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The Social Constitution of Capital

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Abstract

The “new economy” of intangible inputs and products, the inability of economic theorists to define capital, and the empirical failure of economic theories to accurately reflect behavior and account for the creation of long run competitive advantage is finally precipitating a crisis in capital theory (economic, human and social). Using a social constructivist approach, this paper develops an alternative that embeds capital in social and historical context and can account for creation, change and distribution of capital.

Keywords:

After almost fifty years of relative neglect, the concept of capital is once again at the forefront of the social science literature. Recent capital theorists are exploring how human skills and attributes (human capital) and social relationships (social capital) contribute to the creation of long run competitive advantage for individuals, organizations, communities and nations. While the concept of human capital has been quite easily understood and accepted, the same is not true of social capital.

Social capital theorists have been stymied by the difficulties of integrating across multiple theories with divergent assumptions. Social capital has been defined as: “network position” i.e. the structural relations among individuals (Burt, 1997a, 2000a); the resources that individuals in network positions possess (Lin, 2001; Lin, Cook, & Burt, 2001); the quality

of relations among people (Adler & Kwon, 2002; Coleman, 1988; Nahapiet & Ghoshal, 1998; Putnam, 2000); or the social agreements or rules people use to govern themselves (Ostrom, 1994). In addition to internal differences, social capital has been criticized by economists (Solow, 1997), sociologists (Portes, 1998) and organizational theorists (Baron & Hannan, 1994) who dispute whether it should be considered alongside other capital theories and suggest many conceptualizations are ambiguous and potentially tautological.

This paper argues that the challenges that have been encountered in developing social capital theories are in fact endemic to the concept of capital and compel us to fundamentally re-examine the concept. These challenges are a result of inappropriate attempts to treat capital as part of the natural world rather than part of the social world. In other words, capital has been reified. Capital theories have treated capital as a simple, material object. This paper argues that the resources or objects used in production may be material objects (e.g. equipment) but the object itself is not capital. Capital implies an object that produces a flow of value. The focal argument of this paper is that objects do not produce value, people do. Therefore the ontology of capital is embedded in the social process of constructing value associated with resources.

Most theorists unfamiliar with capital theories assume that the concept of capital is unproblematic. In fact, capital has never been adequately defined and capital theorists have never been able to agree on even the

framework for theorizing capital at a general level. Further, capital theories cannot account for the origin, change or collapse of capital. Empirically, economic theories cannot explain differential returns on similar assets or long run advantage of some economic actors. These conceptual and empirical short-comings suggest a crisis in capital theory of Kuhnian proportions. Therefore, instead of beginning from within the existing functionalist, materialist approach to capital, this paper begins with the question what is capital and how does it work?

Capital is defined in this paper as the productive purpose and associated value conferred on an object such as machinery (physical capital), a human skill or attribute (human capital) or social relations (social capital) by a situated collectivity in the context of a specific outcome. Further it is argued that any attempt to appropriate and deploy capital to generate desired outcomes is subject to a social process of recognition and legitimation. Constructing the relative value of capital is a process of negotiation and domination embedded in social relations and history.

Therefore, the question "what is capital" cannot be answered without embedding the answer in a specific social context. In order to answer this question we must abandon a functionalist paradigm and look instead to the social constructivist paradigms that separate the study of social phenomena from natural phenomena. Capital exists in a relational social and symbolic space and therefore cannot be conceptualized in an individualized or

atomized way. Capital exists in the relation between an object and its capacity to generate value and therefore is constituted by actors “in the moment” of production or exchange. This process of constituting capital manifests in reproduction or change of the institution of capital and socially constructed organizations or network structures.

The social constitution of capital occurs in a specific time and space in the context of a specific outcome. Each component of the production function is embedded in a social context and is constituted simultaneously. Therefore a shift in any of the factors of production, the specified outcome, the time/space location or actors involved will substantively affect the constitution of each of the other components. In other words, what is constructed as capital will be different if the specified outcome or context of production shifts. The relative value of the factors of production will be different at different times and in the presence of different actors.

While this conceptualization of capital is a radical departure from our intuitive definition of capital, it is a response to the failure of current capital theories to accurately reflect and predict economic behavior. This paper begins with a brief review of past theories of capital highlighting their philosophical assumptions. A review of recent extensions to capital theories (i.e. human and social) is provided. The paper then proceeds to look at the developments in economic sociology with an emphasis on the contribution that social constructivist paradigms (Berger & Luckmann, 1966; Bourdieu,

1985; Emirbayer, 1997; Giddens, 1984; Searle, 1995) can make to the development of a theoretically rigorous approach to capital. This paper suggests an approach to capital theory that can account for the origin, maintenance, change and decline of capital and that can address the empirical failure of economic theories of capital to account for long run competitive advantage.

EXTANT THEORIES OF CAPITAL

Theories of capital have only been around for about four hundred years. The concept of capital has been problematic since its inception. For the most part, capital theorists have avoided defining capital and have tended to focus on empirical investigation of how specific examples of capital perform. As Solow, a Nobel Laureate states in his theory of capital: "I believe that the easiest and safest route to a simple but rigorous view of the subject is to begin technocratically...[in this way] we can...dodge many embarrassing questions of definition and their ideological overtones" (Solow, 1963:15).

This section begins with a very brief overview of the main theoretical perspective on capital and its philosophical underpinnings. While the term "classical political economy" is used to refer to the work of both Smith and Marx, the philosophical assumptions of these schools is quite distinct. While Marx offered an important critique of the capital theories of his predecessors

that has much in common with social constructivist approaches, Marx's theoretical perspective has not substantially informed mainstream capital theorists. Therefore, "classical" capital theories flowing from similar philosophical assumptions will be the focus of this review in order to facilitate a contrast between generally accepted approaches to capital and the alternative developed in this paper.

Adam Smith and the Classical School

The concept of capital first emerged in the seventeenth and eighteenth century in what is now known as the classical school of political economy. Classical theorists began to describe production, exchange and distribution of goods, which until then had not been an important subject of study. Classical theorists erected the conceptual and philosophical foundations that continue to inform what has become an entire discipline of formal theories of economic behavior.

No formal definition of capital was offered as it was assumed that capital would be easily recognized. These early capital theorists essentially described an agrarian economy and capital was understood to be tools or equipment that could be used to produce goods. Capital is loosely defined as a "produced means of production" (Bliss, 1975). While capital can change form (e.g. from equipment to money that is earned from the sale of goods produced) its value is conserved across situations. The creation,

maintenance and destruction of capital are not addressed by capital theorists.

One of the key problems with the concept of capital is distinguishing capital from value. This problem has produced theories of capital in which capital is characterized conceptually as simply the rate of return (Solow, 1963), or passage of time (the Austrian School). Because the definition of capital assumes a link to the creation of value, theorists have been unable to distinguish between the two concepts at a general level of analysis. This problem disappears in most empirical settings because capital is clearly identifiable. Recently, however, the increasingly intangible nature of both inputs and products of production has presented a challenge to this approach. Despite the absence of formal definitions of capital, most capital theorists, including human and social capital theorists (see Adler and Kwon, 2002 discussion of the properties of capital) would agree with the definition recently offered by Solow : "Generically "capital" stands for a stock of produced or natural factors that can be expected to yield productive services for some time." (1997 : 26). Value is not explicitly referred to in this generic definition; however, it is implied. This conceptualization of capital is therefore tautological from a scientific standpoint. How can you identify capital? You must begin with the "evidence" of its existence, the outcome. The concept is therefore circular.

The philosophical underpinnings of classical theories of capital are consistent with Descartes and Hobbes. William Petty, the originator of classical theory was primarily concerned that: "concepts be "sensible" and "significant"...analytical concepts must signify in a precise manner, objects of sense perception." (Aspromougos, 1996 : 58) According to this approach capital is ontologically objective. It is assumed that theories can be verified by measurement and observation. This produces a classic Cartesian problem: theoretical categories are imposed on the "natural world" by the researcher, who inevitably apprehends the phenomenon in terms of the categories postulated.

Capital therefore, becomes real and natural rather than recognized as a label imposed by theorists (and eventually practitioners and the general public as well) on an object that has its own ontology. In essence the ontology of the researcher's category is conflated with the ontology of the object observed. In addition, capital is impossible to observe at the social level and therefore is observed at the individual level. Further it is assumed that aggregation of both form and value is not problematic. While capital and value are conceived at both the individual and the social level, empirically, the focus is on the individual level and assumptions of rationality of actors therefore become the main dynamic in theories of supply and demand. Distribution of capital has essentially been ignored empirically.

Marx offered a wide-ranging critique of this approach to capital that raised many of the same issues as the approach put forward in this paper. Interpretations of Marx's theory of capital however, are extremely divergent and cannot adequately be captured in this paper. Briefly, Marx argued: that the concept of capital as defined by classical theorists is a reification, that capital is embedded in social relations and history, that manifestations of capital are the outcome of social processes, that the "use value" and "exchange value" of capital must be separated, that conceptualizing capital "in general" as a simple aggregation of specific forms is problematic, that there is a link between individual experience and the structure capital assumes and finally, that these individual conceptions of capital are not necessarily the same and may conflict.

Debates regarding definitions and assumptions regarding capital have continued well into the twentieth century culminating with the "Cambridge" controversies of the sixties (Harcourt, 1969). Since then, the philosophical assumptions of classical capital theory have not been substantively revisited; however, the concept of capital has been extended to include first human capital and most recently social capital.

While human capital theories were seen as a major challenge to prevailing economic theories of capital, they are in fact quite consistent, philosophically with them. As Solow notes: "Within the past 30 years or so it has occurred to some economists that there was a close analogy between

tangible capital and what they call human capital...It is logically a stock; there is a certain amount of it in existence at any time." (Solow, 1997 :26).

The recent generation of capital theories shares most of the underlying assumptions of the classical theories, however, the objects that are posited as creators of value are intangible rather than tangible.

Social Capital

Since the term human capital was introduced into the discourse on capital, there has been a proliferation of capitals. Social capital however, has emerged as the most theoretically developed of the newer capitals and has inspired hundreds of theoretical and empirical articles in the past fifteen years. Despite the popularity of the concept, there has been endless debate among social capital theorists about what social capital is. The concept has also been criticized by theorists from across the social sciences as ambiguous, tautological and metaphorical rather than "real".

There are three main schools of thought in the current social capital literature: the structuralist or network view of social capital, the "content" view of social capital and the community view. The network view posits network position as social capital. The "content" view includes networks as social capital but also argues that the quality of relations rather than simply the structure of relations is important. Finally, political scientists consider social capital as the capacity of a community to work collectively.

While the various definitions and approaches to social capital are significantly different, they all share an underlying assumption of classical capital theories: capital is conceptualized as something “real”, i.e. subject to “laws of nature” that can be appropriated by rational actors rather than embedded in social processes characterized by situated agents. A brief review of social capital theories will highlight the respective definitions of capital and the implicit philosophical assumptions of each. Each of the three approaches is briefly described followed by a general discussion of the weaknesses implicit in extant theories of capital. Finally, the contributions of new economic sociology and philosophical approaches that move beyond materialist, functionalist approaches to capital will be integrated into a new approach to capital theory described in this paper.

Structural or network approach. Burt (1997) in his seminal article articulated his view that social capital is the value of one’s connections. According to Burt, one’s connections or social capital are a function of one’s position in a network. The value of connections is derived from the information and control benefits based on one’s network position. If an individual’s connections are diverse (i.e. not redundant) and not overly dependent on one connection (i.e. not constrained) then this individual is presented with many opportunities to advance his or her career. Burt argued that social capital represents a competitive advantage.

The “engine” in Burt’s model is self-interest and in some cases, opportunism. Organizational entrepreneurs broker information and linkages in ways that maximize their own returns. Burt’s model is grounded in the economics of supply and demand. Burt (1997) argued that the value of an individual’s social capital or connections is contingent on the number of others with similar connections. If one has exclusive or non-redundant connections then they are very valuable, while those with contacts that are common are of lower value.

Burt and researchers in this stream of social capital (Belliveau, O’Reilly, & Wade, 1996; Burt, 1997b, 1998, 1999, 2000a; Burt, 2000b; Lin, 1999; Lin et al., 2001) have developed a significant body of empirical results demonstrating the relationship between network position and speed of promotion and relative compensation. The contribution of Burt’s theory has been significant and provided much more theoretical depth to the idea that one’s connections can produce economic value. Burt’s focus is on determining the relative value of social capital; the model cannot account for the creation or destruction of social capital; social capital simply exists.

So, individuals or organizations that are “central” in their network or span boundaries are seen as having social capital while those who do not occupy these positions are seen as lacking social capital. This view implies that those who have insufficient social capital should go out and get some more by strategically selecting attractive network positions.

The assumptions that underlie this approach, like economic theories of capital are often tautological. It is equally likely that network positions are advantageous because of the implicit centrality of the role to the production context or the particular talents or other social relationships of the individual. In this case, the network position is a reflection of the individual's capacity to add "value" and the theory is tautological; people are central in networks because of their characteristics rather than network centrality conferring certain advantages. Another important concern, also found in economic theories of capital is the inability of the theory to explain the origin of social capital and engines for change.

This is not to suggest that network position is not capital or that network methodology is not valuable, however, the network approach does not resolve concerns regarding tautology and does not provide insight into the creation and destruction of capital. The role of networks and network position in the new approach to capital theory is elaborated below.

"Content" views of social capital. Sociologists and political scientists have tended to conceptualize social capital in terms of the quality rather than structure of relations that exist among specific people or members of a community. While the structural view of social capital represents a fairly coherent paradigm, the "content" views tend to vary widely although most are also predicated on the assumption of rational choice. Nahapiet and Ghoshal's three dimensions of social capital:

cognitive, relational and structural provide a succinct summary of the additional aspects of social structure that content theorists see as social capital (Nahapiet et al., 1998). Trust, norms of reciprocity and fairness as well as shared world views are all seen as important sources of social capital. While they are seen as rooted in social structure, content theorists see them as "capital" in their own right. The source of these forms of social capital is a history of interaction rather than simply the structure of one's network. I begin with a synopsis of Coleman's seminal view and briefly touch on Putnam and Ostrom's views. While there have been several other valuable "content" views of social capital (e.g. Adler et al., 2002; Leana & Van Buren, 1999; Sandefur & Laumann, 1998; Uzzi, 1997, 1999; Woolcock, 1998), these highlight some of the key concepts and issues with these theories.

Coleman's conception of social capital built on Granovetter's (1985) idea of embeddedness. He argued that economics had failed to recognize the importance of personal relationships in economic transactions. Coleman (1988) defines social capital as follows: "Social capital is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate the actions of actors-whether persons or corporate actors-within the structure." (1988:98). Coleman described social capital primarily as "changes in the relations among persons that facilitate action"

(1988:100). Coleman also suggested that social structures developed for one purpose can be appropriated by any member and used for other purposes.

The creation of social capital is the outcome or by-product of social structure. Coleman focused on the concept of closure. Communities or networks with a high degree of closure facilitate the creation of norms and effective sanctions as well as obligations and expectations. Closure was described as structures in which individuals see each other regularly, have expectations of each other, and develop norms about each other's behavior. Coleman also suggested that closure facilitated the creation of social capital because it enables the development of trust and reputation. Trust and reputation are dependent on the perceived effectiveness of collective sanctions.

Coleman's view was that the creation of social capital would be undermined by its public goods quality. For the most part, social structures that create social capital do not benefit an individual exclusively but all who are part of the structure. Since, to a large extent, benefits cannot be captured, social capital is a public good and, Coleman argued, individuals will under-invest in its creation. As a result Coleman argued that most social capital is not created through purposive action but as a by-product of other social activity.

Coleman's view of social capital is representative of "content" views of social capital. Putnam's arguments regarding social capital are similar but emphasize the community level of analysis. This approach is consistent with rational choice theory and assumes that rational actors act in a self-interested manner, however, that people are interdependent and therefore their self-interest is contingent to some extent on optimizing outcomes for the collectivity of which they are a member.

Coleman's and Putnam's views of social capital have been criticized for "vagueness" and their tautological flavor (Portes, 1998). Coleman does not explain the "cause" of these multiplex social structures. This would necessitate explaining why people have social relations. Social relations, while they may be sought for productive reasons, for the most part they exist for non-productive and often non-purposive reasons. Content theories of social capital do not try to explain the cause of social structure instead, the focus is on how social structure can generate productive outcomes.

The approach to capital articulated in this paper does not suggest that trust or the quality of relations that exist among people is unimportant in economic transactions. However, these approaches do not help us to develop a coherent theory of how social structures that simply exist "become" capital. The group or community is taken as a unitary, "real" group and therefore this approach implies that trust or norms are shared by

all members of the community or even, in a less strong version of this view, equally by at least two community members engaging in a transaction.

Despite these short-comings, this approach highlights an important insight: all social structures can have productive value. Content theorists have treated social structures as “real” and there is a sense that a social structure can either be social or productive but that these two “realities” cannot exist simultaneously. The embedded approach outlined in this paper proceeds on the assumption that the “reality” of capital is always overlaid on the “reality” inherent to the object.

Ostrom's theory of social capital. Ostrom (1990; 1994) and her colleagues have concluded that economic success is largely a function of the ability of communities to develop sustainable agreements for governing critical resources held in common e.g. rivers used for irrigation of crops, fisheries etc. Extending this idea then, Ostrom (1994) conceptualizes one form of social capital as the "constitutive rules" that enable effective governance of resources over the long term. She argues that both situational factors (e.g. the capacity to monitor behavior and to identify members of a group) and the form of the rules will affect the capacity of the collectivity to develop sustainable governance of their collective resources, and ultimately their economic success. These rules therefore constitute social capital as they facilitate coordination and cooperation for mutual benefit as Putnam(1995; 2000) argued.

Ostrom explicitly embraces rational actor assumptions in her theory of social capital. Her theory, like other theories of the "collective or public good" approaches social behavior from a functionalist standpoint. Ostrom suggests that the "rules" of governance that develop in certain communities have a social function. While this may indeed be true from a retrospective standpoint, it is unlikely that these agreements were constituted strategically. It is even less likely that the constitution of these rules occurred independent of social fabric of the community, in many ways, these rules are a reflection of and potentially a formal recognition of an individual

or group's current or historic control over some resources. This is not to say that "rules" are not important in the constitution of capital, however, it is important to integrate social structures and the context to appreciate their origin and role in creating value.

Despite the challenges that social capital theorists have faced from critics and the fundamental departure in this paper, each of these views of social capital makes a valuable contribution by incorporating social context into economic behavior.

Critics of social capital. While the potential value of social capital is widely recognized there are also many critics of the concept. Baron and Hannan (1994) complain that social capital is just one in a recent proliferation or "plethora of capitals". The authors go on to suggest that: "unless a characteristic is regarded as an investment for which there is a capital market and opportunity cost, we fail to see the value of calling it a type of capital and are therefore somewhat baffled that sociologists have begun referring to virtually every feature of social life as a form of capital." (1994:1124)

Portes (1998:21) criticized social capital theories as tautological. He argued that these theories of social capital are essentially portraits or descriptions of actors who have produced desirable economic outcomes. Critics argue that theories of social capital are tautological because they "sample" on the dependent variable. As the preceding overview argues this

is essentially the case; none of these theories of social capital can account for the creation or change in social capital for an individual, group or community.

Just as economic theories of capital have been characterized by inability to agree to a definition of capital, there has been relentless debate among social capital theorists about what social capital really is. Portes (1998) argued: "... the point is approaching at which social capital comes to be applied to so many events and in so many different contexts as to lose its distinct meaning." (1998:3).

There is an eerie sense of *déjà vu* in reading the social capital literature. Consistent with their economic forefathers, social capital theorists appear to be talking about fundamentally different "things" at multiple levels of analysis. While the debate between the Classical theorists proceeded from very distinct philosophical assumptions, even capital theorists from within the liberal tradition have suggested that capital is either: the rate of return (Solow), time (the Austrian school) and a produced means of production (Bliss, 1975). Social capital theorists engage in a similar debate that revolves around networks, trust, or rules.

Similarly the relationship between theory and empirical results has not been straightforward. While economic theorists have facilitated their approach to capital by arguing that accounting for the origin and change in capital is the problem of another discipline such as sociology (Bliss, 1975)

and by invoking ceter paribus principles in their theoretical framework, the relationship between theory and practice is acknowledged as a problem. Solow, the noted capital theorist argued that while capital may exist theoretically at a general level, it was virtually impossible to conceptualize generally and instead his approach focuses on trying to understand the operation of specific examples of capital. Instead of dismissing these recurrent theoretical and empirical problems, I take these difficulties as indicators that the whole approach to capital theory needs to be re-examined.

Social capital theories, despite the value they add, are largely functionalist, asocial depictions of the economic activities of individuals and groups. The social unit is reified and taken as real. Theorists are seeking generalizable "laws" that govern causal relations among variables. Each of these approaches to social capital suggests that social capital can be created and "managed" to competitive advantage.

The approach to capital articulated in this paper challenges these assumptions and argues that the ontology of the "resource" is distinct from its ontology as capital. What is missing in these theories is an understanding of the processes by which an innocuous social relationship or identity can be socially constructed as productive and valuable. By ignoring the embeddedness of capital in social context, social capital theorists have been unable to create theories that can separate social structures that

simply are, from those that are imbued with purpose and value in the context of generating a desirable outcome. The social structure or quality of relations does not (necessarily) change to make them productive, instead various relationships and structures are socially constructed as resources or capital that can be combined to produce valuable outcomes. Similarly, objects and skills that may or may not have been developed for a particular purpose can be harnessed and directed to the production of a desired outcome. All capital: economic, human and social, is socially constructed by actors when they deploy it in the achievement of purpose.

In summary, social capital theorists have made important contributions to theories of capital and the key components of the embedded theory of capital proposed in this paper have all been proposed by social capital theories. Rules or heuristics, network structure and individual network position and the quality of social relations are all important in the social constitution of all forms of capital. Instead of debating which of these constructs is really “social capital”, this paper suggests each has a role to play in the constitution of all forms of capital.

Economic sociology. The critique and extension of capital theory proposed in this paper is consistent with the concerns articulated by economic sociologists over the past two decades.

“Economic sociology seeks to understand economic phenomena in their social and cultural contexts, without falling into the trap of three fallacies common to economic analysis. The first fallacy is that the social realm is separate from the economic. Economic

sociologists argue that all economic activity is socially grounded and enabled and that no economic phenomenon can be assessed without the shared understandings (culture), institutional structures, symbols and networks of inter actor relationships that concretize and give it form." (Guillen, Collins, England, & Meyer, 2002: 6).

The second fallacy is that actors' motives or utility functions are exogenously determined. As the editors note: "Economics sociologists also recognize that social forces often affect reasoning in ways that defy a strict rationality assumption" (Guillen et al., 2002: 7). A final key theoretical difference is that economic sociologists reject the idea that the aggregation of individual-level behavior is straight-forward and unproblematic." (Guillen et al., 2002: 7).

The embedded theory of capital shares each of these concerns: methodological individualism, rational actor and the contextualization of economic behavior. However, this approach also challenges assumptions of materiality inherent in economic and many sociological theories. Consistent with social constructivist theories this approach argues that individual agents construct capital, which manifests as social structures. This posits a much different relationship among theoretical constructs whereby nothing is assumed: not the social unit, the objectives, the participants or the outcomes. Further, this approach argues that capital must be considered in its two distinct senses: as an element in the production process, i.e. a

“[socially] produced means of production” as well as a social relation or structure that confers or recognizes a property right.

Finally, all theories of capital have implicitly treated capital as a “thing” with an inherent value that is conserved across situations despite changes in form. All theorists have argued that the form of capital will vary, however, each, including Marx, argues that capital is something like energy-it is real and its volume and value is conserved despite shifting forms. This assumption has produced volumes of macro-economic theory that attempts to account for every unit of capital across all economic activity globally. The consistent failure to successfully account for the preservation of value across time and space has been seen as a measurement rather than a conceptual problem. Approaching capital as a social construction makes it clear that capital is not “real” in the way energy is; capital is a social rather than a “brute” fact using Searle’s terminology (Searle, 1995).

AN EMBEDDED THEORY OF CAPITAL

This paper argues that capital is a word. According to the Oxford English Dictionary, this word was introduced about four hundred years ago in an effort to systematically understand economic behavior (1991). The term was embedded in a scientific tradition and conceptualized as part of the natural world. Capital was seen as ontologically and epistemologically objective and it was assumed that appropriate measurement would yield

observations that accurately represented "reality". The objective of theory was to identify laws that explained the performance of capital. This intellectual heritage has persisted in modern day economics.

The approach to capital articulated in this paper breaks with these assumptions. Consistent with the "linguistic turn" in recent social theory (Berger et al., 1966; Bourdieu, 1985; Giddens, 1984; Searle, 1995) the meaning of capital is not seen as objective. Instead, the meaning of capital is located in the subjective understandings of people situated in a particular context. These inter subjective understandings impose a meaning on the term that is particular to that context rather than general. The continuous reproduction of this meaning occurs through human interaction and therefore is not identical from one moment to the next. As capital has no existence separate from the social context in which it is defined, the form and relative value of particular capitals will be specific and efforts to aggregate these "capitals" across time-space and context is illogical.

This position does not deny that machines such as punch presses or computing equipment have an objective ontological existence. Instead, this approach argues that the ontology of the object regarded as capital within a particular context is separate from its ontology as capital. While the object (used hereafter to refer to skills and social structures as well) has its own objective or subjective ontology, epistemologically it is apprehended as objective in that it is taken for granted for the most part by knowledgeable

actors engaging in everyday activity. What constitutes capital in a particular context becomes institutionalized over time and develops a facticity that produces the impression among people that it is just as real, if not more so, than the natural world.

The fact that capital had no “reality” prior to its introduction into use by classical economists is no longer appreciated and current work seeks an empirical confirmation of capital’s existence and general laws to explain its impact on economic behavior. For actors engaged in everyday activity the concept of capital is totally taken for granted and its general or academic meaning is irrelevant. The form and value of capital is inscribed in the institutional context where it is defined and changes in form or value are also taken for granted as the “reality” of economics.

The importance of appreciating that capital is socially constructed lies in clarifying the role it plays in the economic behavior of agents and in implications for creation, maintenance, distribution and changes in the form or value. Approaching capital as socially constructed in no way diminishes the “real” impact it has on the relative wealth and advantages of economic actors.

This approach suggests that the socially produced inter subjective definition of collective economic activity i.e. business model or approach to production implicitly creates the resources that can be constructed as capital. Further, it is suggested that the negotiation of a business model is a

relational social process embedded in a social context in which actors consciously or unconsciously consider implicit relative distributions of capital. Embeddedness in existing social structures includes the multiplicity of social structures that simultaneously exist among various actors and therefore includes affective relations and processes as well as cognitive and rational ones. Taken for granted understandings of the appropriate way to approach production or exchange are embedded in the history and social relations in an institutional field. If efficiency enters into the negotiation it is as a rhetorical device to justify the correspondence of practices to institutional heuristics.

In contrast to the current economic theories of capital that take the business model, means of production and therefore the form and value of capital for granted, this approach suggests that this is a dialectical process that is negotiated and may or may not be contested. In other words, there is more than one way to skin a cat. The "business model" for producing cars or distributing television services is in no way obvious. There are many, although not unlimited, alternative approaches. Economic theories proceed on the assumption that the most "efficient" approach will be selected among alternatives despite abundant evidence to the contrary. The form and value of capital therefore is already defined and the need to grapple with general definitions can be avoided in favor of the technocratic approach advocated by Solow.

The approach articulated in this paper assumes that production and exchange functions are social (with the exception of the iconic Robinson Crusoe example common in economic theories). Participants in productive or exchange activities must therefore have some minimally defined parameters or heuristics that outline a mutually understood “reality” or approach to the activity. These inter subjective meanings may be more or less institutionalized. This collectively understood business model and/or production model implies which resources will have value in the context and which will not. Again, while the alternatives are somewhat constrained by a logical functional link (i.e. use value or inherent function) to producing the desired outcome, what is constituted as a resource or means of production is not self-evident. While this “agreed” business model constitutes a logic that enables the process of production and exchange to occur, the precise form or value of specific resources must also be mutually defined in a social process that may or may not link value to cost of production.

This mutually defined reality then manifests as social structures such as interaction patterns among people, the form of organization and superstructures such as laws and bylaws of governance structures. The objects that are constructed as capital may already exist and their role as capital is therefore superimposed on the existing identity of the object and co-exists with the previous identity. Alternately, the objects and the social process of governance or control of them may be constructed in response to

the business model negotiated. The process of socially constituting capital (i.e. the collective imposition of the function of production of value) on resources and the relationship between the resource and the social structures it is embedded in as well as those it creates are outlined in Figure 1. This model assumes that the manifestation or objectification of these institutional processes in social structures can constitute real advantages that subsequently impact the social system from which they emanate.

Insert Figure 1 about here

In contrast to functionalist approaches to capital, failures to successfully constitute capital are of equal interest. For every situation in which “agreements” are reached, capital and value can be created. In many situations agreements are not achieved. Economic activity is a significant achievement that should not be taken for granted. This approach eschews the implicit conservation assumptions of extant theories of capital.

A further assumption of both Classical and Marxist theories is that capital is simply embodied labor. This assumption logically implies the theoretical conundrum that faces all macroeconomists: the need to account for the preservation of capital as it changes form from wages to price and total production value. The persistent inability to empirically support this hypothesis has been seen as a measurement rather than theoretical

problem. This assumption is preserved in the theory of capital articulated by Bourdieu whose theory is otherwise very consistent with the philosophical assumptions of this approach.

While this approach breaks in fundamental ways with extant theories of capital, it is very consistent with the recent theories that link agency and structure in non-functionalist ways. A brief overview of the key assumptions of these theories is outlined next.

Philosophical assumptions. The theory of capital outlined above is nested in the philosophical assumptions of what is known as “social constructivist”(Berger et al., 1966; Searle, 1995), “structuration” (Giddens, 1984), “practical reason” (Bourdieu, 1998), or “relational” (Emirbayer, 1997) theories emanating from sociology. While each approach is currently identified with a particular theorist, this body of theory has a broadly similar set of underlying assumptions although the specific terminology differs among theorists.

This review begins with the key distinction that is the foundation of this approach: that facts in the natural world and social world are associated with different paradigms. After clarifying this distinction using Searle’s work, the relationship between actors and social structures articulated by Berger and Luckmann, Giddens and Barley and Tolbert will be summarized. This discussion will illuminate the proposed relationship between the institution of capital and its enactment or constitution in social

interactions and objectification in social structures such as organizations or networks.

Searle's social and institutional facts. The approach proposed in this paper is predicated on the assumption that capital is a "social fact" and in some cases an "institutional fact" (Searle, 1995). In other words, it is socially constructed by the actors in a particular context. Searle contrasts "brute" facts that are part of the natural world with social and institutional facts that constitute social reality.

Briefly, a social fact refers to something with or without an inherent or natural function, but something to which a function is assigned and agreed to by actors within a particular context. The function is conferred by a collective rather than an individual and it is used to manage interdependencies. Interdependencies are not "voluntary" and cannot be reduced to self-interest, the interest of the collectivity will affect individuals by definition, collectively. The embedded theory of capital postulates that production and exchange are collective contexts as one does not produce or exchange goods individually, these activities are by definition collective.

It is in this collective context that objects with or without an inherent function become resources or "factors of production". The implicit agreement regarding the product and means of production may or may not be replicated exactly in each production event or among different people performing the same event. For the purposes of production however, the

“factors of production” assume a new function that may or may not be predicated on their inherent function. For example, if one is producing a car, the punch presses that produce car parts and the laborer that assembles the parts acquire functions as a “factors of production” that produce cars. In the case of the punch press, the factor of production was explicitly produced for car production. As the car is produced in anticipation of its sale for money it is a valuable product and the factors of production or capital therefore become imbued with value as well. To the extent that the laborer has been specifically trained or acquired skills for the purposes of car production the skill can similarly be conceptualized as human capital.

The punch press is ontologically objective; however its function as a “factor of production” is a socially imposed one that is ontologically subjective (i.e. resides in people’s perceptions and understandings rather than the physical world). The skill of the laborer however, is both ontologically subjective and is a social fact integrally connected with the production of cars. As Searle argues, the imposition of function may be casual or this imposition may be a more formal conferral of status on a particular object. The extent to which this production process endures over time is one factor that may give a simple function an institutionalized status formally recognized as capital. Alternately, when a banker offers a line of credit using the punch press as collateral the punch press’ function as capital has been institutionalized and becomes an institutional fact (a special case of

a social fact). The punch press may similarly achieve the role of institutional fact when a manager with an M.B.A. begins to refer to it as a factor of production. The laborer's skill in producing cars may become institutionalized when his or her skill is recognized with a certificate of expertise.

Marx's distinction between use and exchange value is relevant as some objects, skills or relations will be functionally qualified as candidates for construction as capital (i.e. they have inherent "use value") while others will be excluded by the absence of a functional link to production. The process, however, of selecting among alternatives and thereby constituting the resources that will become capital in the context is posited to be a social and institutional one, not an exclusively rational one.

The value of the punch press or the laborers' time must be constituted by participants in the institutional context. This conferral of value is nested in the institutional context of production and therefore will be constructed in reference to "accepted" heuristics. If labor is always seen as more valuable than other resources then this will direct the imposition of value attributed to each factor of production. If the linking of cost and revenue is an accepted heuristic then this formula may produce different values for labor and punch presses. The key point is that there is no "real" value for the object that has been constructed as a factor of production. Equally important is the fact that there are likely to be more than one way of constructing value for the

factor of production and this process is therefore likely to be a dialectical one characterized by power and domination.

The system of creating value however, is constitutive, parties cannot engage in exchange in the absence of a system of broadly defined "rules" or institutional heuristics that define X functions as Y in context C. A system of value is "constitutive" in that the very activity of exchange is predicated on its existence. Which objects are imbued with value and what the relative values of various objects are is contextually defined. However, the existence of a system of value creates the possibility of exchange and the constitution of capital in production. Without a link to exchange, it is impossible to imagine a social division of labor and therefore collective production of goods and services.

While there may be times when an "institutional fact" is consciously considered, for the most part it is simply taken for granted and reinforced through constant interaction. This paper argues that all capital arises from collectively defined heuristics and is embedded in social relations. These institutional heuristics therefore manifest as social structure and distribution of other representations of value (e.g. money). The process of relating agency and structure is discussed in more depth below.

Searle distinguishes between subjective and objective in epistemic as well as ontological terms. All functional judgements are "observer-relative" features of an entity. "Observer-relative features are always created by

intrinsic mental phenomena of the ...observer of the object in question. Those mental phenomena are, like all mental phenomena, ontologically subjective and the observer relative features inherit that ontological subjectivity. But...this does not prevent claims about observer relative features from being epistemically objective." (1995:13).

Capital, viewed from this paradigm is a process rather than an entity. As Searle argues: "Unconsciously, we have throughout this discussion been acknowledging this point by our talk of institutional *facts* rather than institutional *objects*. Such material objects as are involved in institutional reality, e.g., bits of paper, are objects like any others, but the imposition of status functions on these objects creates a level of description of the object where it is an institutional object, e.g. a twenty dollar bill. The object is no different; rather, a new status with an accompanying function has been assigned to an old object (or a new object has been created solely for the purpose of serving the new status-function), but the function is manifested only in actual transactions; hence our interest is not in the object but in the processes and events where the functions are manifested. (1995:57)

In summary then, this paper begins from a very different philosophical assumption than other theories of capital. This assumption is that capital is a process rather than an object. Further, its ontology as capital is a subjectively defined function distinct from its objective or subjective ontology as an object, skill or relationship. For the most part, these social

facts are institutionalized and therefore are apprehended objectively by agents despite their inherent subjectivity. Proceeding from the assumption that capital is defined collectively in a social context shifts the focus of study from an asocial observation of material objects under ceter paribus assumptions. Instead the social context, the time/space of the period of interest, the identity of actors, history and the perceptions of participants in the process assume priority.

The Duality of Structure. The final conceptual step in articulating a socially constituted approach to capital is clarifying how social construction relates to structure. In functionalist, materialist approaches to capital this step is unnecessary as capital is given and it is assumed that one can easily identify capital in the material world. However, if one wants to extend capital into an economy characterized by “goods” and factors of production that are not tangible and “business models” or production models that are not taken for granted then the conceptual link between social construction and structure must be explicitly developed.

In this paper it is assumed that there are two separate ontological existences for material objects and their socially constructed identity as capital. These are parallel realities related simply by “use value” as Marx described or inherent function according to Searle. However, to relate the structure or quality of social relations and their function as capital requires

more conceptual work. The general approach however, is the same. The ontology of the "object" and its function as capital are distinct; however, in the case of social structures both are ontologically subjective or "socially constructed". For example, the existence of trust is ontologically subjective. The existence of a "network" or positions within a network, this paper argues, is also subjective. I begin by outlining the processes for linking agency to structure using Giddens's theory of structuration (1984).

The basic argument is that the subjectively interpreted meaning systems developed within social systems constitute social "reality" in that they are manifest as structural relations and enduring institutional patterns of practice. This means that social units or systems regarded as real (e.g. families, organizations, nations) are manifestations of the perceptions and meanings created by individuals in their on-going interactions. This is a profoundly different approach than the traditional functionalist approach which takes social organization as real entities with clear boundaries and enduring, shared cultural understandings. As Giddens states: "the degree of 'systemness' in social systems is very variable and [that] 'societies' rarely have easily specifiable boundaries...Functionalism and naturalism tend to encourage unthinking acceptance of societies as clearly delimited entities, and social systems as internally highly integrated unities...But societies are very often not like this at all.(Giddens, 1984 :xxvi).

Structuration theory treats individuals as knowledgeable agents consistent with "the reflexive turn" in social theory. Giddens argues that people are more aware than most traditional social theory suggests: "human agents or actors...have, as an inherent aspect of what they do, the capacity to understand what they do while they do it." (Giddens, 1984:xxii). However, much of the knowledge of agents is tacit and taken for granted in the routine of daily activities.

The implications of this "structurational" approach is that social organization is constituted by individuals through the inter subjective meanings or rules of practice they construct through social interaction. People treat their beliefs about social roles and rules as real therefore they make them real as they act them out. Giddens states: "The constitution of agents and structures are not two independently given sets of phenomena, a dualism, but represent a duality...the structural properties of social systems are both medium and outcome of the practices they recursively organize." (Giddens, 1984 :25).

Therefore applying these concepts to the theory of capital articulated earlier, this approach suggests that the key to understanding capital, what it is and how it relates to social structure is embedded in an understanding of the "rules" or the institutional heuristics that guide the actions of agents. These inter subjective understandings manifest in the positions people assume in social relations as they interact with others, this constitutes the

“organization” of their activity. As Giddens suggests, the social context both constrains and enables the approach agents take and therefore the shape the organization will assume.

Both Berger and Luckmann and Giddens emphasize that the majority of daily activity is routine and therefore agents are not typically aware of the rules they are using, these are taken for granted. It is only during a “crisis” that actors become consciously aware of these heuristics (Berger et al., 1966; Giddens, 1984).

According to Giddens, the link between action and the institutional realm is reciprocal and exists in systems of signification, domination and legitimation in the institutional realm which are reciprocally related to systems of communication, power and sanction in the action realm. Giddens states the relationship in this way: “The knowledge they [actors] possess is not incidental to the persistent patterning of social life but is integral to it... According to structuration theory, the moment of the production of action is also one of reproduction in the contexts of the day-to-day enactment of social life...In reproducing structural properties...agents also reproduce the conditions that make such action possible.” (Giddens, 1984 : 26). These two realms and the processes that link them can only be separated analytically as they occur simultaneously as actors conceptualize and carry out their activities.

One "structuration" type approach for relating action to institution is succinctly summarized by Barley and Tolbert in four "moments" of institutionalization: encode, enact, replicate or revise and externalize and objectify (Barley & Tolbert, 1997). Barley and Tolbert focus on behavioral scripts, however, they acknowledge that Giddens actually uses a terminology of rules in his theory. Encoding is associated with the socialization of actors and therefore represents the inculcation or absorption of institutional heuristics or behavioral scripts by actors in various settings. The second moment occurs when actors conceptualize and act on their understandings of institutional heuristics. They may choose to act in accordance with an institutional heuristic or ignore it. This moment reveals the dialectic nature of this process whereby an actor's interests are intertwined with the subjective interpretation of institutional heuristics. The third moment therefore is the replication or revision of the institution in light of this action. The fourth moment captures the objectification or externalization whereby an institution or patterned set of practices enacted during an interaction becomes taken for granted and distinct from actors. In terms of capital, this fourth moment can be conceptualized as the transition from an individual or groups "casual" control of capital for the purposes of production to the institutionalization of their control. This institutionalization may assume the form of an official organizational position or informal recognition of the prerogative of the actor to control the resource. In this way we can link the

two senses of capital: produced means of production and a property right. The conferral of a socially accepted prerogative to control a resource or capital enables the accumulation of wealth and the creation of long run advantage.

The institutionalization of a production and exchange context creates a system of signification which defines what objects are capital in the context of an "agreed" business model. It also implies a set of social relations among members of the institutional field. How actors interact with each other is not random but implicit in the organization of production that exists in a domain. Which positions in this structure are valuable and the density of connections in the structure is also partially implicit in this "agreement". The social relations that exist among actors in the context of production co-exist with other social relations and interact to partially determine the approach to production in the domain. In this way affect and rationality interact in creating the social context of production.

In order to capture how economic actors constitute capital it is necessary to understand the institutionalized approach to production and exchange that exists in the domain. In other words, the "business model" forms the context for constituting capital. The business model allows actors within a domain to identify what types of equipment or skills have the capacity to create value. This institutionalization of the business model is assumed to be determined by the actors involved, it is not imposed

exogenously. This process is understood to be a dialectical one with individual agents invoking modes of signification that are consistent with their interests (Farjoun, 2002). This contest to define a business model is conducted by knowledgeable actors who understand the implications of these decisions for constituting capital.

The business model, once defined, will allow actors within the context to constitute various objects, skills and relations as capital, i.e. objects with a productive function and associated value. These “capitals” and their associated values will become institutionalized themselves and be continuously enacted by members of the field in the “duree” or temporal bracket during which the business model remains relatively unchallenged. While objects such as technology or skills may be defined quite clearly, defining social capital is likely to be more complex. Objects or skills derive their definition and value directly from the business model; social capital, however, is embedded in social relationships. As people move into different positions within the context and in and out of the context, the extent to which the relationship is constructed as capital and its relative value will change. While the specific relationships that are social capital will change, the institutional heuristics that define what specific network positions and what types of relations constitute capital should remain fairly stable.

IMPLICATIONS

The concept of capital first posited by theorists such as Adam Smith was intended to explain an agrarian economy. The fundamental economic re-structuring of the industrial revolution inspired Marx to re-examine capital. Marx's theory focussed on explaining an economy that primarily produced goods with the use of tools and machinery. In developing this new approach to capital, Marx incorporated some of the contemporary insights from philosophy, primarily from Hegel and the phenomenological school. In the last quarter century we have once again undergone a dramatic economic re-structuring. Our economy is now characterized by the production of both goods and services, in almost equal measure. The means of production are also divided between tangible forms (e.g. machinery) and intangible forms (e.g. brands, knowledge). This re-structuring has once again precipitated a re-examination of the concept of capital, this time with significant interest in non-material forms of capital (e.g. human and social).

Since its inception the concept of capital has resisted attempts at definition and the establishment of a strong conceptual link between abstract theories of capital and empirical observations. This paper argues that this failure is the result of the inappropriate attempts to treat capital as part of the natural world rather than part of the social world, in other words, capital has been reified. The intent of the approach advanced in this paper is to build on the efforts of recent theorists by putting the current "plethora" of

capitals into a coherent theoretical framework that leaves behind the materialist, functionalist approach that has characterized past theories of capital.

While the theory outlined in this paper owes much to Bourdieu's work there are important differences between this approach and Bourdieu's. Bourdieu's theory integrates capital back into the social domain and links economic to other forms of capital. Bourdieu emphasizes history and the relationship between the interaction of actors and manifestations of social structure as this approach does.

Bourdieu however, maintains the classical notion that capital is real: "In accordance with a principle which the equivalent of the principle of the conservation of energy, profits in one area are necessarily paid for by costs in another...The universal equivalent, the measure of all equivalences is labor time (in the widest sense) (Bourdieu, 1985 :253)". Bourdieu argues that all capital is reducible to economic capital and that the source of value of economic capital is labor time. This approach does not share Bourdieu's assumption of a universal source of value. Bourdieu also assumes that the distribution of capital is essentially genetic good luck. This paper assumes that the distribution of capital is limited by the inherent function of the resource. This does not deny however, that in constituting the value attributed to a particular resource, or the institutionalization of a business model that implicitly imbues certain resources with value is carried out in an

a social way. The approach put forward in this paper treats the link between the social process of constitution and the durability of the advantage conferred as an empirical, contextually specific one.

The implications of this approach to capital are far-reaching for both theory and research. Methodologically, this approach implies a necessity to embed any study of capital in its social and institutional context. This approach requires an appreciation of how actors in the context construct their reality in symbolic and structural terms. Understanding the heuristics and resources is the core of constituting the capital and manifest structure of the context. One must also be cognizant of the moment in which the study occurs. Is the context in the midst of a relatively stable period in which institutions are relatively stable or are these institutions in flux? What are the boundaries constituted for the social system under study? This approach problematizes almost all of the assumptions that are at the center of economic theories of capital.

Theoretically, this reconceptualization of capital challenges the very foundation on which extant theories are constructed. This approach allows theorists to consider the origin of capital and the bases on which change and decline can be understood. While this paper focuses on developing a framework for capital theorists, this approach to capital has important implications for practitioners.

Finally, this approach to capital re-introduces ethics into the study of capital and economic behavior. By positing a direct relationship between the actor and the construction and distribution of capital, actors regain both agency and responsibility for their actions. While this approach does not suggest that individual actors control all the factors in a context, they do participate and therefore contribute to the shape of the context in which they are embedded.

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FIGURE 1
An Embedded Theory of Capital

