

**1999 Creation and Returns of Social Capital:
Social networks in education and labor markets**

**Department of Economics, University of Amsterdam
December 9-11, 1999**

The work-conference took place in the context of the research program "Creation and returns of social capital: Social networks in education and labor markets" (SCALE). The program was initiated by Henk Flap (University of Utrecht), Tom Snijders (University of Groningen) and Frans van Winden (University of Amsterdam) and funded by The Netherlands' Organization for Scientific Research NWO.

To date, research on social capital has been characterized by an ad hoc nature of the theoretical assumptions and measuring instruments used. The underlying aim of the conference is to contribute to a theoretical integration as well as standardization and coordination of empirical research on the significance of social capital.

International experts in the field of research on social capital present the 'state of the art' concerning the development of theories, measuring instruments and empirical research. Attention has been paid to achieve a balance among the speakers in their expertise regarding, on the one side, the development of theories, methods and empirical research (experimental as well as survey research), and, on the other side, their disciplinary background (economics, sociology and statistics). Further, first results of the four research projects that are included in the research program will be presented and discussed for the first time. The projects deal with experimental research on investment in social relationships, studies of social capital in school and at work, and measurement issues as well, while employing a large-scale data collection ('Survey on the Social Networks of the Dutch', SSND).

Organization

The conference was organized by the SCALE research group at CREED/University of Amsterdam, ICS/University of Groningen, and ICS/Utrecht University.

Sponsors: CREED, ICS (Groningen and Utrecht), KNAW, NWO, and Tinbergen Institute.

The Strength of Weak Ties: a Simulation Study of Network Evolution

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It has often been pointed out (Vanberg & Congleton 1992; Orbell & Dawes 1993; Kitcher 1993; Majiski et al 1997) that the pessimistic inferences about the fate of cooperation in the Prisoners' Dilemma game may be unwarranted. Unlike the case in prisons, actors can often choose whether or not to interact based on the cooperative histories of their potential partners. The ability to avoid any interaction with likely non-cooperators can give cooperative strategies an evolutionary advantage. Similarly, I will argue, the scope condition ordinarily assumed in network exchange research – that the exchange network is unchanging – magnifies the degree of inequality present in exchange networks. There are many situations in which dissatisfied and exploited actors can change their positions. As we shall see, the possibility of changing positions may (or may not) reduce the inequality generated by exchange networks. This means that the validity of theories designed to predict power in networks are often inapplicable; the outcome is often not, as the theories predict, growing inequality, but rather network change maintaining a high level of equality. In addition to pointing out the limitations of existing theories of network power, this paper also has a more positive goal. I attempt to describe the stable forms toward which exchange networks evolve and how this evolution depends on the initial form of the exchange network.

The Constitution of Social Capital in the Transition Phase from School to Labor Market in France

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I would like to base my purpose on examples concerning the professional transition from the young people in France to highlight the interest of a concept of social capital. I will thus not seek to give a general definition of the social capital but I adopt the point of view of Sandefur and Lauman who think that one can give a useful definition of the social capital only with reference to one result which one seeks to explain. Various researches which we have made for five years show that the transition is a process which proceeds according to rhythms which vary with the people. We chose to retain a typology of trajectories as significant variable of the transition. In France the young people entering the labor market know a phase of very great instability with recruitment only but for jobs of short duration. This phase lasts approximately two years and step by step the majority obtains a stable employment. My interpretation is that young people were subjected to a phase of socialization at the labor market, phase during which they learn the rules and the language which enables them to be "recognized" and accepted in the professional environment they integrate. Then, they seem to be able to assert at the same time a status and wages. This first period is also a testing period and a selection. In this precise case, I associate the social capital with what is acquired in this phase: a knowledge of the rules of the professional environment, practices of behavior at work, a set of personal relations

which make that the recruiting is the result of a whole process and not a specific transaction. Qualitative interviewees confirm this interpretation. In France there is very little bond between the school system and the companies. The transition from the first towards the second is not organized. It is what generates this phase of transition. The companies and the school system reject a function of socialization which normally should be of their responsibility. The costs of this system are deferred on the employees on the one hand and the State on the other hand. The use of the personal relations in the search for an employment is not a suitable indicator for this population of young people. It is more interesting to take in account the whole of the assets which make it possible to be recognized and accepted in a professional milieu. This constitutes an operational definition of the social capital for the study of the labor market.

Social Capital in Schools
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The study of educational opportunities in a society is a prominent theme in the sociology of education and stratification research. Education constitutes an important link in the transition of inequality between generations. For the explanation of this relationship, many conditions have been taken into consideration, e.g. inherited intelligence, social, financial and cultural status of the parents, peers, the neighborhood, as well as characteristics of the school. However, the mechanisms that explain educational achievement are still not clear. To our mind, social capital theory might contribute in finding an answer to questions about equality and equity in education, especially regarding relational and communal resources based explanations. Research into social capital is carried out mainly from two angles. The first approach focuses on the resources of others that are available through relations in ego-networks. In the second approach the emphasis is on social capital as a public good. Coleman's work on functional communities is central to this approach. Strangely, both lines co-exist side by side up to now. They have mainly been applied to different domains, but even if the same social area is considered, e.g. education, there is not much cross-fertilization or integration. Therefore, the major aim of this SCALE project focusing on the field of education, is to determine the relative importance of both types of social capital in educational attainment.

Using longitudinal data on 7,300 students at 150 schools in the Netherlands, we discuss the importance of being part of a functional community, as well as the religiousness of students as an alternative interpretation of this effect, for their scholastic achievement in high school. According to Coleman and Hoffer a functional community strengthens the educational opportunities of students. Not clear, however, is to what extent the functional community effect can be understood through the religious characteristics of Coleman's functional community as well. The main questions in our paper are: Does a functional community exert influence on the achievement of students, and to what extent does the religious background of students offer an alternative explanation for this effect? We

expect that a functional community is beneficial for students who are religious and actively involved in the community. In order to answer these questions, we use descriptive and multilevel analyses. We conclude that the differences between schools are large. Only 11 out of all schools are part of a functional community. For these functional community schools, no effect on achievement is found after controlling for religious background. For the students religiosity positive as well as negative effects on scholastic achievement are reported.

Good Networks and Good Jobs: The Value of Social Capital To Employers and Employees

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Some good jobs, and no bad jobs call for important work with people outside the firm. Thus social capital, or a network rich in varied external contacts, is valuable to employers and included in their hiring requirements for some upper level jobs. Social capital is also valuable for employees; employees with more social capital get higher incomes and are more likely to be managers. Similarities among jobs and similarities among bundles of hiring requirements (including various combinations of both social and human capital) define each other in a dual structure that expands our understanding of jobs, capitals, and the hiring process.

Role and Rise of Social Capital

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Social capital can be analyzed at an individual or a collective level. At the individual level, personal networks have a significant impact on status attainment. Using the French labor force survey (INSEE, 1998), log-linear models show that the type of network mobilized to find a job is mainly influenced by level of education, even when controlled by social origin, and alters occupational level rather than wages. For people looking for a job, using personal relationships is more common nowadays than thirty years ago. At the collective level of analysis, social capital is a community resource in its own right. In industrial and urban societies, as stated by Simmel, interest communities (like non-profit organizations) are replacing traditional communities which corresponded to a few small and nested social circles. The new social circles are more numerous, larger and overlap. This long-term trend seems also to be mid-term. From several standpoints, in France social participation has increased during the last thirty years. In the USA, using the GSS data, the same holds true. Furthermore, it should not be forgotten that more and more people are involved in web communities that also represent a collective facet of social capital. At both level of analysis, the different indicators used here, as elsewhere, show

that the role of social capital should not be neglected and has probably mildly risen over the last thirty years.

Measurement of Individual Social Capital

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During the last decades, the developing research field of social capital has met with several problems, among which standardization of its measurement. The main objective of this paper is to discuss the theoretical foundations of a to be developed multi-dimensional measurement instrument for individual social capital, that combines insights of existing techniques. Both rational choice theory and Lin's (1999) 'network theory of social capital' will form the basis of a generally applicable, cross-sectional measurement instrument. Issues addressed will be relationships and resources in several life domains, their availability, characteristics of the individual and her network members, investments in relationships, and the possible implications of network structure. Several approaches to aggregation of these data, among which the one recently proposed by Snijders (1999) will be employed in order to develop a parsimonious, reliable way of quantitative individual social capital representation.

Social Capital and the Governance of Forest Resources

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Given recent research linking forests and the global carbon budget, forest management has become a central political issue at the national and international levels. If forests are to play a central role in reducing the threat of global warming as well as other important environmental issues, government policy toward forest management becomes pivotal. To improve outcomes, contemporary forestry policies in developed and developing countries seek to shift some control over forest management to the community level. In a fundamental sense, such community level forestry policies seek to use the social capital of communities to help manage forests. But despite the centrality of social capital to community forestry plans, neither national governments nor international bodies have a very good understanding of the role played by social capital in forest management at the local level. Since communities through forest management could represent a solution to important environmental concerns, we argue that it is critical to understand the role played by social capital in the community-level management of forests. This paper seeks to evaluate the role of social capital in the local governance of forests. It does so by analyzing cross-national, panel data gathered at the community level in 70 sites representing 11 countries. We find that different measures of social capital have a

measurable effects on the condition of forests. Taken together, there is evidence that social capital matters to forest conditions, regardless of national government policy.

Measuring Social Capital by Network Capacity Indices

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The social capital of an organization or an individual can be conceptualized as embedded resources in a social network that provides an appropriate environment for the organization or individual. Various ways of measuring such resources by capacity indices are discussed. In particular, it is noted that some of the definitions of network capacity have similarities with common indices of network centrality. The measurement problem is conveniently approached by introducing a probabilistic network model which allows capacity to be predicted from estimates of the availability of resource links in the network. The model is also used to derive and compare theoretical capacity expressions for some simple network structures.

Social Capital in Everyday Life Some Information from a Large Scale Study

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This paper covers kin and non-kin contacts that households can muster to help perform routine chores and odd jobs around the home. Numerous researchers have studied support networks but restricted themselves to the poor, elderly and ethnic minorities. We focus on a fairly large sample representative of all households using the French Modes de Vie survey. The Modes de Vie survey, part of a more general research program, was a joint undertaking by the French national scientific research center (CNRS) and the national statistics bureau (INSEE) in 1988/89. All types of domestic production in 7,000 households were covered. The survey was performed with two or three interviews, depending on the amount and diversity of domestic production encountered. Households were asked to complete a household appliances & expenses diary to obtain an inventory of manufactured goods in the household, size of food reserves and consumer expenses. Each head of household and spouse were also given individual diaries and asked to record all their activities on a given day. The questionnaires targeted a description of the household and close relatives, support exchanges with outsiders, wife's professional asset value to her husband, description of the dwelling and share of furniture and other home improvements produced by the household. This yielded a picture of, among other things, who did what in the average French household when it came to food, housework, sewing, home repairs, gardening and childcare. The survey used a variant on standard name generators based on actual exchanges with a list of 18 types of informal help. Responses

were noted on grids plotting types of help listed in the rows against partner households in the columns. One grid served for exchanges between kin households while exchanges with non-kin households were recorded on a separate grid. The following data was enumerated for each partner household of each household surveyed: occupation of the head of household, household members, type of link to household surveyed and physical distance between the two households. Each exchange was noted as given, received or reciprocal. The issues behind our assessment of the data will be twofold. First we will assess the real asset value of support networks. Many researchers have extensively explored mutual support in the family but few compare exchanges among family members with those among friends and neighbors, for example. Yet nothing suggests non-kin support can be safely ignored and our results show the opposite. The nature and asset value of relations in everyday life differ between kin and non-kin. Second we will assess the validity of the "social capital" metaphor for this case. If, among other points, support networks are definitely a resource, we might expect households to accumulate this resource purposefully and will be checking to see if the data confirm this idea.

Inequality in Social Capital: Evidence from Urban China

Nan Lin

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A critical issue for social capital research is the extent to which inequality in social capital contributes to social inequality across social groups. This paper conceptualizes this issue by proposing the analysis of two processes from the capital perspective: capital deficit and return deficit. Capital deficit refers to the extent to which different social groups, for reasons of investment or opportunities, have come to possess differential quality or quantity of capital. Return deficit refers to the extent to which a given quality or quantity of capital generates differential returns for different social groups, due to differential mobilization strategies, agent efforts, or institutional responses. Since it is assumed that social inequality results from inequality in capital, then it becomes important to understand inequality in capital. These formulations help clarify the mechanisms by which inequality in various types of capital, including social capital, emerges for different social groups, and how it potentially affects social inequality among members between the groups. Data from urban China residents was used to explore these mechanisms for male and female attainment in the labor market. The results confirm that Chinese female workers suffer a capital deficit in social capital as well as human and institutional capital. Males show access to a greater number of occupational and political positions, to higher positions in hierarchies, and to a greater variety of positions. On the other hand, there is some evidence that females do not particularly suffer from a return deficit in social capital upon entering the state sector, gaining higher ranked positions, or having higher wages. One clue why females are able to bridge the gap is due to the nature of ties used to access social capital. Females seem to rely more on kin ties to access social capital than males. Since stronger ties (kin ties) enhance access to political social capital, due to the need for trust and commitment in such relations in China, some females, relying on their spouses and spouses of kin, might be able to better access political social

capital which help overcome their disadvantages in entering the state sector, and gaining higher ranked positions and better wages. The research agenda outlined and the empirical study explored in the present paper suggest that systematic empirical investigations equipped with specific measures and designs to flush out institutional and cultural variations can be fruitful in advancing understandings about capital inequality and social inequality for different social groups, on different social inequalities, and in different communities and societies.

Strategic Models of Network Formation

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Traditionally, sociologists have been inclined to the view that individual action is determined by social structure, while economists have tended to ignore the role of social structure altogether. In recent years, there has been interesting work, both by sociologists and economists, that attempts to bridge this difference in approach. An important part of this work has been the research on networks. Several researchers have documented the empirical relevance of social and economic networks. At the same time, theoretical models have highlighted their role in explaining phenomena such as stock market volatility, collective action, the career profiles of managers, and the diffusion of new products, technologies and conventions. These findings have led to an examination of the process of network formation. In this talk, I will discuss some strategic models of network formation.

An Essay on Social Capital: Looking for the Fire Behind the Smoke

Martin Paldam and Gert Tinggaard Svendsen*

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Social capital is defined as the density of trust. It is related to production by a key hypothesis: social capital determines how easily people work together. An easy-to-use proxy (Putnam's Instrument) is the density of voluntary organizations. Social capital might be a new production factor to be added to human and physical capital, or it might enter as a reduction in transaction or monitoring costs. Direct and indirect ways to measure social capital are discussed. The critical question is whether social capital can be changed. That is, can self-enforcement replace third party enforcement? We consider how much harm totalitarian regimes do to social capital when they expand their scope of area of control.

* forthcoming in: *European Journal of Political Economy*

Information and the Creation of Social Capital: An Experimental Study

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In this study we investigate experimentally the relation between the creation of social capital and helping behavior under different information conditions. In the experiment subjects play first a 2-person public good game and in a second stage a dictator game where one of the two partners in the public game plays the role of the dictator. The dictator has the possibility to distribute an amount of money between herself and her partner and to distribute the same amount between herself and a stranger. In place of giving money to the other subjects the dictator also has the possibility to punish the two non-dictators by taking money from them at costs that are larger than the money taken. In three different conditions we manipulate the information about the dictator game stage of the experiment. (i) In the 'no information' condition subjects know during the public good game only that there will be a second part of the experiment do, however, not know the actual content of this second part. (ii) In the 'partial information' condition subjects know already at the beginning of the public good game that thereafter a dictator game will be played. They do, however, not know who will be the dictator in the second part. (iii) In the 'full information' condition subjects know at the beginning of the public good game not only that there will be a dictator game thereafter but also who will be in the role of the dictator and who in the role of the non-dictator. With the help of these three treatments we are able to investigate if investment in social capital takes place and how it is related to the information people have about the possibility of needed help in the future. Furthermore, by looking at the relation between investment in social capital of a non-dictator and money received in the dictator game, it can be studied if investment in social capital actually pays.

Social Networks and Performance at Work:

An Attempt at Studying the Returns of Social Capital in Doing one's Job

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It is a well-established fact that a person's social network facilitates job attainment, but is it also productive while doing one's job? What kind of effects do networks at the workplace have on an individual's job performance? In this paper, we will describe effects of work-related networks of ties to colleagues and to superiors on job performance and attempt to explain these effects as a consequence of the instrumental value of social capital. We further look into the possible goal specificity of social capital, i.e., whether social capital is an all-purposive good or only productive in the attainment of a particular goal. This question can be inquired, inter alia, by studying the effects of the more private, not work-related part of someone's network relations on performance at work. We use data from our national representative survey on social networks in the Netherlands (the social survey of the networks of the Dutch, SSND), which started in

April 1999 and which will end in December 1999. We aim at a sample of 1000 respondents. At the moment 700 interviews have been completed, however in this paper, only data on 200 respondents are analyzed, since the rest is not coded yet. We describe the variation in ratings of own work performance of our respondents, with respect to performance quality and quantity. Next, we test our expectations on network influences on these self-ratings of performance.
