Comment on "'Individual' Social Capital, 'Social' Networks, and Their Linkages to Economic Game," by Masahiko Aoki

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Social capital is a concept with great intuitive appeal, widely suspected to be a valuable contextual factor that might facilitate cooperative economic behavior and hence desirable economic outcomes. Yet, as well argued in the papers by Professor Dasgupta and Professor Aoki, it is still an elusive concept from an economic perspective.

In order to make progress toward answering the key question of whether social capital is a useful notion in understanding economic performance, further advances in conceptualization, theory, and empirics are necessary. It is very hard to ascertain whether social capital helps economic development because we are not quite clear about what we mean by "social capital." (As argued in Aoki's paper, many empirical studies on the effects of social capital on economic outcomes are essentially looking at correlations between endogenous variables.) The paper takes a valuable step in the conceptualization of social capital and hence in the eventual understanding of its possible connections to development.

The paper attempts to provide a psychological and economic micro-foundation to the notion of social capital. This is done in a way that overcomes some important objections raised about the concept by scholars of the stature of Arrow and Solow. In particular, the paper suggests an interesting way to operationalize the notions of both "social" and "capital."

The central theoretical construct in the argument is the notion of a social-exchange game. A social-exchange game is a game in which some instruments (social symbols, physical actions, and nonmarketable goods) are exchanged to achieve "emotional payoffs."

Aoki builds on the "credit slips" analogy of sociologist Jim Coleman (1990), in order to argue for a game-theoretic notion of social capital as an individual asset. Social capital, in Aoki's conception, is an object of individual investment, which is accumulated, owned, and used by individual agents: I do things that make you feel

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good today, with the expectation that you will (somehow) reciprocate in the future. This logic overcomes some of the objections to the concept by ascribing to social capital many of the attributes of financial and other forms of capital.

Having settled the connection to capital, Professor Aoki goes about answering the question of what is "social" about it by distinguishing the exchanges in the social-exchange game domain from others (say, economic) in terms of the nature of the exchanges themselves and the players' objectives. Regarding the nature of the exchanges, it is argued that social exchanges lead to *unspecified* obligations of reciprocity, unlike the case in most economic transactions (where presumably the terms of exchange are more specific). With regard to the players' objectives, the social-exchange game is characterized as one in which actions or statements have a direct impact on the object's payoffs in terms of emotions such as pride, consolation, satisfaction, shame, guilt, and the like, emotions that have been characterized as "social" by Elster (1998, 2007).

Social capital is, then, conceptualized as an individual asset. It is distinguished from social networks, social norms, and other social categories that evolve as societal outcomes of the play of social-exchange games. These are behavioral patterns, supported by sets of beliefs, that appear "in equilibrium" in game-theoretic terms.[1] These categories are closer to the most conventional use of the term *social* in economics and in common parlance and are also the types of categories that empirical efforts to study social capital attempt to measure.

Social-exchange domains are different from economic-exchange domains.[2] Economic-exchange domains, in a broad sense, include typical economic situations such as the use of common resources and the trade (or more narrowly economic-exchange) domains. Even though social-exchange and economic-exchange domains are distinct, they are connected by the overlap of *some of* the players. I want to stress *some of*, since the degree of potential overlap across domains could be an important factor in understanding how the presence of social networks might affect economic performance.

In a simplified manner, we can think of the effects of social capital on economic performance by comparing economic games in isolation to economic games connected to social-exchange games. This comparison could be the basis for some comparative analysis across cases, in which comparable economic domains are "embedded" in varying social contexts.

If we compare a given economic game played in isolation to the same game played in connection to a social-exchange game, various possibilities arise. One (which is the logic implicit in all the literature extolling the economic benefits of social capital) tells us that strategies that were not available in the isolated economic game become available in the larger game, leading to the possibility of more efficient economic outcomes. The paper illustrates this case with a commons situation, in which excludability or other forms of economic or legal sanctions are not feasible, but in which the social-exchange domain supplies the strategic possibility of social exclusion. Adding such possible punishment strategies can lead to more cooperative behavior in the economic domain. Complementary to that logic, it is also possible that the presence of the connected social-exchange game could allow the selection of a more cooperative equilibrium, even when that equilibrium is also feasible in the original game. Certainly, it is also possible that the "appearance" of an economic-exchange game might break up a previously cooperative equilibrium in the social-exchange domain (as when families who were getting along well get into long-term fights over economic benefits and responsibilities emerging from an inheritance).

As illustrated by those very brief examples, all these connections can work in various ways. Another example provided in the paper is one in which the scale of the social networks, which might have been sufficient to support efficient economic exchanges for previous technologies (say, high transport costs leading to economic exchanges within small geographic scales), becomes a drag on the possibility of extending exchanges when new technologies calling for larger geographic scales come into place. This illustrates what I believe to be a very important issue in the relation between social networks and aggregate economic outcomes: the match or mismatch between the scale or scope of different domains. I return to this point below.

Another very important point raised by Aoki's paper is that once we think in terms of the dynamics of belief formation and evolution, the beliefs sustaining behavior in social exchanges (call them social norms) do not evolve independently of the economic exchange domain. (The paper provides some interesting examples of the evolution of social norms in the context of specific incentive systems in economic domains.) This is indeed an intriguing point that brings further into question the notion of social capital as an independent exogenous object that influences economic exchange.

Let us focus on the empirical implications of the theory being developed in the paper. Different polities presumably have different levels of social capital. The question is, where does that cross-case heterogeneity come from? It is very unlikely that the difference lies in different brain structures or other nano-foundations of human behavior; the answer must lie in different socioeconomic environments leading to structures of interaction more likely to induce cooperative behavior (supported by internalized norms) in social exchange. That brings us back to the familiar social science terrain of factors such as proximity (geographic or other), likelihood of repeated face-to-face interaction, and the like.[3] (This, by the way, is an additional two-way connection with economic exchange, since in modern societies who we meet often is linked to economic activities.)

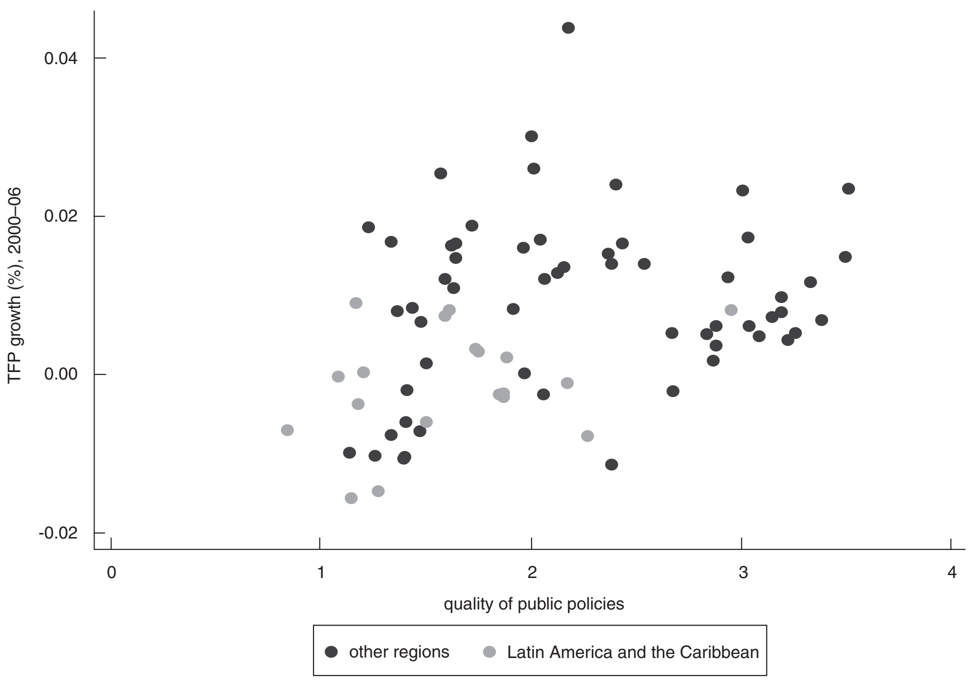
The factors likely to lead to high levels of social capital bring us to another issue highlighted in passing: What is the "reach" or "range" of the social-exchange games referred to here? What is the size of the communities engaged in such games? The answer is possibly a wide range, from a small group such as a family to a larger group such as a professional community or a village. The examples in Aoki's paper cover various ranges. It seems that the concept applies at various levels, a portability that might reflect on its strength. Nonetheless, one is left wondering to what extent the scales at which social-exchange games apply are relevant for issues of aggregate economic performance and economic development. My understanding at this point is that these social-exchange games are likely to be small-scale games, with partial overlap across various networks. Whether the type of cooperation relevant for economic development can be supported by the interactions of these various multilayered networks is a question that requires deeper analysis than the one I can provide in these rushed remarks. The remaining comments provide some hints about connecting local social interactions to broad societal outcomes, with focus on a specific domain of articulation.

Incorporating the Polity Domain

It would be useful in further developments of the theory suggested here to incorporate another domain that might be important for the questions of economic performance at the macro level in modern societies. That is the *polity domain*, a domain in which the exchanges are political and in which the outcome is public policy.[4]

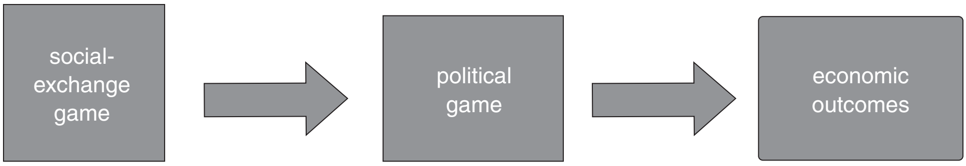
It is by now widely recognized that development outcomes are contingent on the content and quality of various public policies. For instance, figure 1 (reproduced from Machado, Scartascini, and Tommasi 2009) shows that an index of the quality of public policies relates to faster growth of total factor productivity (TFP) in the last several decades in a cross section of countries, after controlling for relevant factors such as the level of gross domestic product (GDP).

FIGURE 1.
The Quality of Public Policies and TFP Growth



Source: Machado, Scartascini, and Tommasi 2009.

FIGURE 2.
The General Logic



So policies are an important factor for economic outcomes. What does social capital have to do with that? The general logic is illustrated in figure 2. The second arrow in the figure is the material of a vast political economy literature establishing the connection between various features of political games and the impact through policies and their properties (such as credibility) on various economic outcomes of interest. The relevant question for the purposes of today's discussion is the first arrow; that is, the extent to which the type of social exchanges analyzed in Aoki's paper affect the political game and, through that, the resulting policies and economic outcomes. It is worth noting in passing that the arrow goes both ways, since often some forms of social exchange could emanate from the political-exchange domain (as when long-time political representatives establish personal relationships) or from the policies generated in that domain (when recipients of a particular public program meet repeatedly and establish personal relationships).

Even if we focus just on the direction from the social-exchange game to the political-exchange game, there are various possible connections. Indeed, there is a literature in political science, similar to the one in economics referred to in the papers by Dasgupta and Aoki, which relates social capital to various democratic outcomes.[5] The issue is an ample one, with at least as many ramifications and issues as the study of social capital and economic outcomes. For the sake of brevity, I illustrate the possible connections with two examples of how "local" (small-*N*) social-exchange game interactions can affect the grand (aggregate) political and policy outcomes. One example focuses on the top of the political game (the relationships among members of the elite), and the other focuses on the bottom of it (clientelistic networks within which some public programs are distributed).

In various countries, including some in Latin America, economic, political, and intellectual *elites* are parts of dense social networks, abundant in *social capital*, in many ways resembling the social networks that Aoki's paper describes for information technology industries. A very integrated elite might have negative effects, if that potential source of intra-elite cooperation is the source of exclusionary politics and policies, as emphasized in the work of Acemoglu and Robinson (2005). Yet, under some conditions, such integrated elites with abundant social capital permit better political exchanges and provide the foundations for better long-term policies.

Some of the most successful economic policies we have seen in Latin America have been in societies where the close ties among elites (and their informal networks) allow for more effective cooperation and long-term horizons. Chile is by any standard the most successful Latin American country in the last couple of decades, judged by the consistency of its economic policies (leading to the highest growth in the region and poverty reduction). Not only have policy-induced outcomes in Chile been outstanding, but the Chilean political system and way of making policy have been important reasons behind the quality and effectiveness of its policies (Aninat and others 2008). Various features of the Chilean political system have been identified as leading to a more coherent and flexible policy-making regime. One of the factors behind this consensual style of policy making has been a characteristic of Chilean society that, even though it could be problematic for some issues, has facilitated the intertemporal cooperation that has led to successful development outcomes. This characteristic is the fact that its elites are fairly integrated. Political leaders, business leaders, and intellectual leaders are by and large members of the same circles, are educated in the same schools, and have long-term bonds. That leads to a consensual style of interaction between economic and political actors that is rare in the region. The density of business-state networks in Chile is conducive to intertemporal cooperation and to the establishment of patterns of long-term systematic consultation, giving coherence and consistency as well as a long-term orientation to Chilean economic policies (Silva 1997).

Another case that was for many years the regional example (and exception) of successful economic policies was Colombia, a country also characterized (at least until recently) by a closely knit political, business, and technocratic elite. Thorp and Durand (1997) characterize the Colombian elite as a "system in which its members all speak to and know each other. The closeness of the elite, even across the party divide, also allows experts to join rival-party administrations with remarkable freedom, which supports quality and continuity. This results in tight networks and security of access. The private sector feels that it has excellent access to the public sector" (Thorp and Durand 1997, 221). Thorp and Durand (1997, 224) also refer to the "horizontal elite-level characteristics of cooperation and reciprocity."[6]

A counterexample to the success of Chile (and Colombia) is its next-door neighbor, Argentina, a country with several cultural similarities but with a meek policy performance. Argentine policies have been quite volatile, changing frequently with minor political winds, poorly coordinated across policy areas, poorly implemented, and generally inefficient. The foundations of such policy performance lie in the noncooperative policy-making environment in which they have been produced. One characteristic of Argentine society that gives rise to such a poor policy-making environment is the inability of elites to generate a consensus on a direction for the country. One of the reasons for this inability is the heterogeneity and incongruence of the Argentine elite (Spiller and Tommasi 2007).

Coming now to a second example of a mechanism connecting (local) social capital to the overall workings of the polity, I briefly discuss the relationship between social capital and clientelism. Clientelism is a form of political exchange in which some personalized material benefits (such as excludable and scarce social programs) are exchanged for votes or other forms of political support (such as participation in rallies). Clientelistic "local" practices could have a negative impact on policies and economic outcomes. Clientelism leads to lower incentives to provide public goods at the local level (Wantchekon 2003 and references therein) and, by weakening programmatic linkages between citizens and politicians, lowers the quality of national public policies, leading to worse economic outcomes (IDB 2005; Stein and Tommasi 2007).

Even though clientelism is defined as a *vertical* exchange between a patron and a client, it is often embedded in dense social networks of the type emphasized in theories of social capital, which are characterized by long-term, person-to-person interactions in relatively localized geographic spaces (Stokes 2007). Some cross-sectional studies within a given country have found that clientelistic political exchanges are more common in small backward towns, which are characterized by high levels of social capital of the type emphasized in this paper, while other forms of politician-citizen linkages are prevalent in the more anonymous larger-N modern cities, where more impersonal modes of interaction are prevalent (Stokes 2006).[7] As a matter of fact, dense networks of social exchange are likely to provide the conditions for solving one of the key difficulties in clientelistic exchanges: monitoring of the vote. What prevents a "client" from receiving the goods and then voting for whomever he or she pleases? Clientelist parties depend on their insertion in social networks, especially in low-income voters' neighborhoods (Auyero 2000). In the words of Stokes (2007, 612–13), clientelistic relationships are ongoing, and the dyad is embedded in a social network: "Networks provide information about their members to other members: we know whether our neighbor or co-worker votes or abstains, voices support for one party or another." Clientelistic parties use operatives who are embedded in these networks and are "walking encyclopedias of local knowledge."[8] This local knowledge allows them to make informed guesses about whether a voter to whom the party gave goods or employment actually followed through and supported the party or defected to another. Networks allow clientelist parties to sidestep the secret ballot. The party can then use this information to reward the voter who has cooperated and punish the voter who has defected—it can hold the voter accountable for his or her vote. In contrast to the kind of accountability celebrated in democratic theory, this is "perverse accountability," in which *parties* hold *voters* accountable for their actions (Stokes 2005).

Even the vertical exchange between political patrons and clients seems to share the psychological micro-foundations stressed in Aoki's paper. Ethnographic studies of clientelistic exchanges in Latin America and other developing regions emphasize the presence of strong notions of reciprocity in such exchanges. As a matter of fact, one of the first waves of academic work on clientelism, inspired in anthropology and sociology, emphasized moral sentiments different from self-interest as the basic explanation of clientelism.[9] The norm of reciprocity seems to undergird motives for returning benefits beyond what can be accounted for just in terms of self-interest and observability of moves.

Notes

1. Aoki (2001) is one of the founding works, together with Calvert (1995a, 1995b), and Greif (1994, 2006), on the very influential view of institutions as equilibriums (a point also

made by Dasgupta in this volume). In particular, Aoki (2001) emphasizes the bounded rationality foundations of institutions, where the *common knowledge* demanded by game theoretic equilibriums is provided in the form of norms and culture as encapsulation of past experiences. He specifically refers to the "summary" or "information compression" nature of institutions, which he characterizes as self-sustaining systems of shared beliefs about a salient way in which the game is repeatedly played.

2. See Aoki (2001, 21) for the distinction between *domains* and *games*.
3. Aoki refers to agents "recursively engaged in social exchanges" within small and homogeneous communities as the cases in which their actions could be more easily known and others' beliefs more easily inferred, conditions that facilitate the positive economic effects of social capital.
4. The polity domain is studied in chapter 6 of Aoki (2001), where the main features of state institutions are interpreted, in line with the general approach of that book, as stable equilibriums in the polity domain. Those valuable insights notwithstanding, in these comments I suggest a more disaggregated (a more micro) look at the polity domain.
5. Classics of that literature include de Tocqueville (1966), Almond and Verba (1963), Putnam (1993), and Fukuyama (1995). Some recent works include Boix and Posner (1998), Knack (2002), and various chapters in Castiglione, van Deth, and Wolleb (2008).
6. These closely knit elite structures also have their drawbacks. The system in Colombia (until recently) has also been characterized as exclusionary, as reflected in the fact that social policies have not been as solid as economic policies. Also, the connection of the elites to the majority of the population have often been characterized as vertical clientelistic networks, a point to which I refer in the remainder of these comments.
7. This is consistent with an assertion of Dasgupta in his paper in this volume, referring to economic exchanges: "It could be that communitarian relationships prevent impersonal transactions from taking place."
8. Wang and Kurzman (2007), cited in Stokes (2007).
9. Lemarchand (1977) and Scott (1972), cited in Stokes (2007) and in Gallego and Raciborski (2008). For instance, Lemarchand emphasizes the relationship between clientelism and ethnicity, stating that clientelism extends the perceptions of mutual interest and cultural affinities beyond the realm of primordial loyalties. These exchanges seem to share the characteristic of general and unspecified obligations highlighted by Aoki; Scott (1972) refers to the client reciprocating "by offering general support and assistance."

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