

# Measuring social capital: orthodoxies and continuing controversies

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Studying social capital is widely spread and the concept entered almost each and every field of the social sciences in the last decade. An overview of the available research strategies and empirical approaches of social capital is presented here. Surprisingly, the conceptual heterogeneity is much less reflected in operational and empirical heterogeneity than expected. The field is characterized by several orthodoxies, mainly related to the dominant position of polling methods and the use of straightforward survey questions. Available alternative approaches are limited to the use of official statistics as inverse indicators and to some experiments. The major pitfalls in empirical research on social capital are discussed. Urgently needed are multi-method and multi-level strategies in order to strengthen the role of empirical evidence in the debates on social capital, civil society, and citizenship.

## Introduction

In the last decade, the study of social capital has become a minor industry in the social sciences. The proponents of this approach claim all-embracing and important consequences: ‘... social capital makes us smarter, healthier, safer, richer, and better able to govern a just and stable democracy’ (Putnam 2000: 290). Studying social capital permits us to deal with a number of serious contemporary worries like the increase of social egoism and isolation, declining feelings of solidarity and community, deteriorating neighbourhoods, a rise in ‘minor’ forms of criminality, insufficient water supplies and undernutrition, and a decrease of social and political engagement.<sup>1</sup> A revival of civic engagement and citizenship seems to present a remedy for a number of social and political problems, and the only feasible way to combine the expectations of an emancipated and individualized citizenry with the requirements of democratic decision-making in mass societies.

In one of the very first publications on this theme Bourdieu (1986: 243) defined social capital as ‘... made up of social obligations (“connections”)’ and he underlined the fact that we are dealing with relations between individuals within specific groups or categories. Coleman developed a similar approach, but stressed the common aspects of social capital by their

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functions: ‘They all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure’ (1990: 302). In particular, the use of the social capital concept by Putnam (1993, 1995a, 1995b, 2000) has stimulated debate about its usefulness in the last few years. According to Putnam, social capital refers to ‘... features of social organization, such as trust, norms, and networks’ (1993: 167). In other words, social capital comprises both structural aspects (that is, connections or networks) as well as cultural aspects (that is, obligations, or social norms and values, and particularly trust).<sup>2</sup> Clearly working in the spirit of Tocqueville, it is usually presumed that membership of voluntary associations is of crucial importance for a minimum level of civic virtue, and that the strength of democracy rests on the existence of a wide variety of those associations. Consequently, a decrease of social capital is partly a result of—or even identical with—a decline in membership in many types of associations, clubs, groups, and organizations. It is especially this decline in the engagement of citizens with their communities that is seen as the cause of a number of serious problems, as well as the cause of the apparent impotence of democratic political systems to deal with these problems. Clearly, a ‘reciprocal relationship’ between social capital and democracy exists (Rosenblum 1998: 36–41, Sides 1999).

Social capital is expected to deal with a wide variety of social and political problems. ‘The more social capital a society has, the more efficient its transactions and the more productive it is’ (Bothwell 1997: 249). Such clear functionalist and problem-oriented approaches, however, result in a number of different conceptualizations and operationalizations, and open the door for many pitfalls and complications. In order to avoid the second traditional fallacy of functional analyses—to develop arguments with ‘*no empirical use of functionalist key terms*’ (Hempel 1965: 319; emphasis in original)—empirical research is indispensable. In this contribution, an overview of the main empirical approaches to measure social capital and the central controversies are presented.

### Orthodoxies

Social capital is defined by its functions, and available research designs and conceptualizations follow this approach. Widely used (implicit) definitions of capital as ‘accumulated wealth’ point to the fact that it can be invested in order to obtain some future advantage. As Bourdieu remarks, capital ‘... takes time to accumulate’ and it is characterized by ‘... a potential capacity to produce profits and to reproduce itself in identical or expanded form’ (1986: 241). Rephrased in the terminology of Rational Choice approaches, this means that investments of social capital are expected to result in a general decrease of transaction costs for all participants in some network because, in trustful relationships, less resources are required to guarantee compliance than in other relationships (Ripperger 1998, Esser 2000).<sup>3</sup>

Unfortunately, this common understanding of the main role and function of the concept as capital that can be invested has not led to consensus about its conceptualization. On the contrary, the bewildering

number of different aspects, characteristics, indicators, or dimensions of social capital makes a common understanding rather unlikely. It is clear that ‘... much of what is relevant to social capital is tacit and relational, defying easy measurement or codification’ (OECD 2001: 43). Obviously, this variety at the operational level can be seen as a direct consequence of the lack of conceptual clarity: ‘... where such a diversity of definition exists it is inevitable that an equivalent heterogeneity of measures is used’ (Schuller *et al.* 2000: 26). Yet, this conclusion might be too simple for the problems attached to the measurement of social capital.

Confronted with a situation of conceptual diversification and operational variety, two major strategies are available. The first one is to stress the need for an unambiguous and *a priori* definition of the concept and to develop operationalizations along the lines suggested by introductory courses in methodology. This approach is hardly fruitful in the field of social capital, where either diverse definitions are used or the level of abstraction remains so high that virtually no definite conclusions or implications for operationalizations can be deduced. Besides, for several researchers the lack of specific *a priori* definitions is part of the conceptualization of social capital itself. In case of apparent functional approaches, the exact form of social capital is irrelevant as long as it performs the functions presumed. For that reason authors like, for instance, Putnam (2000) rely on broad sets of indicators to measure social capital ranging from voting turnout, local bar associations, card and picnic parties, or blood donations by churchgoers. The exact status of these indicators as operationalizations is usually unclear and confusing statements are presented. For instance, Bourdieu refers to ‘... “connections”, which are only one manifestation among others of social capital’ (1993: 33), and Putnam writes about ‘altruism’ being ‘... an important diagnostic sign of social capital’ (2000: 117). Are ‘manifestations’ or ‘diagnostic signs’ to be considered as operationalizations of the concept of social capital? That would be a far too restrictive view, and a failure to notice the fact that social capital is defined by its functions and can be traced in very different ways in different situations. Therefore, for many authors the actual meaning of the concept cannot be fixed *a priori*, since it arises in definite situations only. This brings us to the second main strategy to deal with the measurement of social capital.

The lack of consensus about the exact and actual meaning of the concept means that we cannot simply discuss various operationalizations of social capital and assess their validity and reliability. In this situation it is more appropriate to use a ground-up approach and to search for shared characteristics of available applications of the concept. Fortunately, a closer look at the available empirical studies reveals more similarities and mutual understanding than expected. Roberts and Roche observe that ‘... a clear orthodoxy has emerged regarding methods of measurement’ of social capital (2001: 18). Virtually all these ‘orthodox’ approaches start with a distinction between structural and cultural aspects of social capital.<sup>4</sup> In the work of Bourdieu the structural aspects are evident by the emphasis on ‘connections’ (1993) as well as in his definition of social capital as ‘... the aggregate of the actual or potential resources which are linked to possession

of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition' (1986: 248). That this definition also includes cultural aspects is underlined by Bourdieu's references to social capital as '... made up of social obligations ("connections")' (1986: 243) and the fact that 'manners' may be included in social capital too (1986: 256). Clearly, in this approach the conceptualization of social capital comprises connections or networks (structural aspects) as well as norms, manners etc. (cultural aspects) related to these networks.

The influential works of Coleman and Putnam, too, are evidently based on the conceptualization of social capital as covering both structural and cultural aspects. Here the structural aspects are usually referred to as social networks, while the cultural aspects are divided in trust on the one hand and civic norms and values on the other. In particular, the structural aspects of social capital seem to be relevant because they facilitate the development of trust and norms of reciprocity—just as for Bourdieu 'connectedness' implies 'obligations'. In turn, the existence of mutual trust, norms of reciprocity, or obligations reduces the risk that a co-operative individual will be forced to pay the bill left behind by cheating partners.<sup>5</sup> Social capital, then, reduces the transaction costs for collaborating individuals and solves the dilemma of producing collective goods. In this way, the two aspects are not simply conceptualized as different features of social capital, but as highly (causally) interdependent characteristics.<sup>6</sup> For that reason, the distinction between structural and cultural components as well as the further distinction between trust on the one hand, and civic norms, values or obligations on the other, are easily discerned in operationalizations of social capital. Or to put it more strongly: available operationalizations rely on distinct indicators for networks, trust, and norms and values; no sophisticated measurement models integrating several aspects exist.<sup>7</sup> The dimensional analyses presented by Paxton (1999), Smith (1999), or by Narayan and Cassidy (2001) are among the rare examples of attempts to improve this situation by using sophisticated data reduction techniques.

Figure 1 summarizes the two aspects and three main components of social capital and some commonly used operationalizations and indicators. The dominant approaches are emphasized (grey areas) to underline that most operationalizations and indicators concentrate on networks and trust, whereas respectively measures of activities in voluntary associations and measures of personal and social trust are the most commonly used indicators.

Two further distinctions are required to figure out which conceptualization of social capital is actually used in empirical research: social capital can be conceived either as an aspect of relationships among individuals—that is, as a property of individuals and to be found in networks of individual citizens—or it can be conceptualized as a collective good, by definition available to each citizen.<sup>8</sup> As we have seen, for Bourdieu, social capital simply '... is the aggregate of the actual or potential resources' of members of a group (1986: 248). Other authors do not reject the idea of aggregation, but stress the fact that social capital is not an individual property. As Newton remarks: '... if social capital is anything, it is a societal

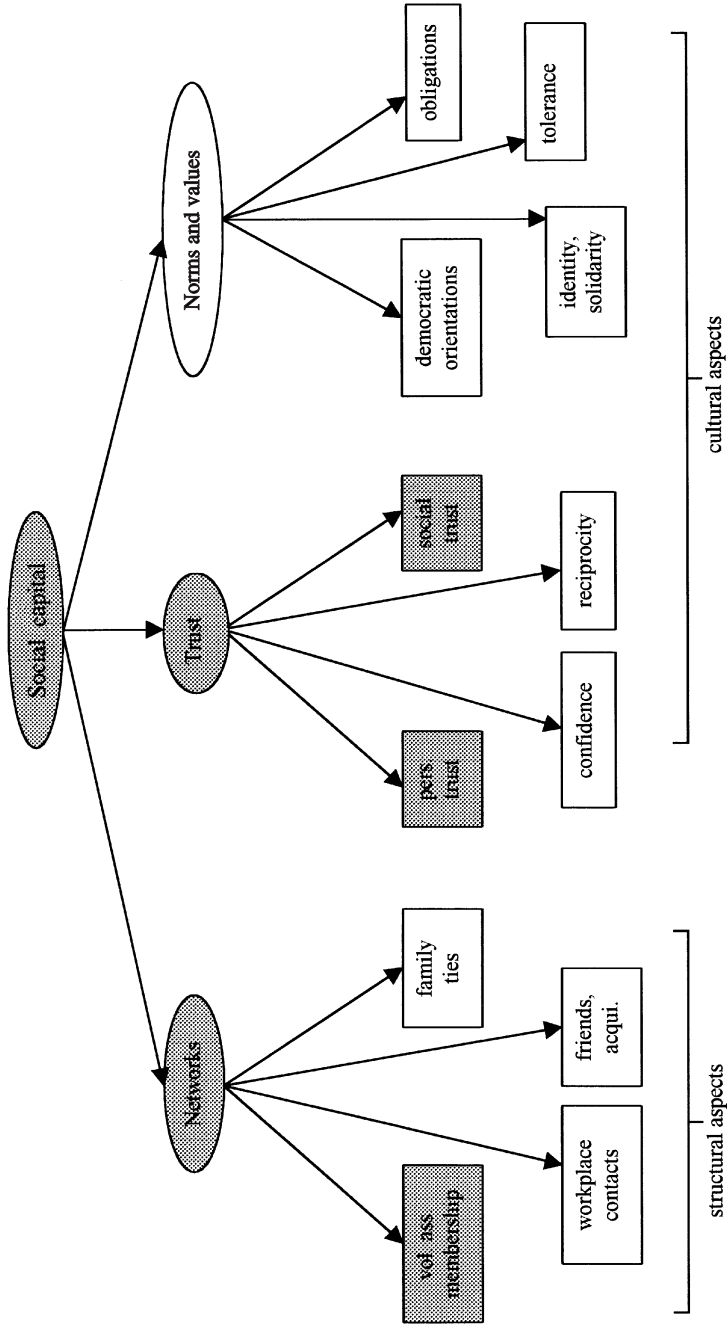


Figure 1. A measurement model of social capital.

not an individual property, and should be studied as a social or collective phenomenon, not at the individual level as if it were a property of isolated citizens' (2001: 207). Rahn *et al.* start with the statement that social capital is '... by definition a property of collectives' which is '... clearly distinct from portable human capital like the civic skills' (1999: 113).<sup>9</sup> Inkeles highlights this distinction with his remark that '... we must take a stand on a critical question, to wit: *whose capital is at issue: that of the individual or the community?*' (2000: 247, emphasis in original; cf. Paxton 1999: 93–95, Lin 2000: 786). Distinguishing between the two conceptualizations of social capital (individual vs collective property) is important because it implies the selection of quite different research strategies.

### Continuing controversies

Strategies in the empirical study of social capital can be distinguished on the basis of the specific aspects considered and on the location of the assets. Some obvious strategies follow from this distinction almost by definition. For instance, information about involvement in voluntary activities among particular parts of the population can be efficiently obtained by standard surveys, whereas the density of voluntary associations can be estimated on the basis of official statistics. In particular, the measurement of trust seems to be closely connected to the use of polling methods; it is difficult to '... conceive of any non-survey data source which might represent an adequate proxy for trust' (Roberts and Roche 2001: 22). Other researchers stress the function of social capital to promote social cohesion and consider the consequences of a lack of social co-operation as *inverse measures* of social capital. In that approach, for instance crime rates or low levels of economic growth are used as indicators for the absence of social capital (OECD 2001: 43–44).

The selection of a research strategy, however, is not simply determined by the preferred conceptualization of social capital and many options are open to the creative researcher. Obviously, the range of opportunities reflects the broad and abstract character of the concept of social capital as mainly defined by its functions and so it does not make sense to strive for a complete overview of all available strategies and operationalizations. Instead, the main indicators used in empirical research are systematically summarised in table 1. This overview provides for each main data collection method used in this area (survey, official statistics, observation, projects); the indicators used for various components (networks, trust, norms and values); and locations (individual vs collective) of social capital. As can be seen at a cursory glance, the selection of survey or polling methods dominates the field. For some aspects like norms and values this situation is self-evident and a lot of useful information can be collected with sophisticated polling and interview techniques. For connections and networks, it is usually difficult to observe actual relationships. Instead of developing other approaches focusing on the structural aspects of social capital, here many researchers seem to follow the old recommendation that asking people is always an easy substitute for one's own lack of ideas.

**Table 1. Major measures of social capital (inverse measures in italics).**

Location	Data collection method	Structural aspects	Trust/confidence	Cultural aspects
Individual feature	Surveys/polling	Networks/social contacts	Trust in other people	Norms of reciprocity
		Membership in vol. associations	Confidence in institutions	Obligations
		Volunteerism (Ego-centred) networks and social contacts	Ethics and corruption	Democratic attitudes
		Time budgets		Solidarity and identification
Collective feature	Surveys/polling	Number of children in the household		Togetherness
		Statistical indicators/ Official statistics	-	Subjective well-being
		Community studies/ observations	-	
		Projects/experiments	-	
Collective feature	Surveys/polling	Aggregate membership figures	Aggregate figures on trust in other people	Aggregate figures on norms of reciprocity
		Aggregate volunteerism figure	Aggregate figures on confidence in institutions	Aggregate figures on democratic attitudes
		Network characteristics (density etc.)		Aggregate figures on solidarity and identification
		Aggregate time budget figures		<i>Voting turnout</i>
		Social mobility		<i>Crime rates</i>
		Organizational activity and resources	Balance sheets of co-ops	<i>Legal protection</i>
		Volunteerism		
		Mass media and use of (new) technology		
		Voluntary associations		
		Networks and social contacts		
Community studies/ observations	Projects/experiments	-	Lost wallets with money	-
		-		

The broad and very general conceptualization of social capital, then, is matched by a variety of measurement strategies and indicators selected, but the diversity is not as large as one might expect on the basis of the diffuse and general character of the concept. From an empirical point of view this practise raises a number of nasty questions that go far beyond the conventional quality assessments of measures in terms of validity and reliability. These additional complications in the field of social capital research can be briefly summarized in the following way:

*The pitfall of using proxies from existing data sets*

Themes like social cohesion, engagement in networks, civic orientations, obligations, or norms of reciprocity have a long tradition in the social sciences and empirical studies in these areas existed long before the concept of social capital became fashionable in the 1990s. Beside, it takes quite some time before newly developed conceptualisations or innovative combinations of existing concepts are applied in large-scale empirical projects and appropriate data become available to the scientific community. Therefore, it is no surprise that many researchers rely on available data collected for other purposes or on data with proxy measures for the various components of social capital. A large part of the empirical studies published rely on the World Values Surveys—an international project collecting survey data in many countries since 1981.<sup>10</sup> In this situation, it cannot be expected that the measures used meet the theoretical specifications of the social capital concept and there is a strong temptation to rely on correlations instead of substantive arguments. This is especially clear for suggestions to use measures of trust as proxies for the much broader concept: ‘... trust maybe an acceptable proxy for social capital in the absence of a wider and more comprehensive set of indicators’ (OECD 2001: 45). Although acceptable and unavoidable as a general research strategy in a field where high-quality data only slowly become available, the risks in using proxies from existing data sets are self-evident and even can be ‘... theoretically naive in that a form of perverse logic operates whereby the available data define the interpretation of social capital’ (Roberts and Roche 2001: 19).

*The pitfall of using perceptions instead of observations*

Usually, phenomena like a lack of social cohesion, social engagement, or corruption are not observed directly and instead polls are used to obtain information on perceptions (cf. for corruption Paldam 2000: 647). In the field of social capital, this practice is copied rather uncritically. Usually, people are simply asked about their involvement in social networks and only very few studies try to focus on these networks before participants are interviewed. Exceptions include the organizational part of the CID-project.<sup>11</sup> In this project, information is collected on all voluntary associations in a specific community. In a second step, volunteers and members of selected associations are interviewed. In research on cultural aspects of social capital, researchers usually rely on polling strategies only



and additional methods (experiments, content analyses etc.) are rare or even ruled out explicitly (cf. Roberts and Roche 2001: 22). More creativity could result in substantial increases in the validity of the whole measurement strategy applied. Examples of these additional or alternative methods are the use of official statistics on Italian co-ops since 1883 as an indicator of social trust by Galassi (2001) or the experiments with lost money mentioned by Knack and Keefer (1997: 1257).

*The pitfall of using aggregate measures for collective phenomena*

If social capital is conceptualized as an individual feature—that might, of course, show its worth in social networks and in these networks only—straightforward research strategies are available. The same applies to conceptualizations of social capital of a group or society as the aggregate amount of individual social capital.<sup>12</sup> Dealing with collective phenomena, however, is much more complicated if they cannot be conceptualized as aggregated individual characteristics only. In some instances, it is possible to develop indicators for collective phenomena on the basis of individual indicators (like the density of a network). In other cases, this strategy is highly problematic (cf. van Deth 2001). Do aggregate survey data about individual trust really measure the amount of trust available as a collective good for all citizens? And what is measured if we simply count the number of voluntary association memberships of each respondent and compute the average membership in voluntary associations in a society? Collective phenomena require carefully developed research strategies that avoid the pitfalls of aggregating individual data.

*The pitfall of using inverse measures as proxies*

If social capital is defined by its functions, an evident lack of predicted consequences can be used as an indicator for the absence of social capital. Crime rates, voting turnout, the amount of blood donated, or even the number of lawyers can all be interpreted as indicators of (a lack of) social capital. This strategy might be an attractive solution for the problems of using aggregate data for collective phenomenon, but the dangers are substantial. These complications are inherent in every functional explanation: ‘... care is needed in using indicators of social dysfunction to measure changes in social capital since the full range of causes of social breakdown is not known (...) Moreover, such approaches risk confusing consequences with sources’ (OECD 2001: 43–44).

*The pitfall of using identical indicators in different setting*

The various aspects of social capital deal with abstract concepts that obtain their meaning within a specific context. This contextual dependency implies that it will be hard to develop standardized identical measures or

indicators. For instance, an evident decline of confidence in their political institutions among Americans in the last decades could be taken as an appropriate reaction of intelligent citizens to a long list of political scandals and obvious signs of political incompetence, and not as a sign of growing distrust among citizens. Therefore, assessing the validity of each measure of social capital in different settings (both cross-cultural and longitudinal) should be a standard practise among empirical researchers in this area. A sophisticated example of this approach is presented by Praxton who concludes that: ‘... this article provides evidence that the relationship between the indicators of social capital and the theoretical concept of social capital has not changed over time’ (1999: 122).

*The pitfall of using single indicators instead of composite measures*

Social capital is conceptualized as an open and multi-faceted idea with several components and aspects, and many research strategies pay tribute to this characterization. Nevertheless, the temptation to rely on simple indicators is widespread. Virtually all polling strategies use a simple question on membership of voluntary associations as a proxy for social engagement and convert the responses to this questions in an additive index, although this practise is patently incorrect for most purposes (cf. Morales 2001, or van Deth and Kreuter 1998). Similar objections can be raised against the use of a single question on trust in other people or against the use of several inverse measures like crime rates or voting turnout. Two improvements are required here. Firstly, multiple-item measurement should replace the use of single-item procedures in the measurement of specific components of social capital. As mentioned, the dimensional analyses presented by Paxton (1999), Smith (1999), or by Narayan and Cassidy (2001) are among the rare examples of attempts to improve this situation by using sophisticated data reduction techniques. Secondly, these specific components should be integrated in encompassing measurement models covering all aspects of the construct. Anheier’s (2001) first attempt to develop a ‘Global Civil Society Index’, the ‘CIVICUS Index on Civil Society’,<sup>13</sup> and the overview of ‘Indicators of a Healthy Civil Society’ by Bothwell (1997) are examples of work in progress here.

**The empirical prospects of social capital**

Currently, the study of social capital is widespread and the concept has entered almost each and every field of the social sciences in the last decade. This popularity is certainly partly caused by the open and usually undefined character of the concept and the ease with which its meaning can be stretched. The price of this virtually unlimited flexibility and adaptation, however, is paid at the operational level. Since social capital is defined by its functions, specific operationalizations require the definition of the actual circumstances for the use of the concept. Unlike the concept

itself as such, its particular operational meaning depends on the actual circumstances. An intelligent discussion of the pro and cons of different research strategies, then, is only possible when these circumstances are specified.

The main conclusion from the concise overview of the available empirical approaches of social capital presented here, is that its conceptual heterogeneity is less reflected in empirical heterogeneity than might be expected. The field seems to be characterized by several orthodoxies, mainly related to the dominant position of polling methods and the use of straightforward survey questions. Available alternative approaches are restricted to the use of official statistics as inverse indicators of social capital and some examples of using experiments or observations can be found. What is urgently needed, then, is the use of multi-method and multi-level strategies in order to strengthen the role of empirical evidence in debates on social capital and citizenship.

The problems and challenges of modern societies are too important to neglect the potential contribution of social capital. However, these problems and challenges are also too important to 'let a thousand flowers blossom' in empirical research. The open and evidently functionalist conceptualizations of social capital should be seen as positive characteristics and not as violations of methodological restrictions. In the end, the only relevant arguments for using a concept are its usefulness, fruitfulness, and efficiency in genuine empirical research. The social capital concept deserves to be appraised along these lines.

## Notes

1. The World Bank website on social capital mentions a number of these issues: [www.worldbank.org/poverty/scapital](http://www.worldbank.org/poverty/scapital)
2. See Haug (1997) or Portes (1998) for reviews of the different definitions and applications of the concept social capital, and Jackman and Miller (1998), Newton (1999), Schuller *et al.* (2000), Lin (2001), Edwards and Foley (2001), Harper (2001), and OECD (2001) for critical overviews of the use of the concept and various conceptualizations.
3. Since co-operation among individuals usually takes the form of a Prisoners' Dilemma, special measures are required to obtain some co-operation in the first place. Mutual trust overcomes this problem almost by definition and transforms the Prisoners' Dilemma into some co-operative game. See for discussions of especially the role of different conceptualizations of trust (or trustworthiness) Axelrod (1984), Seligman (1997), Hardin (1999), or Esser (2000). As usual, one can, of course, solve the whole problem by simply stating its truth: 'By the sheer act of bonding together, organizations build bonds between people, thus increasing trust and social capital' (Carino 2001: 71).
4. Paxton summarizes this distinction as 'objective associations between individuals' and 'a subjective type of tie' (1999: 93).
5. The question of where these feelings of trust, reciprocity, and obligations come from establishes a nice 'second-order dilemma'. Without an answer to this question, however, the whole argument about the presumed positive consequences of social capital appears to be rather superfluous.
6. In order to emphasize the importance of these interdependencies several authors stress specific aspects (for instance, networks or trust) and reject encompassing definitions of social capital. Other authors emphasize that some components or aspects are more important than other features: '... the deepest definition of social capital deals with trust' (Paldam 2000: 629–630), or 'We have two indicators of social capital—informal social interaction and number of children in the household' (Wilson and Musick 1997: 699).

7. See for instance Anheier (2001) for an attempt to develop a 'Global Civil Society Index'. Attempts like these, however, are still restricted to the early stage of listing sets of relevant but very heterogeneous indicators.
8. In order to distinguish these two variants clearly Esser (2000) proposes two different terms to replace social capital: 'Beziehungskapital' ('relational capital') and 'Systemkapital' ('system capital'). For the 'public-good aspect of social capital' see also the early remarks by Coleman (1990: 315–317). Notice that the distinction refers to the location of the social capital concept applied and not to the distinction between micro- and macro-approaches (cf. van Deth 2001).
9. However, in an earlier analysis they remark: 'Social capital is an aggregate concept that has its basis in individual behaviour, attitudes, and predispositions' (Brehm and Rahn 1997: 1000). The confusion is certainly not reduced with the statement that '... social capital manifests itself in individuals as a tight reciprocal relationship between levels of civic engagement and interpersonal trust' (Brehm and Rahn 1997: 1001).
10. See for information about sampling procedures, question wording etc. of the World Values Surveys: [www.isr-umich.edu](http://www.isr-umich.edu)
11. The Network 'Citizenship, Involvement, Democracy' (CID) is funded by the European Science Foundation. See: [www.mzes.uni-mannheim.de/projekte/CID](http://www.mzes.uni-mannheim.de/projekte/CID) for further information.
12. Bourdieu (1986) includes aggregation of individual properties in his definition of social capital. For an example of empirical analyses, see the country comparisons presented by Norris (2001) based on straightforward use of aggregate data to measure social capital.
13. See [www.civicus.org](http://www.civicus.org)

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