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The M–C–M′ cycle and social capital

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Abstract

Social capital has become a popular term over the past two decades amongst researchers, policy makers and practitioners from varied disciplines. This popularity, however, has resulted in a great deal of confusion over the nature and application of social capital in different contexts. This confusion has made it difficult to identify and measure social capital within the evaluation of specific social and health programmes, one of the aims of which may be to stimulate social capital. This paper identifies a theoretical model that seeks to capture the dynamic nature of social capital to assist in the development of research methods that will facilitate its measurement and exploration within such programmes. The model reported in the paper identifies the key components of social capital and expresses the relationship between those components in a dynamic system based on Marx's description of the process of capital (economic) exchanges expressed in the M–C–M′ cycle. The M–C–M′ cycle is the transformation of money (M) into commodities (C), and the change of commodities back again into money (M′) of altered value. The emphasis within the paper is on the capital element of the concept and its transactional nature with the aim of avoiding the pitfall of attributing social capital in relation to social behaviours in isolation of context and interaction. Importantly, the paper seeks to distinguish the central elements of social capital from some of the antecedent factors and outcomes often attributed to and confused with social capital adding to the problem of providing valid measurement. The model is presented as the basis for the measurement of social capital within a transactional process involving the investment of social resources in a cyclical process, which may result in net gains or losses. This process is described as the R–C–R′ cycle following Marx's model of economic capital, with the focus being on the transfer of social resources (R) rather than money (M). R represents an internal resource held by individuals, C the external resource or commodity they obtain from the network and the R′ the internal resource of altered value. The possibilities of the model in assisting in the measurement of social capital specifically in assessing formal networks are explored.

Keywords: Social capital; M–C–M′ cycle; Marx

Introduction

Social capital is an increasingly popular concept with both social theorists and policy makers. From a theoretical point of view social capital suggests an important link between social structure and human agency, a major preoccupation for those trying to understand relative health experiences (Gillies, 1997); and for policy makers it is regarded as a useful barometer of 'social health'. However, as this interest has gathered momentum, social capital has become an increasingly dense and contentious area of study (Coleman, 1988). Furthermore, the accumulation of literature on social capital has begun to obscure understanding of the concept, making it difficult to translate into policy and practice. This is compounded by a tendency of some theorists to over stretch the concept across events and contexts (Portes, 1998; Bourdieu, 1997; Portes & Landolt, 1996). Social capital has also been subject to keen critical scrutiny, being identified as both a 'falsely inflated' concept and as a 'new term for an old product' (Labonte, 1999). Despite such problems it is difficult to

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ignore social capital, as it remains an intuitively useful concept. However, it is necessary to transfer this interesting idea into empirically defendable and practice applicable theory.

Social capital is a multidimensional concept, each dimension contributing to the meaning of social capital although each alone is not able to capture fully the concept in its entirety. The main dimensions are commonly seen as:

- Trust (e.g., Kilpatrick, 2000; Kawachi, Kennedy, & Wilkinson, 1999; Leana & Van Buren III, 1999; Snijders, 1999; Collier, 1998; Cox, 1997; Putnam, 1993a, b; Coleman, 1988);
- Rules and norms governing social action, e.g., norms of reciprocity (Fukuyama, 1999; Collier, 1998; Portes & Sessenbrenner, 1993; Coleman, 1988);
- Types of social interaction (Snijders, 1999; Collier, 1998);
- Network resources (e.g., Kilpatrick, 2000; Snijders, 1999) and
- Other network characteristics (Hawe & Shiell, 2000; Kilpatrick, 2000; Astone, Nathanson, Schoen, & Kim, 1999; Krishna & Shrader, 1999; Burt, 1997; Putnam, 1995).

When developing a social capital framework to include these components, there are a number of fundamental challenges that must still be overcome if theory and practice are to evolve. These challenges include:

- the need to link the different components of social capital (and related concepts or outcomes) so as to augment the theoretical understanding of the concept (Leeder & Dominello, 1999);
- the need to resolve the contradictory use of social capital within social policy and to make the distinction between social capital as an entity as opposed to its consequences or antecedents (Woolcock, 1998) and
- the need to establish the explanatory potential of social capital through the development of effective (valid and reliable) and theoretically defendable measurement strategies.

Thus, it is contended that if these challenges are to be resolved, it is necessary to develop a model of the concept that connects firstly its components with each other and secondly these components with its outcomes and antecedents. Such a model should identify the concept within the complexity of the social world, as defined by dynamic relationships between its components, rather than what at present often appears to be a disparate collection of circumstantial variables.

While acknowledging that there is unlikely to be a consensus on the form of a social capital model, this paper makes the case for one potential analytic framework, ready for empirical testing, that attempts to captures the dynamic properties of the concept. The model has been derived from Marx's classical analysis of capital and is based on the M–C–M′ cycle outlined in *Das Kapital* (Marx, 1867). It is hoped that this model will help initiate the transformation of the concept of social capital from a list of social descriptors, to one with the potential to be an explanatory factor in the description and improvement of socially acquired outcomes, especially those associated within the broader understanding of individual, community and population level health.

Capital and social capital

It is the authors' opinion that much of the lack of clarity surrounding social capital, the accusations that the concept is merely another term for theory that already exists (e.g., social exchange theory, social support) and the debate of its positive and negative effects, come from a lack of understanding of the term capital. The 'capital' element makes the term unique in social theory; albeit the 'social' element that makes it unique in a discussion of theory surrounding capital. A better understanding of the capital element of social capital and its dynamic properties is required. It was this need that led to an examination of Marx's theoretical construction of capital.

What is capital in Marxist terms?

It is beyond the scope of this paper to provide a detailed account of capital and Marx. The task instead is to explain some of the principles that have been distilled from Marx's work to inform the model of social capital presented. For Marx, capital was primarily about economic relationships defined by the power or authority to control and regulate the means by which wealth and power are generated. It underpinned his major ideas on exploitation and alienation. One of the more discrete elements of Marx's discourse on capital was a formula used to describe the transformations of capital. This describes a dynamic process in capital generation whereby money (M) is converted into a commodity (C) that may be reconverted back into money (M′). It is the completion of this M–C–M′ cycle which, in part, gives rise to capital. If money (M) is not in circulation, in the case of the miser for example, then it cannot be considered capital. Similarly, if money has been transferred to a merchant to buy a commodity and the situation does not progress beyond this, then a simple transfer of money has occurred and again capital is not in evidence. In other words, there is a difference between investment in capital (the acquisition of capital resources) and consumption (the acquisition of a product with use-value not to be resold). The capitalist embarks on the M–C–M′ cycle not with the aim of procuring commodities that will be of use to him/her (commodities that have a use-value) but with the aim of selling the commodity and generating a profit that can be reinvested (Marx, 1867). Capital is, therefore, in a constantly changing state, with value being the active factor in the process, either increasing or decreasing as the M–C–M′ cycle is limitlessly repeated (Marx, 1867).

Capital is of two components; the original capital and the profit that investment of the capital has created (which once formed, itself turns into capital alongside initial capital). This process is echoed in Bourdieu's construction of capital (that includes social capital) which identifies the capacity of capital to produce profits and to reproduce itself in an identical or expanded form (Bourdieu, 1997). Astone et al. (1999) describe this profit as having "the characteristics that define a capital resource…(with)…potential input into further production" (p. 10). It should be noted that profit is not a prerequisite for capital as the quantity of money invested may exceed that recovered.[1]

Marx also described capital in terms of both the accumulated wealth present in the means of production (e.g., the tools and machinery used in production) as well as accumulated wealth available for the creation or purchase of the means of production (Jary & Jary, 1995). This accumulation means that capital has a tendency to persist according to Bourdieu, (1997) and Marx, (1867) who hence also place an emphasis on the importance of power relationships and more importantly power differentials in capital exchanges.

Reconstructing capital within social capital—"capital not as a metaphor"

In seeking an analytical framework that might assist in the understanding of social capital, the transfer of the M–C–M′ cycle to the social world is of some attraction. However, a direct metaphorical transfer of the attributes of the more tangible capitals such as economic (as in described by this cycle), physical and even human capital to the realm of the social has its limitations. Difficulties in the assignation of ownership; the appreciation of social capital with use; and the question of public good are examples (Hawe & Shiell, 2000). Thus to argue for such a direct transfer of processes would be flawed. What is suggested, however, is the need for a greater emphasis on capital within social capital using the M–C–M′ cycle as a theoretical foundation. While this is in part an artifice, ignoring in present discussion the socioeconomic relations coined in the term 'surplus value' that is part of Marx's discussions, it is felt that the use of the bare bones of the cycle still helps illuminate important dynamic properties and enhances the ability to both conceptualise and subsequently measure social capital. The socioeconomic relationships coined by surplus value remain interesting, however, and in some situations, the provider of help (the worker) may, in certain circumstances, be exploited by the person accessing this assistance (the social capitalist). Issues of free riding would fit into such debate. It should also be remembered that a lack of social capital is related to socioeconomic relations in a broader sense because, as with other capitals, social capital is a force that makes competition between different individuals or groups of alternative histories imperfect and ensures that all things are not 'equally possible or impossible' for all people (Bourdieu, 1997; Loury, 1995). For the moment, however, this side of Marxist writings on capital will be laid aside.

The M–C–M′ model in social capital

Integrating the M–C–M′ cycle into a model of social capital, even if only in terms of general principle, is challenging. A central aspect of this task is to firstly identify each constituent of the cycle in social terms (i.e. what is M, what is C and what is M′?) and then determine how these interrelate within the cycle. It is immediately evident that M (money) is inappropriate in the context of social phenomena. It is proposed, therefore, that the M part of the cycle for social capital should be supplanted with 'R' for *resources,* and thus the M–C–M′ becomes R–C–R′. The term resource is chosen because it is a particularly strong theme within the social capital literature. Bourdieu (1997) for example, refers to social capital in terms of "actual or potential resources" and Coleman (1988) writes of "a set of resources". In this section attention is directed to the meaning of R, C and R′ and then to the way they interact to produce social capital.

It is useful to begin by considering C, the commodity, as this will to some extent help determine and clarify the meaning of R and R′. Marx described the commodity as:

> "… an external object, a thing which through its qualities satisfies human needs of whatever kind. The nature of these needs, whether they arise from the stomach, or the imagination, makes no difference" (Marx, 1867, p. 125).

[1] For the purpose of simplicity in this article, only the instance of a positive surplus value will be considered, i.e., participation in the social capital cycles lead to positive returns on investment. It should be borne in mind, however, that this may not always be the case and that involvement of certain kinds may lead to a loss in value on the original investment.

The important point is that the commodity is an external entity, something individuals can produce, exchange or use but which is not an intrinsically accessible resource. Thus, the commodity is proposed to be an external resource within the context of the individual (i.e., from within his/her social network) from which s/he may benefit but over which s/he has no direct control or access, unless through interaction with another. Social support, a common theme within the social capital literature, is a good example of a commodity as it is a resource gained through some level of investment in or commitment to the social network from which it is forthcoming. Social support is not an internal resource but can only be externally acquired.

Social support is often applied in theory in a way that implies it is a surrogate term for the social capital construct itself. By placing the concept in the R–C–R′ framework, however, the lack of distinction between social capital and social support is clarified, as social support becomes the commodity sought when personal resources are invested in a particular network. In other words, social support is part of the social capital cycle but not the concept as a whole. Furthermore, analysis of social support alone, without taking into account the cyclical nature of the capital, is a procedure more in line with Marx's description of product consumption as opposed to the acquisition of capital resources that a definition of social capital should encompass.

In contrast to the external nature of C, R may be viewed as an internal object or resource. R may be drawn from different sources within the psyche of the individual (e.g., cognitive, relational, psychosocial or knowledge bases) that s/he must invest to allow access to the commodity. R is the prerequisite for the social exchange from which social capital is accessed. Such internal resources are seen as the fuel of the social capital cycle (see Cowley & Billings, 1999, for example) and might include factors such as trust in members of the network, knowledge of network resources (knowledge of who, when and where to go for help—Kilpatrick, 2000) and self-esteem (the inclination and confidence to enter a network). All are resources held within the individual that s/he will invest in a particular network to attain the commodity it may provide.

For the sake of discussion, trust is taken further as an example of an internal resource. Social interaction is the fulcrum of social capital and to participate in any social activity, even the most fleeting kind, requires some level of trust. At a superficial level, for example, when talking to a stranger at a bus stop about the weather, one assumes that that the stranger will reply in a civilised and even friendly manner. A minimal level, and a fragile type of trust, is hence invested in the interaction. In more enduring circumstances, a stronger, different form of trust may be required. Attendance of the first meeting of a support group, for example, draws on a greater, more resilient trust to be placed in the co-ordinators and other members of the group (for a more complete account of trust in social interactions see Leana & Van Buren III, 1999).

If R is invested in a network and C, the commodity, attained, there is an assumption that R might increase in value so as to form R′. In simple terms R′ is the end product of the cycle, R is invested and R + profit is returned. In the economic model, money is invested and money, hopefully of a greater quantity, is recovered. To be totally consistent with the original M–C–M′ cycle, R and R′ would have to be the same entity, one differing only in quantity, rather than substance, from the other. Therefore, trust invested in the group may be traced through the cycle and its augmentation analysed as the individual realises that members of the group are acting in a manner positive towards him/herself (e.g., offering support). It is possible, of course, to experience little or no return from investment of trust in a group and, as with economic model, those who do not achieve a reasonable return may find that their levels of trust in the group in fact diminishes. Social capital is, therefore, in general, less accessible to such individuals and does not begin to accumulate for them.

Literal transfer of the M–C–M′ cycle into the social world based on the complexity of social relations is neither intended nor desirable. Therefore, while it may be assumed that when involved in rational decision making[2] (of which not all human action is classifiable) most individuals act to secure some form of personal advantage, one would not necessarily always expect a like-for-like exchange in social interactions or that returns be immediate. In other words, what one gains in internal resources in return for investment in a network may be highly individual and R′ need not be the same as the resources invested to achieve an advantage. For example, trust may be invested in the network but self esteem and self-confidence may be the internal resources that increase in value as a result of the transaction. Furthermore, investment in a network may have benefits that are somewhat delayed. Consider, for example, the repayment of obligation (that could be seen as the commodity, C). If trust has been invested in another member(s) of the network sufficiently for an

[2] The research of which this theoretical framework is part, considered specifically the social capital accessible in formal networks exemplified by groups such as parent/toddler clubs, exercise groups and other similar voluntary and formal networks. It is assumed that participation in these groups is based on some of rational choice decision-making process although some respondents may be more conscious of this than others. It is acknowledged that there are other networks in which social capital is housed and in which rational choice is not paramount (e.g., the informal network of the family). Therefore, the analytical framework presented here may be less appropriate or require tailoring to these circumstances.

individual to offer assistance (behavioural demonstration of this trust) then the reciprocal return of the favour (C), and the associated increase in the trust of the individual in group members and improved faith in the norms of the community that govern this return of obligation (R′). The return of the favour and the increment in trust are often, however, at a much later time and circumstance when most needed by that person to whom an obligation has accrued.

Antecedents of R–C–R′

For the R–C–R′ framework to be meaningful it must be located within a social context. In so doing, it must accommodate and be differentiated from the wider antecedents (the factors that precede social capital formation) and consequences (the social behaviours) of the cycle.

Antecedents to the cycle revolve around the reasons individuals begin to participate in certain networks in the first place and can be immediately divided into those associated with participation based on rational choice and that which is not. For the sake of clarity and linked with the nature of the research in which the framework was created, antecedents to networks in which membership is based on free and conscious choice will predominate subsequent discussion. Readers are invited to mould the framework in the description of obligatory network membership (e.g., enforced attendance at a psychotherapy group) or membership of networks which are so informal that consciousness of being a member of the group is limited (e.g., friend and family networks).

As with the resources described within the R–C–R′ framework, antecedents may be located both internally (e.g., one's own disposition as well as a knowledge of the likely disposition of others in the network in which entry is being considered) and externally (e.g., social norms that encourage participation in certain networks and that dictate availability of appropriate networks) (Snijders, 1999; Putnam, 1993a; Coleman, 1988).

The characteristics of networks are important and factors such as the heterogeneity, the horizontal nature of relationships in the group, feelings of identity and a sense of common values (Portes & Sessenbrenner, 1993; Putnam, 1993b) may encourage/discourage individuals from initial investment. Therefore, a street gang member is likely to trust another member of his own gang and invest resources in helping that member if he is in trouble, or alternatively invest trust in the support offered by these members based on feelings of solidarity and identity (Portes & Sessenbrenner, 1993). Conversely, he is unlikely to invest in a member of another gang or the police from whom he is socially and culturally removed. Such contextual factors form an important part of the antecedents to R and entry into the R–C–R′ cycle.

Work by Eastis (1998) links the substantive and structural resources of choir groups (such as the type of musical repertoire and source of funding, respectively) is particularly useful to this discussion. Some features of the choir (e.g., the skills required of choir entrants and the nature of the advertisements seeking recruits) will influence whether an individual will join a particular form of choir, one might describe these features in terms of the R–C–R′ cycle, therefore, as antecedents to the cycle or initial network participation.

It is sometimes possible that antecedental features of the network, may also be factors that, once the individual is within the network, will be features that also facilitate sections of the R–C–R′ cycle, the successful attainment of the commodity, for example. Therefore, in Eastis' work on choirs, pressures to acquire external funding makes choir leaders more open in their recruitment strategies, a fact that encourages certain individuals to join up (hence an antecedent). The same feature is also part of the R–C transformation process as the need for external funding means that all members are encouraged to participate in fund raising activities, something which leads to their acquisition of civic skills (Eastis, 1998).

Another antecedent for the generation of social capital, which may be particularly pertinent to its measurement in individuals, is the cognitive assessment of the costs and the benefits associated with the potential investment (Hawe & Shiell, 2000; Astone et al., 1999). It is recognised that such rational choices are more commonly associated with more economic models and hence has limitations. Social capital, however, in the discussion in this paper is being refined to formal network participation in which rational choice is more likely to be operative and, therefore, such refinement is more appropriate. Possible costs/cons include the non-returnables of investment such as the time spent participating in a meals on wheels programme, the money spent on bus fare to attend a support group and the energy that such participation requires. One assumes that when deciding to participate in an interaction, the individual weighs up these costs and risks involved against the value of the commodity being bought into and the return expected on the initial investment. If costs are deemed too high then entry into the network will be decided against.

Consequences of the R–C–R′ cycle

The consequences of social capital, as with antecedents, are not part of the cycle but derive from it and may in fact feed back into it, as a contextual influence. Obtaining the commodity of social support, for example, may serve as a source of improved self-esteem and stress reduction. In relation to the latter, stress associated with not being able to achieve certain physical tasks, or not having information about how to act in certain circumstances, may be reduced, improving mental and physical well-being (Kawachi et al., 1999; Veenstra & Lomas, 1999).

Social capital generation, as with any form of capital generation, does not come without its downside. While the presence of capital may generate benefits for those that have access to and the ability to accumulate social capital, a contrast with those members of society that do not have such access provides one explanation for the continuation and reinforcement of social differentials. Thus, in using the R–C–R′ cycle within the analysis of social capital it will be important to map out consequential outcomes and determine to whom these outcomes do and do not fall. In particular, it would be interesting to examine cycles within different interactions, exploring issues of gain and exploitation.

The dynamic properties of the R–C–R′ cycle

Having described the possible constituents, antecedents and consequences of the R–C–R′ cycle it is also important to try and introduce the dynamics of social capital into the cycle, i.e., the processes whereby R is converted to C and C to R′. In other words, what defines the dashes between the letters—the transformation processes? Furthermore, the continuity of the R–C–R′ cycle needs to be considered, i.e. how is R′ reinvested? It is this latter reinvestment that is perhaps the most important dimension of the cycle as it signals sustainability and growth in whatever social activity being undertaken, and distinguishes consumption from capital accumulation.

Where the static components of the framework proposed here commonly appear in the social capital literature, the processes whereby each influences the other (the dashes of the cycle) are not commonly explored by authors. Collier (1998) and Eastis (1998) are two notable exceptions. Eastis, for example, describes the creation of norms and values and the process of organisational maintenance associated with the learning of civic skills. She also describes the structures or characteristics of the network that foster certain processes. These processes may be interpreted from the perspective of the present framework as those that link the initial investment of trust in the network (R), as demonstrated by initial registration and participation, and acquisition of certain commodities (C) of which learning certain civic skills is one. The network characteristics may be seen as essential influences on these processes. Learning civic skills are unlikely to have entered any rational decision-making process a new choir member may have made to join the choir, however, and this highlights the fact that the commodity acquired during the R–C–R′ may in fact not be the commodity that the individual had originally intended. This is something in line with the reported fungibility of the social capital concept (Astone et al., 1999; Coleman, 1988; Putnam, 1993b).

The importance of understanding social capital process is further exemplified by a case in which the social capital cycle is blocked through circumstances that inhibit these processes. It is possible that a support group may have the structure to encourage initial investment by a woman suffering domestic abuse. Despite her participation in the group, it may be unable to achieve its goals or the commodity that it is trying to sell due to other forces impeding the R–C process. For instance, the woman might register with a woman-only support group, an investment she is willing to make based on the homogeneous nature of the group (an antecedent to joining). However, a lack of male membership may not facilitate her learning to establish trust in men, other than her husband, if this is one of the goals of the group. The R–C transformation process has become blocked.

Collier (1998) is a second author that attempts to elucidate the mechanisms of social capital, processes that he sees as linking types of social interactions (one way and reciprocal) with their effects. Where he sees the effects of social interaction (the commodity) as the externalities of knowledge, opportunism and free-riding, the processes that link these commodities and the social interaction that precede them, are processes such as pooling (of skills), teaching, learning and copying, all processes which are felt in the present paper to be suitable candidates to fill the role of the transformation dash between R and C.

The literature on social capital processes of R–C is limited and so too is the understanding of those represented by the transformation of C to R′. If one accepts the R–C–R′ nature of capital, then it is essential to try and identify also how commodities such as social support convert back into R′ (C–R′), i.e. how obtaining the commodity successfully (or not) has a bearing on some internal resource of the individual. Processes, therefore, need to be identified that consolidate C and mediate the transformation of the commodity back into say trust (R′) of increased value. The consequences of having positively achieved a commodity may also have some influence on the successful C–R′ transformation. In other words, if the commodity is successfully achieved and the consequences of this are positive, then new beliefs or beliefs of increased strength may be created on the ability and willingness of another to provide help. Such beliefs may amalgamate in line with attitude theory (Fishbein & Ajzen, 1975) to create an improved attitude of trust in the network. The abused woman, attending a support group for the first time, for example, may hope, expect and trust to some degree that she will receive emotional support from her fellow members. If this support is received and her sense of well-being (as a consequence) is improved, her beliefs in the positive behaviours of members towards her are reinforced or increased, subsequently improving her reported trust of the group also.

Such positive affirmations when they occur may also trigger the reinvestment of R′, thus perpetuating the cycle. Increased trust, for example, may strengthen norms within the community which in turn leads to an increased likelihood of trust being reinvested by both the individual and others in the same network. This may be manifested in the form of several behaviours such as increased frequency and/or nature of involvement in the network, a process paramount for the sustainability of the cycle. It also justifies the use of the term "capital" in relation to the social capital phenomenon.

The above discussion is hypothetical at present, however, and empirical investigation of the nature of the R–C; C–R′ and reinvestment of R′ processes is strongly required.

Social interactions and user/giver pathways

A difficulty with social capital is its ability to be contorted to fit almost every social situation. Therefore, to prevent confusion, it is important to be as clear about the context, and hence the type and source of social capital under discussion. Two factors are seen as central to this: firstly, the type of social interaction and, secondly, whether a user or generator pathway of social capital is being described.

The form and process of the R–C–R′ cycle in generating social capital varies depending on the defining attributes of the social interaction from which it is derived. The nature of the social interaction, therefore, is an important consideration in framing and interpreting the R–C–R′ cycle. Two type of social interaction, *complementary* and *symmetrical*, are seen as being of particular importance (Snijders, 1999) (one-way and reciprocal are Collier's (1998) alternatives). In complementary interactions individual A receives help from individual(s) B, B having the capacity and resources to provide the help that A requires. Coleman (1988) exemplifies this type of interaction in his descriptions of the generation of obligation. In symmetrical interaction, on the other hand, the emphasis is on the collective, with a group of individuals working together co-operatively towards a common goal. A network of members of a community may work together to prevent the closure of an essential health service, for example (Veenstra, 2000). Therefore, when the R–C–R′ cycle is traced in a particular context, allowances must be made for the predominant social interaction taking place. The commodity, for example, will very likely change from one type of interaction to the other as will the group dynamics that generate the growth of trust and related behaviours.

Efforts to bring order to an understanding of social capital also requires that consideration be given as to whether the *creation* or conversely the *use* of social capital is being described. Thus a distinction needs to be made between the *generator* of social capital and the *user* thereof and separate R–C–R′ cycles developed for each instance. Firstly, therefore, an individual may be involved in the generation of social capital, social capital that may be exploited now or later by the same individual or others. In a complementary interaction, for example, individual B helps A, which generates an obligation (or a form of social capital) to be utilised later.[3] Similarly, a person may volunteer for charity work and in so doing contribute to the social capital available to others in need. In terms of symmetrical interaction, a group that has rallied together to lobby for better services, will eventually create resources of benefit to their children for whom these services are now improved. In all instances, social capital is being created and pathways of this type may be recognised as a *generator pathway*. Issues of capital ownership are relevant here as unlike economic capital, social capital generated may not accumulate for the generator of capital alone (or at all), but may also accumulate in the accounts of the community that surrounds him/her.

From a user's viewpoint, however, key issues revolve around the accessibility and utility of social capital generated. Gaining access to and utilising the social capital embodied in the interaction may be referred to as the *user pathway* of social capital and questions of "If and how do individuals call in and capitalise on the obligation owed to them?" and "If and how do children access the benefits generated for them by their parents?" are appropriate in analysing a user pathway.

Variations in the factors which inform the nature of R–C–R′ cycle will be observed when user and generator pathways are considered separately, especially if the permutations of combining these with the two types of social interaction are considered. While it is beyond the scope of this paper to give a detailed account of these variations, it is important to consider them when conducting an analysis using the R–C–R′ cycle.

Translating the R–C–R′ cycle to research and practice

The R–C–R′ framework was designed with the intention of facilitating an understanding of the

[3] The obligation alone is a component of social capital, rather than social capital in its entirety. When the obligation is repaid, it is the processes, and the R, C, Rs around this, that together form social capital.

complexity of social capital by theorists and especially practitioners. Many within the voluntary and health sectors, working with people in formal and informal networks, try to promote social inclusion of individuals within networks, having long been aware of the benefit that inclusion in networks can create. Although monitoring, within such groups, of standard health outcomes such as mortality or levels of participation is easily achieved, there is a need to assess the 'softer' outcomes of these networks, something of which social capital may be one approach. The theoretical complexity of social capital, however, makes its translation into practice difficult. It is hoped that use of the R–C–R′ analytic framework will be of assistance in such endeavours.

The R–C–R′ framework does not propose any new and improved indicator of social capital but instead presents a way in which existing indicators can be used considered concurrently to understand the impact of a given programme on the social capital generation. To date, social capital indicators such as trust, participation, social cohesion, social support and levels of crime or conflict are typically used but tend within instrumentation to be considered in isolation. It is necessary to interrelate these items to gain an impression of how they are experienced together, to constitute a theoretically based measurement of social capital. The R–C–R′ cycle promotes the production of measurement tools whose design and analysis are such that items/scales are observed interactively and concurrently. It also assists in making obvious what parts of social capital are not being measured by a single instrument or methodological approach. This may improve clarity in understanding the limitations of any evaluation and point to alternative means of measurement to fill evident gaps in understanding.

It is the opinion of the authors that, because social capital is context specific, that it would prove extremely difficult to create an instrument that measures all the social capital available to or generated by a particular respondent (or community). This ideal must include the social capital available from every network, formal and informal, of which s/he is a member. Considering the length of such an instrument, this is not practical. It is considered for any one instrument that the focus be of one specific network in which the components of the R–C–R′ cycle can be measured and assessed more thoroughly in relation to this context. There, of course, would be no harm in administering a series of separate instruments, some measuring social capital accessible through informal networks such as the family, alongside those measuring social capital accessible within a formal group. In fact the knowledge created by a comparison between the social capital gained from different networks, their interactions and the manner in which one may facilitate entry to the other, would be profound (see Putnam, 1993b for discussions of bridging and bonding capital).

A version of the R–C–R′ model, adapted to formal networks, is felt to be particularly useful in the evaluation of different social and health programmes, programmes where community based projects and groups are established to promote social inclusion and access to social capital. To illustrate the potential of the R–C–R′ cycle in evaluating such programmes and its use in guiding measurement, a typical project, part of a UK based health programme called the Health Action Zone (HAZ), will be used as an illustrative case.

The HAZ programme is based on a series of projects that aimed to improve health and reduce health inequalities in some of the most disadvantaged areas in the UK. Children and young people were an initial priority group for the programme and the creation of a dance class in one HAZ area, described by Fatchett (2000), was typical of this. The aim of this project was to improve young women's health by increasing their exposure to exercise and health related information. It was reported that one young woman benefited so greatly from the programme that she continued to participate in the group as a dancer and later as a trainer in these sessions. Not only had her participation in this group been sustained, therefore, but her level of involvement had increased also, as had her participation in other areas (school attendance, for example). How can this scenario be couched in social capital terms and how might the effect of the project on this individual, and others like her, be evaluated in terms of social capital? How can such assessment in social capital terms, inform social and health related policy?

Survey instrumentation can only be fully useful in the measurement of social capital using the R–C–R′ framework, if a longitudinal design is taken to the study. The reason for this is two-fold, firstly in trying to assess the change from R to R′ and secondly in the measurement of the reinvestment of R′. In the first instance, scales measuring the young woman's trust in the group over a period of study, establishing baseline levels of trust on registration (R) and subsequent levels of trust after exposure to group (R′) could be instigated. Trust is often a difficult concept to measure, however, based upon its abstraction and the fact that it may not always result in any action by the individual. Staggered behavioural measures of R and R′ taken as initial and increased levels of participation and nature of involvement might also be included. In other words, the young women may report a level of trust in her fellow members and may attend the dance class once a week as an average dancer, 3 months into the programme. If re-evaluated after a 6 month period she may report greater trust and have increased her participation in frequency (e.g., twice a week) and level (e.g., dance leader; socialising with group members outside of class time). The latter behavioural changes although indicating a behavioural measure of an increase in trust, importantly also represent reinvestment in the network and the social capital cycle.

Measurement of the commodity (C) needs to be incorporated in instrumentation also and is well exemplified by quantitative scales measuring social support (informational, emotional and practical), readily available in the literature (e.g., Tijhuis, Flap, Foets, & Groenewegen, 1995). A distinction should be drawn here between actual support received, which measures the commodity attained (e.g., How much support do you receive from the dance group?) and the knowledge of where to go for support (e.g., Who would you go to for help or Could you go to the dance class for support?). The latter measures knowledge resources about who, where and when to go for support (Kilpatrick, 2000). This, following the R–C–R′ framework, is more an internal resource held by the respondent rather than an external resource in the network or an actual measure of commodity.

Alternatively, the presence of the external resource of support in the network might be measured with scales seeking to ascertain the degree and circumstance to which each individual is prepared to help others in the group. This would measure the commodity of accessible support, of which aggregate figures (or figures utilised as a second level of analysis in statistical techniques such as multilevel modelling—Goldstein, 1987) give an indication of such network resources (e.g., I feel able to help to help others in the group or Others in the group are worth helping).

Support is chosen here as the commodity of interest based upon its popularity in the social capital literature but in reality the commodity assessed will depend on the objective of both the group and/or the evaluation. In instrumentation, the increase in health knowledge, in fitness and dance skills are three other external resources that respondents may have acquired as a result of being part of the group. These may equally be included in an instrument, with the R–C–R′ framework as a foundation, as a representation of the commodity dimension.

Depending on the focus of investigation, instrument designers might consider including the antecedents to the social capital cycle. These include those factors that may have been part of the young woman's decision-making process to join the dance group in the first place. Practical factors such as geographical and time location may be important, as would her perceptions of the group in terms of its composition (e.g., the age group; gender, ethnic origins), reputation and prior awareness of the group. Two important assumptions, however, are that participation in the network is voluntary, as it has been in this case scenario and that, linked to this, weighing up the pros and cons of membership was a rational process that she is able to recall. For several networks these may not be the case, however, and antecedents may be very different in nature to those suggested. Furthermore, direct measurement techniques such as a tick list of possible rationale, may not be successful, and more subtle methods required. Even if a person has been aware of his/her decision-making processes, s/he still needs to draw on memory to remember why s/he joined, reasons which s/he may confuse with those for remaining in the group (e.g., I thought it would be fun to join the group, as opposed to: I find the group fun, so I stay). These antecedents are then best measured perhaps at the beginning of entry to the project. Alternatively, assessing non-group members to find out why they *do not* attend the dance group may be more lucrative, although respondents are more difficult to recruit.

In a similar vein, consequences of obtaining the commodity may be included in measurement although again are not considered part of the cycle, e.g., the consequences of receiving support (reduction in stress, improves health status, increased feelings of wellbeing), of increased health knowledge (reduction in unplanned pregnancy, improved sexual health, improved health) and of further dance skills (better performance and fitness). These are the cycle's outcomes but may in fact influence the sustainability of the cycle. They may feed back into the cycle by improving the young woman's confidence and trust in the group (R′) and hence her future participation and involvement (reinvestment of R′). The consequences may also fall beyond the boundaries of the dance class and be manifested and measured in terms of increased attendance at school, increased trust in people of the local geographic community and increased participation in other local groups. With the latter in mind, quantitative instrumentation would do well to have two foci: the first would be the social capital accessible (and the consequences thereof) *within* the network. The second is the influence of social capital on the individual and others *outside* the boundaries of the network. Thus the improved trust and participation of the young woman in the dance group may improve her willingness to participate in networks within the wider community, the school community or some other voluntary organisation for example. Measurement, therefore, of trust and frequency of participation in groups in the wider geographic community of which she is part may shed some light on how the involvement of the young woman in the dance group may have influenced her access to social capital from sources outside of this network.

On this note, the issue of public good arises. Coleman reflects on the 'public good' nature of social capital in which the benefits accrued from the investment of the individual in social capital, for her/his own advantage, creates some positive experience for others in the same network or wider group of society (Coleman, 1990).

Within the context of programmes such as HAZ, with the aim that projects such as the dance class and other initiatives have a wider effect on the health and regeneration of the geographical communities in which they are situated, the issue of public good is central. The young woman's involvement in the dance class and her social capital cycle may have consequences not only for herself, but also for the social capital cycles of those around her, i.e., the cycles of other network members as well as those of individuals outside of the network, say in the local geographic community. Within the dance class, her display of increased trust in the group or more materially, her obvious success in acquiring dance skills, may encourage other members to invest and participate more fully. In other words, the individual's social capital cycle touches upon the social capital cycles of others. Similarly, if involvement in the class has encouraged her greater participation in networks outside of the class, then people in these external networks may benefit also.

One means of measuring these occurrences is by falling back on scales previously mentioned that measured an individual's willingness to help others in the group (as a measure of the external resource of the network). Two versions of the scale that measure the young woman's willingness to help others *in* the group on the one hand and help others *in the community* on the other, may be manipulated in such a way that over a period of study, changes in this willingness is assessed. There is an assumption here, however, that this willingness will translate eventually into some form of good to those surrounding her. It also does not address the context in which the public good effects of the young woman's social capital cycle is achieved as an *unintentional* by-product of her activities.

Quantitative instrumentation should not be constrained to the static components of the cycle exemplified by R, C, R′, antecedents and consequences as addressed above. It should also pay attention to the transformation processes of R to C; C to R′ and the reinvestment of R′. Being processes, quantitative methodology is somewhat limited and measurement will be enhanced if qualitative methods are also adopted. However, there are components of the processes that are analysable with quantitative instrumentation. Social cohesion, conflict within the group, group composition, commitment to and identity with the group (e.g., Coleman, 1988; Kawachi et al., 1999), for example, may be measured factors facilitating the processes that fill the gap between the initial investment of trust in the group and acquiring a particular commodity (R–C). The dancer may have invested and be participating in the class but the process of learning dance skills (see Collier (1998) and Eastis (1998) for further discussion of such processes) may be facilitated or inhibited by the composition of the group and the relationships between people within it. Similarly, even if the young woman has learnt skills as a result of being part the group, factors such as group conflicts or feelings of being an outsider may outweigh beliefs that may have contributed to an increase in trust in the group (C–R′). Such factors may also reduce her likely reinvestment and continuation with the group.

Quantitative instrumentation although useful cannot capture all the dimension of the R–C–R′ cycle processes. It can also not measure the type of social interaction taking place within a group. Groups in which either complementary or symmetrical interactions are predominant are likely to display R–C–R′ cycles substantially different to each other and, therefore, an awareness of this, through observation or interview, is essential. Therefore, the R–C–R′ framework is expected to be supportive of qualitative work. Typical interview questions listed are listed in Table 1, a starting point and example of how the R–C–R′ framework might

Table 1
Possible interview questions based on the R–C–R′ analytical framework

Questions	Part of R–C–R′ cycle addressed
What were your initial feelings towards the group?	R
Why did you feel this way?	Antecedents to R
What did you envisage to be the costs and what outweighed these?	Disadvantages of participation and other reasons for investment-antecedents to R
How have these initial feelings towards the group and its members changed and why?	R′ and C–R′
What did you expect to get out of the group?	C
Did you achieve this?	R–C
What did you get out of the group in reality?	C and consequences
What was it about the group that enabled you to achieve this?	R–C
Why did you continue to participate in the group and why did you decide to continue as a trainer?	Reinvestment of R′
How did attendance of the dance class make you feel about school?	Reinvestment of R but in an alternative organisation

be applied in an interview schedule assessing social capital.

Conclusion

This paper has presented a model of social capital, which emphasises capital elements of the concept. The model is based on the M–C–M′ cycle, described by Marx, which has been translated to provide a framework which can be used by researchers and policy makers to analyse or even just conceptualise social capital in different settings at either individual or aggregate levels. It is hoped that this model provides a greater degree of structure to this theory, enhancing its utility and providing a framework for future empirical testing.

The paper has located the various elements of the cycle within the domain of social theory and distinguished the antecedents and the consequences of that cycle.

It is appreciated, however, that this model may be criticised as falling into the trap of 'boundary maintenance or classificatory angst' (Edwards & Foley, 1998), although the model is not meant to be a dogmatic or indeed definitive. The model should be seen as a preliminary and somewhat tentative model which may help those evaluating social and health programmes gain a fuller understanding of social capital both in terms of processes and an outcomes. The model in other words aims to provide a "… useful deductive propositions that enable investigators to make provisional sense out of complex social realities" (Edwards & Foley, 1998).

Further criticism is anticipated that in the form of the accusation that no one model can incorporate all dimensions of the social capital concept. While the proposed model may suggest inclusivity, caution is expressed in interpreting it as such. The focus of the model at this stage is in relation to specific programmes in particular circumstances. The model may have utility as a conceptual framework in exploring the phenomenon of social capital more generically in wider circumstances but this needs further exploration. Empirical testing of the model by qualitative means is required to flesh out the framework to give it a sufficiently heuristic value that will well represent social capital in the future. There is a particular need to try and understand more about the dynamic properties of the social capital cycle.

Qualitative work is particularly essential to generate new and theoretically derived items from which scales measuring the R–C and C–R′ and reinvestment processes may be generated and the effects of the types of social interaction and alternative user/generator pathways be understood.

A clear model linking the components is essential for this contingent as much as it is for theorists and practitioners. If communities of location and interest that promote health outcomes and reduce health inequalities are to be encouraged by means of social capital and social inclusion, then a clear idea on what these actually mean must be available to policy makers to be made available to those at the grassroots of these initiatives. The latter at the present moment appear more confused by the actual meaning of the term than enlightened by its potential. The R–C–R′ cycle provides a clear (although arguably reductionist) way of doing this. If health and related outcomes can be identified as the external resources, commodity or consequence of the networks assessed, then methods that identify, assess and maximise the surrounding dynamics and R, R′ of social capital cycle may be addressed by project leaders and users. There is a need, however, for a model that will enable people to know what they are looking for in terms of social capital and the R–C–R′ cycle may be one way to help them find it.

This paper began by identifying some of the challenges, which have impeded the utility of social capital both theoretically and practically. It is hoped that with the proposed model some of those obstacles are now more surmountable. One of the most important challenges that this model has addressed is the tendency to understate the downside of the concept. This tendency has led to accusations of community blaming, problems which have resulted from poorly structured theory and the acontextual nature of some studies. In contrast, discussion here emphasises the importance of context. It is also hoped that discussion and the proposed model go someway toward justifying the use of social capital as a unique stand-alone term. It is not simply a 'new term for an old product'—but a new, multidimensional and measurable concept that offers a new combination of old ideas in a new and useful package.

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