A CONCEPTUALISATION OF SOCIAL CAPITAL IN ECONOMICS: COMMITMENT AND SPILL-OVER EFFECTS

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> Life begets life; energy begets energy; it is by spending oneself that one becomes rich. Sarah Bernhardt (1844-1923)

> We can only learn to love by loving. Iris Murdoch (b. 1919)

1. THE ACCUMULATION OF SOCIAL CAPITAL

In economics, social capital is commonly defined in terms of its effects, both at the micro level, as well as at the macro level. At the macro level, for example, social capital has been defined "as the social structure which encourages frequent trade" (Routledge Bryan R. Joachim von Amsberg, at http:\\www.worldbank.org/PRM/). The World Bank Social Capital Initiative describes social capital as "the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development" (World Bank, 1998: 1). *Why* social capital encourages frequent trade or contributes to economic and social development remains unclear, giving way to the suggestion that social capital does so *simply because* it is beneficial. Such a functionalistic explanation, however, requires the existence of a teleological plan, an overall plan that determines individual behaviour. This methodological problem has not yet satisfactorily been addressed (see also Jon Elster, 1989). At the micro level, Gary Becker (1996) has described social capital as a collection of social values, like recognition and prestige, that individual economic actors hold as non-material, endogenous preferences. Individuals are assumed to choose the type and level of social capital that maximises their expected utility. Becker (1996: 5) defines the stock of social capital as an individual's social network, which in a dynamic utility function can be pictured as the past and present social relationships of an individual actor with others:

$$U_t = u_t\,(x_t, y_t, z_t, P_t, S_t)$$

Where U = utility, x and y are goods bought in the market, z are goods produced in the household, P is the stock of personal capital (past and present consumption and experiences), and S is the stock of social capital (past and present social network), all at time t.

Becker defines P and S as endogenous preferences, whereas x, y, and z represent exogenous preferences as is common in neoclassical economics. The endogeneity of social capital in Becker's dynamic utility function implies that individuals *choose* the social network from time t-n till time t, that will maximise their utility at time t, where n may be seen as the age of the individual. Hence, expected utility is maximised through the ‘right’ social network. Becker’s micro level definition of social capital is purely instrumental, defining social capital as a means to individual utility maximisation. Apart from methodological difficulties with the macro and micro level explanations of social capital, there is an additional problem which resides in the combination of the two. Often, macro level analyses implicitly assume (some) instrumentalism at the individual level, whereas micro level explanations tend to take for granted functionalistic arguments for the role of social capital at the aggregate level. However, as methodologies, individualism and functionalism are contradictory. It is sheer impossible to explain a social phenomenon at the same time through individual choice as well as through an outside plan: a social scientist has to choose between these two or justify a particular combination. Just like it is impossible to explain the evolution of humans from apes both by intention of individual apes to become human as well as by evolutionary mechanisms outside the realm of individual choice (such as survival of the fittest). This paper addresses this methodological problem and suggests two alternative concepts to explain social capital in economics. In this section and section 2, I will address the micro level, and in section 3 I will clarify the role of social capital in production, whereas in section 4, I will come back to the macro level again. Section 5 will provide a summary and some conclusions.

As expressed in the work of Becker and others, at the micro level individual economic actors are assumed to invest in social capital when the expected marginal utility thereof is higher than the expected marginal utility from investing in any other kind of capital or from consumption. So, in neoclassical economic theory, economic actors who happen to have social preferences as well as individualistic and material preferences, are believed to invest in social relationships if, and only if, there is an expected net individual benefit from doing so. In neo-institutional economics, the values that underlie social relationships have an additional role as constraints, which add to the familiar time and budget constraints in individual decision making. In the words of Douglass North, institutions and the values that they represent are “the humanly devised constraints that shape human interaction” (North, 1990: 3). In the neo-institutional view values are assumed to limit individual choices for some while at the same time they provide opportunities for others.

So, social capital is modelled both as a preference and as a constraint to individual utility maximisation.

Social, political, and anthropological literature on social relationships and social capital however shows that social capital does *not* arise from instrumental motives, nor from constraints on free choice, but from intrinsic motives, unconstrained but socially embedded motives that are part of the very social values that social capital represents. Social values underlying social capital arise when people value their mutual relationships (Bronislaw Maloniwski, 1922), relationships that carry their own value (Claude Lévi-Strauss, 1949), that express trust and loyalty to the community to which one belongs (Georg Simmel, 1950). Recent analyses of social relationships indicate similarly their intrinsic value, rather than instrumental value. If, as the early anthropologists and sociologists have argued, the motivation to engage in and to sustain social relationships lies not in an individualistic urge to maximise one's utility, how then are people motivated to cherish social relationships? Challenged by the neoclassical economic position, various authors have come up with explanations that do not deny the economic dimensions of social capital while at the same time they reject the utilitarian paradigm in present neoclassical and neo-institutional explanations of economic behaviour.

The alternative positions suggest that the ends – preferences in the utilitarian paradigm – that actors seek to realise in economic life through allocating scarce resources, are experienced by economic actors as valuable in themselves, rather than mere instruments. Among the ends in economic life are individualistic ends, as well as public ends and social ends. All these ends are embedded in values that are to a certain extent shared and contested in the community in which one lives. Social ends involve social relationships and are motivated by the very relationships themselves (Robert Putnam, 1992) or by the social activity that is implied in the relationship (Jon Elster, 1983). In other words, social relationships are motivated intrinsically by the very social values that they imply rather than extrinsically by utilitarian trade-offs or monetary incentives (Bruno Frey, 1997). Just like honesty develops from people valuing honesty and friendship develops from people valuing friendship. Utilitarian friendship is a very unreliable type of friendship as Aristotle has argued long ago in his *Nichomachean Ethics*, whereas utilitarian honesty has come to be known as opportunism or hypocrisy leading to a failure of collective action (for example through free riding). Instead, I accept that social values are valuable in themselves, as virtues, to use Aristotle's ethical concept for intrinsic values.

Going back to the explanation of social capital, in particular of its accumulation, I will argue that the instrumental explanation of social capital is mistaken[1]. There are two reasons why social capital cannot be explained as an instrumental value, as in utilitarianism. First, self-interested utility maximising actors would not invest in social capital, and second, even if they did, the way they did would undermine the very social values that are the foundation of social capital, and social capital would soon disappear. I will briefly discuss each of these two arguments, starting with the first one, with the help of the well-known article on 'gift exchange' by George Akerlof (1982).

In a case study on female employees in a utility firm, Akerlof found that employees work harder than the average work effort that is required in their jobs, without having a prospect of promotion. At the same time he found that the employer paid higher wages than can be justified by employees' opportunity costs. Akerlof recognised the social values underlying each groups' behaviour, such as fairness at the side of the employer and sympathy at the side of the employees. As he rightly argued, both sides appear to contribute to a social relationship, or in other words employer and employees invest in social capital. In the remaining of the study however, Akerlof goes on to explain the social capital that has evolved in terms of non-contractual exchange and utility maximisation. He explains the higher work effort and above market wages as an individual utility maximising exchange which generates the benefit of higher wages for the employees and the benefit of higher labour productivity for the employer. The social relationship hence is pictured as an instrument to generate the non-contractual exchange of higher work effort for higher wages, an exchange that is additional to the formal labour contract between both parties and generates extra utility for both. By assuming that social capital is accumulated for instrumental reasons, Akerlof is able to explain the unexpected situation in a firm in which parties put in more effort and pay more than is contractually required.

[1] Elsewhere (van Staveren, 1999) I have argued that not only social values but all human ends that individual actors in economic life seek to realise are motivated by commitment rather than by utility. My argument shows that utility maximisation cannot differentiate between rational and irrational behaviour, whereas commitment can do so.

The explanation of the ‘anomaly’ relies on individual utility maximisation and fits very well in the neoclassical explanatory framework, adding the notion of non-contractual exchange without altering the basic framework.

The reasoning however is flawed. Akerlof gives no justification why social capital would arise in the absence of a contract. What he does not explain is how the non-contractual exchange of extra work effort for higher wages will occur without defection. If the actors involved are self-interested and intending to increase their utility above the level they had already attained through the labour contract, why would they put in more effort or pay more without the assurance that the other party would live up to her part of the exchange? Without an additional labour contract, each self-interested, utility maximising actor will not make the extra efforts of higher productivity or payment of higher wages, since the exchange cannot be enforced. The non-cooperation can easily be shown with a prisoner’s dilemma bargaining game. The absence of a contract will provide the incentive for each self-interested party to defect on her side of the bargain, so that there will not arise mutually beneficent contractual exchange of extra work effort for higher wages. The extra utility as predicted by Akerlof, above the level attained through the standard labour contract, will therefor not occur. Amartya Sen has made, much better than I have done here, the same argument against the neoclassical assumption that people would employ social values as an instrument to increase their individual utility, in his example of the ‘rational fool’ (Sen, 1977). What his example and my critique of Akerlof’s analysis indicate, is that, contrary to neoclassical beliefs, self-interested utility maximising actors will not invest in social capital. Since the underlying social values and social relationships are unreliable instruments for utility maximisation. Even the dynamic solution to a prisoner’s dilemma game in game theory, the tit-for-tat strategy, will not occur, because the employer is not able to monitor the performance of an individual employee, hence, an employer does not know when to reward and when to punish an employee for her behaviour.

My second argument why social capital cannot be explained as an instrumental value for utility maximisation is that even if self-interested economic actors would invest in social capital as a means to increase their utility, they would undermine the very social values that form the foundation of social capital. Here, the work of Bruno Frey is helpful in showing that social values can be crowded out when they are turned into instruments. When employees put in extra work effort for intrinsic reasons, that is, because they value for example the work environment, or the co-operation with their colleagues, their work effort may decrease rather than increase as soon as they will receive financial incentives to sustain their labour efforts. Frey (1997) explains such an unexpected decrease in productivity (which is also unexpected from Akerlof's perspective of informal exchange of productivity for financial benefits) with the help of the well known notion in economics of crowding out. Intrinsic motivation (in the job itself, partly derived from the social relationships on the work floor) gets crowded out by extrinsic motivation (financial incentives) because intrinsically motivated workers are disappointed by the apparent lack of appreciation by their employer of the employees' responsibility and loyalty to the firm. Bruno Frey mentions three psychological processes that would be responsible for crowding out intrinsic motivation by extrinsic motivation.

(1) impaired self-determination, reducing feelings of responsibility
(2) impaired self-esteem, from an apparent lack of appreciation of one's own competence
(3) impaired expression possibility, reducing one's chances to communicate and share intrinsic motivation with other persons (Frey, 1997: 16-17).

So, the more one tries to 'buy' higher productivity, the less one will get it, and social values will be undermined. Oliver Williamson hinted at the same problem of undermining of social values when these are instrumentalised. Whereas Frey has focused on the destructive effect of financial incentives on social capital, Williamson (1993) has suggested that it may be just as well the calculativeness involved in financial compensation which in it self may be enough to destroy social values in economic relationships. Although Williamson is a major contributor to neo-institutional economic theory that relies on utilitarianism, he does recognise the fallacy in instrumentalist explanations of social values and social relationships. He refers to trust as a major social value in economic relationships and makes a case against the common conflation of credibility, which can be calculated, and trust, which is a value in itself, involving the interpretative, moral, emotional, and motivational characteristics of social values. Trust depends on the context of the community in which this value is shared, he explains in line with the anthropological and sociological views that I have referred to earlier. Whereas credibility may be used as an instrument to increase one's utility, trust or the breach of trust cannot be employed profitably. Williamson argues that "calculativeness will devalue the relation" (p. 484) since it "may well be destructive of atmosphere and lead to a net loss of satisfaction between the parties" (p. 481). Hence, both Frey and Williamson point out that an instrumental use of social values may rather undermine them, disrupt social relationships, and in the end diminish stocks of social capital.

Social capital is thus more appropriately defined as a shared commitment to social values as expressed in the quantity and quality of social relationships. The kind of social values and the types of relationships will be different from place to place, community to community, and period to period. But what is clear is that they are rooted and nurtured in the intimate relationships of families, friends, colleagues, neighbours, and others. Besides, social values are not static but change continuously, and so does the content of social capital. It may be beneficial or harmful to wellbeing, or it may be beneficial to insiders while excluding outsiders: social capital should not be romanticised. Individual members of a community hold their commitments to some or most of the community's social values, and they will contribute to these values by practising them, which will support these values as long as enough individuals contribute. Social capital thus is not an individualistic type of capital, a characteristic of an individual, but social capital is inter-personal, residing in a relationship between individuals. Nor should social capital be confused with the moral notion of altruism: social capital is not a self-sacrifice for the benefit of someone else, but a shared commitment to social values that underlie the community of which one makes part. So, social capital is an intrinsic and relational concept that cannot be adequately understood in instrumental, utilitarian terminology. Nevertheless, social capital has clear economic characteristics and therefore needs to be explained in economics (it is scarce, it has value, it is productive, it can be crowded out, it makes part of rational behaviour and it implies certain capabilities – all distinctive economic characteristics).

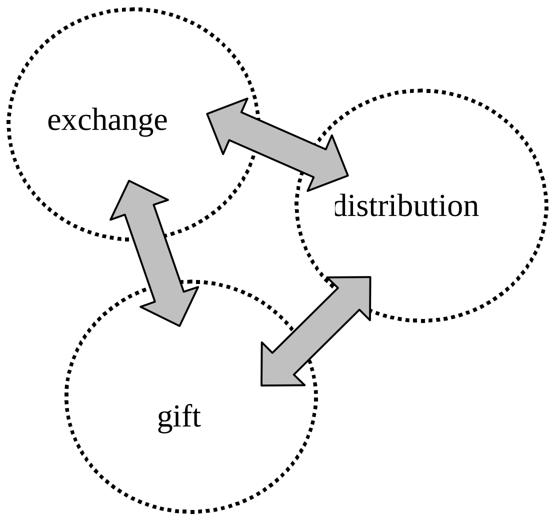
2. THE LOCATION OF SOCIAL CAPITAL

If we accept the assessment that social capital has a significant economic dimension, the question follows *where* in the economy it is located and generated. Social capital is clearly not generated in financial markets, nor forced from above through state social policy. As I have indicated in my critique of Becker's idea that social capital would be accumulated through self-interested individual investments, and in my critique of Akerlof's idea that social capital would be traded and accumulated in markets, I will argue that social capital is *not* generated at all in markets. Nor can social capital be ordered from above[2], as various sociologists have shown, in particular Robert Putnam (1992). So, I will also claim that social capital is *not* generated at all by the state, through social policy, market regulation, or any other form of central policy. The two interaction mechanisms for the allocation of scarce resources as they operate in the market and the state – exchange and redistribution – are inadequate to bring about the social values and accompanying social relationships that underlie social capital.

If social capital in the economy is not generated through exchange in the market place, nor through regulation by the state, only one allocation mechanism remains as a candidate: the gift. The gift in the economy is represented by economic actors' mutual gift giving in terms of labour time, monetary and non-monetary resources, contributing to human wellbeing. The gift is an unconditional transfer between economic actors, but just like there is no such thing as a pure exchange, there is no pure state distribution and no pure gift. Most of the time, we observe mixes of exchange, redistribution, and gift, as in the labour effort case of Akerlof. For an idea about the relations between the three allocation mechanisms in the economy, see Diagram 1 below.

[2] For example, it seems silly to expect that people would behave honestly and friendly towards each other just because government issues a law that requires people to do so. Of course, government has a role to play in the stimulation of social capital through generating appropriate conditions for social values to arise among people, but it cannot order these values as a rule.

Diagram 1. Relationships Between Allocation Mechansims



The type of social values expressed through gifts are caring values, expressing relationships of care among individuals in an economy. Therefore, this part of the economy has been called (for example by Diane Elson, 1995) the *care economy*, as distinct from the market and the state as locations of economic interaction (see Diagram 2 below). Care is an interpersonal value directed at a care receiver who calls for our responsible action (Annette Baier, 1993; Carol Gilligan, 1982; Virginia Held, 1987; Selma Sevenhuijsen, 1998; Joan Tronto, 1993). The contribution of the care economy to the total economy is considerable when measured in terms of time. Unpaid labour time has been estimated between 50% and 175% of paid labour time in developed as well as in developing economies (Marga Bruyn-Hundt, 1996; UNDP, 1995; Marilyn Waring, 1988)[3].

[3] Estimations of unpaid labour time in monetary terms are lower, due to the relatively low wage rate that is generally used to calculate the opportunity costs of unpaid labour time.

Diagram 2. Domains of Economic Interaction

Market:	**State:**	**Care economy:**
(agora)	*(polis)*	*(oikos)*
exchange	distribution	Gift
individual values	public values	Interpersonal values
freedoms	rights	Social networks
generalisation and differentiation of social capital	opportunities and limitations to social capital accumulation	Accumulation of social capital

Explanations of the cells in Diagram 2:

The market is the location of exchange, the state is the location of authority over distribution, and the care economy is the location of mutual gift relations. Exchange is quid pro quo (allocation of resources through monetary, barter, psychological utility, or other means of exchange), whereas distribution is a rule based allocation of resources by an authority, and gift is the pro deo allocation of goods and services in response to needs of those to whom one feels related. Individual values are values of freedom, like autonomy, or self-esteem; public values are collective values that define justice in a society, like solidarity, or equality; and interpersonal values refer to the social fact that people tend to care about one another, expressed in values such as responsibility, or trust. Examples of freedoms are earning one's own income, or deciding about purchase and sale of the land one works (both freedoms are particularly lacking for large groups of women in the developing word and the developed world). Examples of rights are property rights as well as access to public goods, which are both limited for the world's poor. Examples of social networks are family relations and NGO's, not seldomly drawn upon by the poor and by women – two largely overlapping categories of people in economic terms. Finally, the three relations of social capital as expressed in the diagram need to be clarified. Markets support the generalisation of social capital through exchange relationships that develop among people who form part of different social networks. At the same time, markets make use of social capital that its participants have accumulated, which enables the emergence and sustenance of exchange relationships. But markets are not homogeneous, instead, they are often segmented, resulting in the differentiation of social capital among different groups of people, often in an hierarchical way, including some and excluding others. The state may enable the accumulation of social capital, providing opportunities to social networks to arise and flourish, or the state may limit these relationships. So, market and state draw upon social capital and may either support or limit its accumulation, but neither of these two co-ordination mechanisms can accumulate social capital itself: it is in the care economy that social capital arises through the unpaid production and allocation of goods and services among people, *pro deo*, in different social networks.

The lack of attention (until recently) to social capital in economic science, and the attempts to explain social capital within the neoclassical framework can at least partially attributed to the marginalisation of research on the care economy. Unpaid labour, the gift, and social relationships have either been ignored by economists or have tacitly been assumed to be explainable within the dominant paradigm[4]. It has not always been so, since before the marginal revolution that led to the neoclassical paradigm, political economists like Adam Smith, John Stuart Mill, Harriet Taylor, and Thorstein Veblen did recognise the economic value of caring. Although the notion of social capital did not exist by then, these early economists acknowledged the existence and importance of interpersonal social values for the functioning of the economy, Adam Smith (1759) [1984] for example named the caring values 'moral sentiments' and showed their relevance for the well functioning of markets and states. Moreover, it was understood, though often implicitly, by these scholars that it is through mutual giving that people establish social relations that generate trust and responsibility, the basic values of social capital. Recognising the role of these values again, it becomes clear that through mutual gift giving in the care economy, mainly shouldered by women, that social capital accumulates.

The major gift in the care economy is the gift of time, in unpaid labour services in

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[4] The marginalization of the care economy in economic teaching, textbooks, journal articles, economics department chairs, and at conferences has in turn be attributed to the marginalisation of women in economics, both as subjects and as objects. Research shows time and again that women are far more active in the care economy than men. It was only in 1993 that the first conference on feminist issues in economics was held under the expressive title of *Out of the Margin: Feminist Perspectives on Economics*, at the University of Amsterdam (2 - 5 June 1993).

child care, care for the elderly and the ill, personal care among members of households, and voluntary activities in communities and in larger associations which contribute to human wellbeing. The care economy also allocates time and other resources to the production of *material* goods for households and communities, for example in the production of subsistence food, which is a major activity in the care economy in developing countries, and in the processing of food into meals. Caring labour should not be idealised however. Women's unpaid labour is largely unrecognised, often regarded as leisure time or simply as women's duty. It is no surprise therefore, that care intensive jobs in the paid economy, like nursing in hospitals or caring for children in day-care centres, are low paid and have low status, and are predominantly held by women. Also, there may be 'good care' and 'bad care' – care is not necessarily good, like markets can be open and well developed leading to low consumer prices, or monopolistic, 'bad' markets. Also states may distribute public resources according to different ('good' for some and 'bad' for others) criteria of justice. So, care, like liberty or justice, is *not* a moral concept, judging good or bad, but an ethical concept, that is about good or bad, providing a perspective for moral reasoning. Social capital, relying on trusty between people in the care economy, can also develop from exploitative trust, that is, when individuals have no other options to generate their livelihood than through the care economy even when their labour is exploited there.

3. PRODUCTION IN THE MARKET, THE STATE, AND THE CARE ECONOMY

The goods and services produced in the care economy are not independent from production processes in the market place and by the state. There are two kinds of relationships between production through the three types of allocation, or co-ordination mechanisms: complementary production and substitute production.

Complementary Production

Just like some public goods are complementary to private goods and cannot be produced in adequate amounts or not at all in markets, some caring goods and services are complementary to both private and public goods and services. Parts of child care, counseling in friendships and love relationships, personal attention to elderly people, joint efforts of groups of people in sports clubs, community development, and churches, or the allocation of donor blood are complementary to goods and services produced in markets and by states. Markets and states are not able to produce them because of market failures and government failures, or they can produce them only at inadequate levels of quality, or markets and states produce them less efficiently compared to the care economy. Both Charlotte Perkins Gilman (1899 and 1903) and Margaret Reid (1934 and 1943) have pointed at these reasons for production in the care economy. Perkins Gilman has argued that human wellbeing cannot be generated through the market alone, nor only through the care economy: individual economic actors need to produce in both these domains of the economy in order to fulfil their diverse human needs. She gives examples of unfulfilled needs of men who have been socialised into market activity and who thereby under-invest in caring values, and she gives much attention to the unfulfilled needs of women who are socially expected to specialise in the care economy and are not able to reap the benefits of the market. Her work can be interpreted as an elaboration of Adam Smith's *Theory of Moral Sentiments* at the level of households, but has not received much attention by economists, a similar fate as Smith's book experienced. Margaret Reid has pointed to the lower costs (that today we would call transaction costs) involved in the production of goods and services in the care economy, such as transport costs, marketing costs, costs of holding inventories, and other costs. Where these cost savings exceed the cost savings that markets and states would obtain through specialisation and returns to scale, the care economy is more efficient. An example is the allocation of scarce donor blood which is not only cheaper through the gift in the care economy but also of higher quality and more stable in supply compared to allocation through the market (Richard Titmuss, 1970). About the quality of production in the care economy, Reid points out that the type of allocation in the care economy, based on social relationships, provide the goods and services with extra qualities: "companionship, sympathy and interest" (Reid, 1934: 12). Moreover, the complementary production of goods and services at the three locations of market, state, and care economy, is rational from the perspective of risk minimization. Market returns are always insecure, whereas states are often not able to provide enough security against market risks. Given imperfect information and basic uncertainty, it is nothing but rational for economic actors to employ part of their scarce resources in the care economy, relying on the social relationships of which they make part. Hence, the complementary characteristics of goods and services produced in the care economy are as follows:

- addressed by the market or the state
- they address specific *caring needs*, such as Adam Smith's sympathy, than cannot be they express *social relationships* between people, an inter-dependence, which is not possible to the same extent in the market, where actors remain independent, or in the state, where actors are considered to be equals and all dependent on the collective rather than on personal relationships.
- they have *low transaction costs* because of the commitment to social values that motivate their production and distribution (intrinsic motivation)
- they represent *anti-risk strategies* of producers (for example in food production) which may lead them to use part of their resources for non-market production in order to prevent market price insecurity and subsequent insecurity of purchasing power

It is in these complementary characteristics that the role of social capital as a production factor in the care economy is expressed. Whereas the time involved in the production of caring goods and services can be captured by the opportunity costs of the production factor labour, the complementary caring characteristics are an expression of the social capital involved in the production. This complementary value of the production of care cannot be measured with the help of opportunity costs, since there is no substitute available in the market. It might be possible to calculate a shadow price though, based on the costs that the state or an individual would have to make to eliminate the negative effects of the absence of complementary goods and services. But it will be very difficult to measure these costs since they will occur in the long run, are likely to exhibit multiplier effects, and are not always calculable in financial terms, like psychological costs of famines or emotional damage of child neglect. An indication of the extent of the complementary value of caring goods and services, and hence of social capital, is that all households regardless of their level of income engage in the unpaid production of caring goods and services, even when financial resources are sufficient to buy all necessary goods and services from the market.

Substitute Production

Next to the complementary value of the care economy, goods and services produced in the care economy are partially substituting market and state production. Partially child care, care for the ill and for the elderly, preparation of meals, cleaning of the house, listening to a friend's problems, or community development efforts can be done by the market (or state) as well. And it is being done: where there is enough purchasing power, not enough production in the care economy, or an individual preference for obtaining goods and services outside the bonds of a social network, market and state will provide for the same goods. But without the complementary qualities of caring that Reid has distinguished. So, substitution between production in the care economy on the one hand and production in the market and the state on the other hand is imperfect. As with substitution effects in product markets or labour markets, substitution of market or state production for goods and services in the care economy occur when net benefits of doing so arise. There is however an important difference between substitution effects within markets and substitution effects between the market and state on the one hand and the care economy on the other hand: the costs of production in the care economy are generally not included in cost-benefit calculations of substitution, nor external costs and benefits. When health care costs are reduced in the public sector for example, or when transaction costs in labour markets are reduced through flexibilisation, there is an implicit assumption that (women's) unpaid labour supply is perfectly elastic. In reality however, cost reduction in a hospital budget through dismissing patients much quicker after an operation, does not reduce the costs for the economy as a whole, it only shifts costs to the care economy where they may be higher, due to the lack of professional skills to care for post-operative patients. Flexibilisation in the labour market may reduce costs for employers in hiring and firing workers, but it does not necessarily reduce costs for the economy as a whole, since it may imply costs of extra childcare at hours that are more expensive, more travel costs for employees, and stress on households where more than one member's flexible work scheme has to be adjusted on a continuing basis, with consequences for health problems and sick leave. When resources in the care economy become over-employed, quantity and quality of care may decrease and the perfect elasticity of labour supply will appear a myth. There are trends in this direction, in the developed world for example in the ageing population that leads to an increasing demand on caring time by middle aged children, of which particularly women have less time available because of increased labour market participation. In the developing world for example in the limited and reducing role of the state to provide for adequate health care, education, and social services in periods of structural adjustment. It is in these cases that stocks of social capital may decrease as a direct consequence of over-burdening of the care economy, based on two false assumptions. First the assumption of perfect elasticity of substitution of production in the care economy with production in the market and the state and second the assumption of perfect elastic female labour supply. Nevertheless, there are several valid reasons why the care economy produces goods and services as substitutes for private or public goods:

- there may be *market failures* that lead to insufficient or otherwise inadequate supply of these goods and services
- there may be *government failures* (such as rent-seeking) that lead to insufficient or otherwise inadequate supply of these goods and services
- there may be groups of consumers who *lack sufficient purchasing power* to acquire the goods and services through the market or the public sector

The substitution value of goods and services produced in the care economy is generally calculated in terms of the opportunity costs of the labour time involved, e.g. what would have been the money value if these goods and services would have been produced through the market or the public sector? There are several methods to calculate these opportunity costs: opportunity costs of labour time of the individuals who produce the substitute goods and services; average market wage; market wages of professionals involved in similar production in the market or the public sector (cooks, nurses, social workers, for example); and sales prices of the final goods and services in the market. These methods calculate a fictional monetary value of *outputs* of the care economy, through the opportunity costs of the major *input,* which is labour. But, since substitution is imperfect, monetary valuation of production in the care economy is imperfect as well.

The above discussed complementary and substitution characteristics of production in the care economy suggest that social capital will only be accumulated among the members of a community when the care economy has a minimum size, producing enough quantity and quality of caring goods and services, as well as not exceeding a maximum size that is determined by its (unpaid) labour resources. In other words, social capital is accumulated when the size of the care economy is large enough to produce the complementary goods and services in the economy that express people's commitment to interpersonal social values, but not extended with substitute production for the market and the state beyond its 'carrying capacity' in terms of available labour resources.

4. THE VALUE OF SOCIAL CAPITAL

Now that I have briefly discussed *why* social capital is produced (because of actors' *commitments to social values*) and *where* in the economy it is accumulated (in the *care economy*), I will now turn to the question *how* social capital generates value at the macro economic level. As I have argued briefly in Section 1, functionalistic explanations of social capital at the macro level are problematic because they assume a overall plan that determines human behaviour so that it leads to beneficial aggregate outcomes. In this section, I will try to show that the beneficial effects of social capital at the macro level can be explained in a non-functionalistic way. But before I will do so, I need to develop an analogy with another form of capital. The value of other forms of capital for the economy has been analysed extensively, particularly liquid, financial capital in financial markets as well as fixed, physical capital in the production of goods. Less tangible forms of capital, like technological innovation and human capital appear to have a more complex role in the economic process. Here, I will briefly summarise some of the recent developments in the analysis of the value of human capital at the macro economic level.

Traditionally, the value of human capital has been analysed at micro level in terms of its rate of return, in which expected earnings are compared with private investment and opportunity costs (for calculation of the private rate of return) and additionally with public investment costs (for calculation of the social rate of return). Comparison of rates of return to primary, secondary and tertiary education suggests that human capital exhibits decreasing marginal returns, like any other form of capital. At the macro economic level however, this result cannot be confirmed. Historical data on long run economic growth show that GDP growth does not decrease, as predicted by the law of diminishing returns. Paul Romer (1986) presents data on the US economy from 1800, showing that annual GDP growth increases from 0.58% in the first half of nineteenth century, to 1.44% in the second half of the nineteenth century, until 2.47% in the third quarter of the twentieth century (Romer, 1986: 1009). A similar picture emerges from historical growth data of the UK and other European countries. This increase in economic growth rates is not likely to be explained by exogenous changes in technology, since in developing countries low growth rates continue to exist. Therefore, Romer and others, like Robert Lucas (1993), have developed models of endogenous growth with increasing returns to human capital to replace the assumption of an exogenous technological change to all economies. Of course, the production of knowledge is subject to decreasing returns, because of the opportunity costs of the resources needed to supply education and training to people. But knowledge itself, or human capital, as a qualitative production factor, is now assumed to exhibit increasing returns. The increasing returns are attributed by various authors to:

1. Externalities of knowledge between employees and firms: spatial spill-over effects

Employees with lower levels of human capital who work in a team with individuals with higher levels of human capital tend to benefit from their colleagues' knowledge, for example in joint-problem solving, adapting skills, and sharing information (Paul Romer, 1986). When employees move between firms the spatial effects extent to a larger scale.

2. Externalities of knowledge within firms: learning-by-doing effects

These effects seem to depend on the possibilities of firms and countries to transcend to higher quality goods in international trade. When a poor developing country specialises in lower quality goods in trade with a developed country, it will not have the opportunity to learn to produce higher quality goods every time more efficiently, since the developing country will simply not be allowed to do so by its trading partner who reaps the higher gains from trade from the existing division of labour (Nancy Stokey, 1991). Where there are shifts in export production toward higher quality products, human capital becomes increasingly productive thanks to the effects of learning-by-doing in the changing production process (Robert Lucas, 1993).

3. Externalities of knowledge within households: generation based spill-over effects and sharing based spill-over effects

Empirical research in various countries, has not only confirmed the hypothesis that knowledge is shared within households and thereby generating increasing returns, but also that this effect is larger for knowledge invested in women than in men. In fact, there appears to be a double gender effect as is shown for example for Bangladesh: first, human capital of women has higher spill-over effects in households than human capital of men, and second, daughters seem to employ knowledge available in households more effectively than sons (Kaushik Basu, Ambar Narayan, and Martin Ravallion, 1999).

Turning to the subject of social capital again, the literature on increasing returns to human capital suggests an analogy. My hypothesis is that the value of social capital for the economy is not only exhibited by its role as production factor in the care economy, but that it has increasing marginal returns at the macro economic level, just like human capital. Such spill-over effects, which can be defined as unintended positive consequences of economic activity on other economic activities, would provide a non-functionalist explanation of the benefits of social capital for the economy.

Below, I will briefly discuss the internal and external increasing returns to social capital:

1. Increasing returns of social capital in the care economy
2. Spill-over effects of social capital to the market and the state

Ad. 1. Increasing returns of social capital in the care economy

The complementary characteristics of caring goods mentioned in section 3 are likely to contribute to the increasing returns of social capital. It is probably the satisfaction of people's caring needs, the development and sustenance of social relationships, and intrinsic motivation that underlies the productivity of social capital in the care economy. The increasing returns are analogous to those of human capital and distinguish these two forms of capital from other forms of capital, like land, or machines. 'Knowledge breeds knowledge' in the case of increasing returns to human capital and 'care breeds care' in the case of increasing returns to social capital, as in a virtuous circle. This is different for other types of capital, which are not inherent in humans and their relationships. The more physical capital (say, a machine) is used, the faster it depreciates, and the more additional machinery you buy, the lower the marginal productivity of the capital stock will be. But the more human capital (say a particular skill) is used, the faster it accumulates: practice increases returns to skills. And, the opposite counts as well: the less an individual actor uses her skills, the more likely that the value of these depreciate, become outdated. Similarly for social capital: the more social capital (say the bonds in a neighbourhood) is used, the faster it accumulates, whereas the less one uses one's social network , the more likely that the value of the social relations depreciate until the network may ultimately dissolve.

So, the value of social capital is generated in the care economy through the complementary caring characteristics of the goods and services produced. This leads to increasing marginal returns, in analogy to the increasing marginal returns of human capital:

1. Spatial spill-over effects of social values through social relationships in the care economy (extending beyond households, communities, and associations)
2. Learning-by-doing effects of social values through internalising these values through upbringing, peer groups, education, and membership of associations;
3. Generation based spill-over effects and sharing based spill-over effects, within households, communities, and associations.

In her path-breaking work on the ethics of care, political scientist Joan Tronto (1993) has hinted at the possible existence of these positive externalities of caring. She has pointed at the social relationships that both are a precondition for caring as well as a result of caring: they mutually re-enforce one another, as caring becomes an activity to sustain human bonds and at the same time human bonds form the basis for mutually caring relationships. Furthermore she has argued that caring cannot be learned formally as a skill, but is developed in persons through experience. This argument also shows how gender stereotype socialisation of men and women in many societies has resulted in a household distribution of labour in which women specialise on paid and unpaid caring, whereas men specialise in non-caring paid labour. Finally and in relation to the preceding argument, Tronto has suggested that caring has a basis within families, where it is nurtured and transferred to new generations. So, the analogy between increasing returns of human capital and increasing returns of social capital is supported by the theory of care, or at least, not contradicted by it.

Ad. 2. Spill-over effects of social capital to the market and the state

The above listed three spill-over effects of social capital within the care economy, leading to increasing returns to social capital, help to explain the sometimes higher efficiency of production in the care economy compared with the market, as was illustrated by Titmuss in the case of donor blood. Despite specialisation, gains from trade and scale benefits, markets are sometimes less efficient than the care economy because of the substantially lower transaction costs, stronger motivation, higher quality of care, and lower risk in the care economy.

However, the returns of social capital are not limited to the care economy only. Social capital, although generated in the care economy, extends to the state (Putnam, 1993) and to the market (see, for example, Francis Fukuyama, 1995). See also Diagram 1 and Diagram 2 where I have located the accumulation of social capital in the care economy but have acknowledged a role of the state in the extent of social capital and a role of the market in the generalisation of social capital. I will argue therefore, that the links from social capital in the care economy to the market and the state arise as spill-over effects, as unintended consequences of behaviour in the care economy. Clearly, a Tanzanian farmer producing subsistence crops to feed her extended family, does not intend to benefit market transactions or public sector effectiveness – there is no instrumental relationship between the care economy on the one hand and market and state on the other hand. However, market exchange as well as allocation in the public sector make use of social capital. Moreover, they cannot do without this production factor. Social capital has economic value that is not merely additional to the value of other forms of capital, but a necessary condition for the economy as a whole to function. Without a commitment to social values, economic actors are not able to engage in an economic relationship with others: for exchange to happen, economic actors need to have a reliable reputation (Robert Frank, 1988). That is, a reputation that is made up of social values shared in the community in which exchange transactions take place. In other words, the market is embedded in social values and social relationships (Mark Granovetter, 1985) and needs social capital to function. Before an exchange, or a public good, or collaborative home production of any good or service will occur, an individual actor needs to persuade someone else to interact with him or her. This requires certain social capabilities that can only be acquired and practised through social relationships. Hence, rational economic behaviour presupposes that economic actors are committed to certain social values, an assumption that is supported by game theoretic experiments that allow communication between players in a repeated co-operative bargaining game (Avinash Dixit and Barry Nalebuff, 1991). At the individual level, these commitments to social values can also be characterised with the help of Amartya Sen's notion of capabilities: they embody individual economic actors' social capabilities. Without these, their functioning will be less successful: they will not sufficiently address the caring needs of each other, they will hardly enjoy the increasing returns of social capital investment and hence under-invest in social capital, and finally, they will be less successful in persuading others to engage in a market transaction with them, or to contribute to and enjoy the benefits of public goods. The social capabilities inherent in social capital spill-overs to the market and state are:

- *trust* (see, for example, Francis Fukuyama, 1995)
- *responsibility* (see, for example, Milton Friedman and Rose Friedman, 1980, who have argued that there can only be beneficial free exchange among responsible actors)
- *loyalty* (see, for example Albert Hirschman, 1970, who has shown the relation between market behaviour through "exit" options, collective behaviour through " voice" options, and social, [or caring, IvS] behaviour through "loyalty" options)
- *intrinsic motivation* (see, for example, Bruno Frey, 1997)

Trust leads to lower transaction costs in markets and to higher collective contributions to public goods (taxes). Responsibility decreases negative externalities from market exchange and reduces free riding and rent seeking in the public sector. Loyalty reduces adjustment costs in dynamic market processes, whereas it supports the continuation of public goods supply. Intrinsic motivation increases labour productivity in both the market and the public sector.

Without the spill-over of these social capabilities to the market and the state, economic actors will not be able to make rational decisions. Moreover, they will not be able to live a minimum satisfactory economic life, as I have shown elsewhere (van Staveren, 1999) with an analogy to cases of neurological patients with deficiencies in exactly these capabilities (see also Antonio Damasio, 1994). So, it is only with the possession of social capabilities that economic actors' rationality will be meaningful in their transactions in the market and the public sector. This implies that economic actors need to be active in the care economy and not only in the market and/or the public sector. Only then will the social capabilities acquired in the care economy spill over to transactions in the market and the public sector.

At the macro level, the value of social capital for the economy as a whole – the market, the public sector, and the care economy – can be characterised by the size of the care economy. Here, the idea of a balance in the economy between market exchange, state redistribution, and gifts of care, as I proposed at the end of section 2, needs to be addressed. The relative size of the care economy is determined in an endogenous process, through the value of social capital. The care economy, where social capital is accumulated, needs to be large enough in order to address caring needs that cannot be addressed through market exchange or state redistribution, whereas the care economy should not become too large, over-using scarce labour resources and limiting the benefits of markets and public goods. The balance between the three economic domains will be generated endogenously, which again finds a parallel in the endogenous force of human capital for economic development.

Moreover, a macro level balance between the market, the state and the care economy is necessary for the accumulation of 'good' social capital. Where the care economy is not balanced by an efficient market where individuals have opportunities to earn an independent livelihood, and by an effective state that guarantees basic rights and public services, the care economy may turn into a location of exploitation and violation of rights. As has been shown by various authors with examples on the Italian maffia, South-Asian trade in women, and Columbian drug cartels, social capital that is not balanced by freedom and justice can easily develop exploitative trust and turn into 'bad' social capital, benefiting a few and harming many, as well as being harmful for economic development.

5 SUMMARY AND CONCLUSIONS

In this paper I have tried to present an alternative explanation of the phenomenon of social capital in the economy, compared to neoclassical and neo-institutional explanations. First, I have suggested that social capital is accumulated on the basis of individual economic actor's commitments to interpersonal social values, or caring values. Second, I have pointed out that this commitment to social values is generated and nurtured in the care economy, where scarce resources are allocated through the gift, in particular the gift of unpaid labour time. I have argued that the production of goods and services in the care economy is a combination of substitution and complementary production vis-á-vis the market and the public sector. The care economy does so because of underlying social values and social relationships. Third, I have conceptualised the value of social capital with the help of an analogy with increasing returns of human capital. The increasing returns of social capital in the care economy are not limited to the care economy but also extent to the market and the public sector. These spill-over effects can be characterised at the micro level as social capabilities that actors have acquired through activities of giving in the care economy: trust, responsibility, loyalty, and intrinsic motivation. Only with a sufficient size of the care economy, these aggregates will have a positive effect on the functioning of markets and the public sector. But when market and state draw too much on the care economy, crowding too much labour into the unpaid production of care, social capital production will decrease, and so will its beneficial effects on the market and the state.

In conclusion, the value of social capital in the economy can be explained at the micro level without instrumentalism, with the concepts of commitment and capabilities, and social capital can be explained at the macro level without functionalism, with the concepts of increasing returns and spill-over effects. However, further research is needed, both theoretically as well as empirically, to clarify the role of social capital in the economy – both in the developed world as well as in developing countries.

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