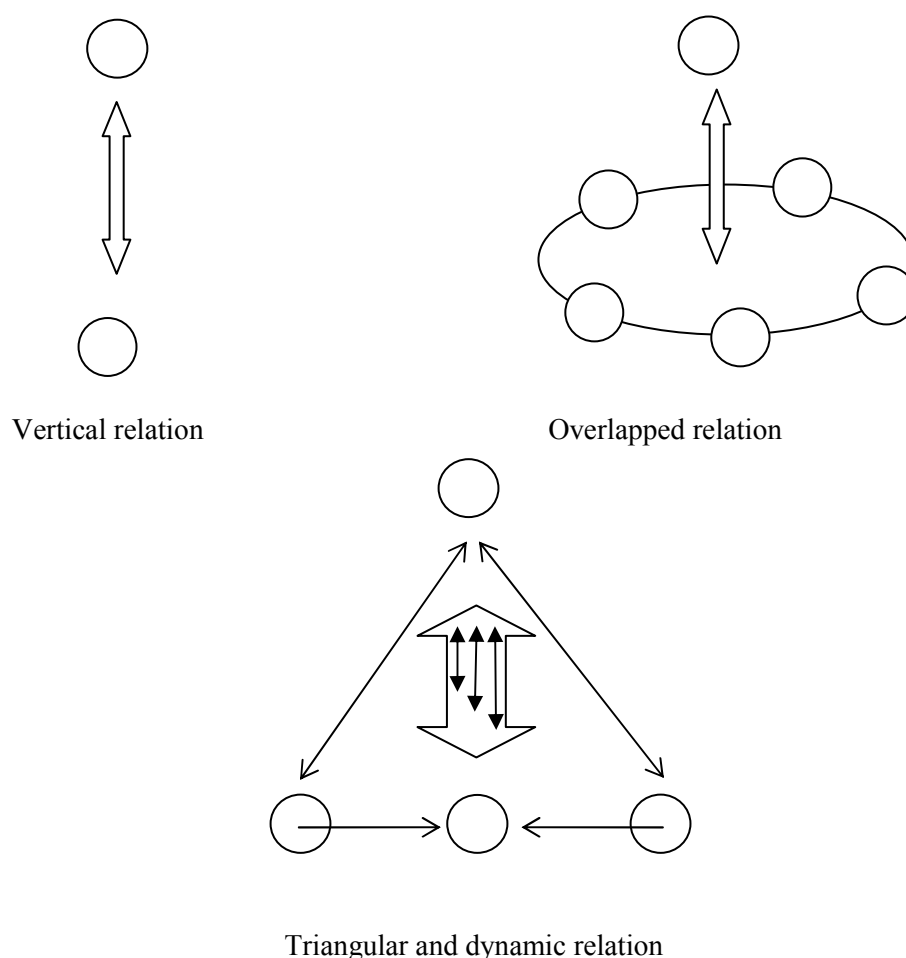
Besides the presence of two subjects linked by any degree of proximity with the debtor, permits to externalize the cost of monitoring and to make it more effective. The guarantors engage themselves towards the bank to play a role of tutor and assistance, as well as, of alarm in case of the guaranteed subject difficulty. It is interesting to observe how the request for this type of guarantors implicates a rational responsibility which prescind from the classical group but absolves to many of its tasks often in a more effective way and without producing excessive tensions. The same enforcement of the contract is obtained through the guarantors' pressure who, in extreme case, could be asked to honour the debt. In reality the ADIE does not bring a legal action in case of default because it would often be too expensive. Moreover, the guarantors' signature is not followed by an investigation of the guarantors' wealth and capacity to refund.

Developing this line, it seems therefore possible to think about a triangular credit-debt relation in which, as in the case of the letters of patronage or of references, the link of trust between the guarantor and the bank is important.

So summarizing the three typologies considered, it is possible to highlight their characteristics in a synthetic scheme. This last one will be referred to in the following chapters where the credit-debt relation will be studied, focusing on the interpersonal dimension and on the role of trust.

Figure 1.3.5: the triangular and dynamic credit debt relation

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In the last years the diffusion of the individual methodology has made possible the beginning of a series of comparative studies which present a lot of difficulties in the collection of data. The success or less of a project and the performances in the payments depend on such a high series of factors, apart from the methodologies, which could be difficult to isolate the impact of each one.

Among these studies, however we take into consideration Karlan and Ginè's very recent one (2006). They have analyzed for one year the Green bank, a microfinance institution in the Philippine, exploiting the fact that in 2004 this institution had converted part of its group loans into individual loans. The first result obtained is that the

passage to the individual loan has not implied a worse performance in terms of payment or an exacerbation of the problem of moral hazard. Instead it has been registered an increase of the loans caused by a reduction of the retirements from the group and an increase of the requests. The thesis which seems to emerge from the data collected is that ‘the innovators, finding methods of lending individually (and more flexy) to the poor are moving in the right direction’ (Karlan and Ginè 2006).

If other studies confirmed the possibility of solving the structural problems of the credit-debt relation also making use of an individual methodology it would be opened a further research line which would try to understand the best practices in different contexts in view of not purely economic objectives.

## **Notes chapter I**

(1) We will have to wait that the classical thinking, which for thousands of years has seen the financial activity object of ethical prescriptions, gets to accept the existence of an interest rate in the practice of credit. See Sen, 1999; Hicks 1969; Bruni and Zamagni 2004.

(2) This observation leads to underline how it is relevant the interplay existing between the productive process and the establishment of a credit-debt relation. This issue will be explicitly analysed in the third chapter referring to Georgescu Roegen's (1965) analysis of peasant communities.

(3) In the third chapter we will deeply consider the role of trust and trustworthiness in a game framework on the base of Pelligra's (2005) psychological game.

(4) Important researchers have shown how the practices of microfinance achieve to impact in a more effective way when they are addressed to persons belonging to the middle poor more than to those ones who are collocated in the deepest part under the poverty line (Hulme and Mosley 1997).

(5) See Maria Nowak (2005) in her reconstruction of the expansion of microfinance in Europe especially during the 90s.

(6) The group may be constituted by three/five persons until ten in the first two methodologies while, in the case of the village bank, it is possible to have from thirty to one hundred members.

(7) See L. Costabile (2004)'s contribution that, starting just from the study of Sufia's condition, analyses the employment relations in the context of underdeveloped countries

(8) The first case of 'weak relation' realizes for example in the urban context with high costs of monitoring. The case of 'too strong' group relations refers for example to the existence of an excessive social capital and the possible emergence of collusive phenomena, so that to bring back the overlapped relation to a vertical one. See for both these issues Madajewicz 2003; Rai and Sjostrom 2004; Laffont and Rey 2003.

(9) It is evident that this concept of social capital implicates, therefore, the role of the trust and of the mechanisms of cooperation and coordination and for this reason we will concentrate on them in the third chapter.

(10) At such purpose Armendariz de Aghion and Murdoch (2005), express some doubt concerning the structure of the game because the fact that the game will finish at the tenth round, would cancel the possibility of a cooperative choice starting from the first round.

(11) The diversity, as we will see in the third chapter, plays an important role also from the point of view of the interpersonal relation. For example, in the processes of emergence of trust or when the problem of the sharing of emotion and the mirroring (Rizzolatti and Sinigaglia 2006) are considered.

(12) In other experiences as that of the Bancosol it is used a system of 'credit scoring' in which the relations with friends and family members have an important impact; or, as we have seen in the

SANASA, it is necessary that one or more members of the cooperative act as guarantors for the loan of a new member.



## ***Social Capital and Enabling Institutions***

### **2.1 Social Capital: a multifaceted concept**

#### **2.1.1 Defining social capital: critical issues**

The concept of social capital has assumed a central role in the current social science research because it has been able to create a space, a table of comparison, around which psychology, anthropology, sociology as well as historical, political and economic sciences have had the possibility to sit, one in front the other. In this way they have had the opportunity to confront themselves fertilizing reciprocally in the study of man in his social and relational dimension. To such complex and for many aspects difficult dialogue is to be recognized the effort to introduce a ‘federating concept’ able to overcome that tendency to an ‘undersocialized conception of man’ (Granovetter 1985), particularly present in the current economic science.

In the last thirty years, at first with the contributions of Bordieu (1986) and Coleman (1988) and then with that one more famous of Putnam et al (1993), it has been developed a wide literature that has tried to define and apply the concept of social capital in different contexts, among which as we have seen that one of microfinance. Starting from these authors different schools, internally very heterogeneous, have been structured. They have produced a ‘plethora of definitions’ as well as empirical researches on the causal role played by the social capital in the explanation of phenomena, both on macro or aggregated level and on micro or individual level. Although

this wide literature, as it is recognized by many authors the definition of social capital has remained almost vague and elusive (1).

Starting from the following definition by Coleman (1988, 598):  
'social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: they all consist of some aspects of social structures, and they facilitate certain action of actors – whether persons or corporate actors – within the structure'

which is enriched after words (Coleman 1990, 302):

'Like other forms of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence or could be achieved only at higher cost'

it can be noticed how in some authors the social capital is defined in terms of the outcome, that is of that sort of 'group externality' which would be able to generate.

On the same line we find the contribution by Putnam et al (1993, 167): 'social capital...refers to features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating co-ordinated actions'.

Other definitions focalize greatly the attention on the structure of relations and interdependences among individuals from which such benefits on individual or group level would arise so that social capital comes to be defined as: '[...] connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them' (Putnam 2000, 19); or in Fukujama (1997, p.378): 'Social capital can be defined simply as the existence of a certain set of informal rules or norms shared among members of a group that permits cooperation among them. The sharing of values and norms does not in itself produce social capital, because the values may be the wrong ones.'

This last clarification is proposed again by Arrow (2000) who, recognizing a great consensus on the fact that social networks play a central role, for example affecting economic performance, reminds that it is necessary to take into account that ‘social interactions can have negative as well as positive effects’. Moreover this last author, together with others, highlights how the little clarity in the concept of social capital is partly determined by the use of the term ‘capital’ that, as Solow suggests could be better substituted by that of ‘patterns of behaviour’.

A useful interpretative scheme is offered by Durlauf and Fafchamps’ contribution (2004) in which it is underlined how the various definitions can be articulated in the following way:

- (i) social capital generates externalities, both positive and negative, for members of a group;

- (ii) these ‘group externalities’ are achieved through shared trust, norms, and values and their consequent effects on expectations and behaviour;

- (iii) shared trust, norms, and values arise from informal forms of organizations based on social networks and associations. While in Putnam’s study these last ones substantiate in the set of “horizontal association” and “network of civic engagement”, in Coleman (1988, previously mentioned) horizontal as well as vertical associations and organizations as well as different entities among which firms (characterized by hierarchical relationships and an unequal distribution of power among members of a group) are included again. For this reason Coleman, as we have seen in Fukuyama’s definition (1997) recognizes the possibility that: ‘a given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others’ (Coleman 1988, 598).

The type of positive or negative externality, as Serageldind and Grootaert (2000, 47) underline would come to depend ‘on the nature

of relationship (horizontal versus hierarchical), pre-existing norms and values, and the wider legal and political context’.

The same authors aiming at the achievement of an integrating view of social capital, point out that the base network from which the social capital would be generated could include again that group of ‘formalized institutional relationships and structures, such as governments, political regimes, the rule of law, court systems and civil and political liberties’(2). In such sense it is detected the possibility of achieving an ‘optimal mix’ of the different types of social capital which express themselves in different levels. The macro institutions would constitute an ‘enabling environment’ for all those micro institutions, local and horizontal associations, in a complementary and reciprocal strengthening relation.

The lack of a coherent methodological framework can be found, as many have underlined, in the numerous empirical studies in which a series of proxies of social capital have been used, in order to build some indicators as the famous ‘Putnam instrument’ (3). Though these contributions can be appreciable for their effort of experimenting and strengthening the relation between theoretical and empirical work, they show a series of limits in the econometric technology adopted.

Though we will not concentrate on the analysis of these studies, we propose some reflections that emerge authoritatively from recent contributions by Durlauf (2002) and Durlauf and Fafchamps (2004). In addition to a first problem (often ignored in empirical works) concerning the use of individual data for the estimation of social capital’s benefits, it is stressed how there is a basic difficulty linked to the model specification.

Typically these studies try to identify the effect of social capital on an outcome that is the variable of interest, for example called  $\omega_i$ . This variable can be measured both at the aggregate level and at the

individual level. In this last case, for example the regressive model would be of the type:

$$\omega_i = \gamma X_i + \pi Y_{g(i)} + J SC_{g(i)} + \varepsilon_i$$

in which  $X_i$  is a set of individual controls,  $Y_{g(i)}$  is a set of group controls and  $SC_{g(i)}$  is Social Capital. In order to understand its role we must check the significance of the coefficient  $J$ .

Durlauf and Fafchamps (2004) stress, among the others, two main issues: the first one is a problem of observations, to which they propose to give a solution recurring to the concept of exchangeability; the second one is mainly a problem of identification of a causal relation between social capital and the outcome. Finally another signal of the lack of a theoretic rigorous model is that most of the contributions do not pose themselves the root problem of the existence of differences in the endowment of social capital for individuals or aggregates. It is explicative the passage by Durlauf (2002, 464) who declares: ‘These studies, in turn, typically do not incorporate a separate theory of the determinants of social capital formation, although they do often employ instrumental variables to account for the endogeneity of social capital. However, without a theory as to why one observes differences in social capital formation, one cannot have much confidence that unobserved heterogeneity is absent in the samples under study’.

As a matter of fact, in the last years, there have been many empirical contributions but not so many efforts in the direction of setting up a congruent theoretical framework which would enable to analyse the ontological status of social capital: its sources, forms and consequences. More precisely there have been some contributions that have studied the relation between the social capital externalities and the market, as we have seen for example in our microfinance review of literature. Others have mainly considered how the social capital

could affect on the development process. Surely, there has been a lack of ‘an inquiry into the character of those institutions that would enable people to have a good chance of pursuing well-lived lives’ (Dasgupta and Serageldin 2000, xii). In other terms just the lack of a formal structured theory of social capital, has not allowed the study of those that we can call ‘enabling institutions’, that is those institutions able to generate a process of creation of social capital.

Some attempts in the direction of embody social capital in the formal economic models have been made in a context of repeated Prisoner’s dilemma games in which the social capital is nothing but that factor which facilitates the emergence of cooperative equilibrium. For this reason it has been defined as the individual’s reputation for cooperation in prisoner’s dilemma games. Another line of research has tried to investigate the notion of trust and trust worthiness putting them into a structured analytical framework that we will consider in the third chapter.

Perhaps the most important contribution in which the relation between social capital and formal modelling has been systematically analysed is that by Dasgupta (2002) in which he ‘models social capital as a form of social network structure and uses the presence of that structure to understand how individual outcomes are affected in equilibrium’ (Durlauf, Fafchamps 2004, 61).

In order to conclude this short review on the research about social capital we could quote Solow’s impression (2000, 6): ‘I think that those who write and talk about social capital are trying to get at something difficult, complicated, and important: the way a society’s institutions and shared attitudes interact with the way its economy works. It is a dirty job but someone has to do it; and mainstream economics has puristically shied away from the task. My problem is that I would like to see the job done well, in the hope that serious research will uncover defensible answers. So far I have seen only vague ideal and casual empiricism’.

In the following paragraph Dasgupta's contribution (2002) will be analysed in detail going into the research of a theoretical model that provides defensible answers and mainly "if it is a good model [...] some interesting questions" (Hicks 1969, 42). This analysis will be deepened in the third chapter where some approaches developed in economics to study social and economic interactions will be examined.

### **2.1.2 Looking at social capital as a social structure: Dasgupta's analytical framework**

The difficulties pointed out by many contributions in defining and using the metaphor of social capital, find an organic synthesis in Dasgupta's work (2002) that explicitly, starting from the point of view of economic analysis, aims to develop a theoretical framework.

The main weakness of the concept of social capital lies mainly in the fact that it 'encourages us to amalgamate incommensurable objects, namely (and in that order), beliefs, behavioural rules, and such forms of capital assets as interpersonal links, without offering a hint as to how they are to be amalgamated'(Dasgupta 2002, 5). In other terms the social capital is defined as a sort of 'black box' inside which a set not well defined of concepts and structures that interact with each other and with the outside are put. The type of relations and causal nexuses inside the box are not well defined and moreover it is not offered an explanation of the way in which such structures have constituted.

Dasgupta's work goes in the direction of opening the black box and make comprehensible and manageable theoretically and empirically concepts like trust, institutions (especially informal institutions), beliefs etc.

In order to build a rigorous theoretical framework he underlines how it is not possible to stop at some functional notions of social capital. This means that it is not sufficient to observe what arises from the black box, the externalities or spillovers, in order to be able to define it. Besides in order to be able to control or to induce the process of formation of this outcome in the case of positive externalities, it is necessary to know the social structures below the social capital and so to detect which can be the ‘enabling institutions’.

In this sense the following approach is proposed (Dasgupta 2002, 6): ‘[...] social capital is most usefully viewed as a system of interpersonal networks. If the externalities, network formation gives rise to are ‘confined’, social capital is an aspect of ‘human capital’, in the sense economists use the latter term. However, if network externalities are more in the nature of public goods, social capital is a component of what economists call ‘total factor productivity’. There is no single object called social capital, there is a multitude of bits that together can be called social capital. Each bit reflects a set of interpersonal connections’.

The fundamental level of the analysis is therefore moved from the institutions that often erroneously are identified with the concept of social capital to the system of social networks from which institutions emerge. In fact different systems of networks are able to attain different equilibrium configurations. For each of them we can find a ‘distinct institutional structure, involving a distinct set of human relationships’ (Dasgupta 2000, 7).

The first step consists in trying to understand the way in which some social networks come to constitute and also the reasons that lead persons to look for each other, meet and interact. The concept of network is very malleable and dynamic so that it is possible to apply it in various levels of interactions. In fact each individual since his/her birth is put inside a network that in its turn is embedded in a system of networks. On the basis of this original network, each person can



choose to extend his/her network opening some channels, that is acting to achieve an ‘optimal set of channels’. The creation as well as the keeping of the channels require the bearing of a cost that could be called ‘link cost’ or that in other context is called ‘transaction cost’.

The reason that can lead a subject to invest in a channel can be both of economic type and intrinsic one. This last one is strictly linked to the person and his/her need of relationships. Often these two reasons overlap and others, unknown at the moment of the creation of the network, are added to them according to a principle of ‘serendipity’.

In this sense Dasgupta (2002, 22) speaks about networks: ‘as systems of communication channels for protecting and promoting interpersonal relationships’ underlining how the interpersonal relationships constitute the basic category inside which to detect the concept of trust and the deriving system of mutual beliefs.

Putting attention for a moment on this dimension we can detect an elementary channel that is a channel which links directly a couple of individuals. Just the concept of network presupposes the possibility of creating some indirect links and so the possibility to propose an interesting distinction (Durlauf and Fafchamps 2004). On the base of a distinction of different kinds of links among persons it is possible to speak about:

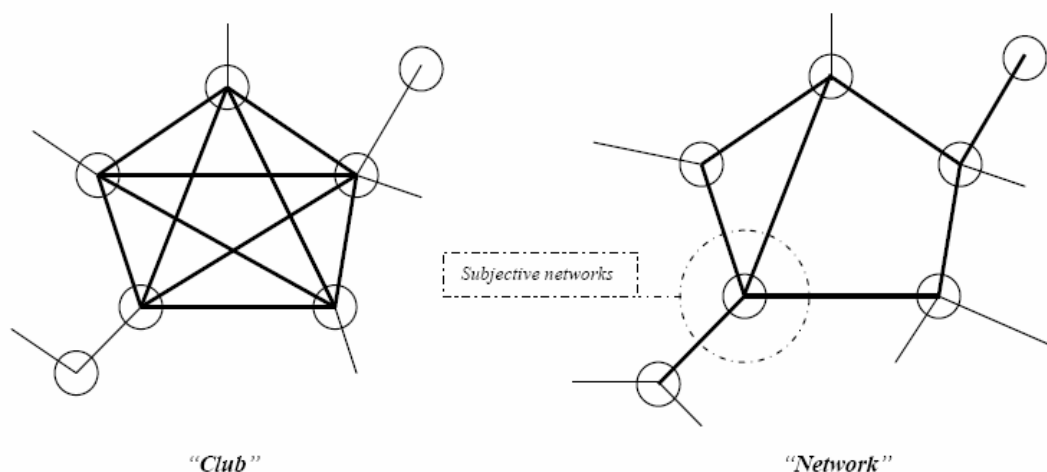
- (i) ‘Club’: when each one has a direct link with each other member of the network so that it describes ‘finite, closed groupings’ ( this does not imply that each one has other external channels or is member of other networks)
- (ii) ‘Network’: when each one is only related to some other agents, not all persons involved. It represents a more complex structures in which we can distinguish some subjective networks from some indirect ones.

Apart from this distinction between two different types of network that comes from the possibility of direct as well as indirect

relationships, the common element is given by the fact that: ‘Networks are personal. Members of networks must have names, personalities, and attributes. Networks are exclusive, not inclusive, otherwise they would not be networks. The terms of trade within a network would be expected to differ from those which prevail across them. An outsider’s word would not be as good as an insider’s word: names matter’ (Dasgupta 2002, p 28).

Using the similar schemes seen in the first chapter studying the credit-debt relation, these structures can be represented in the following way:

Figure 2.1.1: club and network



This distinction can be used to introduce the concept of trust in its two different personalized and generalized dimensions. If at first we embrace the idea of trust as an expectation or belief regarding another’s agent behaviour, then we can say that: in the first case (personalized trust) we are dealing with a trust that comes from a repeated interpersonal relation; in the second one (generalized trust) the trust derives from a general knowledge of the social network of which a person is a part. An example of this second case is given by the community of merchants, presented in Hicks (1969), in which,

though not all the merchants knew each other personally, they were part of a network inside which a system of beliefs was shared.

Although the concept of trust will be developed in the third chapter, we anticipate some of the considerations proposed by Dasgupta (2002) because this concept is a sort of cornerstone essential to develop an analytical framework (4).

The concept of trust ‘acquires an important role in the efficacy of various institutions when it is placed squarely within agency relationships’ (Dasgupta 2002 p 8). In such context trust is nothing but the expectation that the subjects involved in the relationships build in relation to the other subject’s behaviour and to the various possible states of nature. The formation of an expectation can derive from two types of situations:

- (i) the first one is given by the impossibility of observing other’s actions at the same time in which a person chooses his/her own action (this situation reminds that of moral hazard);
- (ii) the second takes place when other subjects have some information concerning themselves or some states of the world, information unknown to the subject that has to choose (this situation reminds that of adverse selection). In such case the concept of trust worthy comes into play.

The trust, in both cases, is based on the reputation that the other interacting subject (an individual, a group or an institution) has. Such reputation is obtained as the time goes by on the base of the interaction, both through a direct and indirect relation. For this reason is clear that: ‘Trust is of importance because its presence or absence can have a bearing on what we choose to do, and in many cases what we can do’ (Dasgupta 2002 8). Besides differing from the concept of ‘confidence’ introduced by Luhmann (1988), that refers to an expectation concerning the capacity or less of the social institutions to

work, the concept of trust as expectation, implicates someone's underlying 'disposition, motivation and incentives' to do something.

Going back to the process of formation of networks, we can observe how the creation of channels is nothing but a way to create trust, that is 'for protecting and promoting interpersonal relationships'. Though the possibility of creating some expectations and trusting decreases when the relations becomes more and more indirect inside the network, that is when 'I trust you, because I trust her and she assures me that she trusts you' (Putnam 1993, 168) and so on, this not imply that 'weak ties' are less significant channels. In fact using this concept in the sense proposed by Granovetter (1973), these channels introduce the possibility to open more and more the network dimension and to wide the informative base.

In less developed countries, especially in the rural areas, there are systems of social networks based on strong ties more than on weak ties. This situation often involves the non exploitation of a wider information and cooperative base. Concerning this Wintrobe (1995) arguments how the networks emerge following ethnic lines that create some structures with entry barriers (to be members of a kin-group based on birth) and exit barriers in terms of group sanctions and social ostracism. The raise of this kind of social network may come from a root reason: investment in channels is irreversible and moreover the cost to be suffered to maintain the channel decreases with the increase of the number of interactions inside the channel. This would explain why there is a particular investment in the original club or family group.

Linked to this reflection, it is interesting to remember how the Grameen methodology requires a group composed by not strong related persons, that is belonging to the same 'club of blood'. So they incentivate the creation of some social networks constituted by persons not necessarily directly linked, or in other terms linked by personal trust. This can be seen as an effort towards the enablement in

the creation of a generalized trust. The fact that persons come to be linked into a network inside which they can be incentivated to interact with unknown members is a way to widen the original club and to overcome the tendency stressed by Wintrobe.

The analysis of the possible structure of a network, in relation with trust, has to consider a relevant distinction between ‘horizontal versus vertical networks’. In Putnam’s contribution (1993, 174) we find a possible characterization of both: ‘A vertical network, no matter how dense and no matter how important to its participants, cannot sustain social trust and cooperation. Vertical flows of information are often less reliable than horizontal flows, in part because the subordinate husbands information as a hedge against exploitation. More important, sanctions that support norms of reciprocity against the threat of opportunism are less likely to be imposed upwards and less likely to be acceded to, if imposed. Only a bold or foolhardy subordinate lacking ties of solidarity with peers, would seek to punish a superior’.

Such argument seems to support the choice of creating an overlapped credit-debt relation able to exploit the characteristics of an horizontal network instead of that in which elements of verticality are present. Dasgupta (2002) introduces another reflection to support such thesis in favour of horizontal structures. These last ones, in fact, would present a greater disposition to a dynamic process of evolution and renegotiation of the relations. In fact if those who are members of a network find out the possibility of exploiting some opportunities external to the enclave, for example in terms of better economic relations, in the case of a vertical relation it can occur elements of resistance against changes and the opening of new channels. These behaviours could come from persons that have more power in the network especially when the change can generate a different distribution of power into the network.

After analysing the process of formation and the structure that a social network can present it is possible to study the institutions that emerge from social networks. Each institutions are formed and sustained by a system of beliefs that each member of the network shares with the others. Institutions are in other terms a space inside which persons interact on the base of a system of believes and norms. The process of emergence of norms as well as the distinction between formal and informal institutions will be widely examined in the third chapter.

A system of beliefs substantiates in a system of expectations concerning other's behaviour or, using Dasgupta's words, 'about one another's characteristics and predilections'.

Let us consider a group of persons, for example the group of microcredit, inside which an agreement is concluded. We can distinguish four different situations, rationales, according to which each interacting subject can expect that the others keep to the agreement. These four causal mechanisms are often overlapped and complementary and can generate different institutional arrangements. In spite of this let us consider them separately:

(i) *Mutual affection*

Each member of the group cares about one another and also they are conscious that everybody is interested in the other's fortunes. Economists formalize this situation making use of a system interdependent utilities. This type of social network, where persons are linked by a sort of reciprocal affection is realized in the institution of the family for example where in fact the costs of monitoring are minimal and for this reason it is more difficult to find problems of moral hazard and adverse selection

(ii) *Pro-social disposition*

Persons can present a particular disposition to be trust worthy. When each member of the group 'is sanguine that most of others are honourable' the agreement will be kept. Two possible

complementary explanations of this personal disposition can be detected: some underline how it comes from an evolutionary process which would have selected the subjects whose behaviour is based on reciprocity; others highlight how in reality the explanation must be found in the first years of life of each person and some cultural factors as for example education. Apart from this analysis, the system of norms interiorized and practiced directly or indirectly through meta-norms (for example in clan, neighbours, ethic or religious group), would be at the basis of this pro social disposition. Consequently it would become a mechanism of enforcement of the agreement.

*(iii) Mutual enforcement*

Even in the lack of an affective relationship and interest for others' well being or a disposition to be honest, an agreement can be honoured if subjects are engaged in long term and repeated relationships. The basic idea, widely developed in economic literature in the so called 'folk –theorems', consists in the fact that persons can reach a cooperative equilibrium because they can observe those who defect from the agreement and apply some sanctions. To be effective, the menace of the sanction has to be credible and also parts must be able to observe each other's behaviour.

*(iv) External enforcement*

Unlike the others this last situation implies the existence of a formal contract between parts that base their system of beliefs on formal rules that frame each person's possible set of behaviours. Moreover the mechanism of enforcement is of external type and is practiced by a 'third party', an established structure of power and authority. The functioning of this mechanism needs two ingredients. First of all the third party must be recognized and accepted by people. A general acceptance is an equilibrium that emerges from the fact that when most of the subjects recognize the

third party it is very expensive and discouraging not to conform to it. This does not mean that the third party can not consider the system of beliefs of persons. In fact if the third party is no more considered trust worthy, persons can in different ways choose to coordinate themselves towards a different equilibrium. The second ingredient needed is that of ‘public verifiability’ that sometimes is impossible or excessively expensive, as it has been mentioned in the study about the raise of courts of law. For this reason these four mechanisms often are used in a complementary way.

None of these mechanisms can assure the attainment of a certain equilibrium: the degree of conformity, as well as to which equilibrium it is possible to arrive, depend on the system of beliefs that is at the base of the interaction. If from one side the economic science permits to detect those systems of rational beliefs, that is those ‘that are not belied by the unfolding of evidence’; from an other side starting from Weber (1930), it has been developed a literature on the concept of community’s ‘culture’, as a system of values and dispositions, to explain economic performances and institutional arrangements. On this line and only on this level it is possible to meet recent contributions such as for example that by Putnam et al (1993, 2000). They use cross-section data in order to discover correlations between civic culture and economic growth.

The concept of culture presented by Dasgupta (2002), in order to identify differences in the beliefs people hold about one another, is embedded in a coherent and organic framework that shows us how ‘social capital, trust, culture, institutions are different objects and should not be conflated’ (Dasgupta 2002, p 7). Besides it is evident how culture configures as an endogenous variable that comes from an evolutionary process in which history matters. In fact it is able to affect the system of beliefs and the practice of norms on which the interactions in that particular historical moment are based. In turn these ‘are influenced by the products of society, such as institutions,



artefacts, and technologies'. Besides the models of cultural stereotypes and civic cooperation proposed, show how the changing of these systems of beliefs can realize internally in a non homogeneous way in the short run. In order to understand how in the long run different equilibrium configurations can be reached, more than focusing on the cultural differences as the main cause of different economic performances, it would be necessary to consider the interaction and the existing correlation between cultural and economic variables.

### **2.1.3 Social capital: different channels towards the improvement of efficiency and development**

A possible line that could be followed in order to find some points of convergence among different definitions is to consider two specific outcomes that arise from social capital:

- (i) the first is represented by the impact of social capital on social exchange and specifically what are those channels through which social capital improves efficiency;
- (ii) the second concerns the relation between social capital and development.

In the debate previously presented, there is a wide consensus on the fact that social capital can affect positively, but not only, economic performances, although some critical points remain opened.

In this paragraph we will try to understand how social capital can permit in certain cases to overcome market inefficiencies, as we have underlined studying microfinance literature where the group and other methodologies have been considered. Moreover, concerning the second point more related to these studies starting from Putnam's one (1993), we will pay attention to some critical issues regarding the

causal relation between endowment of social capital and patterns of development.

#### ***2.1.3.1 Social capital and efficiency***

The study of the credit-debt relation is only one of the possible typologies of social interactions in which the existence of information asymmetries as well as of externalities can cause forms of inefficiencies. In reality such problems characterize structurally human society and for this reason, as Hayek (1945, 519-520) among the first scholars points out ‘the economic problem of society is thus not merely a problem of how to allocate given resources...[it is rather] a problem of the utilization of knowledge not given to anyone in its totality’.

In social exchange inefficiencies can arise at two levels to which correspond two kinds of problems. The first one that we can call of ‘searching’ is linked to the difficulty to find those subjects to which interaction can be more advantageous. The second one appears when the interaction is occurring and it substantiates in the problem of ‘trust’ if it is true that ‘trading is trading in promises’. In this context one important role that social capital can play is to improve social exchange ameliorating inefficiencies and facilitating the process of search and trust.

This argument presupposes the existence of an initial condition Paretian inefficient of ‘second-best world’ on which social capital, under certain conditions and exploiting specific channels, can impact leading to a more efficient equilibrium in Paretian terms. For example social capital can be an instrument to solve coordination failure, to alter the systems of incentives among persons or finally to improve the technology of social exchange widening the information base and the space of possible interactions.

Although ‘social networks can guard against market failure’ (Arrow, 2000), social capital must not be considered the only possible

way of solution of inefficiencies. We can basically distinguish two different ways of achieving this aim: the first one is represented by the building of formal institutions; the second one is given by such informal mechanisms and interpersonal relationships that, as we have seen, are put together in the concept of social capital. The comparison of these two possibilities must take into account that we have situations in which one solution can be more efficient than the other and also that the recognition of the role played by social capital must not close the door to the development of formal institutions that may be a superior alternative (Arrow 2000; Durlauf Fafchamps 2004).

Again following Dasgupta's approach, we should keep in mind that 'all societies rely on a mix of impersonal markets and communitarian institutions', that means, in other terms, that formal market institutions and communitarian institutions can complement each other as well as can be substitutes. The main difference is that while communitarian institutions emerge from systems of interpersonal networks and therefore 'names matter', on the contrary markets can involve 'anonymous' exchanges. It is recognized as this distinction is not sharp because 'even in a sophisticated market (modern banking), reputation matters (credit rating of the borrowers)' (Dasgupta 2002, 28) but it permits to underline a point: markets and communitarian institutions are linked together through some externalities. These last introduce 'a wedge between private and social costs and between private and social benefits'.

Moreover if in social capital literature it is broadly highlighted the virtue of personal relations into networks at the same time Dasgupta points out as networks can suffer from its very exclusiveness. Sometimes the impersonality in market institutions can have enormous virtues too in terms of inclusiveness and enabling a more efficient and productive use of resources.

Before entering into the analysis of those channels through which social capital improves efficiency, these arguments have shown

us as the relation between social capital and efficiency is not so immediate and must be critically considered.

In this complex scenario with different spaces of interactions into markets and communitarian institutions, we can find three main channels through which social capital can solve or reduce inefficiencies in an effective and less expensive way compared to formal market institutions (Durlauf and Fafchamps 2004):

(i) *Information sharing*

Even if the objective of socialization and interaction among persons as well as the creation of networks is not to transfer information, the opening of these channels permits to share information and to create a common base of knowledge. An impressive literature about the role played by social networks in the process of technology diffusion, the circulation of information about employment and markets opportunities and finally on contracts (as we have seen studying peer monitoring and peer selection mechanisms) has been developed. It is more difficult to understand what are those particular conditions that allow to exchange accurate information as, for example, the existence of a sort of punishment in terms of loss of reputation that a person faces reporting false information (Fafchamps 2004). Following the same purpose it could be interesting to analyse if different social structures (horizontal vs vertical) can allow the sharing of information and can affect their credibility.

(ii) *Group identity and modification of preferences*

Being part of a network or member of a group has a direct impact on a person's system of preferences and consequently his/her choices. The situation in which social capital alters individual preferences encouraging altruistic behaviour can be studied starting from the consideration of a standard Prison's Dilemma where even moderate levels of altruism can conduct to a Pareto superior outcome. Economic experiments suggest that in order

to induct altruistic and cooperative behaviour it is necessary to build a group identity in which each member can recognize him/herself. This is possible even if persons are strangers and they do not interact directly 'face to face' (5). Moreover the identification with a group can stimulate such behaviours called by economists 'herding behaviour' or deeply some processes of 'mimicry' among members that require the analysis of a more fundamental level of interpersonal relationships. As we have seen considering externalities, we must remember also that persons can mimic the others' 'good' as well as 'bad' behaviours. Finally social capital can allow persons to obtain certain objectives that they are not able to achieve individually because they face some internal obstacles: for example to be part of a ROSCAs protects persons from their own impulses to spend money.

(iii) *Explicit coordination*

In some cases, especially when in the achievement of some goals a certain degree of coordination is required, social capital can impact positively on the decision making process facilitating the exchange of information as well as inducting some behaviours (altruistic) and discouraging others (free-riding), as we have seen above. But in order to exploit these mechanisms in a situation of explicit coordination it is necessary a 'good leadership' that has the capacity to use these levers of social capital or, in other terms, that shows a 'capacity building' based on mental representations instead of material incentives (Durlauf, Fafchamps 2004). This point raises a normative issue: social capital not only plays a role in terms of improving efficiency but at the same time acting on the social structure it is possible to activate a process of 'building of social capital'.

Finally, there is the other possibility to achieve the goal of coordination and efficiency through formal rules. In this case a

‘bureaucratic’ leader that ensures the applications of the system of rules defined by the group is enough.

An interesting field in which these arguments assume a particular sense is that one of public goods. From one side if it is true that the state can tax persons to finance the provision of a public goods (via formal rules), at the same time in some contexts especially in poor countries (but not only) the inability of the state can find a solution on social capital. In fact as we have seen its qualities in terms of information sharing, encouraging behaviours and coordination can offer good levers to solve a typical situation of inefficiency.

### ***2.1.3.2 Social capital and development***

Perhaps, the great success of the concept of social capital comes just from those studies on the relation between social capital and economic development. In the first most famous contribution by Putnam et al (1993) such relation has been considered so strong that social capital has been presented as the determinant variable of different patterns of development of regions in the North and South of Italy.

But, just going to the same author’s contribution (2000) on the United States experience since the 1950’s we can immediately understand that this correlation is not so direct and obvious. For example, if we consider, as Putnam does, as a proxy of social capital the club memberships, the decline registered of this variable since 1950’s in front of the US economic performance can be interpreted in the following way. The improvement of a generalized trust over the period studied could have reduced the necessity for persons to be part of a club or enforce their networks. In the opposite Italian case, it can be argued that the absence of a developed formal institutional environment had given a preeminent role to small clubs (Durlauf, Fafchamps 2004). This argumentation suggests that we have to investigate the role played by networks, clubs and informal community-based organizations at different levels of development

pointing out that there is a dynamic in the structural change that can lead to the invention of different well functioning institutions. We will consider more widely this point focusing on North's (1990, 2005) distinction between formal and informal institutions.

Drawing again from Dasgupta's contribution (2002), we can take into account a critical point that must be considered when we want to discover 'how network activities [at a micro-behaviour level] translate into the macro-performance of economies'. In other terms, the recognition of the existence of a relation is not enough and must be followed by a specification of the causal relation between social capital and its outcome. An effort that can be done in this direction and that permits to show analytically how social capital among other production factors can work is the following.

Let us consider a production function:

$$Y = A F(K, H)$$

where the outcome  $Y$  is a single good (in order to overcome aggregate problems) and  $F$  is the economy's aggregate production function.

$F$  presents typical characteristics and is assumed to be an increasing function of  $K$ , that is the stock of physical capital, and  $H$ , that is the aggregate human capital. The first can be imagined as the amount of 'manufactured capital' (we can ignore for our purpose natural capital). The second,  $H$  is equal to:  $\sum_j (h_j L_j)$  where  $h_j L_j$  can be considered the effective labour input because  $L_j$  is the labour-hours of the person  $j$  and  $h_j$  is her/his 'traditional human capital', that means that it is not considered the network to which  $j$  belongs.

Finally  $A$  is the scale factor of the production function called by economists 'total factor productivity' that is a combined index of institutional capabilities and publicly-shared knowledge.

At this point if we suppose an increase in civic cooperation in the community, this will have an impact on  $H$  but also in  $A$  or in both. Precisely if the externalities are confined to small groups it will reflect on an increase of the human capital of the members of the group; on

the contrary if the externalities are economy wide, generalized, we will face an increase of the total factor productivity. In both cases we will observe the same directional changes in macro-performance, even if not the same magnitude of the improvement of  $Y$ . Starting from this simple formulation it is possible to compare two communities 1 and 2: if in community 1 civic cooperation were greater among people than in community 2 this means that  $A^1 > A^2$  and/or  $h^1 > h^2$ . This means that ‘we have not to invoke possible increases in total factor productivity or human capital to explain why a cooperative culture is beneficial’ and also that the relation is not only from civics to economics but also the other way round.

Although it has been highlighted as the process of formation of social capital and so what are ‘those institutions that would enable people to have a good chance of pursuing well-lived lives’ (Dasgupta 2000, xii) are fundamental issues till now the argumentations presented have not focused on it. In the following paragraph we will try to propose some reflections on the ‘building of social capital’ in order to understand on these basis if microfinance institutions can be considered enabling institutions.

## **2.2 Building social capital through enabling institutions**

In these last years there have been a proliferation of empirical studies that recognize the role of social capital, but at the same time we do not have convincing theories to explain how social capital is actually generated (Dasgupta and Serageldin 2000; Hooghe and Stolle 2003).

In my opinion the first responsibility can be found in the fact that a lot of these studies have not spent the necessary efforts to build a coherent analytical framework up to sustain a pessimistic idea that social capital is a sort of legacy of long period of historical development (Putnam 1993). Following this line present generations



in countries with low level of social capital could not have some possibilities to enhance their inherited stock of social capital especially in the short run. Facing this situation, as Krishna (2000, 72) points out 'the development practitioner might as well pack his or her bags and go home'.

In the opposite side, some studies are promoting a more optimistic idea that is the design of institutions, for example for the provision of local public goods, as well as forms of horizontal organizations and government policies are all instruments capable to trigger a process of formation of social capital (Schneider et al 1997; Lam 1996; Ostrom 1994). In this terms social capital starts to be seen as a more malleable object that can be built up over time, also in the short run, through an accretionary dynamic process (Uphoff 2000).

Moreover, some of these scholars that had sustained a more deterministic thesis, have begun to recognize the possibility to implement some strategies to improve or restore the stock of social capital of a certain country through a synergic interaction between civil society and government institutions.

Before considering what the possible sources of social capital are and on which different levels 'enabling institutions' can operate, it is important to discuss briefly what is the beneath set of assumptions on which the pessimistic thesis is based (Krishna 2000). Concerning this aspect a conceptual distinction is required: each country can present different levels of social capital, that is a stock variable, from which some benefits, a flow variable, spring out. In Putnam et al (1993, 1995) and Fukuyama (1995) the connection between stock and flows is 'direct, proportionate and invariant' that is, in other terms, there are two basic assumptions: (i) the stock of social capital cannot be added to in the short run and (ii) a given stock produces a single, invariant level of flow. Regarding this second argument, it is relevant to notice that, actually, the same stock of social capital can be utilized in more or less efficient way generating different flows of benefits.

Some situations, as Krishna underlines referring to Wade's work (1994), where for example very close villages (sharing a common history and a similar cultural matrix) show different levels of social capital, challenge these two assumptions that can not be sustained together if we want to give an explanation to these different process of development (7). In other terms Krishna (2000, 74) concludes that it has to be recognized that 'social capital can either be created or its flows harnessed even within the short run'.

This distinction allows also to go over a static notion of culture that is sometimes used to categorize societies in less or more trusting. Regardless societies, in some different forms trust and cooperation, the core of social capital, are always present. Starting from this point, building up social capital is nothing but extend 'previously narrow expectations of mutual trust to produce more positive-sum outcomes for all' towards forms of cooperation.

### **2.2.1 Creating social capital: forms, dimensions and spaces of enablement**

The analysis of those institutions that enable a process of formation and strengthening of social capital at first must clarify what are the two main forms in which social capital can be conceived and respectively the two fundamental dimensions behind. In this way we could detect some possible spaces of enablement as well as some instructions about purposive actions and strategies in a normative perspective. This effort will be conducted considering in particular Krishna's (2000) and Uphoff's (2000) contributions because in my opinion they start from an analytical framework that is congruent with the above mentioned Dasgupta's one (2000). The framework that we are going to develop will be later applied to microfinance institutions

in order to discover in which spaces and exploiting which levers these institutions can be considered a sort of enabling institutions.

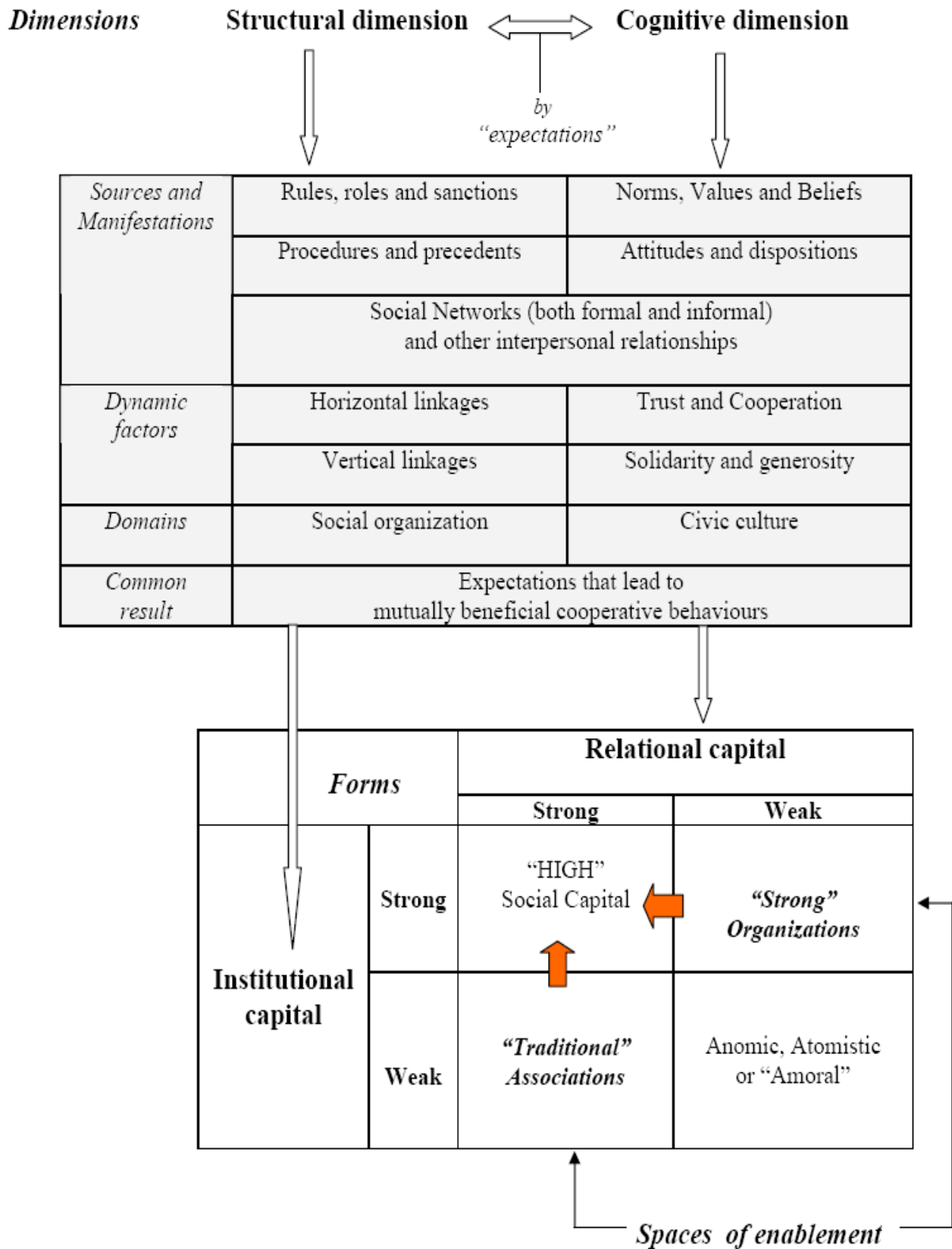
As we have underlined, the consideration of the basis of collective actions lead us to discover that social capital can be studied distinguishing two different complementary forms that give reason to the following distinction:

- (i) *Institutional capital*: in this case collective action arises from a system of structured clear rules and procedures as well as the existence of well recognized roles and a leadership figure;
- (ii) *Relational capital*: it substantiates in norms and beliefs through which persons coordinate themselves. In this case we immediately recognize a cognitive and not an institutional basis of the collective action.

These two forms are actually mixed and interplay in a synergic and strengthening way. For example if a group deals a new situation, the construction of a new set of rules becomes easier if the same persons coordinate themselves on the base of some norms of reciprocity or some system of beliefs and values interiorized. Vice versa, though persons are linked by strong feelings and their behaviour is inspired on trust and altruism, sometimes it is necessary to create some structures, it does not matter if they are very informal, and recognize some roles 'to translate individual attitudes and values into coordinated, goal-oriented behaviour'.

The dichotomy introduced is useful to individuate some possible spaces of action and to compare different situations that can be faced but it is clear that both are required to sustain and develop social capital. In fact, if we want to compare two different contexts in terms of their different stocks of social capital, we can distinguish four different cases/spaces and for each one we can find some normative prescriptions. See the following scheme (figure 2.2.1).

Figure 2.2.1: Dimensions, forms and spaces of enablement



Source:

Author inspired by the overlap of tables in Berman (1997), Krishna (2000) and Uphoff (2000)

In the first case, the luckiest, the context considered is characterized by a high level of social capital that is in other terms institutions are well structured and persons are intrinsically well endowed in terms of pro social disposition (vice versa in the opposite case “weak, weak”).

Taking apart these two ideal typical situations, it is possible to find among the various shades in the real world two interesting sub cases. Each one of them, called respectively ‘Traditional’ associations and ‘Strong’ organizations, is characterized by a more or less endowment of the two forms of social capital considered above. In order to understand how it is possible to build institutional capital (weak) on a relational capital base (strong) and in the opposite case to define some institutions that enable the formation of relational capital up to impact on a deeper dimension, we have to analyse the fundamental dimensions behind them.

The ‘institutional capital’ can be considered as the expression of the structural dimension of social organizations and networks. They are based on a system of rules, precedents, procedures and roles (either formal and informal) that contribute to cooperation facilitating the adoption of a mutually beneficial collective action. Instead the ‘relational capital’ is better collocated in a cognitive dimension of persons because it derives from mental processes that are reinforced by culture, ideology, more specifically norms, values, attitudes and beliefs. These last, finding their domain in the so called civic culture, are capable to predispose people towards a mutually beneficial collective action.

These two dimensions, structural and cognitive, are intrinsically connected because the structural dimension and therefore the development of an institutional capital, is directly derived from cognitive processes that are intrinsic and not directly observable. The subjective behavioural phenomena of expectations can be considered the vector through which the passage from one to another of these

dimensions in both sense is realized. System of rules and roles are created by expectations but at the same time they create expectations. Moreover ‘norms, values, attitudes and beliefs by creating expectations about how people *should* act, by implication create expectations about how people *will* act [...]. Thus what are subjective impetuses have definitely objective consequences’ (Uphoff 2000, 219).

These arguments highlight that following the approach that thinks of social capital as a form of social network structure we must consider this interplay that is both the structural as well as its cognitive dimension of network. The consideration of these two dimensions and the role played permit to identify those mechanisms ‘by which social capital is built up and accumulated, stored, modified, expressed and perpetuated’.

Bearing these mechanisms in mind, we can now consider the two sub cases previously mentioned and identified in the scheme as two different spaces/contexts characterized by different combination of institutional and relational capital (in the case of ‘Traditional associations’ respectively weak and strong; while for ‘Strong organizations’ strong and weak).

#### ***2.2.1.1 Building institutional capital on a relational capital base***

In a context where the relational capital is strong and deeply rooted, typical examples are those villages where persons are linked by traditional norms of association, it is possible to use this stock of relational capital to build institutions introducing a congruent system of rules, procedures as well as new organizational skills.

Just to make some examples, this strategy has been developed successfully in Malawi since 1960s in the so called self-help rural water supply program or in the so called “Six-S”, an assisted self reliance group that exploiting traditions of labour-sharing and cooperation especially among the youngest in the villages

has persuaded them to invest in productive infrastructures (both physical and social) and institutions.

In fact the innovations in organizational procedures have helped: (i) sometimes to reinvigorate the traditional relational matrix but more often to create new social networks; (ii) to enhance their capacity and efficacy in collective action in a wider range of activities. Moreover, because of the interplay between the two dimensions, these strategies have considerably modified not only some traditional forms of relationships but also the relational capital that is up to the cognitive dimension. This last passage is very important because in order to sustain a new system of rules and roles (institutional capital) it is necessary that they are accepted or, in other terms, that they are recognized by persons internally if we want to obtain a modification in expectations. Briefly we have to consider this as a process that starting from a certain base of relational capital allows the possibility to build institutional capital that in turn will modify the first one and so on. See again the figure 2.2.1.

#### ***2.2.1.2 Enabling institutions for relational capital***

Belonging to a cognitive dimension the objective of creating relational capital is more difficult to achieve than that referring formal institutions whose rules can be written on paper, anyway it will involve some costs. The precedent case suggests us the possibility to obtain this result in an indirect way, through the definition of particular kinds of institutions that can impact on subjects' beliefs and attitudes up to the modification of their systems of norms and values.

An interesting contribution that sustain with strength this argumentation is that one by Hetcher (1987) that suggests a multistage process for building group solidarity. The context in which this thesis is applied is just that of microfinance as we discover reading the effective and synthetic analysis proposed by Krishna (2000, 84): 'People who need credit and insurance agree to join together in

groups, especially when, as in pre-market societies, credit and insurance are not openly available to all individuals. Having joined together to obtain private goods, however, members must devise membership criteria and monitoring and sanctioning procedures. These rules and procedures get institutionalized over time. Internalizing rules and procedures, members moderate behaviours so that these correspond to the expectations others have. This build up of social capital – of formal rules and mutual expectations – facilitates extending group activities to other previously unexplored areas’.

This contribution, anticipating the answer to the question: “Is microfinance an enabling institution?”, provides an idea of the dynamic process of enablement, that is coherent with the argument presented by Falk and Kilpatrick (1999). In their work, they show how the accumulation of social capital is the outcome of a process of learning interactions. In order to build social capital, therefore, it is necessary to stress attention on quantity and quality of these learning interactions that require a learning event (an actual occasion) and occur in a contextual dimension (the broad, socio-cultural and political frame of reference). The planning and implementation of community projects embedded in an institutional frame may be one of these learning interactions. It is argued by a number of practitioners that people’s participation rarely happens spontaneously, but rather it involves social-institutional preparation towards the construction of a learning event. This preparation is the outcome of a systematic pattern of action-reflection-action (Albee & Boyd, 1997).

Sabel’s work (1994) focuses on a quality aspect of these interactions that allow the creation of such mechanisms of learning. He proposes the concept of ‘discursive institutions’ that is of those institutions in which all members, committing themselves to ongoing negotiations based on shared understanding of common goals, become able to build up social capital. In fact (Sabel 1994, 138-156): ‘Discrete transactions among independent actors become continual, joint



formulations of common ends in which the participants' identities are reciprocally defining...discussion is precisely the way by which parties come to reinterpret themselves and their relation to each other by elaborating a common understanding of the world...It is this reflexive capacity to embrace different forms of self-expression that defines persons as individual and creates new interpretative possibilities for society'.

As it is possible to understand from these contributions, there is no single answer or model for the promotion of social capital formation but there are frameworks and guiding principles following which it is possible to build enabling institutions towards the creation of relational capital or more generally impact on the domain of civic culture, using Uphoff's expression (2000).

Just the consideration of two forms and respectively two dimensions of social capital that interact together in a mutually reinforcing mechanism, it has been possible to find some principles and normative prescriptions for the activation of an incremental process of social capital creation. Finally if we recognize the possibility of the formation of social capital (acting on stock and flows) at the same time we have to pay attention on the fact that social capital can be destroyed and probably that it can be eroded faster and more easily than it can be created.

Having sustained an optimistic thesis about social capital formation, in the next paragraph we are going to focus on some contributions that underline the possible role of civil society and institutions for social capital creation in a comparative perspective. Particularly the pregnancy of the concept of civil society, as a system of horizontal relations, will be taken into account.

### **2.2.2 Civil society and institutions in the process of social capital generation**

Because of the central role assumed by the concept of social capital in political and economic life, in recent researches we are meeting the first efforts which try to understand the process of social capital generation in order to give some answers and normative suggestions to political and economic actors. A useful way to look at these contributions is to start distinguishing two different possible approaches that identify respectively two levels of intervention (Hooghe and Stolle 2003). Moreover, this distinction enriches the framework proposed in the previous sub-paragraph clarifying the following issue: in the two spaces of enablement, identified above on the basis of two different dimensions and consequently forms of social capital, there is the possibility to introduce as we have seen some enabling institutions. But these last ones can be realized at two different levels: the first is that one of civil society and the other level is that of governments, public policies and political institutions.

At this point we can introduce Hooghe and Stolle's (2003) definitions: the first approach called 'society-centred' operates in the realm of civil society; instead the second one, called 'institution-centred', is embedded in those political institutions that can define 'top – bottom' strategies of enablement or more generally can create a favourable environment for social capital formation. Both approaches are aimed by the recognized necessity of increasing the level of social capital in a given context particularly acting on that dimension that we have called 'cognitive' or that can be defined 'attitudinal' (following Stolle 2003).

In the 'society-centred' approach a preeminent role is recognized to social networks, for example voluntary associations, as spaces of social interactions from which in certain cases relational capital can arise. After testing this thesis the problem is to understand

which types of social interactions, associations and networks, are capable to develop civic attitudes and skills and how they operate creating the congruent conditions of enablement. In the same way the 'institution-centred' approach requires the investigation of a series of issues such as for example: (i) the possible correlations between governmental local experiences and patterns and levels of social capital; (ii) how some characteristics of political institutions especially their credibility can affect generalized trust and forms of cooperation; (iii) how some political choices such as for example the neighbourhood composition (especially in multiethnic societies) or forms of tax amnesty can impact on expectations and social capital.

Although both approaches open interesting and often interrelated questions, the purpose of this brief analysis is to underline the existence of these two levels and then to concentrate on some aspects of the 'society-centred' approach into the frame of civil society. The reason is that, in order to study microfinance institutions, we have to take more carefully into account those conditions that allow the creation of social capital starting from social networks.

In the collection edited by Hooghe and Stolle (2003) there are interesting analysis of the relationships between specific aspects of participation, as for example the number and the length of memberships or the intensity of participation, and the development of 'civic attitudes' and norms. Some results recognize that important factors are: (i) the presence of regular social horizontal interactions where persons are linked by face to face relation; (ii) the length and quality of time that members spend together; (iii) the concentration of selected attitudes within a group implying that only those associations in which democratic patterns predominate are possible sources of social capital (Hooghe 2003). This recalls some aspects introduced with the concept of discursive institutions (Sabel 1994) or with the idea of groups as learning spaces of interactions (Falk and Kilpatrick 1999) as we have seen above. But these results are not unambiguous

because for example others (Wollebaek and Per Selle 2003) point out as the promotion of civic attitudes can arise both from active and passive memberships and also that time intensity of participation is less important than for example the multiplicity of memberships for each person.

Concluding this review, we can notice that if all these contributions sustain the idea of a relation between voluntary associations and attitudinal aspects of social capital, at the same time they find that this relation is very complex and not so direct and linear and therefore that it must be studied more applying a mix of theoretical and empirical approaches as well as exploiting multidisciplinary contributions in a fertilizing perspective.

A following critical issue is to understand if and in which way the process of creation of relational capital can be extended outside the group or association allowing the solution of collective action problems outside the group towards, in other terms, developing a generalized trust. As the authors recognize: ‘The problem is that there is no causal mechanisms that successfully explains the transfer of trust for people one knows personally, such as the members of one’s association, to people outside the associational experience. How are group experiences generalized?’ (Hooghe and Stolle 2003, 234).

An initial possible suggestion in order to analyse this issue comes from a common conclusion of these contributions that find as ‘multiple or overlapping memberships’ are important aspects of group life and consequently they impact on the development of civic attitudes.

At this point it is relevant to introduce a theoretical distinction used in social capital studies between ‘bridging’ relations and ‘bonding’ relations. The first one unites actors across social cleavages while the second one allows the creation of bonds within homogeneous subcultures. As it is underlined (Mayer 2003; Wolebaek and Selle 2003) the fact that many people belong to more than one

association for example a religious group, a non profit association, a trade union or a political movement demonstrates that each subject has found his/her own form of bridging social capital. In this way also persons 'are exposed to various cross pressures, even if all of these organizations, considered independently are homogeneous'. Moreover they have the opportunity to face different contexts and persons on the base of different interests, personal characteristics or identities from which the memberships derive. In other terms persons engaged in various types of associations will introduce in their system of social networks some elements of diversity and variety. Regarding to this, social capital theory 'suggests that the membership contact with citizens that represent a broad sampling of the population might be more conducive for generalizing trust to people outside of the association than contact with people like oneself' (Hoooghe and Stolle 2003, 234). In these terms it is possible to find some sources of a generalized trust and relational capital studying not only the dynamics into groups but also in which way the subjective system of social networks (and so all the memberships owned by a person) can be an instrument to spread and generalized systems of civic attitudes and norms. This effort runs again into the same limit that we have underlined trying to define the concept of social capital that is the absence of a developed theoretical framework.

An interesting starting point in this direction, can be the analysis of different models of civil society especially that one of 'open proximity', in which the role of horizontal and overlapped systems of relations is studied (Porta and Scazzieri 1997; Scazzieri 1999).

The concept of civil society stems from the classical philosophical reflections on the idea of 'sociability' that has been developed by Aristotle and Cicero up to the Scottish contributions in the XVIII century (mainly by Adam Smith), leading to different models of interpersonal interaction. The common object substantiates

in the analysis of those characteristics that human's sociability acquires when we start to consider interpersonal relationships and social structures outside the context of the original family group.

The general conditions of social living together are considered in Aristotle on the base of an evolutionary criteria that leads to the recognition of the 'political association' in the *polis* as the fundamental structure of sociability. From this idea comes the 'political' model of civil society in which a strong connection between sociability and citizenship implies a close relational structure characterized by exclusiveness.

In *De Officiis* Cicero refuses an evolutionary scheme and suggests an idea of sociability as an attitude that steams at first from the common exercise of 'fundamental human capabilities as reason and language [...] that link human beings in a sort of universal fraternity' (*De Officiis*, I, xvi, 50). From this conception derives an idea of a system of open social structures characterized by different 'degrees of proximity and distance' in which each person is inspired in his/her behaviour by a rational allocation process of benevolence. Just this 'economic' principle of sociability open the door to a multiplicity of spaces of interaction that can coexist without the recourse to a general order structure that implies a general hierarchic criteria of sociability. In fact in Cicero's frame 'linkages between relational spheres are lateral more than vertical reflecting a situation of reciprocal congruence instead of hierarchic subordination' (Scazzieri 1999, 366 personal translation).

This framework is coherent with the argumentation presented above (Hooghe and Stolle 2003) because it implies that each person can belong to multiple and overlapped networks (friends, commercial relations, associations, etc) excluding the situation of closure. This system of networks are characterized also by forms of horizontal coordination among persons and by mechanisms of inclusion and

openness that opens the possibility to two other models of civil society.

Although both of them, the model of ‘commercial society’ on the base of the Scottish reflection and that one of ‘open proximity’, provide for the development of open relational schemes able ‘to transform the strangers in friends’ (through the principle of ‘*catallaxy*’ proposed in Friedrich von Hayek) briefly we will focus on the second one because it can be applied in different contexts introducing ‘the paradigm of lateral connections and multiple memberships’ in a context of maximum variety. In fact ‘civil sociability can do without a reduction of variety and permits the simultaneous memberships of the same subject to a multiplicity of distinct groups that are not organized in conformity with a hierarchic criteria’ (Scazzieri 1999, 373 personal translation).

Forms of coordination among subjects can be achieved implementing ‘lateral process of exploration’ through which different persons (or social groups) can find the existence of complementary among their secondary own characteristics. The discovery of such similarity and shared characteristics, outside the fundamental identity, can open spaces for the formation of horizontal patterns of interactions and cooperation. In this sense in this model of civil society it is not required a reduction of variety or the coordination on some behavioural standards as in the commercial society. The fundamental intuition at the base of this model is an elastic concept of distance among persons: in fact even very different persons can find among their characteristics an element of proximity. Moreover a generic binary relation among persons on the base of a certain character is opened to all persons that own the same character. The following generation of possible spaces of congruence among persons, with different degrees of extension and density, can facilitate the enlargement of the informative base and so the reduction of

transactions costs, the formation of a common knowledge and more generally the creation of a common base of norms of interactions.

In this sense the concept of civil society as ‘a cluster of relations and needs continuously changing’ (Poni 1997, personal translation) and in particular the hypothesis of open proximity can be a good analytical framework in order to understand the formation of social capital and the diffusion of these attitudinal habits and systems of norms that are the deep intangible dimension of social capital.

### **2.3 Is Microfinance an “enabling institution”?**

As we have seen studying some aspects of the debate around the ‘social collateral’ argumentation, the notion of social capital has been widely used in microfinance literature. Very often in the last years from different sides, microfinance institutions have been presented as good practices for the mobilisation of social capital in order to reduce poverty just where both the market and the state have failed. Although we do not have so much and convincing contributions to sustain the thesis that microfinance institutions are good tools in order to enable the process of formation of social capital, recalling some features of these institutions presented in the previous chapter, we can try to insert them in the analytical framework developed here.

Most of the argumentations that we are going to discuss require a systematic empirical research in order to test their basic hypothesis. If they were verified, we would have important normative suggestions for the definition of development policies.

A first observation is that microfinance institutions can operate as enabling institutions in both the spaces of intervention that we have individuated. In fact these institutions can allow the construction of a congruent system of rules, procedures as well as new organizational



skills (not only related to the credit-debt relation as the ‘Sixteen decisions’ in Grameen Bank model suggests) that in turn can impact both on the institutional and relational faces/forms of social capital. Some examples have been presented before referring not only to microfinance experiences but also to other development programmes in which a certain degree of coordination among persons is required. This point is particularly relevant if we consider as poor countries suffer very often a condition of ‘institutional poverty’ often accompanied by a lack of systems of social horizontal networks.

It has been highlighted as the group mechanism based on an horizontal social structure can allow the formation of social capital. For example Rutherford (2000, 41) observes how ‘perfect strangers coming together with the limited aim of running a ROSCA, can sometimes construct and practice trust more easily than people with histories of complex relationships with each other’. Moreover the regular interactions in group meetings can represent those ‘learning events’ (Falk and Kilpatrick 1999) in which members practice some horizontal-democratic rules of interactions as well as ‘discursive’ interactions (Sabel 1994) that can be all instruments for the creation of a new system of norms and beliefs.

This argument has been explicitly sustained referring to group lending in Hatcher (1987) and it finds some supports in these contributions in which the relation among horizontality, trust, forms of cooperation and civic attitudes is stressed.

Some studies (see Dowla 2006) present interesting results regarding the effects that the introduction of the Grameen Bank system has had on the rural Bangladesh where communities are particularly divided because of clan and caste tensions, village superstitions and scarce resources. As it is widely demonstrated in development economic studies, women are more disadvantaged by this situation of poverty especially for what concerns the possibility for them to create some ‘social channels’ towards a social network

system outside the family group. Because of Islamic purdah norms, women's relationships are in fact primarily cultivated among those with whom they share kinship ties. The Grameen group represents for women their first opportunity to convene with a new group based on horizontal relationships, permitting the achievement of some goals such as:

- (i) individual recognition (women are called into the Center using their first name instead of that one of their husband or family);
- (ii) shared identity ( through the weekly group meetings);
- (iii) building new networks and increased mobility (in each Center women can meet other 40 women so that, not only they can strengthen their old direct relationships but also develop new indirect relationships; for example in the Soburon's 'rice water network');
- (iv) information sharing;
- (v) exchange of scarce resources and forms of cooperation (it is registered an increase in borrowing material networks).

The recognition of these results comes also from A.Sen (1999) who praises the role of Grameen Bank and other MFIs in Bangladesh which have 'done al lot not merely to raise the deal received by women, but also - through the greater agency of women – to bring about other major changes in the society'.

The same author in an other book *Reason before identity* (1999) or look also at *Identity and violence* (2006), speaking about the difficult dialogue between these fundamental dimensions of human being, recognizes how the worst situation is that in which a person 'thinks that is not possible to think', in other terms that there is no space for putting things under the eye of rationality. Following this line, it is possible to argument that the introduction of a particular methodology that encourage interactions among peers on new bases

and procedures can be considered an instrument to put into discussion some rooted elements of cultural identity.

As we have seen, in microfinance institutions, other two kinds of relations, the overlapped one in which microfinance institutions and the group are linked and the triangular one in the case of individual loan, are present. Some scholars have raised the idea that it is possible to recognize a form of social capital also in the vertical relation 'lender-borrower' sustaining that microfinance operators and borrowers develop special relationships (Ito 2003; Van Bastelaer 1999). This point comes from many observers' reports from both developed and developing countries as for example in the Grameen Bank model or in many experiences of Mentor programme in Ireland, UK etc and it is declared also in some World Bank documents (7 april 2003) as we can read: 'the formation and maintenance of social capital between staff and borrowers is crucial to: identify and train borrowers; select and approve loan proposals; negotiate solutions when problems emerge; and fend off criticism – even hostility – from sceptics, moneylenders, and some religious leader'. Moreover for example in Bangladesh villages, Grameen Bank workers have become not only recognized money managers but also some sorts of counsellors, conflict mediators, teachers and institutional references (Ito 1999). This phenomenon happens especially when microfinance institutions are inspired by an integrated approach that open the possibility to various occasions of 'learning interactions'. But as Montgomery (1996, see chapter one) has widely showed in group lending programmes, the vertical relation between operators and borrowers could shift in certain cases from a 'bhai (brother) culture to a sir culture', in other terms reproducing a 'patron – client' relation in which elements of hierarchy, pressure and unequal distribution of power could represent obstacles to the development of a base of social capital. In spite of the possible existence of these degenerations some scholars have pointed out how the 'vertical social capital' has become

increasingly the best guarantee of good repayments and therefore that microfinance institutions have to invest more and more on this relation.

A possible way to introduce in the borrower – lender relation a third part that recreate a more horizontal base is to resort to figures as guarantors that are placed between the two actors in the credit-debt relation and also are recognized by both of them. This is the case of the so called ‘triangular’ scheme.

Although the application of different methodologies imply the creation of different systems of interactions providing various instruments of enablement, a common strategy that can be applied to make microfinance an enabling institution is to embed the credit – debt relation into a system of overlapped and interweaving relations. In fact this system could strengthen not only the credit-debt relation as we have underlined in the first chapter, but it can introduce some new system of social networks in which economic, social and relational reasons find a congruent composition reciprocally reinforcing.

The fact that microfinance institutions are able to impact in all these contexts, providing persons the opportunity to develop their capabilities in the production field but also in the relational and institutional one becoming a sort of fabric of social networks, suggests the idea that they can be looked at as enabling institutions.

If we recognize that microfinance institutions enable the creation of social capital into groups and other sets of relations the problem that remains open is to understand and empirically discover if they are also capable to extend these results in a broad context.

In a recent study in the East Europe (Mosley et al 2004) where social capital has been literally destroyed in years of dictatorship, some scholars have tried to understand which effects the introduction of microfinance institutions had generated. Although not in all countries examined there is a correlation between microfinance and higher levels of formal associational membership, they find some

evidence that links microfinance institutions to the development of informal associations, and thence trust, and thence political participation. They also underline how these results must be taken with caution because for example ‘prior linkages bonded in the hard experience of perestroika tended to survive and induce more trust than more recent and more ad hoc associations’ (Mosley et al 2004, 424).

In other terms, as we have highlighted above, the causal relation between microfinance institutions and social capital needs to be more investigated, both in the intra and inter institutional dimensions, in order to understand how the potentialities that these enabling institutions seem to show can be exploited in a normative perspective.

## Notes chapter 2

(1) See Dasgupta (2000), Durlauf (2000), Solow (2000), Arrow (2000), Portes (1998).

(2) This last approach anticipates some considerations that we will widely develop considering Douglass North's (1990 and 2005) distinction between formal and informal institutions as well as the role of the institutional dimension of interaction.

(3) See for example the Fukujama's contribution (1995) in which a comparative analysis is conducted simply considering the differences between high trust societies and low trust societies. There are also others more refined studies such as that one by Knack and Keefer (1997) or Paxton (1999) in which various proxies of social capital are adopted. Finally we can mention Burt's work (1997). Here social capital is measured in terms of network constrain that depends on: size, density and hierarchy of a particular network

(4) Consider Arrow (1972: 357) who wrote: 'Virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time. It can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence'. The relevance of the concept of trust is also stressed in Coleman (1990: 304): '... social capital ... is embodied in the relations among persons...a group whose members manifest trustworthiness and place extensive trust in one another will be able to accomplish much more than a comparable group lacking that trustworthiness and trust'.

(5) We will come back to this point in the third chapter considering the role of group identity speaking about team thinking and Bacharach's last contribution (2006). For the second aspect, that is in which way a certain behaviour can impact on person's identity see Akerlof and Kranton 2000; Muldrew 1998.

(7) This prognosis is challenged by a number of recent empirical studies (Schneider et al, 1997). For example, it has been shown that changing the structure and composition of school boards can enhance significantly the level of parental involvement in school-related activities and in turn help build social capital. Others present similar conclusions about the design of irrigation projects (Ostrom, 1994 and Lam, 1996).





***The economics of social interactions:  
an analytical framework***

**Introduction**

The aim of this chapter is to introduce an analytical framework for the study of economic and social interactions in view of assessing the phenomenon of microfinance and the working of enabling institutions (see chapters one and two). In this direction, the distinction between formal and informal institutions, the dynamics of interactions and reciprocation and the role of trust will be further analysed.

First of all, I suggest a methodological approach in which the study of economic and social interactions is carried out by distinguishing between different levels and dimensions of interaction. This will allow the identification of a fundamental level of interaction. For this reason we may start from the analysis of the space (domain) of interaction in which the interplay between objective and institutional features takes place. An interesting perspective in this direction is the one provided by Nicholas Georgescu-Roegen in his analysis of peasant communities, not only because the interplay of these two dimensions is clearly considered, but also because his analytical effort lends itself to a high degree of generalization. Although this economist seems to be distant from the ‘microfinance revolution’, we have to remember that he has been recognized by M.Yunus (1997, p71-72), as his ‘better teacher [who] opens up unsuspected horizons before [him]’(1). I shall suggest that there are various connections between the two economists and that it is possible to identify a clear intellectual influence of the teacher upon his pupil.

After introducing this structural frame, we will make another step taking into account social interactions and particularly the interpersonal dimension in economics (paragraph 3.2 and 3.3). At this level it is possible to analyse the possible explanations of non-selfish economic behaviour provided in the economic literature. In this section we will consider both economic theories of altruism and reciprocity and those more radical proposals, such as team reasoning, towards the reintroduction of relationality into economics.

A particular emphasis will be placed on the analysis of the role of trust and its property of responsiveness that will be modelled following Pelligra's work (2005). The existence of emerging practices of trust as well as the role played in the credit debt relation will be considered specifically.

The last step will introduce a more fundamental level of interaction between human beings. At this point, concepts such as that one of 'fellow feeling' and 'sympathy' introduced in the eighteenth century by Adam Smith in his *Theory of Moral Sentiments* (1759) show an impressive deepness and 'modernity'. These last features are immediately evident if we consider, as we have done in the last paragraph, the revolutionary discoveries in neurosciences made in the last ten years by Giacomo Rizzolatti and his associates at the University of Parma. This fascinating encounter between economic theory and the biological and neural foundations of human beings leads to the identification of a fundamental relational structure within human beings, which is based on mirror neurons and from which the first basic pattern of interaction arises.

### **3.1 Economic structures: objective and institutional features**

#### **3.1.1 Introduction to economic structure**

In the field of structural economic analysis, the economic system is described starting from the consideration of each event as an element of a particular structure. Moreover, the consideration of the economic structure as the ‘most fundamental set of relationships among economic units providing the basic framework for economic life’ (Baranzini, Scazzieri 1990, 6) allows to consider these events both as the result and the cause of the underlying structure.

As suggested in Baranzini and Scazzieri’s (1990) analytical perspective on economic structure, the concept of ‘structure’ presented in literature leads to a fundamental distinction. As a matter of fact, structure can be conceived ‘as the network of interpersonal relationships on which the economic fabric of society is founded’ or ‘as a set of relationships among economic magnitudes such as sectoral outputs population and technology’ (Baranzini and Scazzieri 1990, 1). In the first case the concept of structure refers to the system of social rules, interpersonal obligations and mutually compatible beliefs and thus to the formal and informal institutions that define the framework of economic actions; in the second case we describe the economic system in quantitative terms dealing with relationships among magnitudes such as wealth, revenue, population and capital stock. Clearly the relationships of the latter type ‘describe in the first instance the outcome not the motivations of agents’ aggregate behaviour’ (Baranzini and Scazzieri 1990, 1).

A very clear example of the use of the concept of structure ‘as the fabric of economic society’ is provided by institutional economic analysis. The concept of ‘economic society’ arises as the result of a process that starting from the emergence of market laws slowly arrives to the definition of a sophisticated and institutionalized system of rules

of behaviour that becomes the ‘natural space’ for economic interactions (2).

In parallel the concept of structure, as the set of relationships among economic magnitudes, was developed by the so called “political arithmetic” up to Leontief’s work (1941) in which the “Structure of the American economy” is represented in terms of a flow of inter-industry relationships. In this second approach as it is highlighted in Scazzieri (1993, 85) ‘the object of investigation is represented by a network of relationships that can be identified in an objective sense (they are flows of produced and traded commodities, or of services delivered by particular productive funds). The behavioural assumptions, in this case, are important in so far as the dynamics of the system are concerned, but do not affect the identity of the economic system as such’.

The existence of these two structural dimensions has sometimes led some scholars to a structural specification based on assumptions on the institutional set up of the economic society. In other cases economists such as J.M.Keynes, Piero Sraffa and Luigi Pasinetti have tried to understand the impact of particular institutional aspects on a given outcome. In particular Pasinetti’s contribution (1964) is an attempt to identify a fundamental level of structural analysis which is independent of the institutional set up. However, as soon as we want to consider more specific features of economic systems, the analysis of the institutional framework is recognized to be essential.

Although it is useful to distinguish between these two fundamental notions of structure at the same time it is important to examine their possible patterns of interaction. As a matter of fact ‘[the] institutional set-up is itself related to the objective features of economic structure, and thus with the dynamic behavioural principles at the basis of the actual motion of the economic system through historical time’ (Baranzini, Scazzieri 1990, xi). This mutual dependence between objective and institutional features of economic

structure emerges also as central in determining paths of structural economic change.

### **3.1.2 The interplay between objective and institutional features**

As we have just seen introducing the alternative uses done of the notion of structure, the description of economic systems permits the identification of two distinct but interrelated structural dimensions: the objective and the institutional one.

The first dimension, substantiating in the ‘objective network of the flows of produced commodities and services and of the stock of real assets existing at any given point of time’ (Baranzini and Scazzieri 1990, 243) has been represented following two different approaches. In the horizontal one, mutually dependent economic activities generate a circular flow, while, in the vertical approach, the relationship between certain key magnitudes and the respectively requirements for their production or utilization is a ‘one way’ relationship. In other terms the integration of economic activities can take the form of a circular interdependence between consumption and production leading to the idea of ‘productive consumption’ or in the opposite case the form of a unilateral relation between consumption and production, leading to the consideration of the concept of ‘productive allocation’. Although the reconstruction of the intellectual traditions from which different patterns of integration of economic activities, the horizontal and the vertical one, is not the focus of this section, it is worth stressing that this structural specification played a very important role in the analysis of the dynamic of the economic system and its quantitative changes.

Our goal, here, is to underline how the specification of this structural dimension that belongs to the level of the ‘natural’ economy analysis, must be conducted taking into account the existing interplay with the institutional arrangements behind the objective network of

flows and stocks. For example, as it is stressed, in Sraffa's original corn-iron model in which a structural matrix of the economic system is defined, 'institutions come into play as soon as the system generates a positive net product [...] In particular the assumption is made that the net product is distributed among industries according to the criterion of a uniform rate of profit reflecting the requirements of a capitalistic competitive economic system' (Baranzini and Scazzieri 1990, 234).

In this direction we have to recognize how 'institutions, which may be defined as 'prevalent habits of thought with respect to particular relations and particular functions of the individual and of the community' (Veblen 1953, 132) are at the basis of the specific forms taken by economic activity in relation to the processes of production, consumption and accumulation. [This type of structural specification] permits a careful identification of the distinguishing features that characterize any given form of economic activity" (Baranzini and Scazzieri 1990, 243-244).

The existence of such interplay substantiates in the fact that if the social and institutional structure behind the economic system has an impact in the determination of its productive structure, at the same time the way in which production and accumulation are arranged could be reflected in the social structure and in the institutional set up. For this reason it is important not only to obtain a certain degree of congruence between economic units in both dimensions, objective and institutional, considered alone, but also it is important that their interacting dimension finds a congruent composition.

Baranzini and Scazzieri (1990) highlight that the recognition of interaction between 'objective' and 'institutional' dimensions may be linked to the idea of Georgescu – Roegen (1976, 235; 1<sup>st</sup> edn 1965) that 'economic growth involves not only quantitative changes but also qualitative transformations'. This argument arises from the observation of differences between the productive organization in agriculture and industry. Any form of productive organization can be

considered as a 'cluster of technological, institutional and physical features of the production process [that] gives identity to the economic structure at any given point of time' (1990, 245). This consideration leads to concentrate our attention on the institutional dimension at the base of qualitative transformations of an economic system.

As we have mentioned in the introduction, some scholars among them Luigi Pasinetti in his formulation of a theory of economic structure and structural change (1964-5), have tried to analyse the interplay between objective and institutional aspects of economic system starting from the definition of a set of relationships that may be defined independently of the institutional arrangements, relationships that 'may be stated in natural terms'. The 'natural' and the 'institutional' systems of relations are considered in two different types of causal frameworks: in the former 'a precise direction of causality may be established between fundamental explanatory variables and their relative impact upon structural interdependencies'; while the field of institutional relationships is associated with a 'mutually causality (Hicks 1979) among all the variables that reflect the simultaneous working of a given institutional mechanism' (3).

If following this line it seems to emerge the possible relative autonomy of a 'natural' and an institutional analysis at the same time other complementary approaches have been proposed such as that one of 'local models' by Morishima (1984). In his contribution the effort goes to the direction of finding those characterizing assumptions for each particular economic system that allows to distinguish essential and non essential features of an economic model.

At this point it is worth to underline as 'the relationship between economic history and economic theorizing appears to be one in which history provides the economist with a number of alternative institutional frameworks, thus emphasizing those 'characterizing assumption' that give shape to the type of historically specific

economic theories relevant for the analysis of any given economic situation' (Baranzini and Scazzieri 1990, 252).

In the next paragraph we are going to focus on the Georgescu-Roegen's analytical framework (1965) based on the analysis of peasant communities and its implications in the study of the interplay between the 'objective' features of an economic system and the corresponding institutional set-up.

### **3.1.3 The 'analytical map' of interpersonal relationships**

It is important to restate that 'the concept of economic structure emerges as the outcome of a complex inter-relationship between the analytical representation of the objective stock-flow network of any given economic system and the theoretical formulation of some general features of economic behaviour as may be associated with the existence of relatively persistent institutional arrangements' (Baranzini and Scazzieri 1990, 227).

Georgescu-Roegen's contribution on peasant communities (1965 first edition) represents a first important attempt at finding a framework suitable to the consideration of these two dimensions and their interaction.

In his work we can find a conceptual scheme based on the idea that it is possible to identify an analytical map of interpersonal relationships. In fact it is possible to identify in principle all institutional relations  $R_k$  that may relate to a pair of individuals  $A_i$  and  $A_j$ , distinguishing between those relations that are potentially existing and those ones that hold in practice. This leads to the emergence of a dominant set of 'true relations' from which a specific institutional arrangement derives. Individuals will be related through a plurality of different interpersonal relations however: 'the analytical map of true relations  $A_i R_k A_j$  will immediately separate the whole structure into several distinct nuclei [...]. The analytical separation results from the



fact that the number of relations true for any pair  $A_i$  and  $A_j$  of the same nucleus exceeds by a significant magnitude the number of relations applicable to internuclear pairs” (Georgescu-Roegen 1976, 205-6; 1<sup>st</sup> edn 1965).

In other terms, using the example of peasant communities we will face a situation in which the number of ‘true relations’ connecting the members of the same village overcomes that one existing among members of different villages.

At this point the emergence of a dominant set of interpersonal relations comes to be related to the processes of production, consumption and accumulation through the organization of the productive activity that represents a keystone for the consideration of the relationships between the material and the institutional aspects of a given economic system. As it is stressed using the same example ‘the economic activity of the village forms a unit of production as close knit as a simple workshop. A peasant household can perform practically no economic activity independently of those of others. On the contrary [...] all must move in step, whether it is for cultivating the fields, mowing the meadows, cutting wood from the forest, or depasturizing the animals’. Such organization of production implies that ‘in all economic respects, not only in respect to production, the village is not a granular mass of households, much less of individuals, loosely connected through anonymous markets, factories, banks, or other similar urban institutions. Above all, it is not a civil society. On the contrary, it is an indivisible social and economic whole [...] cemented by multiple integrative forces’ (Georgescu-Roegen 1976, 206; 1<sup>st</sup> edn 1965).

In this sense, it may be argued that the concept of productive organization emerges as a critical factor of institutional arrangements because it is ‘the factor determining the way in which any given material basis comes into relation with the institutional set-up’ (Baranzini and Scazzieri 1990, 258). Moreover, the degree of

specificity of productive organization is strictly related to the degree of determinacy that links the institutional set up with the material basis. This last one refers to the matrix of objective conditions that substantiates in the natural and environmental resources available as well as the technological set-up defined in terms of technological skills and capabilities.

The existence of the interplay between material bases and institutional set-up, analysed on the base of the organization of productive activity, can be detected considering other types of societies such as for example the commercial society where productive units are connected by exchange based institutions (commercial and financial markets) or the industrial society. If in the peasant economy we face a situation of 'simple cooperation' in the other two cases the concept of 'complex cooperation' can explain the dynamic of the economic system.

Apart from the different types of economic societies that we are facing, the important outcome of this contribution as it is stressed, is the 'identification of a characteristic feature of the objective stock-flow network of economic activity; namely that the field of structural economic analysis cannot be restricted to the material bases of any given economic system. As a matter of fact, in any economic system associated with a sufficiently sophisticated material basis the role of the institutional set-up becomes crucial, the reason being that in this case production processes cannot be carried out without the existence of an articulated network of institutional arrangements, such as property rights and associated patterns of wealth accumulation; the interpersonal distribution of resources and opportunities of exchange; the distribution of currently produced output; family size and structure; cultural traditions and inherited skills. In addition the political dimension of social institutions (such as the mechanisms of formation of collective choices) may also be considered' (Baranzini and Scazzieri 1990, 263).

The institutional features mentioned above are widely considered in Georgescu-Roegen's contribution to the analysis of peasant communities. His attention to these institutional contexts presents a particular inspiring root, among others, that substantiates in the reflections made by scholars such as Herzen, Chuprov and Chaianov that studied the condition of Russian peasants of the early years of the nineteenth century. They were members of the political and cultural movement called populism (*narodnicestvo*, from *narod* that means common) that tried to find solutions to the critical situation of Russia in the nineteenth century, a situation that will lead to the October Revolution in 1917. Both the two schools of this movement, the Slavophiles and the Narodniki, sustained the idea that the traditional village communities, called 'obscina', organized through the so called 'mir', had to be studied deeper because they would be the Russian own institutional model of development.

Georgescu-Roegen's reflections were inspired just by these villages considered as 'social entity...a perfectly natural, atomic, social unit' (1976, 205; 1<sup>st</sup> edn 1965), the resiliency and power of their traditions and especially their productive organizations from which the interplay between material basis and institutional arrangements clearly emerges.

The study of this relationship and particularly the institutional dimension finds a useful framework in Georgescu-Roegen's (1976; 1<sup>st</sup> edn 1965) definition of an 'institutional matrix', that is the relatively invariant patterns of relationships among distinct technological, organizational and behavioural features of a given economic system. Starting from the consideration of the institutional matrix from which a plurality of distinct institutional arrangements can emerge it is possible to organize in a coherent frame the above mentioned institutional features, discovering 'a comprehensive range of theoretically possible clusters of such different features'.

The ‘institutional matrix’ allows not only to study systematically the institutional dimension but also becomes a powerful tool in the analysis of the dynamic and the qualitative transformations occurring in some institutional features of an economic system.

It is worth remembering as the structural change is deeply rooted in the interplay between the objective stock-flow network and the institutional dimension (the ‘social fabric’ of a community) of an economic system. As it is clearly explained: ‘once a certain degree of sophistication in productive organization is attained, the material basis, which is expressed by means of an objective stock-flow network, takes shape according to the possibilities implied by the existing institutional set-up. An important consequence is that changes in the material bases of the economic system may require corresponding changes of the institutional set-up; on the other hand modifications of the institutional set-up may sometimes be impossible unless a corresponding change of the material bases takes place’ (Baranzini and Scazzieri 1990, 265).

These reflections lead these scholars to introduce an idea of structural change as a morphogenesis, a concept that implies the consideration of the transformation both of the objective stock-flow network and the institutional set-up.

In this direction it is also stressed how it is possible to consider two different types of institutional transformation of any given economic system distinguishing ‘whether such a system is moving within the boundaries of a given institutional matrix or whether it switches to a different matrix’ (Baranzini and Scazzieri 1990, 263). In other terms we can define two situations: in the first one remaining into the same institutional matrix the transformation leads to the formation of new clusters of institutional features, that is a different combination of the existing institutional features; in the second one transformation is a more radical process through which the

institutional matrix is changed: some features of the traditional institutional set-up disappear while others emerge.

Each institutional matrix, as Georgescu-Roegen pointed out, shows a certain degree of resiliency that is particularly strong in the case of peasant communities. As soon as the pressure impressed by some dynamic factors such as population increase, the change in the demand (for example with the income distribution) or supply side of the economy becomes not sustainable by the institutional matrix, this incongruence comes to be solved in terms of a morphogenesis of the institutional matrix (the second case considered).

The gradual emergence of this potential change of economic nature is often accompanied by a necessary action of political institutions. In other terms 'new institutions may emerge from a previous institutional framework, either as an outcome of endogenous determination or as an outcome of deliberate actions taking into account existing structures and their implicit potential for change' (Baranzini and Scazzieri 1990, 265).

Into this frame the idea of enabling institutions finds a conceptual scheme of reference. In fact, the study of the institutional matrix of a given economic system and so the interplay existing with the objective stock-flow network seem in my opinion to be the 'pillars' for the building of that space of enablement, as we called it in the previous chapter, in which microfinance institutions can play an important role.

It is not a case that the approach that we have presented comes from the complex legacy of a heterodox economist, Georgescu-Roegen, who 'always considered economics to be a social science, a science which does not deal only with observable quantity but also with man, the study of which necessitates an empathetic interpretation' (De Gleria 1999).

Like Marshall, he sustained the idea that economists must find their home in biology and not in physics looking for a synthesis in

which ‘the economic process appears as a continuation of biological evolution, in fact a transcendental extension of this evolution. This synthesis explains not only the eternally evolutionary character of the economic process, but also political social aspects related to inequalities among social classes or among nations...’ (Dragan and Demetrescu 1986).

Following some reflections presented by De Gleria (1999) and on the base of M.Yunus’s reconstruction of his relation with Georgescu-Roegen, it is interesting to individuate some elements of congruence between the refined reflection by the Romanian economist and the complex figure of ‘the banker of the poor’.

Quoting Yunus (1997, 71-72): ‘Georgescu was a real tyrant, difficult and implacable, but there is no doubt that I have never had a better teacher [...] He opened up unsuspected horizons before me. Thanks to him, I understood that there was no need for formulae, and that the essential thing was to understand the concept [...] Burdened with work under his direction, I learnt to respect precise models which showed me that certain concrete plans could help us to understand and to build the future’. When Yunus arrived at Vanderbilt University, it was the period of gestation of ‘Entropy Law and Economic Process’ (1971) while the collection ‘Energy and Economic Myths’ had just been printed (1965 first edition).

Briefly, it is possible to find at least three points of similarity in which it seems clear the influence of the teacher on his pupil.

At first, as we have stressed before, Georgescu-Roegen suggested the need to study the phenomenon of economic growth both in terms of ‘quantitative changes’ and ‘qualitative transformations’ (see before). Although Yunus will become a professor of econometry he remained persuaded that the ‘economics of poverty’ cannot get along without a qualitative analysis recognizing how ‘prices, profits, interest rates and famine are the results of a complex and powerful social process’ (Fuglesang and Chandler 1995).

Moreover, Georgescu Roegen had observed that persons, especially considering rural communities (with particular objective and institutional features) are not well represented in terms of self interested agents. Yunus will speak referring to human motivation neglecting the idea that the main one is ‘greed’.

Finally, as we have remembered in the first chapter, Yunus applied a particular approach to the economic problem he was facing, that is to assume the ‘worm’s-eye perspective’ rather than ‘the bird’s-eye overview’. This assertion is especially significant if we remember how microfinance institutions have been development policies inspired by a perspective ‘from the bottom’. This preference for a micro-level perspective, especially in a normative context, in such a way was also present in Georgescu-Roegen’s thought. As De Gleria (1999, 469) remembers: ‘this distinction was made by GR in 1968 under the heading of *Utility* with regard to the theory of consumer choice. There is no doubt that GR often expressed a sceptical view of macro-economic questions (not least, I presume, because he had had first-hand experience of the practical difficulty of tackling such questions seriously during his Romanian exile, when he held important official positions, including posts of responsibility within the National Institute of Statistics)’.

Taking into account these reflections, our goal is now to make another step towards a deeper understanding of the role of institutions both in their formal and informal dimension.

### **3.1.3 Formal and informal institutions**

In the last decade it has been recognized more and more that institutions in their specific diversity and complexity matter if we want to understand relevant economic phenomena such as, for example, the explanation of the diverse economic performances of different economies. This recognition has been having huge implications in terms of the relevance assumed by the institutional

economic analysis opening also new points of view on phenomena such as that one of poverty that comes to be rethought as a situation, among others, of ‘institutional poverty’.

In this paragraph the definition of what institutions are and how they are formed is done following Aoki’s Game - Theoretic perspective (2001) in which three different (although interrelated) views of institutions are presented. After that we will focus more on one of these conceptualizations, that is that one by Douglas North (1990), specifically in his identification of two kinds of constraints, formal and informal, through which institutions emerge and can be defined. This conceptual scheme finds a significantly advancement in North’s last contribution (2005) in which his conception of the nature of institutions is the result of new reflections coming from the field of the philosophy of mind and the cognitive sciences.

Starting from the analogy of the economic process as a game, as already Adam Smith (1759) had done with the image of the ‘great chessboard of human society’, Aoki highlights how economists have regarded an ‘institution comparable to either players of the game, the rules of the game, or equilibrium strategies of the players in the game’ (2001, 5).

Some economists, as in part we have done speaking about microfinance, identify institutions as organizational establishments, and so players such as industry associations, technical societies, universities, courts, legislatures etc (see Aoki, 2001). But at the same time, speaking about microfinance institutions, our attention has been placed on their internal systems of rules from which spaces of interactions among agents derive.

This view has been strongly proposed by Douglas North that opens his seminal book with this definition: ‘Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interactions [structuring] incentives in human exchange, whether political, social or economic’ (North 1990,



3). These constraints, defining the framework within which human interaction takes place, allow a reduction of uncertainty and a more stable 'structure to everyday life' in which for each economic actor a set of choices is defined.

The degree of uncertainty that characterize the space of interaction is the result of both 'the complexity of the problems to be solved and the problem-solving software (to use a computer analogy) possessed by the individual' (North 1990, 25). The first cause of complexity arises from the incomplete information characterizing human interactions while the computational limitation are intrinsic to the capacity of the human mind 'to process, organize and utilize information', as Herbert Simon had firstly pointed out.

At this point North (1990) suggests an analytical framework based on the idea that if we want to understand why institutions exist and their role in the functioning of societies we have to combine a theory of human behaviour with a theory of the costs of transacting. These last ones 'consist of the costs of measuring the valuable attributes of what is being exchanged and the costs of protecting rights and policing and enforcing agreement. These measurement and enforcement costs are the sources of social, political and economic institutions' (1990, 27).

The subsequent step is to introduce a theory of production that allows to explain the role of institutions in economic performances, recognizing how the costs of production are the sum of the transformation and transaction costs. This approach immediately shows itself to be impressive not only for the implications in the neoclassical paradigm but also because it underlines the role of institutions in the solution of problems of interaction and coordination, exchange and production.

For our purposes in this framework a distinction is particularly relevant. 'As in a competitive team sport', quoting North (2005), the interaction among agents is regulated by a system of both formal and

informal rules. The formal ones are those written rules consciously designed that substantiate in political rules (constitutions, regulations etc), economic rules (property rights on resources and their derived utility) and contracts (agreements on the use or exchange of goods). These formal rules are accompanied by a bundle of informal ones such as social norms, moral codes and conventions that very often play a very important role in human interactions.

In the analysis of the emergence and evolution of these systems of rules, according to North a sharp distinction between organizations and institutions must be considered. In fact if institutions (formal and informal) ‘define the way the game is played’, at the same time there are some players of the game that are ‘groups of individuals bound by some common purpose to achieve objectives’ (North 1990, 5) that he calls organizations.

Just in the interaction between these two subjects, institutions and organizations, it is recognized the possibility of an institutional change: ‘Both what organizations come into existence and how they evolve are fundamentally influenced by the institutional framework. In turn they influence how the institutional framework evolves. [...] Organizations are created with purposive intent in consequence of the opportunity set resulting from the existing set of constraints (institutional ones as well as the traditional ones of economic theory) and in the course of attempts to accomplish their objectives are a major agent of institutional change’. This institutional change realizes in an incrementally rather than in a discontinuous path in particular because of the existence of informal institutions embedded in customs and traditions that have a higher degree of resilience, as Georgescu-Roegen (1965) had noticed, than the formal one.

Although it is more difficult to define and describe the informal mechanisms through which human beings have structured their space of interaction, we have to make this kind of effort taking them into great consideration.

As a matter of fact, several contributions demonstrate how in primitive societies in the absence of the state and other formal institutions the existence of a ‘dense social network leads to the development of informal structures with substantial stability [in which] people have an intimate understanding of each other and the threat of violence is a continuous force for preserving order. [...] Deviant behaviour cannot be tolerated in such a situation, because it is a fundamental threat to the stability and insurance features of the tribal group’ (North 1990, 38-39). Even in most developed economy, informal institutions, that is the informal system of rules, are important in themselves often also in the explanation of the effectiveness of formal institutions’ performances and the enforcement of agreements.

Following North, we have to underline how these informal constraints, with their pervasiveness in the coordination of repeated human interaction, can manifest themselves:

- (i) as extensions, elaborations and modification of formal rules
- (ii) as socially sanctioned norms of behaviour
- (iii) as internally enforced standards of conduct

The same kind of specification is also suggested in Aoki where, into the framework of prisoner’s dilemma, it is recognized how starting from an ‘external enforced’ system of norms, as for example trader’s norms and club norms, we can arrive to an ‘internal mechanism’ based on moral obligations that were described by Kenneth Arrow (1969, 79; quoted in Aoki, 2001) as the ‘carrying out of implicit agreements’ in which ‘internalized feelings of guilt and right are essentially unconscious equivalents of agreement that represent social decision’. The historical analysis that we have conducted in the first chapter on the evolution of merchant’s community and financial markets can be reread just using these lens.

As we have seen, as we move from less to more complex societies characterized by an increasing specialization and division of labour, we face the emergence of a system of formal rules and legal systems that 'may lower information, monitoring and enforcement costs and hence make informal constraints possible solutions to more complex exchange. Formal rules also may be enacted to modify, revise, or replace informal constraints' (North 1990, 47). This last point suggests the idea that we must take into account the interplay between these two mechanisms, formal and informal, internal to the institutional dimension if we want to explain in a coherent framework economic and social interactions.

After having focused on the central distinction proposed by North between formal and informal constraints, it is worth to consider some aspects of the last approach, called in Aoki (2001) the equilibrium-of-the-game view of an institution (4).

This last conceptualization has been developed on the base of two different equilibrium notions: the evolutionary game approach and the repeated game approach.

In the first line of research an important contribution is that one by Robert Sugden (1986). As it is well stressed by Aoki (2001, 7) here 'a convention of behaviour establishes itself without third-party enforcement or conscious design. As a convention evolves, agents tend to develop particular traits (perceptions of environment, preferences, skills, etc) under the pressure of evolutionary selection. Thus a convention and associated individual traits may co-evolve'. Only in this direction conventionalized rules of conduct may become formal, underlining the idea that 'the law may reflect codes of behaviour that most of individuals impose on themselves' (Sugden 1986, 5). One relevant difference in this approach to that one followed by North is that institutions originate from a spontaneous order or a self organizing system.

The other line developed, mainly by Greif's various contributions (1998), is based on sophisticated concepts of equilibrium where the expectations (or system of beliefs) in a context of repeated game play a central role. This approach leads to a conception of institutions as the result of 'two interrelated elements: cultural beliefs and organizations' that 'whenever applicable, have to be an equilibrium'.

Moving in this direction Aoki (2001, 10-12) arrives to identify institutions with a '*self-sustaining system of shared beliefs* about a salient way in which the game is repeatedly played'.

This becomes the system of rules of the game that are created endogenously through agents' interactions and held in their mind. Specifically 'the content of the shared beliefs is a *summary representation (compressed information) of an equilibrium of the game*. Namely, a salient feature of an equilibrium may be tacitly recognized by the agents, or have corresponding symbolic representations outside the minds of the agents and coordinate their beliefs [...] Agents strategic choices made on the basis of shared beliefs jointly reproduce the equilibrium state, which in turns reconfirms its summary representation'. On the base of this mechanism, briefly described, an institution endogenously created becomes objectified and self-sustaining unless some events comes to modify the shared system of beliefs.

In this very brief overview on different theoretical frameworks into which the concept of institution can be developed, we have to underline the relevance of North's recent contribution *Understanding the process of economic change* (2005). For the purposes of our research, the first more methodological section of the book seems particularly relevant.

In the tradition of his seminal work (1990), North restates the idea that human institutions are mainly motivated by the need of a reduction of uncertainty (in Frank Knight's 1921 sense; as quoted in

Aoki 2001) on the face of an intrinsic limit of human mind whose nature is such that our knowledge is necessarily partial and incomplete. This human condition is complicated by the fact that the structure of the human domain is ‘non-ergodic’. This means that it shifts in unintended ways as humans try to modify or control it. Moreover, as we alter it, it changes how we represent the costs and choices we face, which in turn changes how we attempt to further alter our institutional environment and so on.

Facing this scenario, North mainly innovative effort is to recognize that ‘we must necessarily focus on the way in which the mind works and makes sense of our external environment’ (2005, 21). In other terms we cannot understand the society’s structure of interaction independently of the ‘mental models’ or systems of beliefs that help to constitute that structure.

According to North a first attempt in this direction is to rediscover F.A.Hayek’s contribution *The Sensory Order* (1952) about the process of learning and formation of beliefs, that has ‘an amazingly modern resonance in recent work in cognitive science’ (North 2005, 33).

North highlights how human beings think and act within the context of a system of categories and assumptions that provides a necessarily incomplete model of the world in which not all the range of possible actions is represented. Our estimation of our alternatives depends on how we represent them which in turn depends on our underlying system of beliefs (5).

Drawing on the work of Andy Clark (1997), Ed Hutchins (1995), and Merlin Donald (1991, 2001), North commits himself to the view that cognition is not simply something that takes place ‘inside the head’, but which is done in interaction with a structured external human environment. In this way we could show how ‘human cognition is not just influenced by culture and society, but that it is in a very fundamental sense a cultural and social process’ (Hutchins

1995, xiv; quoted in North 2005, 34). The recognition of this endogenous feature is stressed referring to such works in which cultural and historical variables show to be relevant in the explanation of the general experimental game of responding to incentives.

This last contribution stressed again the importance of an understanding of the cultural background of economic interaction and so of the formal and informal institutional arrangements especially ‘if we are to account for the wide and still-widening gap between rich and poor countries’ (North 2005, 47).

Although North’s last contribution would deserve more attention for his interesting and in such a way ‘revolutionary’ for economic theory thesis introduced, the goal of this section was to underline the co-existence into the institutional dimension of a system of formal and informal constraints. In the next paragraph we are going to analyse another dimension of interaction that call in cause directly the interpersonal dimension.

## **3.2 Economics and social interactions: towards the explanation of non- selfish economic behaviour**

### **3.2.1 Social interactions and the interpersonal dimension of economics**

At the beginning of the twentieth century the ‘new’ economic science introduced a theoretical revolution that is systematically described in many recent contributions (see Bruni 2005; Gui, 2000; Zamagni 2005). In this process it is recognized how, in contrast with the founders of the classical political economy, Pareto’s reformulation of the theory of choice implied the first sacrifice of the interpersonal

dimension and the development of a methodological individualistic base of analysis.

Before considering the reasons that make necessary the adoption of new theoretical lenses and the efforts made in this direction in economic literature, briefly we are going to put attention on the principle stages in the economic reflections that have had a so important impact in the contemporary economic science.

As Bruni (2005, 213) underlines in his reconstruction of the new Pareto's approach based on the 'naked fact' of choice: '[...] no room is left for non-instrumental relations among human beings: economics becomes the science of the individual and is characterized by a system of preferences, rather than by an identity or personality [reaching] the point of stating: 'The individual can disappear, provided he leaves us this photograph of his tastes (Pareto sect. 57 as quoted in Bruni 2005)'.

This process of eradication of the interpersonal dimension in economic analysis found the subsequent fundamental step in Wicksteed's idea that 'the specific characteristic of an economic relation is not its egoism but its non-tuism' (Wicksteed 1933, 180; as quoted in Zamagni, 2005). In his approach, economics can be compatible with any motive and so even altruism, but the thing that can not be tolerated is 'that the other becomes a you'. As Zamagni (2005, 311) maintains 'Non- tuism is the true barrier that prevents the treatment of economic relations between agents that, on the one hand, know each other (so that the interactions are not anonymous), and, on the other hand, possess an identity (so that the interaction cannot be impersonal)'. Using the well known metaphor, the combination of instrumental rationality and non-tuism, as two sides of the same coin, condemned Robinson to an unhappy life alone without Friday which was turned out from the island of economic theory.

As a result of this path in the economic thought, conventional economic theory represents 'the behaviour of rational agents,



characterized only by, and motivated only by, their preferences and beliefs; in consequence, it recognizes only the cognitive dimensions of interactions between its agents. This methodological strategy, one might say, treats all interactions as *impersonal*' (Sugden Gui, 2005, 13). Just in that strand of literature that puts into discussion the rational choice model, new contributions on the relevance of sentiments and communication of dispositions are arising. In the last section of this chapter we will take into account those recent contributions in which the mutual perception of sentiments in the interpersonal dimension is considered rediscovering Adam Smith's *Theory of Moral Sentiments* (Sugden 2002, 2005; Scazzieri 2005).

In the modern economic science, sociality, at least in the sense of not assuming self interest has been reintroduced in order to give an explanation to those phenomena such as the provision of public goods, the bequest motive, or the existence of social dilemmas as well as experimental data and results raised in game theory that are in contrast with the selfish maximization.

In some of these earlier contributions, for example if we consider theories of altruism, generally there is no departure from an individualistic and instrumental horizon in which 'modification are restricted to an expansion of the set of arguments in the individual's utility function' (Bardsley and Sugden 2006, 18). In this way individuals may be altruistic or inequality – averse but 'the others' are considered only as instruments or obstacles for their own preferences even if their objectives include the welfare of just those others. In more recent works, for example theories of reciprocity (Rabin 1993), the idea that individuals in their interactions may be motivated to return kind behaviour for kind behaviour and viceversa, opens the door to causal links between motivations (Kolm, 2005).

Another way followed to explain non-selfish behaviour has been to consider the possibility that economic agents can be motivated (endogenously) by their need to meet other people's expectations

about them. In other terms, in these theories of normative expectations ‘one person’s motivation depends on another person’s belief’ (Sugden and Gui 2005, 15). Moreover, just on the idea that a person with his behaviour can communicate his expectation on other’s behaviour, the mechanism of trust responsiveness is based. Finally if we recognize that persons are affected by the consideration, admiration and esteem of others, also in a deeper way in terms of the recognition of themselves and their identity, we have found other endogenous sources of motivation that can have a very important explaining power (6).

We will spend more time in the next subparagraphs considering some of these contributions and more radical proposals, such as that one of team reasoning, towards the explanations of non selfish economic behaviour and the provision of useful instruments to face the microfinance phenomena.

Before that, it is worth to identify some important causal links that connect interpersonal relations with the economic sphere in order to underline the relevance and necessity of a more complex scheme of interpretation of economic phenomena. In fact, if in the previous paragraph we have underlined the importance of the institutional framework in its formal and informal expression for economic performance, here the goal is to consider specifically the interpersonal dimension and its relevance in the economic field.

As suggested in the recent contribution by Robert Sugden and Benedetto Gui (2005) we may argue that:

- (i) Interpersonal relations inside the economic sphere can affect the economic performance and well being

This statement implies that the existence of good interpersonal relations among economic actors may allow not only a reduction of the transaction costs and mutually beneficial interaction towards cooperation and collective actions; but at the same time it means

that positive interpersonal relations may provide intrinsic benefits for the persons involved.

- (ii) Interpersonal relations outside the economic sphere can affect economic performance and well being

As we have seen the existence of norms of cooperation, dense social network and mutual familiarity, in a word of social capital, can bring instrumental benefits towards the improvement of efficiency and development and at the same time may bring intrinsic benefits

- (iii) Economic choices can affect interpersonal relations inside and outside the economic sphere

A particular arrangements for example in terms of intra e inter organizational practices can affect the interpersonal dimension of the actors involved (examples can be some different settings analyzed in microfinance literature based on incentives and monitoring mechanisms or other development projects applied in rural communities). Outside the economic sphere personal relationships and social cohesiveness can be facilitated (or not) by individual and collective economic choices. In this sense we have suggested the concept of enabling institutions, as a possible tool through which it is possible to implement economic policies.

Each of these links have been inspiring an increasing number of theoretical and empirical contributions, underling also the necessity of an interdisciplinary approach in which different disciplines encounter themselves with a fertilizing attitude.

The first conceptual scheme that we are going to analyse is that one in which just the recognition of the relevance of the interpersonal dimension, and so the consideration of the so called relational goods, leads to a different idea of economic interaction that comes to be reviewed as an encounter.

### **3.2.2 Economic interactions as encounters: ‘relational’ goods**

A possible root that can be taken in order to consider the interpersonal dimension of economic reality, or in other terms the ‘communicative/affective side of economic interactions’ (Gui 2005, 28), is to identify some conceptual entities that may contain relational phenomena into a coherent framework and then analyse agents’ preferences and motivations concerning such entities.

The first attempt in this direction could be to apply in this field the concept of externality, that is, to individuate some forms of ‘interpersonal’ or ‘social’ externalities that operate ‘through interpersonal communication (both verbal and visual) or emotional links’ (Gui 2005, 29). But this concept is more useful if we want to refer to a situation where the effects on other agents of one’s behaviour are unintentional, that is, a by-product of actions based on the persecution of other goals.

Other efforts could be done considering a wide spectrum of goods’ characteristics or extending the exchange paradigm introducing concepts like social exchange in which the expression exchange substantiates in a ‘non-contractual combination of reciprocal contributions’.

Leaving apart some limits that these solutions present we will concentrate on the promising root taken by some scholars (Gui 1988, 2000; Uhlaner 1989; Zamagni 1999) particularly considering Benedetto Gui’s recent contribution (2005). This choice is motivated by two reasons.

The first is that in Gui’s contribution, starting from Mark Casson’s statement (1991, 25) that ‘the concept of a trade [must be] replaced with the concept of an encounter, which can also include team-work, public assembly, chance meetings, and so on’, the scholar proposes an analytical framework in which relational goods are considered as the result of a productive process called ‘encounter’.

The second one is that his concept of relational capital is the manifestation at a micro-level, as it is suggested by Turner (in Dasgupta and Serageldin's collection essays 2000), of the same concept of social capital that we have presented in the second chapter at a different level.

After proposing examples of encounters such as 'an estate agent and a customer engaged in a deal; a foreman explaining a new task to a worker' or others based on different 'productive technologies' (Sugden 2005), all characterized by the fact that they substantiate in face-to-face interactions, Gui suggested to decompose an encounter (considered as a productive process) into its components. The aim of this operation is to identify at first the inputs and the so-called affecting factors of the productive process and then the resulting outcomes or outputs of encounter.

In transactions the following inputs (I) are employed:

- (I1) ordinary goods and services
- (I2) interactants' human inputs (they refer to such flows of services of interactants' stocks of human capital)

These elements must be considered in the face of two affecting factors (A):

- (A1) the external environment (both the objective and institutional structure of a society)
- (A2) interactants' attitudes and moods (interactants' reciprocal "state of feelings")

In order to understand the communicative/affective side of an encounter to the traditional outcomes (O) considered, that are:

- (O1) transfers of property rights
- (O2) the provision of a service
- (O3) the performance of a task within an organization

we have to add other two outcome-entities that are:

- (O4) changes in interactants' human capital, in particular its relation-specific component

(O5) ‘relational’ goods ‘consumed’ in the course of interaction

Just the introduction of these two outcomes (O4 and O5 as Gui defines them in his scheme) that we are going to analyse separately, opens to the identification of those entities we had spoken about at the beginning.

***Relation-specific human capital or ‘relational capital’ (O4)***

In nearly all encounters, the human capital of the agents involved is modified by the fact that there is a passage of information owned. As a matter of fact, in the encounter a face to face interaction generate new information that become available for future individual activities and choices. But, in the case in which ‘a piece of information obtained during an encounter affects only the ability to derive outputs of various types from future encounters with *the same* interactant, it constitutes ‘relation-specific human capital’ (or, more simply, ‘relational capital’)” (Gui 2005, 35 cursive added).

This new capital, substantiating in an improvement of information, may be local. This means that one part univocally possesses information about the other, or common knowledge for those specific agents involved, but not for others. The creation of relational capital substantiates also in the modification of the ‘state of feelings’ of interactants that can affect an encounter’s outcome.

On the base of the degree of specificity of human capital from a two-person relationship (dyadic) through small groups up to full generality, we can recognize in this entity the concept respectively of relational capital at a micro level and social capital at a meso and macro level. As it is well clarified by Gui (2005, 36): ‘Enlarging the number of the group causes the notion of relational capital to overlap with the notion of ‘social capital’, which – in its prevalent ‘meso-economic’ usage – refers to a collection of intangible durable resources that are specific to a community: the respect of norms of

cooperation (which requires, first of all, knowledge of the norm, and, secondly, a convergence of beliefs that it will be followed); mutual familiarity and trust among members of networks along which information flows easily (so research costs are contained); and so on. Indeed, social capital and what I call relational capital are made of roughly the same substance’.

We quote this last statement because it is clearly coherent with the framework proposed in Dasgupta (2000; 2002) and for this reason in the fourth chapter we will overlap these contributions towards a comprehensive framework of analysis.

### ***Relational goods (O5)***

To introduce this concept we have a wide range of examples. One of them is proposed by Hansmann (1980, 890; quoted in Gui 2000; 2005) who suggests how the success and continuation of participatory organizations such as associations, cooperatives, non profit organizations can be explained referring to those benefits that persons involved obtain just for being interacting parts of these realities, independently of other possible outcomes achievable (O1, O2, O3, O4).

Those benefits, identified by Gui (2005, 37) as ‘relational consumption goods’ are those outcomes of social interaction that do ‘not reside in what this can be instrumental to (advantageous transactions, or the accumulation of human capital of any sort) but in what is enjoyed (or suffered, if the communicative and affective side of the interaction is unpleasant) during the interaction itself – a peculiar form of consumption’.

In this sense Kenneth Arrow (2000, 3 cursive added) asserts that “much of the reward from social interaction is *intrinsic*”.

Relational goods, as Carole Uhlaner (1989) had observed, can be considered local public goods. This implies they are subject to market failure with two exceptions: the first is that complete free

riding is not possible; the second is that they are exposed to the tragedy of commons: non-contractibility. In other terms just their intrinsic dimension cannot be accompanied with monetary incentives. If we put briefly attention on the process of creation of these particular kinds of goods two reflections can be done.

The first is that the distinction just proposed between relational capital and relational goods permits to recognize the role that relational capital (and in a wider sense social capital) can play in an encounter not only in terms of a reduction of transaction costs but also in the achievement of intrinsic benefits from interactions, that means the creation of relational goods.

The second is that (Gui 2005, 50) although ‘spontaneity is a crucial condition for high-quality relational interaction, while the outcomes of public intervention are, almost by definition, artificial, [here] ample room [remains] for indirect public intervention: promoting actions that favour the accumulation of relational capital goods, and discouraging other actions that lead to their depletion’.

In this conclusive statement the concept of enabling institutions reappears suggesting its pregnancy: it is possible to implement policies that introduce those enabling institutions through which at different levels activate a process of creation of relational and social capital towards also the ‘production’ of relational goods.

### **3.2.3 Economic theories of altruism and reciprocity**

Since the last quarter of the twentieth century, economic science has tried to reintroduce ‘sociality’ following different routes. In this paragraph we will analyse the most relevant theoretical efforts in this direction while, in the next one, we will concentrate on those theories at the frontier of economic science such as those of team reasoning and group identity (Sugden 2003; Sugden and Gold 2006; Bacharach 2006).



As a matter of fact, the economic theory of altruism has been for long time the most followed route and articulated attempt in order to overcome the intrinsic limitations implied by the assumption of self-interested behaviour.

At this point, it seems interesting to remember that the word ‘altruism’ was originally coined by Auguste Comte (1875) in order to define a ‘selfless motivation to act in others’ interest as opposed to a motivation to act in others’ interests for an ulterior selfish reason. [This conception of altruism] does not rule out that people can act in others’ interests independently of their own preferences’ (Bardsley, Sugden 2006, 19). But this is not the conception on which models of rational choice altruism have been based. In fact, these theories, as we are going to see, are more related to that apparently similar conception that persons can obtain utility from others’ well being. This idea was introduced in Edgerworth’s utilitarian approach and Bentham’s classification of ‘the pleasure of benevolence’,

Following a useful distinction proposed by many scholars (Zamagni 2005 refers to Khalil’s 2001 distinction; Bardsley and Sugden 2006) we can identify three main approaches to altruistic behaviour: egocentric, egoistic and altercentric. This distinction allows to detect some different conceptual frameworks in a comparative perspective. After that, we will put attention on two different notions of reciprocity.

### ***Egocentric approach and Rational choice altruism***

This first approach finds its original root in Becker’s contribution (1974) according to which pro social behaviours can be introduced into neoclassical economic theory once it is allowed to individual utilities to be positively interconnected. In other terms, following Edgerworth’s intuition, an altruistic behaviour can be modelled simply recognizing at first that the *others’ utility* becomes an argument of *my* individual utility function. Secondly we have to recognize that this

argument, as a mere consumer good, has a positive impact on my utility.

In formal terms, let  $i$  denote an altruist (with his vector of consumer goods  $x_i$ ) and  $j$  the generic other person:

$$U_i = U_i(x_i; U_j)$$

The altruistic assumption is that:  $\partial U_i / \partial U_j > 0$

In this approach (7), the relationship between economic agents is instrumentally defined so that an individual will behave altruistically only to the extent that the marginal utility, that he derives from the others's utility, equals the marginal cost to be altruistic. As Zamagni (2005, 307) underlines 'to reduce an altruistic behaviour to a questions of tastes or preferences means betraying the meaning of the term itself [...] introduced by Auguste Comte to denote a disinterested motivation to act in the interest of others'. Moreover this approach, based on the altruistic interdependence of utilities, often leads to paradoxically results and predictions for example in the field of the contribution to public goods or more generally in the analysis of interpersonal relations (Bardsley and Sugden 2006; Gui 2000) .

### ***Egoistic approach and 'warm glow'***

With this expression Khalil (2001) identifies two main influential lines of research.

The first one is related to Axelrod's pioneering contribution in the explanation of cooperative behaviour in the context of repeated social interaction. Here the typical prisoner's dilemma can be overcome assessing a role to agents' reputation. In this field the idea of a 'calculating altruism' emerges as the result of an instrumental strategic behaviour. As a matter of fact, an agent may be motivated to build a reputational asset if interactions with others are repeated on

time. But it is relevant to underline how, at the base of the altruistic behaviour, there is again an egoistic motivation that leaves unexplained ‘true altruism’ (Zamagni 2005).

The second approach has been proposed by James Andreoni’s (1990) idea of ‘warm glow’. In his theory of voluntary contribution to public goods, the scholar assumes that an agent can derive utility ‘directly from an act of unselfish behaviour, independently of any consequences it gives rise to’ (Bardsley and Sugden 2006, 21). The idea is that an agent acting unselfishly will experience internally ‘warm glow’ and so that he will act in pursuit this feeling. In the voluntarily provision of a public goods, warm glow is a sort of ‘private by-product’ that increases the supply of public goods. In the model the utility function will be:

$$U_i = U_i(x_i; w_i; z)$$

where  $w$  is the contribution to a public goods and  $z$  the total amount of public good financed by voluntarily individual contributions. The internal satisfaction derived from contributing to public goods implies that:

$$\partial U_i / \partial w_i > 0$$

Although this theory seems to explain the strong empirical evidence in the provision of public goods of crowding-in, ‘warm glow’ cannot be considered the first cause of an altruistic behaviour. In fact, as it has been stressed, ‘there are grounds for claiming that warm glow presupposes the rationality of the behaviour it is supposed to explain’ (Bardsley and Sugden 2006, 21). This means that the fact that rational agents experience ‘warm glow’ requires a priori belief according to which to contribute is a good thing that implies a good feeling. In the absence of this a priori element, rational agents will not feel ‘warm glow’ and we will meet again a situation of crowding out.

### *Altercentric approach and 'inequality aversion'*

In this third approach, linked to the work of Etzioni (1986) and others, at the base of an altruistic behaviour there is ultimately a moral imperative, that is the interiorization of a system of moral ideals. But, in this case, 'the ethical altruist is not interested in others as such. He is only concerned in abiding by a particular ethical principle that operates in the same way as the Kantian categorical imperative' (Zamagni 2005, 309).

This first feature leads immediately to the consideration of one of its limit that is of an altruism without 'the other', or more precisely, in which the other is a generic other. The second one is that this ethical code may be not chosen by the agent but it may come from some macro entity (the community, the social class, the group etc) that imposes a particular system of values on agents.

Recently some models introduce in the explanation of agent's behaviour a sort of inequality aversion that can be interpreted both as an ethical code and an aversion that produces a bad feeling related to inequality, as in the case of warm glow. These theories have arisen from the experimental results obtained in the so called 'ultimatum' or 'dictator' games. But as the previous attempts, it shows a weakness that is more fundamental.

At this point, it is clear how the basic limit of these theories is that they remain embedded in an individualistic framework. In other terms, just the denial of the social (or better relational) nature of person is the higher limitation of standard economic theory.

Here, as Zamagni (2005) suggests, we must take care of a critical distinction/connection between the relationality and the sociality of individuals. From the well known Aristotle's assertion that man is a social animal, we know that human beings present a disposition to interact systematically in society. But, in this sense, sociality is essentially 'a principle of self-organization' that is not exclusive to human beings. Recent studies recognize how in the

animal realm various examples of social behaviour can be observed, especially in terms of mutual assistance. But ‘what is typical of the person is the relationality which postulates that the others become a *you* and not merely an alter ego [...] Relationality ultimately hinges on the conception of the self: oneself is constituted by the recognition the other bestows upon her. In standard economics, the other only has instrumental significance. In turn this implies that relations among agents are treated as relations “at arm’s length” and not as “face to face” interpersonal relations (Gui 2003). This excludes all process of relationality from theoretical examination’ (Zamagni 2005, 315).

This distinction can be understood at the light of two recent developments in the economic theory of human behaviour based respectively on the idea of expressive rationality and collective rationality. Briefly, since we will concentrate on Sugden’s theory of team reasoning in the next paragraph, here it seems worth to introduce the fundamental idea behind the concept of expressive rationality (8).

In opposition to rational choice theory, it seems to me that this conceptual tool comes to be particularly relevant, also in the study of the credit-debt relation. This seems true especially when it is combined with a theory of the social determination of appropriate expressive actions. In the standard economic theory of choice instrumental rationality implies that the agents choose an action only as a mean to some end. The expressive rationality approach is based on the idea well explained by Benn (1978, 3) that: ‘An action can be rational for a person regardless of its payoff if it expresses attitudes and principles that it would be inconsistent of him not to express under appropriate conditions, given the character which he is generally content to acknowledge as his own. This is what is called being true to oneself’.

In other terms this approach allows to consider an agent that is not simply interested to the consequences of actions but also in the significance that these actions have with respect to their identity of

persons. The meanings or connotations of an action depend critically ‘on the existence of a shared rule, standard or norm [that governs] the appropriateness of acts as expressions of particular meanings [...]’. That is to say that, there are constraints and opportunities imposed not through interaction with specific others but by the prevalent attitudes and beliefs of members of a community” (Bardsley and Sugden 2006, 27).

As it is possible to understand reading Muldrew’s (1998) *The Economy of Obligation* about the credit culture in early modern England, a deeper understanding of the credit debt relations requires the consideration of the particular ‘meaning’ of the act of not paying respect to borrower’s identity. As a matter of fact, the stability and mechanisms of solution of disputes among the members of a particular credit network cannot be understood only on the base of the reputational factor and in terms of repeated interactions. The impact of an action on person’s identity should be introduced in the analysis of these mechanisms of enforcement of agreements.

In the following part of this paragraph we are going to analyse another important line of inquiry based on the principle of reciprocity.

### ***Notions of reciprocity and its emergence***

A comprehensive analysis of the huge literature around the principle of reciprocity would require more than a section. Here we will introduce only some efforts in this field and later we will concentrate more on Kolm’s (1994) formulation of reciprocity that appears particularly interesting in a relational perspective. Some of these theories are also closely related to those ones on altruism. We will come again on the principle of reciprocity studying the role of trust in social interactions. In fact, these two concepts are theoretically and empirically so tightly intertwined to the point that in some contributions trust is considered as an expectation of reciprocal behaviour (9).

It is widely recognized that reciprocity overcomes both the idea of reciprocating altruism and direct reciprocity developed by some scholars (better known as the ‘tit-for-tat strategy’).

Many studies, such as the famous Rabin’s theory of reciprocity (1993), have defined a game theoretic model that leads to the use of psychological game theory. Others have tried to explain the evolutionary process through which preferences of reciprocity in agents can emerge and stabilize in a specific social context. Finally, in many empirical studies the application of various theories of reciprocity have shown a clear evidence of the validity of this concept in the explanation of agents’ pro-social behaviour (Frey and Meier 2002). As a result, iterated laboratory experiments of the prisoner’s dilemma have put into discussion just the basis of traditional game theory.

In this specific field, it is possible to identify in the vast literature two main notions of reciprocity. The first one arises from an internal aversion to unfair distribution that leads to a reciprocating behaviour (this seems very closely related to those theories of inequality aversion analysed). In the second conceptualization, as Falk and Fischbacher (2001) underline, reciprocity is a behavioural response to a ‘perceived courtesy’. Here, the term courtesy implies both a sense of distributive equity and a specific good intention of the agent. In this direction it is possible to take into account the intention behind a certain action and the adoption of signalling actions finalized to teach to the other interacting players a coordinative strategy at the cost of a ‘sacrifice’ in the short run.

But, both these theories present the same limit of an individualistic framework that has been stressed in the previous sections. The only difference between them arises from a ‘different specification of the interdependence of individual preferences, but the conceptual structure behind it is the same: the attribution of weights to

the pay-offs of others persists, weights that enter, in some way, one's own preference function' (Zamagni 2005, 318).

In a more relational perspective, Kolm's (1994) definition of reciprocity 'as a series of bi-directional transfers, independent of each other and at the same time interconnected' appears particularly interesting (Zamagni 2005, 320). In fact this definition implies that reciprocity is characterized by three relevant properties:

- (i) each transfer is voluntary in itself

Unlike the principle of the exchange of the equivalent, the fact that each transfer is realized independently implies a wide degree of freedom and voluntary of the action. In other terms each transfer is not the prerequisite of the other; while in the exchange of equivalents the transfer in one direction makes obligatory the opposite one.

- (ii) transfers are bi-directional

The bi-directionality is a critical element that allows to distinguish philanthropy and pure altruism from a reciprocating relation. In fact, if in the former the relation realizes in an one-direction form (from the giver to the receiver) and so it is not properly a relation, in the case of reciprocity both actors are essential active pillars of the relation. In this sense, as we have shown speaking about altercentric approach, some relations appear to be relations without the other, to say without a specific other with a peculiar identity.

- (iii) transitivity

A reciprocating attitude may reveal itself not necessarily when it is directed towards the person who 'triggered' the reciprocity relation. The fact that a third external party may be the recipient of a reciprocating action opens the door to



the fact that reciprocity is a triadic structure. This seems particularly interesting if we try to apply this kind of concept in relational structures based on a credit-debt relation. We will consider more deeply this aspect in the fourth chapter where the analysis of social network structure will lead to the central consideration of triads.

To quote Zamagni (2005, 320): ‘the relation of reciprocity requires some form of balancing between what one gives and what one *expects* to obtain, or *expects* to be given to some third party; a balancing [that] may vary according to the intensity with which moral sentiments such as sympathy, benevolence, the feeling of solidarity are put into practice by the agents involved in the relation’.

This principle of reciprocity, in Kolm’s sense, also does not exclude, as we have seen above, the existence of a strategic dimension. In other terms, agents involved in a system of social interactions can choose to reciprocate or not, to signal or not a particular attitude and so to establish/continue or not a relation. What makes this concept richer in a relational perspective is that as Zamagni (2005, 321) well explains ‘the other person assumes a special value, since s/he gives us back the relational sense of ourselves. By comprising an essentially communicative aspect, reciprocity builds social relations and sense of identity’.

A relevant dynamic aspect of reciprocity is also related to the idea that the practice of reciprocity in a given social context allows both to induce in its interacting agents a sort of pro-social disposition and to modify endogenously their preference structure. In this direction, on the base of the literature on social evolution, it is possible to think reciprocity as a social norm that can emerge endogenously as the result of various processes of cultural transmission and of social selection. In this evolutionary process, the institutional framework, especially in its informal dimension, plays a central role impacting on

the system of preferences, values, norms, identity and cultural traits of individuals (Bowles 1998).

This last reflection remembers once again the possibility just in a dynamic perspective of the role that enabling institutions can play. For example if we follow Putnam's characterization of social capital as a context of generalized reciprocity, we have to ask ourselves in which way particular kind of institutions can enable the process of formation of these practices of reciprocity and so of social capital.

In the next paragraph we will abandon the more traditional approach to sociality in economic theory to face more radical proposals at the frontier of economic research.

### **3.2.4 Team reasoning and group identity**

The theory of economic decision is based on the assumption that agency is invested in individuals. Their actions are the result of their own system of preferences and beliefs. As we have seen, this does not exclude that persons' preferences may be altruistic or other-oriented. This means that they may take account of the impact of their own actions on other people. But 'still, these are *her* [of the person] preferences, and she [the person] chooses what *she* most prefers' (Sugden,Gold 2006, 8).

In the last years some contributions (Sugden 1993) Bacharach 1999, 2006; Hollis 1998; Sugden and Gold 2006) have introduced an alternative approach that allows groups of individuals, 'teams', to count as agents. In this case each group member acts as a part of the whole and not simply in the interest of the whole. This idea suggests that individuals, in front of a particular context of interaction in which the individual strategies offer 'a scope for common gain' (to use Bacharach's 1999 expression) or the possibility of a Pareto improvement, will base their action on a team reasoning.

In other words, we are considering the hypothesis that a person may face a problem asking not “What should *I* do?” but “What should *we* do?” (10).

Such a sort of decision theory, based on the idea of team reasoning, seems to provide a framework to understand those results in experimental economics and evidence in real life in which persons act in contrast with the prediction of the orthodox decision theory.

At this point it seems interesting to introduce two puzzles of cooperation: the Prisoner’s Dilemma and the Hi-Lo Paradox, from which the idea that in standard theory there is something fundamentally wrong emerges clearly (Bacharach 2006; Gold and Sugden 2006). After that we will concentrate on team reasoning as a mode of reasoning that may be explicitly represented through schema of practical reasoning. Finally we will focus on Bacharach’s last contribution in which persons’ identification with a particular group is a matter of ‘framing’. In other terms we will make two steps.

The first is to face these puzzles through team reasoning identifying it as ‘a mode of reasoning’. Then, given the existence of an isomorphism between individual and team agency, the second step is to introduce two possible explanations of ‘how the unit of agency is *in fact* determined’ (Bardsley and Sugden 2006).

The former contribution is related just to Bacharach’s uncompleted work on ‘frame’ (1999, 2006) while the latter to Sugden’s (2002) rediscovery of the Smithian concept of fellow feeling (developed in the paragraph 3,4).

### ***The Prisoner’s Dilemma***

As well known, conventional game theory predicts that the two prisoners will choose the strategy *defect* (defect, defect is the only Nash equilibrium) although there is scope for common gain when both choose the strategy *cooperate*.

Table 3.2.1: The Prisoner's dilemma

Prisoner's dilemma		Player 2	
		cooperate	Defect
Player 1	cooperate	2 , 2	0 , 3
	defect	3 , 0	<b>1 , 1</b>

At the same time we have an experimental evidence that suggests how many people (around the 40-50 per cent) facing this kind of game have a strong intuition that cooperate is the rational choice. The following puzzle is more interesting.

### ***The Hi-Lo Paradox***

As in a pure coordination game, players choosing both the same labels (high, high) or (low, low) will obtain a positive payoff (the same for both, therefore it is defined a 'common interest game') while in the opposite case (0 , 0). The interesting difference is that here there is the label 'high' that associates to coordination a strictly higher payoff for both players. As in the Prisoner's dilemma there is a scope for common gain but here there are two pure-strategy Nash equilibria (high, high) and (low, low). So a coordination problem arises.

Table 3.2.2: The Hi-Lo Paradox

Hi - Lo		Player 2	
	<i>labels</i>	high	low
Player 1	high	<b>2 , 2</b>	0 , 0
	low	0 , 0	<b>1 , 1</b>

Although the common sense suggests that players will coordinate on the equilibrium (high, high) that they both prefer, in the formal theory ‘there is no sequence of steps of valid reasoning by which perfectly rational players can arrive at the conclusion that they ought to choose *high*. [...] from the assumption of rationality, all we can infer is that each player chooses the strategy that maximises her expected payoff, given her beliefs about what the other player will do’ (Gold and Sugden, 2006).

In team reasoning approach a solution to these puzzles is the result of a different ‘mode of reasoning’. As a member of a team a person may ask to herself ‘What should we do?’ and the answer is to perform that action that, combined with other’s team players, would best promote the team’s objective. Following Bacharach (2000), Sugden and Gold (2006) propose to represent team reasoning through schema of practical reasoning which include premises about agency.

Given a set  $S$  of individuals, a set of alternative actions for each player and for each profile of actions, that the individuals may choose, an outcome (better known as game form), we define a payoff function to represent what some specific agent wants to achieve. Finally, given any individual  $i$  we will say that  $i$  identifies with a set of individuals  $G$  if  $i$  conceives of  $G$  as a unit of agency, acting as a single entity in pursuit of some single objective. Here there is also a situation of common knowledge in the usual sense.

Letting  $A$  stand for any profile and  $U$  for any payoff function, the simple team reasoning may be represented (from a group viewpoint) as follows:

- (1) We are members of  $S$
- (2) Each of us identifies with  $S$
- (3) Each of us wants the value of  $U$  to be maximised
- (4) A uniquely maximizes  $U$

---

Each of us should choose her component of  $A$

This schema can be applied both to individual reasoning assuming that  $S$  is reduced to ‘myself’ or as a mode of reasoning of a group. A critical condition in this schema is that (2) is satisfied. This means that all the members of  $S$  identify (in the sense before expressed) with this group.

After having intuitively shown what these authors mean for schema of reasoning, we have to make the second step. In fact ‘the pure theory of team reasoning [...] presupposes that there can be group agency; but it is not reliant on any particular theory of how group agency comes about or of what the group agent should take as its goal’ (Sugden, Gold 2006, 17).

The literature, as I have anticipated, has conducted various attempts in this direction. Here we want to introduce briefly Bacharach’s last contributions (1999, 2006) in which the idea of team agency as the result of framing is at the base of the concept of ‘group identity’.

In a lecture in 2001, Bacharach defines a ‘frame’ as ‘the set of concepts or predicates an agent uses in thinking about the world’. And adds: ‘If I see the marks

O   Δ   X

as a circle, a triangle and a cross, my frame includes three shape concepts; if as an omicron, a delta and a xi, three letter concepts. I can also see them as both. But not at the same time. One does not just see, but one *sees as*’ (Bacharach 2006, 10).

Behind this statement there is a clear distinction between objects of choice and act-descriptions. According to the frame used by the decision-maker, the same set of objects may be perceived in different ways leading to alternative decision problems. The ‘perception’ or ‘framing’ and consequently the description of a given

set of objects depends on ‘contextual factors which bring to mind, or prime, particular sets of ideas’ (Sugden, Gold in Bacharach 2006). Just the absence of distinction between objects and act-description in conventional decision theory does not allow the possibility of ‘variable frames’.

So assessing that the identification of a person with a group is a matter of framing means that in order to reason as a ‘team’ it is necessary that in person’s frame the concept of ‘we’ is present. In this way it is possible to recognize that the perspectives of ‘I’ and ‘we’ are the results of different frames.

At this point Bacharach suggests that the ‘we’ frame may be induced by the payoff structure of a game which presents a property that he calls strong interdependence. Referring to our examples such as that of Prisoner’s dilemma, we can approximately say that a game shows strong interdependence when “it has a Nash equilibrium that is Pareto dominated by the outcome of some feasible strategy profile” (Gold, Sugden 2006, 20). The identification of this property does not imply that in its presence a game invariably prime the ‘we’ frame and so a form of team thinking.

To conclude, what seems particularly important to stress is Bacharach’s recognition that other contextual factors can play a critical role in the process of decision making just through the process of framing. This intuition and the construction of Bacharach’s variable frame theory has remain uncompleted but leaves an important legacy in the development and comprehension of coordination problems. Moreover in my opinion it is evident how this theoretical effort will conduct to a more comprehensive theory of choice capable to dialogue with just those other dimensions of interactions that we are detecting in this chapter.

### **3.3 The interpersonal dimension: the role of Trust**

#### **3.3.1 Emerging practices of trust: rationality and relationality**

In the previous chapters, both in the analysis of the credit-debt relation and in the study of the concept of social capital we have often referred to a general idea of trust. After having introduced the interpersonal dimension, at this level of interaction, it seems particularly relevant to deepen the study of this concept.

The aim of this paragraph is just to present different theories of trust in which scholars try to explain the kinds of reasoning that persons use when they engage in practices of trust. The huge literature in economics and philosophy on this field is strictly related to those theories of social capital in which the focus is on those institutions able to induce and reproduce practices of trust and its emergence in terms of habits, dispositions or modes of reasoning. This subject has been treated in the second chapter. There, in front of those theories in which the economic underdevelopment of some regions is explained through the idea of scarce social capital and the absence of trust-inducing institutions (Putnam 1993), we have tried to recognize more optimistically the possibility of enabling institutions.

As it has been suggested (Bruni and Sugden 2000), these arguments should be approached not simply on the base of the instrumental conception of rationality and the individualistic approach which dominate modern economics and game theory. Instead, it could be useful to refer also to classical authors such as Smith, Hume (the leading figures of the Scottish Enlightenment) or Genovesi (in the Neapolitan Enlightenment) towards a more ‘fluid’ approach that allows to detect the real nature of trust.

In this section we will present the three main definitions of trust emerged in modern economic theories referred respectively to the concept of reputation, disposition and reciprocity. In doing that, we



will make a backward step to one of these ‘father thinkers’ to provide intuitions that help us to collocate trust in a relational perspective.

In the next section we will discuss the recent approach that introduce the idea of trust as a responsive behaviour. Finally in the last subparagraph we will present a recent contribution by Pelligra (2005) in which just this concept in a trust game framework is applied specifically to Grameen Bank methodology. It will be suggested also the opportunity to explain the fiduciary interactions in microcredit programs not only in the vertical credit debt relation (borrower - lender) but also in the overlapped relation, as it has been defined in the first chapter.

Modern theories of trust are immediately characterized for their intrinsic intention to be both descriptive and normative. Descriptive of the practices of trust observed in social contexts but also normative ‘in that they characterize trust as rational: under appropriate conditions, trust can be recommended to rational persons’ (Bruni and Sugden 1999, 3).

The first line of research, that we are going to introduce, has defined the concept of trust mainly in terms of reputation. Starting from a decomposition of economic and social interactions into discrete games, scholars admit the possibility that players can choose to be cooperative that is, to repay trust or not. Although each player benefits if everyone is cooperative, each has a self interested incentive to be uncooperative. When in this framework we introduce the possibility of repeated interactions and that persons can dispose of the ‘history’ of players’ behaviour, it is possible for them to adopt conditional strategies. To cooperate with and only with those who have been cooperative can lead under certain specific conditions to a certain Nash equilibrium (see the literature on Folk Theorems). What seems particularly interesting in these models (Dasgupta 1988) is the fact that ‘trust can be sustained by rational self interest, by virtue of

the private value of a reputation for trustworthiness' (Bruni and Sugden 1999, 4).

As it is observed also in Pelligra (2002), specifically in Dasgupta's (1988) model we remain into a neoclassical frame in which players act only on the base of their own self interest while trust, comes to be considered as 'nothing but the expectation that the subjects involved in the relationships build in relation to the other subject's behaviour and to the various possible states of nature' (see chapter two). In other terms this approach contemplates the possibility of a 'long run self interest' through which it is possible to explain how and when a rational agent may renounce to immediate gains in order to make a reputational investment.

But, although it is clear that the repetition of interactions in human relations plays a critical role, this approach seems to lose its explaining power when we observe trust for example in a one-off interaction. As Pelligra (2002) suggests there is a risk of a reductive comprehension of trust taking apart other motivations that are primarily the result of the fact that trust implies relationality. Quoting the title of Pelligra's work, trust is a matter of "r(el)ationality".

Another important limit of this approach can be detected referring to those mechanisms, suggested in social capital theory, according to which people who have experimented the value of trust in one socio-economic context of interaction, are better able to make use of trust in other ones.

At this regard many scholars (Granovetter 1985; Putnam 1993) have highlighted how the existence of dense networks of civil engagements incentivate to make an investment in reputation for trustworthiness. Specifically, just the direct and indirect experience of trust (through its transitivity) in various contexts of interaction, and so the emergence in the network of a generalized system of trust, are the main arguments at the base of the concept of social capital. To this respect however 'the mechanism by which trust is supposed to spread

from one domain to another is not altogether clear. We suspect that these arguments depend on an implicit assumption that trustworthiness is something more than a reputation, built and maintain for instrumental reason' (Bruni and Sugden 1999, 5).

An interesting perspective that provides a possible explanation of this phenomenon is related to those theories that refers to trustworthiness as a disposition (see Bruni and Sugden 1999) that inspires a wide range of human acts. Although we remain as before in an instrumental perspective, here as it has been pointed out the rationality is assessed 'over the whole class of situations in which it gives guidance, rather than case by case. In any particular case, an action is judged to be rational if it proceeds from a rational disposition, irrespective of the instrumental value of the action itself' (Bruni and Sugden 1999, 6). But this theory depends critically on the assumption that each person's dispositions are known by others.

The last theory that we want to introduce, as it has been anticipated (see paragraph 3,2), identify the concept of trust as a relationship of reciprocity. The starting point of this approach is related to Martin Hollis's (1998) criticism to the philosophical egoism on which the previous (and others) approaches are based.

This kind of 'a-relational' perspective arrives to define the rationality and emergence of trust only in terms of those benefits and incentives deriving from trust, to the point that society comes to be represented as a network of egoistic individuals inspired only by a calculus of the 'convenience' of their behaviour. From his work we can read: 'we need a more social conception of what persons are and a role-related account of the obligations which make the world go round and express our humanity' (Hollis 1998, 104).

The perspective suggested by Hollis is mainly a change in agents' perception of the problem, not simply the emergence of a cooperative attitude in the pursuit of everyone self-interest. His attempt, in this direction, is to define a theory that can consider

rational to repay trust even when this is in contrast to our self interest. To be trust rational, according to Hollis, it is necessary that the persons involved inspired their behaviour on a principle of reciprocity. A situation of this kind, as we have seen before, occurs when there is an 'expectation that the practice of trust will be generally followed, and that this practice will tend to work to everyone's advantage' (Bruni and Sugden 1999, 7).

This last step towards 'the first person plural' is realized only if each person arrives to think as member of a team or, in other terms, she becomes aware that her action is part of an action by us which has good consequences for us. As we have seen in the previous paragraph this approach requires the existence of a group identity and a mutual awareness of that identity. This process arises from a network of civic engagements where the 'community consciousness to be a we' may emerge leading to the rationality of trust. In this framework 'social institutions do not merely set the parameters within which rational choice are made; they influence the content of rationality itself' (Bruni and Sugden 1999, 8).

But, although the idea that trust is based on an expectation of reciprocal behaviour has been capable to explain many interactive situations and so have found many advocates, as Pelligra (2002) stresses, there are situations where the absence of this kind of expectations does not exclude the emergence of trust. For this reason we need a more general explaining principle that is capable to catch the true nature of trust. As we will see, starting from the philosophical contribution by Philip Pettit (1995; 2002), some scholars, especially Pelligra (2002; 2005) are going to suggest that this general principle is that of responsive behaviour.

Before that, although it could be interesting to analyse Hume and Smith's ideas on trust and social capital (some aspects of their philosophical approach to human nature will be the subject of the next

paragraph), in this last part we will introduce briefly some aspects of Antonio Genovesi's concept of *fede pubblica* (public trust).

This choice is motivated by his strong 'relational' approach that arrives to the point to consider the enjoyment of social relationships as the chief advantage of society (while for Hume it is an increasing provision of material goods). This thesis, of a human nature immediately relational, is expressed by Genovesi saying that we are 'created in such a way as to be touched necessarily, by a musical sympathy, by pleasure and internal satisfaction, as soon as we meet another man; no human being, not even the most cruel and hardened, can enjoy pleasures in which no one else participates' (*Diceosina*, Book I, Chapter 1, §XVII, p. 42; as quoted in Bruni and Sugden 1999).

Just Genovesi's assumption on human nature and the recognition of human desire for social relations allow him to think trust as rational. Trust is a precondition of social relations as well as friendship (that we should identify with reciprocal assistance in a non instrumental sense) and in this way, escaping from any form of instrumental reason, trust is rational *per se*.

Moving in the same direction of the classics in the last years, the rediscovery that trust is basically a matter of interpersonal relationships has conducted to a responsive conception of trust.

At this point, as Pelligra well clarifies we must recognize that '[an] act of trust takes place within an (often personalized) relationship between two subjects. It is extremely unlikely that a theory that considers the reasons to behave trustfully and trustworthy as external to that relationship will be able to give a satisfactory account of what trust is. Nevertheless, at least theories based on (enlightened) self-interest, altruism, inequity aversion and team thinking consider the reason to be trustworthy as exogenous. This means that, at a given node of interaction, whether or not *alter* decides to behave trustworthily does not depend on *ego*'s preferences and

choices. In the trust responsiveness hypothesis, a trusting move induces trustworthiness through an endogenous modification of *ego's* preference structure [providing] *additional* reasons to behave trustworthily” (Pelligra 2005, 113). With this critical specification in mind, now we can understand the theory of trust responsiveness and the possible application of this concept in the credit-debt relation.

### 3.3.2 Trust responsiveness

The basic idea just intuitively expressed in Pelligra's useful quotation can be more systematically formalized in the following way.

Given two subjects A and B:

If A behaves trustfully

→ A is signalling his expectations about B's behaviour

According to the trust responsiveness mechanism:

Given A's manifestation of his expectations

→ B is induced to fulfil A's expectations

In this sense it has been studied in behavioural economics if trust presents a self-fulfilling quality (see for example Bacharach, Guerra and Zizzo 2001).

Just in order to find a theoretical explanation to the self-fulfilling nature of trust, Philip Pettit (1995), among the first, suggested explicitly the possibility of this kind of process. In his contribution, starting from a very general idea of the word trust, as a reliance on people's behavioural disposition, the philosopher focuses his attention on interactive reliance.

Taking again the stylized situation of two subjects, we will be in the presence of trusting reliance when A thinks that his manifest reliance on B “will strengthen or reinforce [B's] existing reasons to do that which [A] relies on him to do. [This because] the utility [B] gets

(from fulfil trustor's expectations) increases with the recognition that [doing so] will serve [trustor's] purposes" (Pettit 1995, 206).

Although an explanation to this process may be found (as Pettit does for example referring to Greif study of medieval traders presented also in Aoki, 2001) through the combined mechanisms of loyalty, virtue and prudence, the endogenous process that emerges, appears to be more relevant (Pelligra, 2005). In fact, behind the scheme presented above there is a process of belief formation:

The fact that A rely on B expresses A's belief that B is trustworthy

→ only if B confirms A's good opinion may enjoy a special good, that is 'A's good opinion'

In this explanation, Pettit is suggesting the fact that persons' desire to be well regarded by his/her peer may induct trust responsiveness. But according to Pelligra (2005, 115) 'although crucial this motive should not be considered the ultimate source of motivation. [...] this is because there is a wide range of motives, going from vanity to the genuine desire of being praiseworthy' that we must try to take into account in their varieties to full understand the rationale at the base of this mechanism.

In order to find a more comprehensive descriptions of human motivations behind trust responsiveness, Pelligra (2002; 2005) refers to the evolution of the concept of self love broadly conceived as 'desire for the good opinion of others' up to the introduction of the Smithian concept of impartial spectator. Although we will concentrate widely on this subject in the paragraph 3.4, here it is necessary to anticipate some conceptual instruments that allows to identify three sources of motivation for being trustworthy.

As a matter of fact, although both in Dasgupta's (1988) and Rabin's (1993) models the idea that one's trustfully behaviour

generates on us a sort of obligation to which is very difficult to betray is suggested, these scholars do not introduce this intuition in their models. Here, the attempt is just to introduce into the model a more complex representation of human motivations that may give reason for a responsive behaviour.

The first motivation has been already introduced in Pettit where, the good opinion of others, constitutes an ‘external psychological reason’ to act as trustworthy persons.

Using again Pelligra’s expression we can identify also an ‘internal psychological reason’ at the base of the trustee responsive behaviour just going back to Smith’s reflections in the *Theory of Moral Sentiments* (1759). Here, as we will see later (see subparagraphs 3.4.2 and 3.4.3), Smith recognizes how one of the first motive for social action is the desire to be loved by fellows and approved. But, at this point Smith clarifies the distinction, already proposed in Hume (1739) between the desire to be appreciated and the desire to be worthy of appreciation. This distinction, based on the ‘reverberating’ or ‘reflective’ nature of sympathy, is at the base of the introduction of an internal motivation.

A critical property that Smith associates to sympathy is, in fact, to allow persons to become capable of self reflection. Precisely, through sympathy (fellow feeling) man arrives to the construction of a ‘man within’, a sort of impartial spectator from which man’s ability for self-approration and disapprobation depend.

In this direction Smith argues that ‘Man naturally desires, not only to be loved, but to be lovely; or to be that thing which is the natural and proper object of love...He desires, not only praise, but praiseworthiness’ (TMS III, 2, 1). This assertion seems to provide a potential justification to the existence of that internal psychological motivation for being trustworthy that ‘[derives] from the mere fact of having been made an object of trust’ (Pelligra 2005, 118).



These reflections have been stylized in models and also empirically applied in behavioural economics experiments (Pelligra 2002) for example recurring to the so-called Trust Game.

In the next paragraph we will consider a game of this kind applied to the credit debt relation. What is relevant here is that we have arrived to define three orders of motives at the base of human behaviour:

- (i) material reasons
- (ii) external psychological reasons
- (iii) internal psychological reasons

To explain better this order of motives, recalling again our individuals A and B, let assume that:

A has two strategies: to be trustful or prudently distrustful

→ opts for the trustful strategy

According to the traditional assumption:

B is materially self interested:

→ B will behave opportunistically

But under the assumptions that:

(i) man has a natural desire for the good opinion of others

(ii) man has a desire to deserve praise and so to self esteem

→ B knows that he must confirm A's expectations if he wants that A maintains the good opinion on B that A has manifested with his trustful behaviour

→ B is influenced by the idea that his internal impartial spectator will form on him if B decides to be opportunistic

So "B is in relation with two subjects" and from the balance between material gain and psychological losses the theory of

trust responsiveness suggests that the trustee will be trustworthy resisting the temptation to be opportunistic.

To conclude with Pelligra (2005, 120) trust responsiveness is based on: ‘two sources of motivation [that] account for the difference that exists between having a desire for conformity to others’ expectations because of the fear of others’ reactions and having the same desire because of intrinsic reasons related to one’s own sense of worth. [...] And this composite nature is able to explain why, for instance, we often observe trustworthiness even in anonymous interactions”.

Just this idea of a trust mechanism based on the self reflection that in turn is the result of the relation with others (interpreted as “mirror of the self”), suggests the recognition of the relational nature of trust.

### **3.3.3 Models of fiduciary interaction: vertical and horizontal relational structures**

After having widely discussed the mechanism of trust as a responsive behaviour in this last section we want briefly to introduce some aspects of Pelligra’s model of fiduciary credit-debt relation.

Here the scholar has shown how the trust responsiveness mechanism may account to the surprising results obtained by Grameen Bank in terms of a high rate of repayment (see chapter one). This attempt has been conducted presenting the structural informative problem of the credit debt relation in the form of a ‘Simple Trust Game’. This presentation allows to reconsider briefly some of the explanations suggested both in literature on microfinance and in the literature on social and economic interactions. Later we will introduce in the scenario the trust responsiveness mechanism.

Given the informative problem at the base of the credit-debt relation, the lender may decide to give (G) or not to give (NG) the loan. If the borrower receives the loan he/she may decide to repay the debt and keep the profits of his/her investment  $x$  (strategy R) or to keep the loan ( $f$ ) and the profit  $e = x + f$  (strategy K). To solve problems of moral hazard and adverse selections the traditional response is to require a collateral ( $S$ ). In this case the Simple Trust Game becomes a Banking Game as we can see in the following representations (source Pelligra 2005b, 6-7):

Figure 3.3.1: The Simple Trust Game

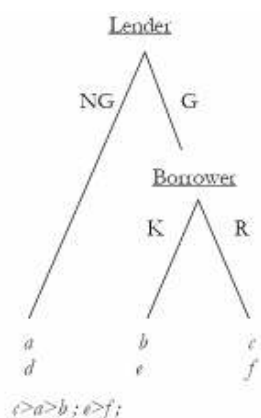
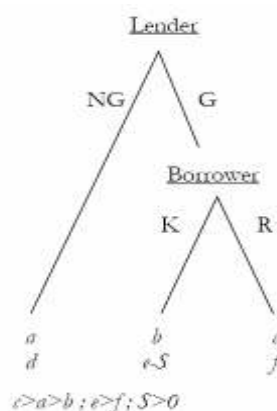


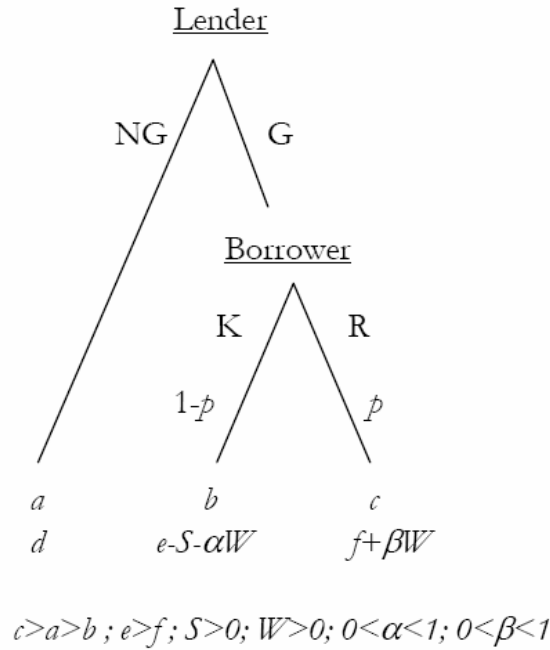
Figure 3.3.2: The Banking Game



As we have seen (chapter one) in microfinance literature various explanations have been provided to the functioning of those methodologies that are not based on collaterals. For example, if we consider the role of repeated interactions and the consequent value of reputation (Dasgupta 1988) that summarizes the effect of dynamic incentives and the role played by forms of social collaterals, we arrive to a more complex configuration of the game.

Here  $W$  represents the objective value of social approbation and disapprobation (in monetary terms) that is weighted for a parameter of sensitivity ( $\alpha$  to disapprobation and  $\beta$  to approbation). The loss of future interaction related to a loss of reputation can be logically interpreted as a sort of sanction equal to collateral ( $S$ ).

Figure 3.3.3: the Simple Trust Game with reputation and social pressure



Source: Pelligra 2005, 10

Just two intuitions proposed by Yunus (1997) as the basis of his methodology:

- (i) ‘If we want succeed we must rely on trust’(1997, 197);
- (ii) ‘the poor have their self-love’ (1997, 34).

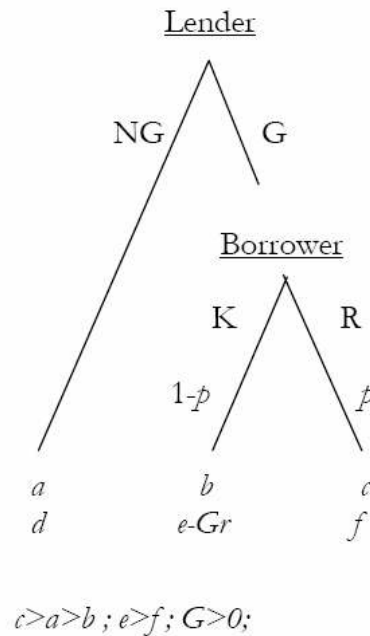
have encouraged Pelligra to apply the trust responsiveness mechanism towards a ‘relational’ explanation of Grameen Bank and other microfinance institutions’ methodologies.

Using psychological game theory Pelligra suggests a variant version of the Simple Trust Game in which it is possible to identify B’s hierarchy of beliefs. That is, given  $p$  the probability that B plays R, the lender’s belief about  $p$  is  $q$  and finally  $r$  is B’s belief about L’s belief on B’s choice.

In this scenario according to the mechanism of trust responsiveness B will balance material and psychological payoffs. These last ones may take account of the sense of guilt that B will feel in the case of an opportunistic behaviour. This guilt  $G$  is multiplied to

A's belief ( $r$ ) on B's behaviour to consider the impact of A's trustfully behaviour.

Figure 3.3.4: the Simple Trust Game with sentiments



Source: Pelligra 2005b, 17

Rather than to focus on the multiple equilibria of the game, for our purposes, here it seems more relevant to stress the three main fiduciary dynamics detected by Pelligra.

The first is certainly that one of trust responsiveness that is 'based on the perception of the idea the others have of us and on its direct and indirect influence on our self esteem. Such a perception strengthens in relation to others' actions, and particularly in relation to our interpretation of such actions. Such interpretation, in turn, is strongly affected by the context and the framework within which actions take place' (Pelligra 2005b, 19). This recognition of the existence of the so-called framing effect is particularly critical. The fact that 'the same action may provoke different reactions depending on the context where it happens' (Pelligra 2005b, 19) suggests to

reconsider again the preminent role played by the relational and institutional structures.

As a matter of fact, if it has been recognised how in the experimental context the framing of the situation is critical for the results of the game and the emergence of equilibria, all the more so in the real world the institutional and relational matrix must be taken into a more important account.

A declaration such as the following underlines clearly how Grameen Bank would signal to the borrowers that believes them to be trustworthy: ‘Banks tend to suspect every clients to want take the money and run. So they bind her with every kind of clauses especially designed by specialised lawyers. In the bank system there is only diffidence (...) for Grameen, on the contrary, the starting point is that debtors are honest. Since our first day we decided that our system will not had relied on police and courts (...) nowadays to recover our credits we never use lawyers (...) Following the same logic we do not use formal contracts between clients and the bank. We establish relationships with people not with documents’ (Yunus,1997:106-108).

This statement also suggests the second dynamic called by Frey (1997) motivational crowding-out. According to this theory material incentive in certain cases may transform itself in a disincentive. In other terms, transforming my motivation from intrinsic to extrinsic up to assign it a price, material incentives may reduce my willingness to perform a given action (for example to repay my loan). Moreover this effect depends critically on the subject’s perception of the incentivator’s intention to control or to support the other’s action.

In the first case we can face a strengthening of internal subject motivations (and so crowding-in) while in the second a negative impact on self esteem (and so crowding-out). Finally, it is recalled how the new program in cognitive psychology suggests the impact on human behaviour of the so called ‘Feeling of Freedom-Effect’, that is, the importance of the perception of freedom in doing an action.

All these mechanisms, according to Pelligra, are congruent with the institutional design of the Grameen Bank and have allowed the construction of a relation borrower-lender highly cooperative. Moreover the scholar concludes his work supporting our thesis of microfinance institutions as enabling institutions (see chapter two) recognizing that: ‘The case of Grameen constitutes, in this sense, a paradigmatic example showing how is possible to encourage agents to behave according to their fiduciary duties, not by means of pecuniary sanctions or incentives, but by both trusting them and attributing to the environment the distinctive traits of a cooperative relationship, that is freedom, responsibility, commitment; *favouring this way the development of trustworthy behaviours*’ (Pelligra 2005b, 24, cursive added by the author).

On the base of the analysis conducted in the first chapter, it seems to us that the mechanism of trust responsiveness could be also a reasonable explanation for the horizontal relation that is established inside the ‘group of five’. In other terms, we are suggesting the introduction of a model in which the mechanism of trust responsiveness allows to justify why the various forms of joint liability may be sustained. We must remember, in fact, that just in the Grameen Bank methodology the five members of the group are linked by a sequential mechanism of loan provision that makes the third, the fourth and fifth exposed to the un-cooperative behaviour of the first two who receive the loan immediately.

This attempt is particularly interesting especially on the light of microfinance literature in which the dynamics inside the group in its various forms, from the group of three, five to more in ROSCAs, have been explained not so much in a relational perspective.

As a matter of fact, many models have considered the role of reputation and the role of dynamics incentives as well as social ostracism and peer pressure as good factors for solving the informative problem of the credit-debt relation and to reduce the need

of a material collateral. But very few have modelled the credit-debt relation from a different perspective on human nature and motivations, in the sense for example suggested by Smith's fellow feeling.

In the fourth chapter we will stress again the need to a more complex framework of analysis for microfinance methodologies that joined the variables until now considered to others towards a more relational approach.

### **3.4 Towards the fundamental level: fellow feeling and mirroring**

#### **3.4.1 Human nature and the social bond in classical thought:**

##### **Hobbes, Hume and Rousseau**

The aim of previous chapters was to show that the study of the economics of social interactions requires the identification of different dimensions and levels of interactions. Our starting point was the recognition of the existence of an interplay between objective and institutional features of economic structure. After that, we consider the institutional dimension and a set of contributions in which the exploration of economic behaviour is found primarily in the interpersonal dimension. We then examine the interpersonal dimension focusing on the possible dynamics behind a non selfish economic behaviour as well as on the role played by trust.

In this paragraph we reach the fundamental level of investigation in which the analysis of interactions lends itself to the consideration of fundamental assumptions concerning human nature. It is interesting in this first section to briefly consider some contributions from classical philosophers such as Hobbes, Hume and Rousseau especially in order to provide a background to the analysis of Smith's conception of fellow feeling. This concept is essential in



order to critically assess the assumptions on human nature in economic theory. It may be argued that there are similarities with new findings in neuroscience that show the existence of neural fundamental structures of interactions: the mirror neurons.

The idea that social relations may be explained without assuming a certain degree of ‘sociality’ in human nature has been a guiding principle in economics since the time of Adam Smith. His well known statement, or better the interpretation that has been given of it (Sen 1999), according to which it is not from the benevolence of the butcher, the brewer or the baker that we expect our dinner, but from their regard to their own interest, has irremediably constrained the ‘interpretation’ of human beings in economic theory. As a matter of fact, following this line of reasoning, it has been argued that economic relations are realized among individuals motivated by rational self interest and that the working of the economic system needs only a system of property rights and markets (called by Smith ‘natural liberty’). But as soon as we want to explain why economic agents should respect one another’s property rights we are bound to make some assumptions about sociality (Sen 1999, Bardsley and Sugden 2006).

Economic theory requires a richer model of human motivation than the one associated with the idea of *homo economicus*, going beyond the assumption of self interest, have remained anchored to an individualistic framework (see paragraph 3,2).

Recognizing that sociality is part of human nature and that human beings ‘naturally’ live in structured groups has far reaching implications. In particular, we are bound to acknowledge that ‘we human beings are genetically endowed with emotions, dispositions and ways of reasoning that equip us to live in groups. [And so that] some kind of sociality – by which we mean some primitive desire or tendency to participate in society without ulterior motive, or some positive orientation towards other human beings – must be part of

human nature' (Bardsley and Sugden, 2006, 3). In other terms, it is not sufficient to say that the human being is a social animal to derive some assumptions concerning the sociality of his nature.

The following short introduction to some relevant aspects of Hobbes's, Hume's and Rousseau's philosophical reflections provide a background to the consideration of Smith's *Theory of Moral Sentiments* (1759). This reconstruction will be based on concepts such as 'self-love' (Pelligra 2003) and following the interpretation suggested by Bardsley and Sugden (2006), will consider the four ingredients from which the 'social bond', or 'cement' of society arises. Here we will combine some features associated with both these contributions.

As a preliminary to that, it is worth noting that the concept of *philautia* (literally "self-love") takes central relevance in Aristotle's thinking about social relations, in particular about friendship. As a matter of fact, recognizing that "Friendly relations with one's neighbours, seem to have proceeded from a man's relation to himself" (*Nicomachean Ethics*, 1166a 4-5), Aristotle puts at the basis of *philia* (friendship) the idea of *philautia*. In turn, *philia* is the necessary condition for *eudaimonia* (happiness), to be understood as "human flourishing" (Nussbaum, 1986). Finally an important effect of *philia* noticed by Aristotle is its property of fostering one's own self-knowledge and self-consciousness. At the base of this process we find the idea of the 'other as a mirror' of ourselves. This means that human beings can acquire an objective self-knowledge only through friendly relations.

### ***Hobbes's reflection on human nature***

In the following centuries, the idea of self love and of the natural sociality of human beings 'will be in various forms subjected to a form of moral degradation' (Pelligra 2003, 8), reaching the lowest

point in Thomas Hobbes's *Leviathan* (1651), where self love becomes equivalent to egoism and the natural sense of sociality disappears.

According to Hobbes, in a state of nature human beings cannot find pleasure in one another's company as they perceive one another as potential enemies. The main sentiment that human beings feel in their relational dimension is fear of the other. In his mechanical representation of human behaviour, Hobbes highlights that human beings are motivated by desires of self preservation, delectation, security and *glory*. If the first three motivations are associated with self interest the fourth one leads to the satisfaction of others. These natural desires condemn human beings to the condition of *bellum omnia contra omnes* from which it is possible to escape only through reason: "Social order – in the form of a common power to keep everyone in awe [the Leviathan, created, through a voluntary renounce of a share of individual's freedom] – is the product of reason, not of natural sociality" (Bardsley and Sugden 2006, 7). The adherence to the 'laws of nature' at the foundation of the *Leviathan* is, in fact, a result of human 'rational' self-interest. Following this interpretation, contractarian thinkers will consider social institutions as agreements reached among rational individuals.

### ***Hume and the emergence of conventions***

In Hume's "new science of man" (1739, 1751) it is particularly relevant to highlight the introduction of two concepts that are explicitly in contrast with Hobbes' cynicism.

The first is that one of conventions, a sort of tacit agreements, that emerge as unintended consequences of repeated interactions between rational individuals. They 'arise gradually, and acquires force by a slow progression, and by our repeated experience of the inconveniences of trasgressing it' (*Treatise of Human Nature*, 1739, 490). In other terms according to Hume, individuals will be motivated to conform with a convention not through an explicitly agreement but

through the experience of the other's compliance in similar previous situations and therefore the creation of an expectation on others' behaviour. In this conceptualization, he also offers two interesting explanations of the way in which conventions emerge in human society. The first, anticipating Schelling's (1960) analysis of 'focal point', refers to an idea of salience (expressed in terms of associations of ideas) of some patterns of coordination that allows, in the absence of experience, to expect some kind of behaviour in other people. The second, also associated with the concept of salience, suggests that conventions may emerge from a sort of contamination from a context (for example the family) to another one (small groups up to societies). Finally, although according to Hume social order arises from the interaction of rational self interested individuals, as in Hobbes (not requiring necessarily socially oriented motivations), it is necessary a certain kind of 'common understanding among individuals sufficient to produce the common conceptions of salience and common associations of ideas [...] Conventions are therefore possible only among people who have some habits of thought in common' (Bardsley and Sugden 2006, 11).

The second relevant aspect in Hume's reflection is more directly related to human nature, in which he recognizes the coexistence of both self-interest and benevolence. Contrary Hobbes, here human beings are acknowledged to have sympathetic affections, especially for those whose happiness or misery is "brought near to [us] and represented in lively colours (THN 1978, 481).

As Pelligra clearly shows, in Hume 'social relations are governed by the very powerful principle of sympathy, that enable us, through imagination, to experience others' feelings and sentiments, pleasures and pains. Such a system of reciprocal sympathy is, according to Hume, the basis of society's moral order. It is through sympathy, in fact, that we can originally assess whether our actions are 'useful' or 'pernicious' for the others' (Pelligra 2003, 12). In

some way here we find some elements of similarity with Smith's *Theory of Moral Sentiments* (see next paragraph).

***Rousseau and the 'identification with a greater whole'***

We cannot present here a comprehensive assessment of the intellectual tradition associated with Jean Jacques Rousseau (see Gauthier 2006). But, it is useful to stress how Rousseau, writing at the same time as Hume and Smith, has influenced their views, especially with his 'treatment of the self', reintroducing in the philosophical debate the central idea of self love at the root of human nature. In particular, Rousseau points out that 'the desire for approbation (*amour propre*) is the most powerful motif of social life' (Pelligra 2003, 15) from which every virtue, but also every vice, are originated.

The other interconnected relevant contribution is represented by his reconstruction of the history of human beings and the original source of inequality. Starting from the picture of an original innocent state of nature in which human beings interact very little, he arrives to describe 'the truth youth of the world'. In the happiest epoch of history, human beings develop language, intelligence and social organization based on simple social structures in which persons supported each others. The 'loss of innocence', according to Rousseau, has been a result of social interactions, by the gradually growing desire for public esteem. Finally the development of a system of property rights and the division of labour have conducted to the arising of inequality.

In this reconstruction, in order to escape from a Hobbesian destiny, Rousseau introduces in 'The Social Contract' (1762) the idea of a form of democracy in which the participation of all members of society allows the determination of a 'general will'. To obtain this result a 'remarkable change in man' is required. This 'change' seems to involve 'some radical shift in each person's perceptions and modes of reasoning such that, when he acts in the role of citizens, he

*identifies with* the political unit of which he is a part' (Bardsley and Sugden 2006, 14). In this direction Martin Hollis (1998) has found an interesting linkage with Rousseau's reflection and the modern theory of 'team thinking' (see paragraph 3,2).

### **3.4.2 Smith's perspective: the congruence *continuum* and fellow feeling as the highest stage of social interaction**

As we have seen looking at some of the most important contributions in the eighteenth century, if we want to understand the complex mechanism at the base of social interactions we cannot escape from a deeper analysis of human nature. In other terms, to understand the way in which human beings establish and sustain interpersonal relations, we must combine the analysis conducted until now with a deeper comprehension of the fundamental structures of interactions with 'others' in a given situation. For this reason we have introduced this section speaking about a fundamental level.

In order to face the complexity of this subject recent contributions (Sugden 2002, 2006; Scazzieri 2006) have proposed a reconstruction of Adam Smith's legacy in his *Theory of Moral Sentiments* (1759). This attempt has been conducted stressing the centrality of concepts such as that one of 'fellow feeling', which we are going to consider. How these concepts have found important elements of congruence and confirmation at the light of modern discoveries in neuroscience will be the subject of the next paragraph.

A possible way of addressing the concept of fellow feeling, following Scazzieri (2006), is to start from the consideration of the sophisticated Smithian theory of rational choice in which, human behaviour and the rationality of the actors result from a complex interplay of understanding, knowledge acquisition and deliberation under social constraints. As Scazzieri points out: 'Smith associates rationality (and rational deliberation) with the ability to identify a

congruent setting, in which mutually acceptable *reasons* may be identified. Once such a congruent setting is identified, ‘Smithian’ rationality presupposes the ability to attune decisions to the structure of expectations prevailing within such an environment. This makes rationality itself to be context-dependent’. (Scazzieri 2005, 1). This means that context may significantly impact on the mental representation of problem spaces and on the identification of agents’ rational standards. As soon as we accept the idea that rationality is itself context dependent, we may observe that ‘rationality appears to be relative to the relational context in which human deliberation takes place. The same choices could be reasonable under some rational configurations and unreasonable under others’ (Scazzieri 2005, 1).

In such a framework it is the consideration of the way in which social constraints are ‘mediated through reflection and imagination within the agent’s mind’ (Scazzieri 2005, 3) that allows us to appreciate the critical relevance of a relational perspective and the fundamental concept of fellow feeling.

In the Smithian perspective, the analysis of the interpersonal dimension may be conducted mainly by considering the combined influence of imagination and sympathy on human behaviour. As a matter of fact, we must recognize at first that each human being faces a situation, that is, ‘the complete state of the universe at an instant of time (MacCarthy and Hayes, 1969, online version, p. 18), starting with a ‘bounded social knowledge’ and a system of behavioural beliefs emerging as the outcome of situational knowledge. But, at the same time, human beings through imagination, that is, through ‘the ability to consider a counterfactual set-up’ (Scazzieri 2005, 4), may extend their knowledge ‘beyond [their] own person’ (TMS I.i.1.2) by imagining another individual’s situation and feelings (sensations) and ‘by conceiving what we ourselves should feel in the like situation’ (Smith, 1976a [1st edn 1759], TMS I.i.1.2).

On this basis ‘impartial spectator’ is allowed to create his own judgment and to express her/his own emotions.

In other terms, ‘[i]magination allows individuals to complete their own descriptions of states of the universe and to introduce workable patterns of social interactions’ (Scazzieri 2005, 8). This possibility for human beings, through imagination, to consider, or better to ‘imagine’ counterfactual-set-ups (a property that presupposes a certain degree of distance and diversity, see Scazzieri 2005; Porta and Scazzieri 2001) permits to identify a ‘continuum of congruence criteria based upon different stages of counterfactual reasoning (sympathy)’ (Scazzieri 2005, 6).

As a matter of fact, counterfactual reasoning mechanism allows the identification of three different stages of sympathy (11):

(i) *semiotic sympathy*

It is the result of an almost instinctive use of imagination vis à vis a particular situation, and leads to an immediate correspondence of feelings. In Smith (TMS I.i.1.6) we read: ‘Upon some occasions sympathy may seem to arise merely from the view of a certain emotion in another person. The passions, upon some occasions, may seem to be transfused from one man to another, instantaneously, and antecedent to any knowledge of what excited them in the person principally concerned. Grief and joy, for example, strongly expressed in the look and gestures of any one, at once affect the spectator with some degree of a like painful or agreeable emotion’.

(ii) *subsidiary sympathy*

In this case, sympathy arises from an inversion of feelings: the spectator, facing the other’s situation, identifies a social distance that allows his feelings to be different from those ones of the other. Again quoting



Smith: '[w]e blush for the impudence and rudeness of another, though he himself appears to have no sense of the impropriety of his own behaviour; because we cannot help feeling with what confusion we ourselves should be covered, had we behaved in so absurd a manner' (TMS I.i.1.10).

(iii) *mutual sympathy (or fellow feeling)*

It is the highest stage of fundamental interaction as it implies a 'double correspondence' of feelings between persons. According to Smith 'nothing pleases us more than to observe in other men a fellow-feeling with all the emotions of our own breast; nor are we ever so much shocked as by the appearance of the contrary' (TMS I.i.2.1).

Using the categories just introduced, we may analyse the dynamics of fellow feeling, which in terms of modern psychology appears as 'a mechanism which connects individuals' affective states' (Sugden 2005, 15). At this point, it is essential to understand how fellow feeling is not simply resolved in the fact that, given two persons A and B, individual A can imagine the good or bad situation of individual B and that also B recognizes A's attitude. In other terms, B will not feel "the pleasure of mutual sympathy" simply from the recognition of a semiotic sympathy. As a matter of fact this kind of sympathy would only obtain the result that B and A's feelings (good or bad) find a sort of congruence. Smith's hypothesis, at the base of fellow feeling, is "not a simple reflection of pleasure and pain" (Sugden 2005, 16). It means that the simple congruence of feelings is not the real source of pleasure of mutual feelings.

The process is interpreted in Scazzieri (2005, 6) as follows: "[...] B's mind-set derives not so much from semiotic congruence (between the original joy or grief and A's fellow-feeling), as from the perception that A's fellow-feeling corresponds exactly to how he (or

she) would react, were she (he) in the same position as *A*. Correspondence of feelings becomes an essential element of social interaction, and is itself at the origin of a new ‘layer’ of sentiments: in general, human beings are pleased when ‘able to sympathize’ with the feelings of another human being, and distressed ‘when [they are] unable to do so’ (TMSI.i.2.6)”.

In Scazzieri’s contribution, Smith’s theory of fellow feeling is presented into a more complex framework in which, the existence of such a continuum of methods of congruence, has a critical impact on the formulation of a theory of choice in terms of conceptual structure.

Another important aspect highlighted in Sugden (2002) is that, as soon as we accept the idea that the correspondence of sentiments is a source of pleasure for human being, we can admit the existence of natural desire to create interpersonal contexts of internal congruence. Smith proposes the example of two persons that read a book together, but we can imagine various other examples such as the big difference between eating together or eating alone. Some of these examples, recalling some aspects of the theory of relational goods, suggest how “the mere fact of doing something *together with another person* rather than alone can be a source of pleasure [identifies] an element of sociality in human nature” (Bardsley and Sugden 2006, 17).

The topicality of Smith’s insights about fellow feeling and ‘emotional contagion’, according to Sugden (2005), is shown in the wide theoretical and empirical work conducted in biology, psychology and neuroscience.

### **3.4.3 Neuroeconomics and mirror neurons**

In the last years we are facing the emergence of a new approach, popularly known as neuroeconomics, in which different disciplines mainly psychology, neuroscience and economics are trying to integrate their contributions towards more accurate models of choice and decision of human beings. Although some scholars have

expressed a strong scepticism, it is more and more evident how neuroeconomics is able to draw upon the complementary strengths of its contributing disciplines towards new potentially fruitful research directions. As it has been pointed out ‘neuroscience can, and already has, benefited from economics’ unitary perspective [...] while economics can, and has begun to, be enriched by taking account of cooperation and competition between multiple specialized neural systems’ (Sanfey, Loewenstein, McClure and Cohen 2006, 108). This last statement allows us to introduce, perhaps, the most relevant contribution from neuroscience to the analysis of interpersonal relations.

As a matter of fact there is a wide psychological literature, supported by recent neuroscience discoveries, that suggests to represent human behaviour as the result of a multiple process that reflects the fundamental interaction of different specialised subsystems. As it has been explained: ‘Although most of the time these systems interact synergistically to determine behaviour, at times they compete, producing different dispositions towards the same information. A major cause of these observed idiosyncrasies of behaviour that have been used to challenge the standard economic model might be that these decisions do not emerge from a unitary process, but rather from interactions between distinguishable sets of processes’ (Sanfey, Loewenstein, McClure and Cohen 2006, 111).

At this point the central distinction between systems supporting emotion and those supporting deliberation, which closely parallels the distinction between automatic and controlled processes, emerges. Neuroimaging studies have stressed how emotional and controlled processes, activate some closely interrelated neural mechanisms but at the same time these processes involve distinguishable neural components. This distinction ‘could help shed light on many of the most basic patterns uncovered by behavioural economics [...] as well as several other behaviours that challenge the standard economic

model, including many that involve market and non-market interactions between individuals' (Sanfey, Loewenstein, McClure and Cohen 2006, 113).

According to Robert Sugden (2002, 2005), the existence of a linkage between Adam Smith's concept of fellow feeling and various forms of 'emotional contagion' may be derived from recent contributions (see also Decety and Chaminade 2003). The emotional contagion has been described as a process that realizes below the level of conscious control and implies the transfer of emotional states between individuals. This mechanism seems to be present not only in humans but also in other social mammals and seems to be positively correlated to the degree of proximity and homogeneity of the individuals involved (their familiarity, their similarity in experience and the salience of the signal expressed). In this field the modernity of Adam Smith's conceptualization, according to Sugden, can be better understood by taking into account the discovery of mirror neurons by Giacomo Rizzolatti and others, in the 1990s (Rizzolatti and Gallese 2002; Rizzolatti and Sinigaglia 2006).

If we want to catch the intuition at the base of the linkage between the modern representation of the brain, as a system made up of a dense network of interconnections in which mirror neurons play a central role and the Smithian mechanism of fellow feeling, we have to make a backward step.

Quoting Sugden (in Sugden Gui 2005, 57) who refers to some experiments conducted in order to discover the basic mechanism of representation of an action and its imitation '[...] it is now known that in both monkey and human subjects, seeing the hand of another monkey or human grasping an object with apparent purposefulness does not merely activate in the subject's brain a visual representation of that act, as seen from outside. It also activates a *motor* representation of the performance of the act, *as performed by the subject*. In other words, the subject's consciousness of another's

individual's act of grasping has much of the neural content of *actually grasping*. There is some evidence that affective states are subject to similar mirroring. For example when sad stories are read to human subjects, neural structures that are known to be involved in emotional processing are activated'.

Rizzolatti and Sinigaglia (2006) reconstruct the emergence of the concept of mirror neurons that arises just from the study of simple acts (such as grasping an object). For a long time, the simple representation of the motor system as mechanical implementation of an act (perception → cognition → act), had left no space for the consideration of these kinds of neural structures.

The revolutionary discovery in this field has been represented by the identification of neurons that activate in relation to finalized motor act. Quoting from Rizzolatti and Sinigaglia (2006, 2 my translation) 'these neurons appears to be able to distinguish and select sensorial information, detecting the different possible set of acts implied, independently from the actual or not realization of it'. Just the possibility of an abstract representation in human brain and therefore the distinction between simple movements ('*meri movimenti*') and acts ('*atti*'), allows human beings to acquire knowledge and to give a precise meaning to things. In this framework, in which a unified process of perception-cognition-action is suggested, we find the discovery of mirror neurones.

The mirror neurons, are so called, because they make able our brain to recognize the meaning of a movement observed in another subject correlating it to our movement. This process immediately recalls the image of a mirroring. This means that the recognition of the others, of their movements and actions and also of their intentions, may be realized immediately by our brain exclusively thanks to our motor asset and skills. Obviously it does not exclude the possibility for a human being to interpret the other on the base of a cognitive

process based on the analysis of other possible intentions, expectations and motivations.

The relational nature of these neural structures, through which processes of imitation, communication and learning are realized among human beings, clearly assigns to mirror neurons a central role in the field of interpersonal and social interactions. Moreover, recent researches are showing how these mirror properties are present also in the field of the communication of emotions or ‘emotional contagion’. Intuitively the same neural mechanism at the base of the recognition of a movement seems at the base of our capacity to recognize others’ feelings. A first experiment that has been conducted to understand the mirror properties in the emotional field is related to the sensation of pain and disgust. These experiments demonstrate how there is a mechanism that leads to emotional sharing (or ‘correspondence’): the direct experience of a pain and the indirect perception of a pain in another person, for example, seems to activate the same neural base. Quoting Rizzolatti and Sinigaglia (2006, 181 my translation): ‘[...] our perception of others’ acts and emotive reactions seems to be based on the same mirror mechanism that allows our brain to recognize those things that we look at, feel and imagine to be done by others. This is because these things activate the same neural structures responsible for our actions and emotions. [...] The immediate comprehension of others’ emotions allowed by the mechanism of mirroring, is the necessary prerequisite for the empathic behaviour that is at the root of most of our interpersonal relations’.

To conclude, it is clear that the neural mechanism of mirroring recalls the process of fellow feeling discussed above. The main overlap is that human behaviour can only be explained in relational terms and the acknowledgment that ‘it is bizarre to conceive an I without a we’ (Rizzolatti and Sinigaglia 2006, 4). It is only through interaction with the others, ‘the outside’, that each human being attains the construction of ‘the inside’.

### **Notes chapter 3**

(1) In the middle of the 1960 Yunus thanks to a fullbright scholarship left the Bangladesh (Chittagong) for Vanderbilt University in Nashville, Tennessee. There he became an esteemed pupil of Georgescu Roegen.

(2) This view of economic structure can be met first in Adam Smith's notion of civil society and later in contributions of other classical authors as John Stuart Mill and Karl Marx up to John Maynard Keynes.

(3) Pasinetti's distinction of these two fundamental levels of analysis is also present in Lowe (1935), as it is stressed in Baranzini and Scazzieri (1990, 245-248).

(4) This approach seems to be particularly interesting at the light of the development proposed in the fourth chapter where the problems of asymmetric information (moral hazard and adverse selection) are presented in a game theoretic framework combined with other conceptual schemes.

(5) North is particularly fascinated, as in recent seminars he has stressed, by the hypothesis that religious belief plays a central psychological role in human belief systems.

(6) All these conceptual efforts towards the consideration of the interpersonal dimension and therefore a deeper analysis of human sentiments, dispositions and motivations represents the recognition of the high degree of complexity in the domain of economic and social interactions, or in other terms, quoting Barkley Rosser (2003) that 'we

live in a world that reflects the enormous variety and diversity of humanity in their knowledge, attitudes, and behaviours, interacting with each other in an enormous range of institutional frameworks’.

(7) Alternatively, one can start with a mapping from the utility individuals gain from commodities to inclusive utilities.

That is,  $U_i = U_i(u_i(x_i), u_j(x_j))$ , where  $U_i$  is the utility function which represents  $i$ ’s overall preferences,  $u_i$  is a function which represents  $i$ ’s tastes with respect to his own consumption of goods, and altruism is represented by the assumption  $\partial U_i / \partial u_j > 0$ .

(8) This finds its original root in Max Weber’s concept of *wertrational* (‘value – rational’).

(9) See Pelligra 2006 who clarifies the relation between the concepts of trust and reciprocity.

(10) To view some of the issues involved in analyzing team reasoning, it is useful to outline Sugden’s (1984) ‘reciprocity theory’. Comparing this theory with that one by Rabin (1993) it is possible to notice that the fact that reciprocity is defined in terms of participation in the collective action of groups, makes this model one of team reasoning.

(11) This distinction is proposed in Scazzieri (2006) from which these passages of the *Theory of Moral Sentiments* are taken..



## ***Understanding the credit debt relation: overlapping literatures towards a relational approach***

### **4.1 Introduction**

The aim of this chapter is to analyse microfinance institutions through the economic literatures developed in the last two chapters. In the second chapter we have focused on the concept of social capital embracing the idea of social capital as a form of social network (Dasgupta 2002). This approach requires a deeper analysis of the economics of social networks that can be a useful frame in which to consider some of the main relevant aspects of the credit-debt relation, especially when it is established using a group methodology as it has been done in microfinance institutions. In this sense we will try to develop the analysis of those graphs, club and network, anticipated in the second chapter towards a better definition of the system of social network (paragraph 4.1). This work will lead to the recourse, in addition to payoff matrix, to adjacency matrix whose elements provide some information about the relations existing among actors. At the same time, on the base of the literature developed in the third chapter, we will focus on the internal dynamics of a network studying the ‘economic and relational’ worthiness of the system of ties among actors involved. Here the concepts of objective, institutional and economic-social interactions and therefore the main theoretical efforts done in order to consider sociality and relationality into economics

will help us to understand the possible dynamic process into a network system.

Following this line, in the paragraph 4.2, we will try to reconsider the two structural problems that the credit-debt relation presents. These are the adverse selection and moral hazard problems. These problems have been presented in some simplified models in the first chapter drawing on microfinance literature.

Here the same kind of analysis will be conducted through a different analytical framework. The first step will be to introduce in the explanation of the dynamics inside the group of three (as a basic starting point) the use of payoff matrix that allows to look at informative problems in a compact and more interactive way.

The payoff matrices could be studied on the base of the theory of game trying to identify the possible equilibria of the game and some of the possible scenario suggested in the first chapter (for example collusive groups, different levels of interest rate).

As a matter of fact, this analytical framework appears to be not yet sufficient if we want to consider these economic and social interactions by a more 'relational' approach. In other terms we are looking for a framework that allows to study these information problems encompassing the relational dimension and the role played by those relevant variables and dynamics presented in the third chapter towards different possible solutions and therefore explanations of some methodologies developed in microfinance institutions.

A proposal in this direction could be, just starting from these payoff matrix, to consider different payoff matrix in relation to different relational structures behind the space of interactions. As it has been in various occasions suggested in the previous chapters, the relational and institutional matrix that define the space of interaction could impact on agents interaction both in terms of agents' perception of the situation both in terms of motivations, and so choices.

## **4.2 The economics of social networks: a starting base of understanding**

Social network analysis has emerged as a set of methods for the analysis of social structures, groups and institutions in order to investigate the relational aspects of these structures shifting the focus from the individual or group to the relationship between individuals or groups. The starting theoretical point is the recognition of the importance of relationships among interacting, individuals or groups that are connected to one another through social and economic ‘meaningful relationships’ (Wellman & Berkowitz, 1988). Examples of such meaningful relationships include family, friends, and more generally relations based on trust, such as giving advice, or sharing information. The study of this multifaceted dimension leads to the consideration of the patterns that emerge among individuals, groups, or organizations in terms of the *quality* of the relationships and the *positions* of actors within the network, in order to understand how both aspects affect the way information and resources flow (Wellman & Gulia, 1999).

The relevance of this approach is widely recognized in Granovetter’s legacy, especially in three main propositions that are of interest to economists (Gazier, Saint Jean 2005, in Gui and Sugden 2005). Starting from the recognition of the intrinsic limit of an ‘undersocialized conception of man’, Granovetter proposes a vision of economic actions as social actions in order to expand the set of motivations that belong not only to the economic order but must also include search for recognition, identity, status, etc. From this point of view he/she suggests that the preferences as well as the identity of the economic agent may evolve as a result of the interactions in which he is engaged. This point leads immediately to the second proposition concerning ‘embeddedness’, according to which individuals are not

‘monads’ but are ‘embedded in concrete, ongoing systems of social relations’ (1) (Granovetter 1985, 487). Stressing ‘the role of concrete personal relations and structures (or ‘networks’) of such relations’, the concept of network is introduced in a wide sense including all regular sets of contacts and relations among individuals. Just from their dimension of interaction, that is from the structure of the social network, choices and behaviours derive ‘generating trust and discouraging malfeasance’ (1985, 490). The concept of network plays such a central role in this analysis that Granovetter (1990, 1992) comes to define institutions as ‘congealed social networks’ underlining the existence of a process of creation of institutions and the possibility of a dependence in their formation.

In order to systematically study in which way microcredit groups may be conceived as ‘network systems’ (paragraph 4.2), we have to take into account the basic concepts of social network analysis and the different possible ways of representing such networks.

A social network may be defined as a finite set of actors connected to one another through relations. Each actor (individual, group or organization), whose actions are interdependent, has to be seen as a node of the network. Relational ties (linkages) between actors are channels for the transfer or ‘flow’ of resources (either material or nonmaterial). These ties can be reciprocated, or unreciprocated, and they can be directed or undirected. A relation is a specific type of tie between actors in a network. There are many different kinds of relations: communication or social interaction, friendship, reciprocity, trust, diplomacy, advice, and so forth. Since the network environment provides opportunities for, or constraints upon individual action, it is clear that it may affect substantive outcomes and be related with emergent effects.

For this reason, the fundamental unit in network analysis is not the individual, but a collection of individuals and the linkages among them. In particular, attention is focused on *dyads* (two actors and their

ties), *triads* (three actors and their ties), or larger systems (subgroups of individuals), or upon entire networks.

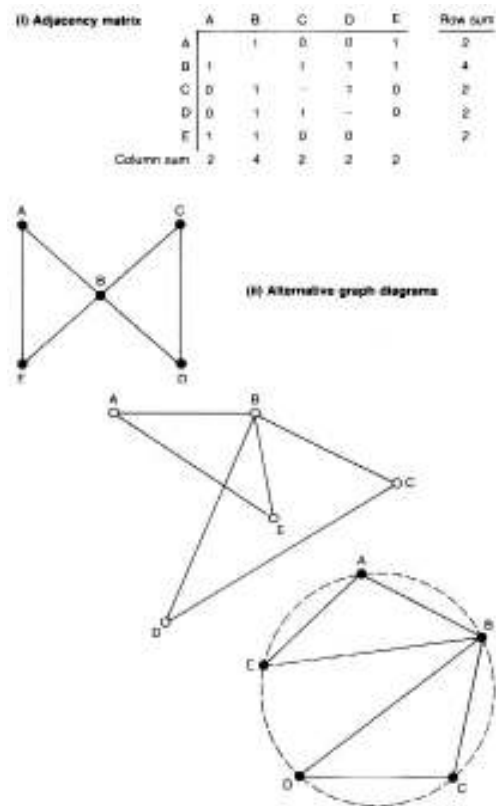
From a methodological point, this approach has developed different techniques for data collection, statistical analysis, visual representation, etc., providing both a visual and a mathematical analysis of complex human systems. If as we have seen, a social network can be represented by having recourse to the theory of graphs (2); at the same time it is possible to combine this analytical tool with the *adjacency matrix*.

In adjacency matrix  $n \times n$ , the system of relations of each actor is expressed exploiting a binary codification. Precisely if between two actors (nodes)  $i$  and  $j$  there is a relational tie (or connection) the generic element  $a_{ij}=1$  (viceversa  $a_{ij}=0$ ). For this reason starting with a matrix of adjacency it is possible to define a graph  $G(p, q)$  such that  $p$  is the number of nodes in the network and  $q$  is the total number of relational ties between any two nodes in the graph. In formal terms, each graph represents a function in which each relational tie  $q$  is associated with a couple of nodes. In this sense it is possible to derive a graph from a matrix of adjacency.

The study of network structure may be developed considering more information regarding relational data in terms of their value and direction. In other terms, we can not only say if there is or is not a relation (binary system), but we can also identify the intensity of the relational tie between any two nodes. In many cases, it is difficult to distinguish the direction of relational ties while basically it is generally much easier to detect if there is or not a relational tie and of which kind that tie is.

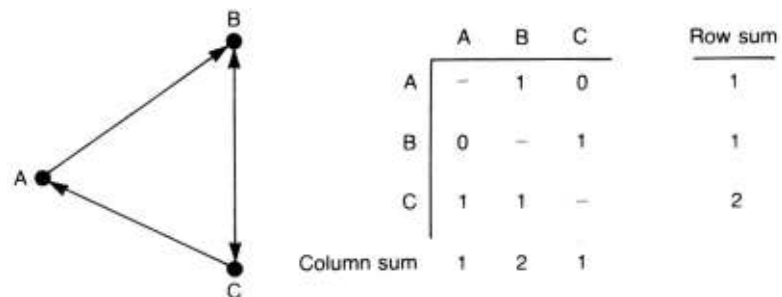
Finally it is possible to consider 'indirect' ties and the so called 'path' through which nodes that are not directly connected can be indirectly related to one another. I shall examine below examples that are related to those presented in the chapters I and II.

Figure 4.1.1: Adjacency matrix and alternative graph diagrams



Source: Scott ( 1991)

Figure 4.2.2: A directed graph



Source: Scott ( 1991)

Focusing first on the network as a whole, one might be interested in the number of actors, the number of connections that are possible, and the number of connections that are actually present. The number and kinds of ties that actors have are keys to determine how much their embeddedness in a network constrains their behaviour, and the range of opportunities, influence, and power that they have. Differences in how connected the actors in a population are, as well as the impact of the size of the network, may be indicator keys of the solidarity, ‘moral density’, and ‘complexity’ of the social organization of a population (Hanneman, Riddle 2005).

Moreover, it is possible that a network is not completely connected, which raises the question of ‘reachability’. In fact, if it is not possible for all actors to ‘reach’ all other actors, then our population consists of more than one disconnected groups. As a result, it is possible to define for each network a different *degree of inclusiveness* (considering the difference between the connected nodes and the isolated nodes).

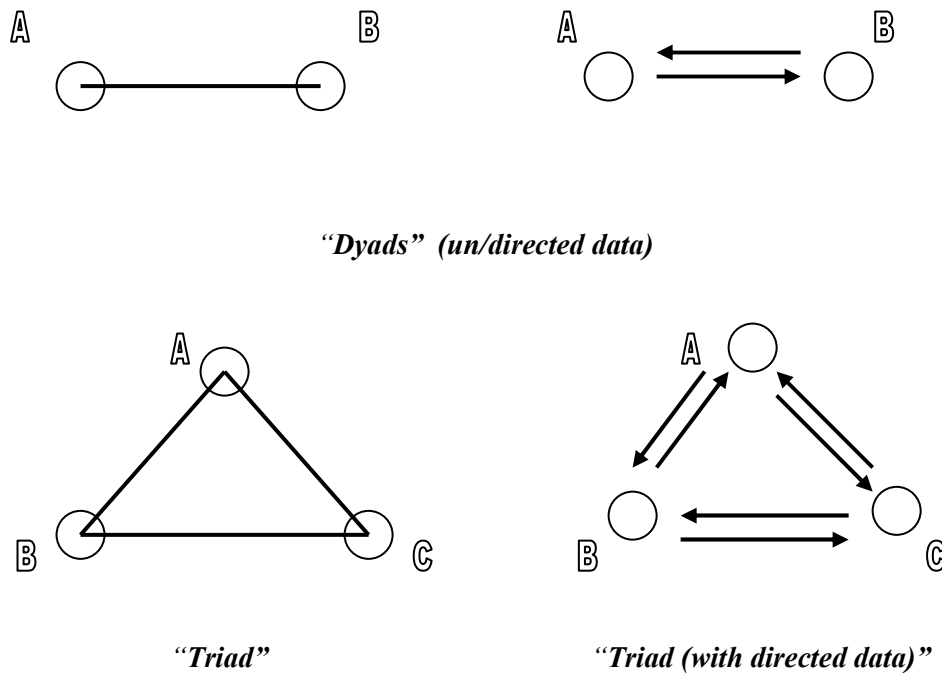
Another useful way to look at networks and at the way individuals are embedded in them, is to examine the so-called *local structures*. The most common approaches have been to look at *dyads* (i.e. sets of two actors) and *triads* (i.e. sets of three actors), as we can see in the following graphs (see next page figure 4.2.3).

The relevance of a triangular relation has been stressed also in chapter I when considering particular situations in which the ‘guarantors’ are added in the vertical relation between the borrower and the lender.

With directed data, there are four possible dyadic relationships: *A* and *B* are not connected, *A* sends to *B*, *B* sends to *A*, or *A* and *B* send to each other (with undirected data, there are only two possible relationships - no tie or tie). It may be useful to look at each actor in terms of the kinds of dyadic relationships in which they are involved. An actor that sends, but does not receive, ties may be quite different

from one who both sends and receives. A common interest in looking at dyadic relationships is the extent to which ties are reciprocated (3).

Figure 4.2.3: Local structures: dyads and triads



Of course, one can examine the entire network, as well as individual differences. In one sense, a network that has a predominance of null or reciprocated ties over asymmetric connections may be a more ‘equal’ or ‘stable’ network than one with a predominance of asymmetric connections.

Although dyadic relations permit to analyse the degree of reciprocation in the relation, small group theorists argue that many of the most interesting and basic questions of social structure arise with regard to triads. Triads allow for a much wider range of possible sets of relations (for example with directed data, there are actually 64



possible types of relations among 3 actors) including relationships that exhibit hierarchy, equality, and the formation of exclusive groups (for example where two actors connect, and exclude the third). Thus small group researchers suggest that all of the really fundamental forms of social relationships can be observed in triads. Because of this interest, we may wish to conduct a 'triad census' for each actor, and for the network as a whole. In particular, we may be interested in the proportion of triads that are 'transitive' (that is, display a type of balance where, if  $A$  directs a tie to  $B$ , and  $B$  directs a tie to  $C$ , then  $A$  also directs a tie to  $C$ ). So, there is really quite a lot that can be learned both about individual actors embeddedness, and about the whole network structure just by examining the adjacencies in dyadic and triadic structures.

An interesting concept in the analysis of smaller units is that of *clique*, that is a sub-set of a network in which the actors are more closely and intensely tied to one another than they are to other members of the network. The smallest 'clique' is that composed of two actors: the dyad can be 'extended' first to triads up to more inclusive subgroups, forming strong or closely connected components in graphs.

The strongest possible definition of a clique requires that all its actors (more than two, usually three is used) be tied to every other member directly, that is, all possible ties are present. This strict definition of a clique (as a maximal fully connected sub-graph) may be too strong for many applications, and for this reason cases of "cliques" where at least some members are not so tightly or closely connected have been proposed (4). For example:

(i)  $N$ -clique approach: an actor is a member of a clique if she/he is connected to every other member of the group at a distance greater than one. Usually, path distance 2 that corresponds to being 'a friend of a friend'.  $N$  stands for the length of the path allowed to make a connection to all other members.

(ii) *K*-Plex approach: a node is a member of a clique of size  $n$  if it has direct ties to  $n-k$  members of that clique. For example, if  $A$  has ties with  $B$  and  $C$ , but not  $D$ ; while both  $B$  and  $C$  have ties with  $D$ , all four actors are members of the clique. This last approach, which permits the existence of ‘overlapping social circles’, makes a good deal of sense for many problems. It requires that members of a group have ties to (most) other group members. If we relax this assumption, it may be possible to think that an actor who has ties to a *sufficient* number of members of a group may feel tied to that group even if she/he does not know many, or even most members. It may be that identity depends on connection, rather than on ‘immersion’ in a sub-group.

A bottom-up approach, as the one we have followed when analysing local structures, may allow us to see if and in which way this kind of tight structure can be extended outward. Consequently, the overall structure of the network can be seen as ‘emerging’ from overlaps and couplings of smaller components. Other approaches tend to look at the ‘whole’ structure and identify ‘substructures’ as parts that are locally denser than the field as a whole. In this way, they can look for ‘holes’ or ‘vulnerabilities’ or ‘weak spots’ in the overall structure that imply the emergence of lines of division or cleavage in the larger group (Burt 2000).

Going deeper into the analysis of social network graphs, the concept of *density of the ties* is of special interest, as it measures the general level of connectedness among its nodes. In other terms, density is defined as the proportion of all ties that are actually present and those that could be present.

Fully saturated networks (for example, ‘club’ in which all logically possible ties are actually present, so that all actors are directly connected to all others in the network) are empirically rare, particularly where there are more than a few actors in the population.

Generally in order to look at how closed a network is we can simply use the following formula:

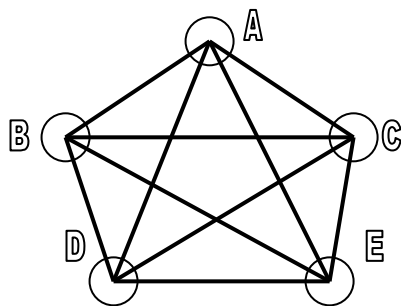
$$\text{density of ties} = \frac{L}{n(n-1)/2} \quad 0 < d < 1$$

where  $L$  is the total number of linkages in the network and the denominator (with undirected data) is given by the  $\Sigma$  of number of possible connections ( $n$  is the number of nodes in the network ).

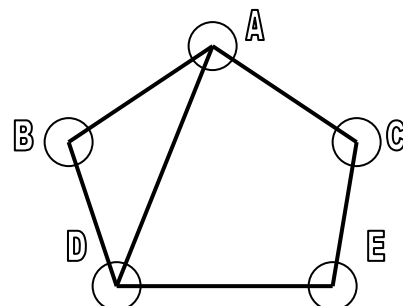
In the presence of ‘valued lines’ (that provide information about the intensity of the corresponding relational tie) this formula should also take into account this additional qualitative information. At the numerator we only have to consider linkages multiplied by their intensity, whereas at the denominator we face a problem related to the definition of the maximum degree of multiplicity of linkages (that is the maximum level of intensity achievable). This problem is related to the fact that, with a growing network size, the degree of density tends to diminish because, as we have seen in the chapter II, channels and linkages have construction and maintenance cost, particularly high if the actor wants to maintain a high degree of intensity of the relation (See figure 4.2.4).

In a social network structure, we are interested not only in the presence, density and intensity of connections but also in the role which this kind of structure attaches to different nodes and actors. In other terms, in order to consider the degree of horizontality and verticality of any given relations, we should pay attention to the *degree of centrality* of each actor in a network, that is, to his position regarding others and also, looking at the network in its entirety, to its centralization (given certain central nodes) and thus to the cohesion of the structure.

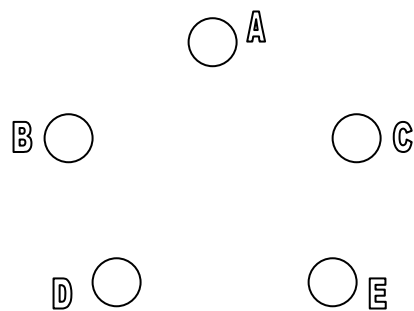
Figure 4.2.4: Examples of density of different graphs from chapter II



“network as club”: density 1



“true network”: density 0,6



“no - network”: density 0

The respective adjacency matrix

	A	B	C	D	E
A					
B					
C					
D					
E					

We may distinguish three main concepts of centrality (Lomi 1991; Soda, 1998; Hanneman 2001):

- (i) the *degree of centrality*: this is a relative concept that makes possible forms of comparison between networks given by the number of relational ties owned by an actor relatively to the number of connections that are possible. This indicator gives information about the involvement and the role of the actor in the network. Obviously it can be derived by the adjacency matrix.

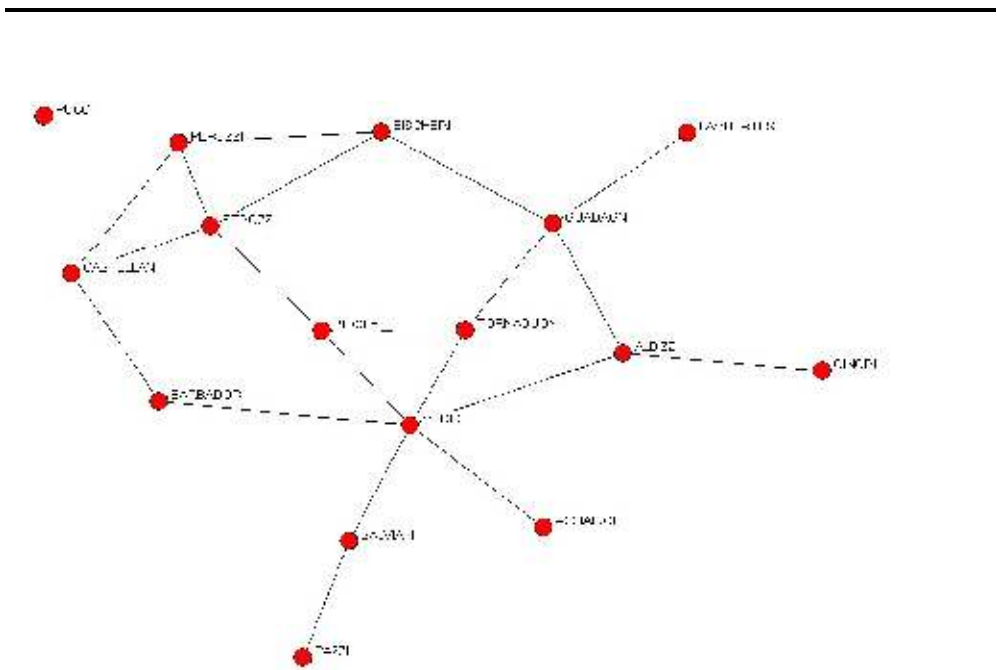
The power owned by an actor and his capacity to exert an influence in the network is related to two other kinds of centrality:

- (ii) *absolute centrality*: this index considers the centrality not in terms of number of relations owned but rather in terms of closeness centrality, in other terms nodes that are geographically more central to all other nodes are more prominent than those more distant from all others. In order to express this kind of synthetic information we need the matrix of distances, that is a matrix in which is possible to find for each couple of nodes the shorter path of connection
- (iii) *betweenness centrality*: nodes characterized by this particular type of prominence are those that are placed in strategic points in the network structure (for example when a node is the unique point of connection between two or more other nodes, or when it connects sub-groups). From this position, a mediatory and brokerage power derives, which allows *specific* actor to control the flow of resources and information. The broker can play a decisive role in the network of social relations by facilitating or discouraging transactions and interactions “among these actors that have no direct linkages of trust” (Mardsen 1982). We have a system of possible relations in a community of merchants or in village banks (this case was examined in the chapter I).

Another example that suggests possible practical applications of these concepts is the study of the network of marriages between the key

families in Florence in the 1430s (Padgett e Ansell 1993). These scholars have shown how the Medici's rise to power can be explained by their high level of betweenness centrality (that is 0.522 in contrast with Guadagni's 0.255 or Strozzi's 0.103).

Figure 4.2.5: 15th Century Florentine Marriages



Source: Padgett and Ansell (1993)

To the extent that marriage relationships were keys to communicating information, business deals, and reaching political decisions, the Medici were much better positioned than other families, playing in such way a role of broker in the network.

In the last decade the recognition that “social networks are the fabric of many of our interactions” (Jackson 2005, 1) has produced an explosion of economic studies that focus on economic networks.

As a matter of fact the field of application of these concepts is very wide, including the relationships among friends, relatives and neighbours in which information and favours are shared, as well as the most sophisticated interactions among relevant economic actors at various levels. Researchers in this field have concentrated their efforts

especially in two directions: the first one is to define the process of network formation that has common points with the analysis of the process leading to the formation of enabling institutions; the second line of research tries to model social behaviour and economic outcomes as influenced by network structure.

Coming back to our main topic of microfinance institutions where we have faced social network structures such as ROSCAs as well as groups of microcredit, we will try in the next paragraph to use the analytical tools of social network analysis to understand mechanisms of peer monitoring and selection.

### **4.3 A more general framework of analysis for microfinance methodologies**

In chapter one we have discussed models in which the information problem that structurally characterized the relation between lender and borrower is studied. Let us consider again the basic economic issue.

The lender faces two main informative problems:

- (i) the first of adverse selection substantiates in the difficulty of selecting the potential credit worthy beneficiaries; as we have seen, each possible borrower may present an inherent characteristic of good or bad borrower.
- (ii) the second is that of moral hazard. It is caused by the difficulty for the lender of monitoring and enforcing the repayment of the loan. In particular the main problem is that the lender cannot monitor and constrain the borrower in doing all the possible so as the investment has a good end and therefore there is a return to refund the loan

The hypotheses behind are:

- (i) The borrower has no collateral and therefore the repayment of the loan will depend exclusively on the investment return;
- (ii) We are in the presence of high transaction costs of selection and monitoring

We have also seen that the introduction of a group methodology can solve both these kinds of problems. In the case of the ‘overlapped credit-debt relation’, the lender relates with a group of persons (the minimum is given by three subjects  $A, B, C$ ) that needs a loan to make an investment and are linked by a form of joint liability.

In order to achieve the goal of solving the information problem the assumption behind is that  $A, B, C$  are persons related by a particular kind of meaningful horizontal relation.

Before taking this relation into account we can use the social network graphs and adjacency matrix to look at the possible relational structures that we can observe before the constitution of the group (it is clear how considering a group of more members the network structure will be more complicated but the triadic example, as we have seen, can be expanded and permit to analyse the main relevant set of problems).

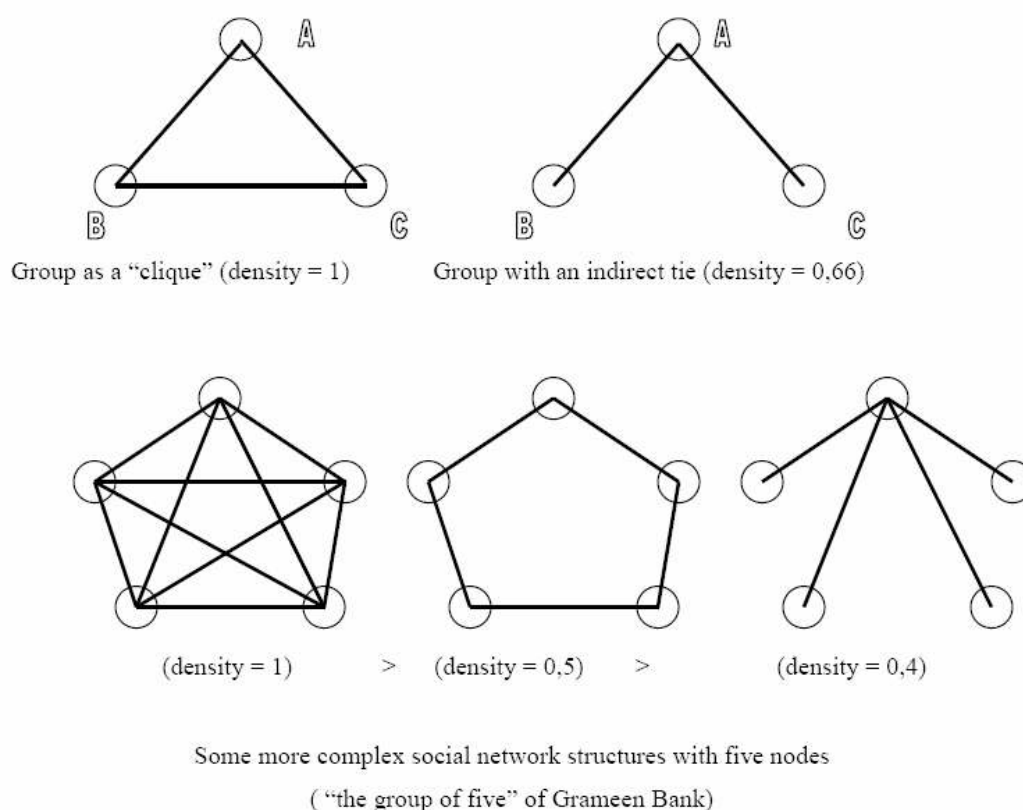
As we can see in the following figure 4.3.1, given a group formed by three persons we can observe two situations:

- (i) all the members are directly related, and this is the first case of ‘clique’
- (ii) persons are not all directly related. For this reason one subject  $A$  presents a prominence in the structure because through  $A$  the other two,  $B$  and  $C$ , are connected. This will impact in the degree of density of the two groups.



Figure 4.3.1: two possible Triad Groups and some more complex relational structures

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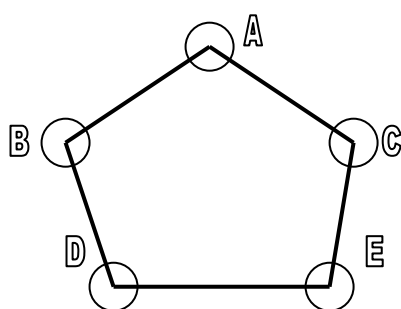
At a first glance, the different degree of network density and the graphs presented suggest that the more the network is connected (high density) higher will be the degree of horizontality of the network and the relational capital shared by the members of the group.

As a matter of fact, if each linkage between actors is in terms of information, beliefs and stabilized relation, a form of capital per se when it is inserted in a network can constitute a type of relational capital shared by all members of the group.

However, if we look at the following graphs (see figure 4.3.2) we notice that we must take care of the combined effect of density and centrality. It is evident that it is not enough that there are the same

numbers of ties in the network, as centrality should be reduced to have a more horizontal configuration of the network.

Figure 4.3.2 : The interplay between density and centrality

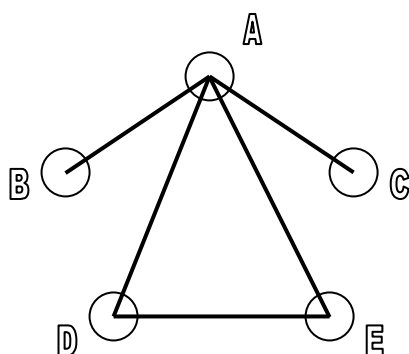


Density 0,5

	A	B	C	D	E
A		1	1		
B	1			1	
C	1				1
D		1			1
E			1	1	

adjacency matrix

with distribution of ties (2,2,2,2,2)



Density 0,5

	A	B	C	D	E
A		1	1	1	1
B	1				
C	1				
D	1				1
E	1			1	

adjacency matrix

with distribution of ties (4,2,2,1,1)

In order to analyse these different situations it is necessary to focus on what is the meaning of the tie between two actors in the network. In chapter I, when reviewing the microfinance literature, we have seen how some scholars emphasize the relevance of the group because through it the social capital embodied in the social network could become a sort of ‘social collateral’. Following this idea we may

interpret these relational ties as linkages deriving by a certain degree of proximity between the two nodes-actors persons considered. If we look at the reality of rural developing countries, for example, to live in the same village and to be neighbours could be the base on which the relational channel is opened. In other cases the existence of complementarities in production processes as well as in the commercial field could be the occasion for the establishment of a channel of interaction. Finally, as we have underlined, just the intrinsic relational dimension of human beings can be the sources of these linkages that can emerge in various relational spaces.

Ties and system of ties, that is networks, substantiate in relations in which:

- (i) information about the other's identity, characteristics and behaviours is channelled and shared;
- (ii) trust in terms of expectations and so a system of beliefs based on repeated interactions is developed;
- (iii) feelings (positive like mutual affection or negative related to asymmetries in the structure as different degree of centrality) arise developing the relational-emotional dimension

The existence and the emergence of such relations implies:

- (i) the possibility of exploiting informational assets in the selection between 'good' or 'bad' potential borrowers and mechanisms of peer selection;
- (ii) the possibility of monitoring others' behaviour and efforts;
- (iii) the possibility of enforcement of contract after the investment's return;
- (iv) pro social disposition to reciprocate and the possibility to start a trust game (the mechanism of trustworthiness in an

horizontal dimension has be considered specifically in the context of credit debt relation in the paragraph 3.3);

- (v) the exploitation of the relational dimension based on a face to face interactions where names matter to apply a punishment or discourage a certain behaviour. This form of punishment could impact ‘externally’ through social ostracism, lost of the reputational capital, the menace of closure of others overlapped relations as well as ‘internally’ on the identity of the person and her self esteem (see paragraph 3.3)

In this attempt to define better the particular relevant meaning the relational tie assumes in the context of the group of microcredit two important issues arises.

The first is that, as we have seen in the basic example of the triadic structure, members of the same group cannot be all directly related. This aspect requires the investigation of the impact of a less dense network and so the presence of indirect ties on the information sharing and the capacity to exert the peer pressure. At the same time in the presence of a relation “friend of a friend” we have to consider in which way the level of personalized and generalized trust in the network will be affected.

The second is that, apart from the initial relational structures in which the actors are embedded, when the group of microcredit is formed all the members start to be related by a form of joint liability. This implies the possibility of a change in the relational structure of the network that can affect the original one as Arrow (2000, 4) explains ‘[...] the pre-existing network [of social relations] into which new parts of the economy (for example, development projects) have to be fitted [...] will create their own unintended social relations, possibly destroying existing ones’.

The last quotation suggests the idea of a dynamic process that may change the relational structures behind the interactive game. In

other terms, the horizontal relational structure on which the bank rely in view of assessing a sort of social collateral, as we have seen in the first chapter, is something that change and is subjected to a continuous process of confirmation (or viceversa). This element will be reconsider in the last paragraph.

Taking into consideration the two models developed in the first chapters we can now expand them considering others relevant variables and trying to define payoff matrices in which relational variables are included. In order to construct these matrices we are going to use the same terminology used in the first chapter:

#### **4.3.1 Adverse selection and “Peer selection” in a game framework**

We have two possible kinds of borrowers (distinguished on the base of their inherent risk):

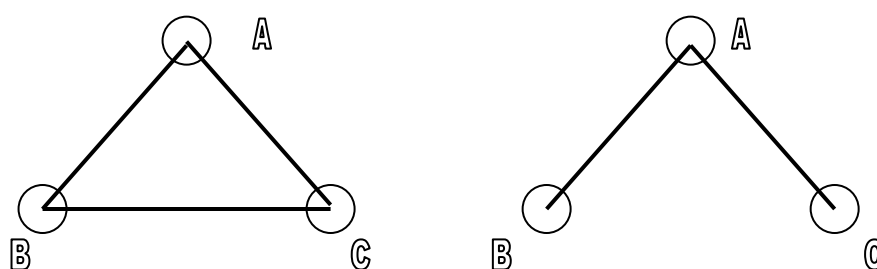
- (i) in the case of the safe subject: Investment =  $I$  US\$  
 $\rightarrow$  Certain return =  $y^S$
- (ii) in the case of the risky subject: Investment =  $I$  US\$  
 $\rightarrow$  Return =  $y^R$  with probability  $p$   $0 < p < 1$   
 $\rightarrow$  Return =  $0$  with probability  $(1-p)$

The bank will apply an interest rate  $R$  and so the payoffs matrix of all possible situations will be:

	<b><i>sss</i></b>	<b><i>ssr</i></b>	<b><i>srr</i></b>	<b><i>rrr</i></b>
<b><i>s</i></b>	$y^S - R$	$y^S - R +$ $-(1/2R)(1-p)$	$y^S - R +$ $-(2R)(1-p)^2 - 2Rp(1-p)$	
<b><i>r</i></b>		$p[y^R - R]$	$p[y^R - R - (1/2R)(1-p)]$	$p[y^R - R] +$ $-(2R)(1-p)^2 - 2Rp(1-p)$

In the case of a complete triad (before called “clique” see figure 4.3.1) the safe borrower can know directly the “types” of borrower and therefore he will be able to select those with whom constitute into a group. Such possibility implies that the safe type will form group of only safe types through self selection so that they do not have to support the risky types in case of insolvency. Consequently the risky types will be able to constitute only into groups with as many risky types. The bank, at this point, must only face the situation of a group of risk types and therefore must fix an interest rate that make the payoff (rrr) strictly negative.

Figure 4.3.3: two possible Triad Groups



If we consider the case of a group of three borrowers with an indirect tie, although a safe borrower B does not directly know the type of the borrower C the fact that knows that A is a good type can permit him to infer that also C is a safe type.

But it is also possible that, if the payoff related to the group composed by ssr is positive, the subject A will help the subject C to constitute with B a group, although C is a risk type (for example the strong tie that link A with C can derives from the fact that C is a member of A’s family). This suggests that the relational structures behind the payoff matrix can impact on the possible equilibria that will emerge.

#### 4.3.2 Moral Hazard and the mechanisms of “Peer Monitoring” and “Peer Enforcement” in a game framework

Unlike before where the riskiness was an intrinsic characteristic to the subject, here the agent can do actions or non actions which have an influence on the degree of riskiness of the investment and therefore on the possibility or less for the bank to have the loan refunded.

##### Ex ante

The debtor-investor may choose of:

- (iii) to bear a cost in terms of working effort equal to  $c$  and to obtain with certainty ( $p=1$ ) a return equal to  $y$  and therefore to be able to refund with certainty the debt of  $1$  US\$. In such case the investor will have a net return equal to  $(y - R - c)$ ;
- (iv) not to bear any cost in terms of effort and obtain a return equal to  $y$  with the probability  $p < 1$  to which an expected net return equal to  $(y - R)p$  corresponds.

The payoffs matrix of all possible situations will be:

	<i>All members sustain effort <math>c</math></i>	<i>2/3 members sustain effort <math>c</math></i>	<i>1/3 members sustains effort <math>c</math></i>	<i>Nobody sustains effort <math>c</math></i>
<i>Payoff of the agent who sustains the effort <math>c</math></i>	$(y - R - c)$	$p(y - R - c) + (1-p)[(y-R-c)-1/2R]$	$p^2 (y - R - c) + 2p(1-p)[(y-R-c) - 1/2R] + (1-p)^2 [(y-R-c) - 2R]$	
<i>Payoff of the agent who does NOT sustain the effort <math>c</math></i>		$(y - R)p + (1-p)[0 - d]$	$(y - R)p + (1-p)[0 - d]$	$(y - R)p + (1-p)[0 - d]$

In this payoff matrix the element  $d$  substantiates in a sanction (external and internal) that will be applied on the subject that choose to expose the others to a risk  $(1-p)$  of zero investment return. If the sanction  $d$  is applied by the members of the group in the last case (that is when nobody decide to sustain the effort), the sanction  $d$  may disappear. In this case the group can choose to collude against the bank. For this reason the bank would rely on a form of sanction that is not simply internal to the group. In our matrix we have considered a sanction expressed by the members of the group embedded in a social network from which the sanction  $d$  arises.

Ex post

In the first chapter we have seen that once the bank is able to satisfy the IC commitment and so to fix a  $R$  which allows to cover the unitary costs  $k$ , the borrowers linked by the joint liability will find conveniently the cost  $c$  and therefore all the projects will be succesfull. At this point let us consider how the group is able to monitorate and to oblige to payment each one of its members imposing a sanction  $d$  (external and internal). Let us suppose that each member of the group is able to know the true return of the investment. The payoff matrix will be:

	<i>All members pay</i>	<i>2/3 members pay and 1 runs away</i>	<i>1/3 members pay and 2 run away</i>	<i>Nobody pays (collusion!)</i>
<i>Payoff of the agent who Pays</i>	$y - R - c$	$y - R - c - 1/2R$	$y - R - c - 2R$	
<i>Payoff of the agent who takes the money and run</i>		$y - c - d$	$y - c - d$	$y - c - d$



This model could be considered in a context where the monitoring as a certain cost  $z$  and this cost is related to the density of the network. Here in order to have an incentive to monitoring it is necessary that the cost  $z$  is not too high: in other terms the information cost would not exceed the benefit that such information produce. Another possible element that can change our payoff matrices is represented by the consideration of a sanction  $d$  but also the possibility of a relational positive payoff in terms for example of an increase in the reputation of the agent that sustain the effort  $c$  or choose to adopt the strategy “to pay”.

#### **4.3.3 Different scenarios: an index of ‘relationality’ and the matching with payoff matrix**

Until now we have sustained two thesis that we have detected both in the first chapter (see specifically paragraph 1.3) and in this last one. Here the introduction of a different framework has been done through the introduction of payoff matrix both for the adverse selection and the moral hazard problem. These matrix are traditionally constructed considering the expected payoff for each agent in different situations. And so for example in the case of groups of safe borrower rather than in the case of defection to cooperative strategy (sustain the effort  $c$ ).

In this framework, the first thesis is that the relational structures, the network of social ties (with their specific meanings in terms of information, trust, reputation, feelings, social pressure etc), allow to solve both the informative problems at the base of the credit debt relation. But as we have seen these systems of social ties may be different just in terms of their capacity to express peer selection, monitoring and enforcement of the contracts. In other terms according to the relational structures behind, agents will express different forms of peer pressure and will experience different equilibria. More deeply, a different frame of interaction will significantly affect the perception

of the ‘game’ as well as the possibility to apply sanctions and forms of internal and external psychological sanction.

The second interconnected argument is that the relational structures that we are considering is a dynamic subject that will change with the evolution (in a certain part unintended) of the system of economic and social interactions existing among the agents. Moreover this change can be direct and internally expressed among the member of the group but also indirect if we remember how the member of the group are embedded in a social network.

This suggests also that the system of beliefs, on the base of which agents act, will constantly are updated and tested on the base of the effective results of interactions.

A possible way to combine these reflections and the standard representation of the problem in payoff matrix, could be to introduce an index representing the relational structures behind our space of interaction. This index, which would reflect the relational complexity and the different stage of interaction, could be applied to the payoff matrix suggesting a different payoff matrix for different relational structures.

## **Notes chapter 4**

- (1) See also Polanyi on 'markets embedded in society'
- (2) The theory of graphs is the result of a sophistication and systematization of the sociometric analysis started by Moreno (1934)
- (3) Observing these graphs, it is worth to remember that for some authors there is an equilibrium tendency toward dyadic relationships to be either null or reciprocated, and that asymmetric ties may be unstable.
- (4) For a wide analysis of these different approaches see Hanneman and Riddle, 2005



## *Concluding remarks*

In the last years, microfinance institutions have acquired a more and more important role.

The first reason is that they have been recognised by international institutions and many scholars to be effective development tools. The solutions proposed to the informative problem behind the credit-debt relation have been successfully applied everywhere in the world. This has been the best proof that it is possible to overcome one of the first barriers to economic inclusion: the access to credit.

Another reason, that has at first inspired this work, is that microfinance is a field of research that requires the adoption of a multidisciplinary approach. It represents a challenge for economics because it implies the study of some problems at the frontier of economic research. Here the importance of a mutual fertilization among different disciplines such as economics, history, psychology, sociology, etc appears to be more and more critical.

As a matter of fact, the study of the credit-debt relation presupposes the consideration of the economics of social interactions and how different relational structures can generate different institutional arrangements.

In this work we have placed a particular emphasis on the analysis of relational structures. Starting from this perspective, we have provided an original framework in which, the credit-debt relation and the methodologies developed in microfinance institutions can be understood in their complexity.

We have also detected four different levels and dimensions of interaction. The first two are represented by the 'institutional matrix' and the objective feature of an economic structure. We have stressed

that both these dimensions, especially in their interplay, originate the space in which interpersonal relations realize.

The credit-debt relation has itself led to recognize that the dynamic of the productive process has a critical impact on the emergence of particular kinds of institutional arrangements and relational structures. For this reason, we cannot understand economic and social interactions without the analysis of this interplay.

Finally, the study of the other two dimensions, the interpersonal and the fundamental ones, has highlighted the important role played by processes of mirroring.

The last relevant result of this work, arising from a critical analysis of the concept of social capital, is the identification of spaces of enablement. As a matter of fact, only by considering these spaces it is possible to introduce the concept of enabling institutions. The relevance of this concept, especially in a normative perspective, has been also analysed in the field of microfinance.

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