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Social Capital in the Creation of Human Capital¹

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In this paper, the concept of social capital is introduced and illustrated, its forms are described, the social structural conditions under which it arises are examined, and it is used in an analysis of dropouts from high school. Use of the concept of social capital is part of a general theoretical strategy discussed in the paper: taking rational action as a starting point but rejecting the extreme individualistic premises that often accompany it. The conception of social capital as a resource for action is one way of introducing social structure into the rational action paradigm. Three forms of social capital are examined: obligations and expectations, information channels, and social norms. The role of closure in the social structure in facilitating the first and third of these forms of social capital is described. An analysis of the effect of the lack of social capital available to high school sophomores on dropping out of school before graduation is carried out. The effect of social capital within the family and in the community outside the family is examined.

There are two broad intellectual streams in the description and explanation of social action. One, characteristic of the work of most sociologists, sees the actor as socialized and action as governed by social norms, rules, and obligations. The principal virtues of this intellectual stream lie in its ability to describe action in social context and to explain the way action is shaped, constrained, and redirected by the social context.

The other intellectual stream, characteristic of the work of most economists, sees the actor as having goals independently arrived at, as acting independently, and as wholly self-interested. Its principal virtue lies in having a principle of action, that of maximizing utility. This principle of action, together with a single empirical generalization (declining marginal utility) has generated the extensive growth of neoclassical economic the-

¹ I thank Mark Granovetter, Susan Shapiro, and Christopher Winship for criticisms of an earlier draft, which aided greatly in revision. Requests for reprints should be sent to James S. Coleman, Department of Sociology, University of Chicago, Chicago, Illinois 60637.

ory, as well as the growth of political philosophy of several varieties: utilitarianism, contractarianism, and natural rights.²

In earlier works (Coleman 1986*a*, 1986*b*), I have argued for and engaged in the development of a theoretical orientation in sociology that includes components from both these intellectual streams. It accepts the principle of rational or purposive action and attempts to show how that principle, in conjunction with particular social contexts, can account not only for the actions of individuals in particular contexts but also for the development of social organization. In the present paper, I introduce a conceptual tool for use in this theoretical enterprise: social capital. As background for introducing this concept, it is useful to see some of the criticisms of and attempts to modify the two intellectual streams.

CRITICISMS AND REVISIONS

Both these intellectual streams have serious defects. The sociological stream has what may be a fatal flaw as a theoretical enterprise: the actor has no "engine of action." The actor is shaped by the environment, but there are no internal springs of action that give the actor a purpose or direction. The very conception of action as wholly a product of the environment has led sociologists themselves to criticize this intellectual stream, as in Dennis Wrong's (1961) "The Oversocialized Conception of Man in Modern Sociology."

The economic stream, on the other hand, flies in the face of empirical reality: persons' actions are shaped, redirected, constrained by the social context; norms, interpersonal trust, social networks, and social organization are important in the functioning not only of the society but also of the economy.

A number of authors from both traditions have recognized these difficulties and have attempted to impart some of the insights and orientations of the one intellectual stream to the other. In economics, Yoram Ben-Porath (1980) has developed ideas concerning the functioning of what he calls the "*F*-connection" in exchange systems. The *F*-connection is families, friends, and firms, and Ben-Porath, drawing on literature in anthropology and sociology as well as economics, shows the way these forms of social organization affect economic exchange. Oliver Williamson has, in a number of publications (e.g., 1975, 1981), examined the conditions under which economic activity is organized in different institutional forms, that is, within firms or in markets. There is a whole body of work in economics, the "new institutional economics," that attempts to show,

² For a discussion of the importance of the empirical generalization to economics, see Black, Coats, and Goodwin (1973).

within neoclassical economic theory, both the conditions under which particular economic institutions arise and the effects of these institutions (i.e., of social organization) on the functioning of the system.

There have been recent attempts by sociologists to examine the way social organization affects the functioning of economic activity. Baker (1983) has shown how, even in the highly rationalized market of the Chicago Options Exchange, relations among floor traders develop, are maintained, and affect their trades. More generally, Granovetter (1985) has engaged in a broad attack on the “undersocialized concept of man” that characterizes economists’ analysis of economic activity. Granovetter first criticizes much of the new institutional economics as crudely functionalist because the existence of an economic institution is often explained merely by the functions it performs for the economic system. He argues that, even in the new institutional economics, there is a failure to recognize the importance of concrete personal relations and networks of relations—what he calls “embeddedness”—in generating trust, in establishing expectations, and in creating and enforcing norms.

Granovetter’s idea of embeddedness may be seen as an attempt to introduce into the analysis of economic systems social organization and social relations not merely as a structure that springs into place to fulfill an economic function, but as a structure with history and continuity that give it an independent effect on the functioning of economic systems.

All this work, both by economists and by sociologists, has constituted a revisionist analysis of the functioning of economic systems. Broadly, it can be said to maintain the conception of rational action but to superimpose on it social and institutional organization—either endogenously generated, as in the functionalist explanations of some of the new institutional economists, or as exogenous factors, as in the more proximate-causally oriented work of some sociologists.

My aim is somewhat different. It is to import the economists’ principle of rational action for use in the analysis of social systems proper, including but not limited to economic systems, and to do so without discarding social organization in the process. The concept of social capital is a tool to aid in this. In this paper, I introduce the concept in some generality, and then examine its usefulness in a particular context, that of education.

SOCIAL CAPITAL

Elements for these two intellectual traditions cannot be brought together in a pastiche. It is necessary to begin with a conceptually coherent framework from one and introduce elements from the other without destroying that coherence.

I see two major deficiencies in earlier work that introduced “exchange

theory" into sociology, despite the pathbreaking character of this work. One was the limitation to microsocial relations, which abandons the principal virtue of economic theory, its ability to make the micro-macro transition from pair relations to system. This was evident both in Homans's (1961) work and in Blau's (1964) work. The other was the attempt to introduce principles in an ad hoc fashion, such as "distributive justice" (Homans 1964, p. 241) or the "norm of reciprocity" (Gouldner 1960). The former deficiency limits the theory's usefulness, and the latter creates a pastiche.

If we begin with a theory of rational action, in which each actor has control over certain resources and interests in certain resources and events, then social capital constitutes a particular kind of resource available to an actor.

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 certain actions of actors—whether persons or corporate actors—within the structure. Like other forms of capital, social capital is productive, making possible the achievement of certain ends that in its absence would not be possible. Like physical capital and human capital, social capital is not completely fungible but may be specific to certain activities. A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others.

Unlike other forms of capital, social capital inheres in the structure of relations between actors and among actors. It is not lodged either in the actors themselves or in physical implements of production. Because purposive organizations can be actors ("corporate actors") just as persons can, relations among corporate actors can constitute social capital for them as well (with perhaps the best-known example being the sharing of information that allows price-fixing in an industry). However, in the present paper, the examples and area of application to which I will direct attention concern social capital as a resource for persons.

Before I state more precisely what social capital consists of, it is useful to give several examples that illustrate some of its different forms.

1. Wholesale diamond markets exhibit a property that to an outsider is remarkable. In the process of negotiating a sale, a merchant will hand over to another merchant a bag of stones for the latter to examine in private at his leisure, with no formal insurance that the latter will not substitute one or more inferior stones or a paste replica. The merchandise may be worth thousands, or hundreds of thousands, of dollars. Such free exchange of stones for inspection is important to the functioning of this market. In its absence, the market would operate in a much more cumbersome, much less efficient fashion.

Inspection shows certain attributes of the social structure. A given merchant community is ordinarily very close, both in the frequency of interaction and in ethnic and family ties. The wholesale diamond market in New York City, for example, is Jewish, with a high degree of intermarriage, living in the same community in Brooklyn, and going to the same synagogues. It is essentially a closed community.

Observation of the wholesale diamond market indicates that these close ties, through family, community, and religious affiliation, provide the insurance that is necessary to facilitate the transactions in the market. If any member of this community defected through substituting other stones or through stealing stones in his temporary possession, he would lose family, religious, and community ties. The strength of these ties makes possible transactions in which trustworthiness is taken for granted and trade can occur with ease. In the absence of these ties, elaborate and expensive bonding and insurance devices would be necessary—or else the transactions could not take place.

2. The *International Herald Tribune* of June 21–22, 1986, contained an article on page 1 about South Korean student radical activists. It describes the development of such activism: “Radical thought is passed on in clandestine ‘study circles,’ groups of students who may come from the same high school or hometown or church. These study circles . . . serve as the basic organizational unit for demonstrations and other protests. To avoid detection, members of different groups never meet, but communicate through an appointed representative.”

This description of the basis of organization of this activism illustrates social capital of two kinds. The “same high school or hometown or church” provides social relations on which the “study circles” are later built. The study circles themselves constitute a form of social capital—a cellular form of organization that appears especially valuable for facilitating opposition in any political system intolerant of dissent. Even where political dissent is tolerated, certain activities are not, whether the activities are politically motivated terrorism or simple crime. The organization that makes possible these activities is an especially potent form of social capital.

3. A mother of six children, who recently moved with husband and children from suburban Detroit to Jerusalem, described as one reason for doing so the greater freedom her young children had in Jerusalem. She felt safe in letting her eight year old take the six year old across town to school on the city bus and felt her children to be safe in playing without supervision in a city park, neither of which she felt able to do where she lived before.

The reason for this difference can be described as a difference in social capital available in Jerusalem and suburban Detroit. In Jerusalem, the

normative structure ensures that unattended children will be “looked after” by adults in the vicinity, while no such normative structure exists in most metropolitan areas of the United States. One can say that families have available to them in Jerusalem social capital that does not exist in metropolitan areas of the United States.

4. In the Kahn El Khalili market of Cairo, the boundaries between merchants are difficult for an outsider to discover. The owner of a shop that specializes in leather will, when queried about where one can find a certain kind of jewelry, turn out to sell that as well—or, what appears to be nearly the same thing, to have a close associate who sells it, to whom he will immediately take the customer. Or he will instantly become a money changer, although he is not a money changer, merely by turning to his colleague a few shops down. For some activities, such as bringing a customer to a friend’s store, there are commissions; for others, such as money changing, merely the creation of obligations. Family relations are important in the market, as is the stability of proprietorship. The whole market is so infused with relations of the sort I have described that it can be seen as an organization, no less so than a department store. Alternatively, one can see the market as consisting of a set of individual merchants, each having an extensive body of social capital on which to draw, through the relationships of the market.

The examples above have shown the value of social capital for a number of outcomes, both economic and noneconomic. There are, however, certain properties of social capital that are important for understanding how it comes into being and how it is employed in the creation of human capital. First, a comparison with human capital, and then an examination of different forms of social capital, will be helpful for seeing these.

HUMAN CAPITAL AND SOCIAL CAPITAL

Probably the most important and most original development in the economics of education in the past 30 years has been the idea that the concept of physical capital as embodied in tools, machines, and other productive equipment can be extended to include human capital as well (see Schultz 1961; Becker 1964). Just as physical capital is created by changes in materials to form tools that facilitate production, human capital is created by changes in persons that bring about skills and capabilities that make them able to act in new ways.

Social capital, however, comes about through changes in the relations among persons that facilitate action. If physical capital is wholly tangible, being embodied in observable material form, and human capital is less tangible, being embodied in the skills and knowledge acquired by an individual, social capital is less tangible yet, for it exists in the *relations*

among persons. Just as physical capital and human capital facilitate productive activity, social capital does as well. For example, a group within which there is extensive trustworthiness and extensive trust is able to accomplish much more than a comparable group without that trustworthiness and trust.

FORMS OF SOCIAL CAPITAL

The value of the concept of social capital lies first in the fact that it identifies certain aspects of social structure by their functions, just as the concept "chair" identifies certain physical objects by their function, despite differences in form, appearance, and construction. The function identified by the concept of "social capital" is the value of these aspects of social structure to actors as resources that they can use to achieve their interests.

By identifying this function of certain aspects of social structure, the concept of social capital constitutes both an aid in accounting for different outcomes at the level of individual actors and an aid toward making the micro-to-macro transitions without elaborating the social structural details through which this occurs. For example, in characterizing the clandestine study circles of South Korean radical students as constituting social capital that these students can use in their revolutionary activities, we assert that the groups constitute a resource that aids in moving from individual protest to organized revolt. If, in a theory of revolt, a resource that accomplishes this task is held to be necessary, then these study circles are grouped together with those organizational structures, having very different origins, that have fulfilled the same function for individuals with revolutionary goals in other contexts, such as the *Comités d'action lycéen* of the French student revolt of 1968 or the workers' cells in tsarist Russia described and advocated by Lenin ([1902] 1973).

It is true, of course, that for other purposes one wants to investigate the details of such organizational resources, to understand the elements that are critical to their usefulness as resources for such a purpose, and to examine how they came into being in a particular case. But the concept of social capital allows taking such resources and showing the way they can be combined with other resources to produce different system-level behavior or, in other cases, different outcomes for individuals. Although, for these purposes, social capital constitutes an unanalyzed concept, it signals to the analyst and to the reader that something of value has been produced for those actors who have this resource available and that the value depends on social organization. It then becomes a second stage in the analysis to unpack the concept, to discover what components of social organization contribute to the value produced.

In previous work, Lin (1988) and De Graf and Flap (1988), from a perspective of methodological individualism similar to that used in this paper, have shown how informal social resources are used instrumentally in achieving occupational mobility in the United States and, to a lesser extent, in West Germany and the Netherlands. Lin focused on social ties, especially “weak” ties, in this role. Here, I want to examine a variety of resources, all of which constitute social capital for actors.

Before examining empirically the value of social capital in the creation of human capital, I will go more deeply into an examination of just what it is about social relations that can constitute useful capital resources for individuals.

Obligations, Expectations, and Trustworthiness of Structures

If *A* does something for *B* and trusts *B* to reciprocate in the future, this establishes an expectation in *A* and an obligation on the part of *B*. This obligation can be conceived as a credit slip held by *A* for performance by *B*. If *A* holds a large number of these credit slips, for a number of persons with whom *A* has relations, then the analogy to financial capital is direct. These credit slips constitute a large body of credit that *A* can call in if necessary—unless, of course, the placement of trust has been unwise, and these are bad debts that will not be repaid.

In some social structures, it is said that “people are always doing things for each other.” There are a large number of these credit slips outstanding, often on both sides of a relation (for these credit slips appear often not to be completely fungible across areas of activity, so that credit slips of *B* held by *A* and those of *A* held by *B* are not fully used to cancel each other out). The El Khalili market in Cairo, described earlier, constitutes an extreme case of such a social structure. In other social structures where individuals are more self-sufficient and depend on each other less, there are fewer of these credit slips outstanding at any time.

This form of social capital depends on two elements: trustworthiness of the social environment, which means that obligations will be repaid, and the actual extent of obligations held. Social structures differ in both these dimensions, and actors within the same structure differ in the second. A case that illustrates the value of the trustworthiness of the environment is that of the rotating-credit associations of Southeast Asia and elsewhere. These associations are groups of friends and neighbors who typically meet monthly, each person contributing to a central fund that is then given to one of the members (through bidding or by lot), until, after a number of months, each of the *n* persons has made *n* contributions and received one payout. As Geertz (1962) points out, these associations serve as efficient

institutions for amassing savings for small capital expenditures, an important aid to economic development.

But without a high degree of trustworthiness among the members of the group, the institution could not exist—for a person who receives a payout early in the sequence of meetings could abscond and leave the others with a loss. For example, one could not imagine a rotating-credit association operating successfully in urban areas marked by a high degree of social disorganization—or, in other words, by a lack of social capital.

Differences in social structures in both dimensions may arise for a variety of reasons. There are differences in the actual needs that persons have for help, in the existence of other sources of aid (such as government welfare services), in the degree of affluence (which reduces aid needed from others), in cultural differences in the tendency to lend aid and ask for aid (see Banfield 1967) in the closure of social networks, in the logistics of social contacts (see Festinger, Schachter, and Back 1963), and other factors. Whatever the source, however, individuals in social structures with high levels of obligations outstanding at any time have more social capital on which they can draw. The density of outstanding obligations means, in effect, that the overall usefulness of the tangible resources of that social structure is amplified by their availability to others when needed.

Individual actors in a social system also differ in the number of credit slips outstanding on which they can draw at any time. The most extreme examples are in hierarchically structured extended family settings, in which a patriarch (or “godfather”) holds an extraordinarily large set of obligations that he can call in at any time to get what he wants done. Near this extreme are villages in traditional settings that are highly stratified, with certain wealthy families who, because of their wealth, have built up extensive credits that they can call in at any time.

Similarly, in political settings such as a legislature, a legislator in a position with extra resources (such as the Speaker of the House of Representatives or the Majority Leader of the Senate in the U.S. Congress) can, by effective use of resources, build up a set of obligations from other legislators that makes it possible to get legislation passed that would otherwise be stymied. This concentration of obligations constitutes social capital that is useful not only for this powerful legislator but useful also in getting an increased level of action on the part of a legislature. Thus, those members of legislatures among whom such credits are extensive should be more powerful than those without extensive credits and debits because they can use the credits to produce bloc voting on many issues. It is well recognized, for example, that in the U.S. Senate, some senators are members of what is called “the Senate Club,” while others are not. This

in effect means that some senators are embedded in the system of credits and debits, while others, outside the "Club," are not. It is also well recognized that those in the Club are more powerful than those outside it.

Information Channels

An important form of social capital is the potential for information that inheres in social relations. Information is important in providing a basis for action. But acquisition of information is costly. At a minimum, it requires attention, which is always in scarce supply. One means by which information can be acquired is by use of social relations that are maintained for other purposes. Katz and Lazarsfeld (1955) showed how this operated for women in several areas of life in a midwestern city around 1950. They showed that a woman with an interest in being in fashion, but no interest in being on the leading edge of fashion, used friends who she knew kept up with fashion as sources of information. Similarly, a person who is not greatly interested in current events but who is interested in being informed about important developments can save the time of reading a newspaper by depending on spouse or friends who pay attention to such matters. A social scientist who is interested in being up-to-date on research in related fields can make use of everyday interactions with colleagues to do so, but only in a university in which most colleagues keep up-to-date.

All these are examples of social relations that constitute a form of social capital that provides information that facilitates action. The relations in this case are not valuable for the "credit slips" they provide in the form of obligations that one holds for others' performances or for the trustworthiness of the other party but merely for the information they provide.

Norms and Effective Sanctions

When a norm exists and is effective, it constitutes a powerful, though sometimes fragile, form of social capital. Effective norms that inhibit crime make it possible to walk freely outside at night in a city and enable old persons to leave their houses without fear for their safety. Norms in a community that support and provide effective rewards for high achievement in school greatly facilitate the school's task.

A prescriptive norm within a collectivity that constitutes an especially important form of social capital is the norm that one should forgo self-interest and act in the interests of the collectivity. A norm of this sort, reinforced by social support, status, honor, and other rewards, is the social capital that builds young nations (and then dissipates as they grow older), strengthens families by leading family members to act selflessly in

“the family’s” interest, facilitates the development of nascent social movements through a small group of dedicated, inward-looking, and mutually rewarding members, and in general leads persons to work for the public good. In some of these cases, the norms are internalized; in others, they are largely supported through external rewards for selfless actions and disapproval for selfish actions. But, whether supported by internal or external sanctions, norms of this sort are important in overcoming the public goods problem that exists in collectivities.

As all these examples suggest, effective norms can constitute a powerful form of social capital. This social capital, however, like the forms described earlier, not only facilitates certain actions; it constrains others. A community with strong and effective norms about young persons’ behavior can keep them from “having a good time.” Norms that make it possible to walk alone at night also constrain the activities of criminals (and in some cases of noncriminals as well). Even prescriptive norms that reward certain actions, like the norm in a community that says that a boy who is a good athlete should go out for football, are in effect directing energy away from other activities. Effective norms in an area can reduce innovativeness in an area, not only deviant actions that harm others but also deviant actions that can benefit everyone. (See Merton [1968, pp. 195–203] for a discussion of how this can come about.)

SOCIAL STRUCTURE THAT FACILITATES SOCIAL CAPITAL

All social relations and social structures facilitate some forms of social capital; actors establish relations purposefully and continue them when they continue to provide benefits. Certain kinds of social structure, however, are especially important in facilitating some forms of social capital.

Closure of Social Networks

One property of social relations on which effective norms depend is what I will call closure. In general, one can say that a necessary but not sufficient condition for the emergence of effective norms is action that imposes external effects on others (see Ullmann-Margalit 1977; Coleman 1987). Norms arise as attempts to limit negative external effects or encourage positive ones. But, in many social structures where these conditions exist, norms do not come into existence. The reason is what can be described as lack of closure of the social structure. Figure 1 illustrates why. In an open structure like that of figure 1*a*, actor *A*, having relations with actors *B* and *C*, can carry out actions that impose negative externalities on *B* or *C* or both. Since they have no relations with one another, but with others instead (*D* and *E*), then they cannot combine forces to

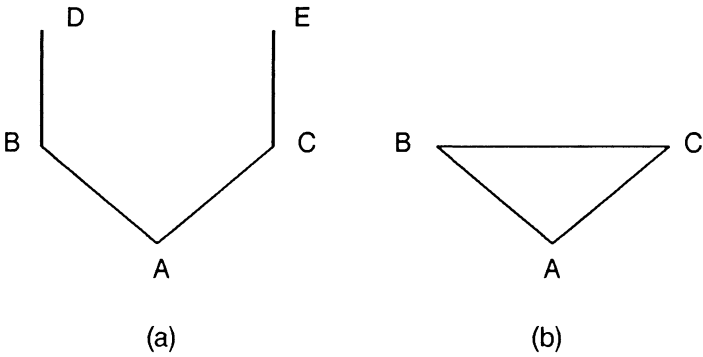


FIG. 1.—Network without (a) and with (b) closure

sanction *A* in order to constrain the actions. Unless either *B* or *C* alone is sufficiently harmed and sufficiently powerful vis-à-vis *A* to sanction alone, *A*'s actions can continue unabated. In a structure with closure, like that of figure 1*b*, *B* and *C* can combine to provide a collective sanction, or either can reward the other for sanctioning *A*. (See Merry [1984] for examples of the way gossip, which depends on closure of the social structure, is used as a collective sanction.)

In the case of norms imposed by parents on children, closure of the structure requires a slightly more complex structure, which I will call intergenerational closure. Intergenerational closure may be described by a simple diagram that represents relations between parent and child and relations outside the family. Consider the structure of two communities, represented by figure 2. The vertical lines represent relations across generations, between parent and child, while the horizontal lines represent relations within a generation. The point labeled *A* in both figure 2*a* and figure 2*b* represents the parent of child *B*, and the point labeled *D* represents the parent of child *C*. The lines between *B* and *C* represent the relations among children that exist within any school. Although the other relations among children within the school are not shown here, there exists a high degree of closure among peers, who see each other daily, have expectations toward each other, and develop norms about each other's behavior.

The two communities differ, however, in the presence or absence of links among the parents of children in the school. For the school represented by figure 2*b*, there is intergenerational closure; for that represented by figure 2*a*, there is not. To put it colloquially, in the lower community represented by 2*b*, the parents' friends are the parents of their children's friends. In the other, they are not.

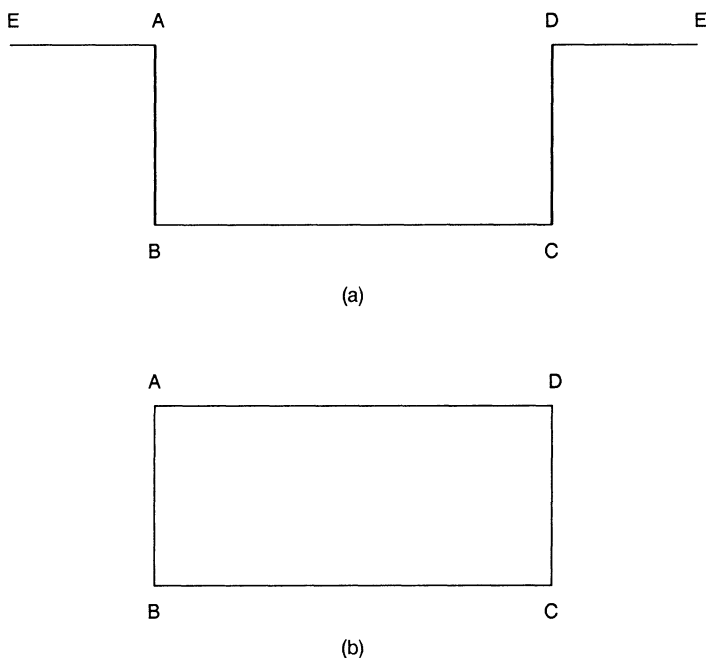


FIG. 2.—Network involving parents (*A*, *D*) and children (*B*, *C*) without (*a*) and with (*b*) intergenerational closure.

The consequence of this closure is, as in the case of the wholesale diamond market or in other similar communities, a set of effective sanctions that can monitor and guide behavior. In the community in figure 2*b*, parents *A* and *D* can discuss their children's activities and come to some consensus about standards and about sanctions. Parent *A* is reinforced by parent *D* in sanctioning his child's actions; beyond that, parent *D* constitutes a monitor not only for his own child, *C*, but also for the other child, *B*. Thus, the existence of intergenerational closure provides a quantity of social capital available to each parent in raising his children—not only in matters related to school but in other matters as well.

Closure of the social structure is important not only for the existence of effective norms but also for another form of social capital: the trustworthiness of social structures that allows the proliferation of obligations and expectations. Defection from an obligation is a form of imposing a negative externality or another. Yet, in a structure without closure, it can be effectively sanctioned, if at all, only by the person to whom the obligation is owed. Reputation cannot arise in an open structure, and collective

sanctions that would ensure trustworthiness cannot be applied. Thus, we may say that closure creates trustworthiness in a social structure.

Appropriable Social Organization

Voluntary organizations are brought into being to aid some purpose of those who initiate them. In a housing project built during World War II in an eastern city of the United States, there were many physical problems caused by poor construction: faulty plumbing, crumbling sidewalks, and other defects (Merton, n.d.). Residents organized to confront the builders and to address these problems in other ways. Later, when the problems were solved, the organization remained as available social capital that improved the quality of life for residents. Residents had resources available that they had seen as unavailable where they had lived before. (For example, despite the fact that the number of teenagers in the community was smaller, residents were *more* likely to express satisfaction with the availability of teenage babysitters.)

Printers in the New York Typographical Union who were monotype operators formed a Monotype Club as a social club (Lipset, Trow, and Coleman 1956). Later, as employers looked for monotype operators and as monotype operators looked for jobs, both found this organization an effective employment referral service and appropriated the organization for this purpose. Still later, when the Progressive Party came into power in the New York Union, the Monotype Club served as an organizational resource for the Independent Party as it left office. The Monotype Club subsequently served as an important source of social capital for the Independents to sustain the party as an organized opposition while it was out of office.

In the example of South Korean student radicals used earlier, the study circles were described as consisting of groups of students from the same high school or hometown or church. Here, as in the earlier examples, an organization that was initiated for one purpose is available for appropriation for other purposes, constituting important social capital for the individual members, who have available to them the organizational resources necessary for effective opposition. These examples illustrate the general point, that organization, once brought into existence for one set of purposes, can also aid others, thus constituting social capital available for use.

It is possible to gain insight into some of the ways in which closure and appropriable social organization provide social capital by use of a distinction made by Max Gluckman (1967) between simplex and multiplex rela-

tions.³ In the latter, persons are linked in more than one context (neighbor, fellow worker, fellow parent, coreligionist, etc.), while in the former, persons are linked through only one of these relations. The central property of a multiplex relation is that it allows the resources of one relationship to be appropriated for use in others. Sometimes, the resource is merely information, as when two parents who see each other as neighbors exchange information about their teenagers' activities; sometimes, it is the obligations that one person owes a second in relationship *X*, which the second person can use to constrain the actions of the first in relationship *Y*. Often, it is resources in the form of other persons who have obligations in one context that can be called on to aid when one has problems in another context.

SOCIAL CAPITAL IN THE CREATION OF HUMAN CAPITAL

The preceding pages have been directed toward defining and illustrating social capital in general. But there is one effect of social capital that is especially important: its effect on the creation of human capital in the next generation. Both social capital in the family and social capital in the community play roles in the creation of human capital in the rising generation. I will examine each of these in turn.

Social Capital in the Family

Ordinarily, in the examination of the effects of various factors on achievement in school, "family background" is considered a single entity, distinguished from schooling in its effects. But there is not merely a single "family background"; family background is analytically separable into at least three different components: financial capital, human capital, and social capital. Financial capital is approximately measured by the family's wealth or income. It provides the physical resources that can aid achievement: a fixed place in the home for studying, materials to aid learning, the financial resources that smooth family problems. Human capital is approximately measured by parents' education and provides the potential for a cognitive environment for the child that aids learning. Social capital within the family is different from either of these. Two examples will give a sense of what it is and how it operates.

John Stuart Mill, at an age before most children attend school, was taught Latin and Greek by his father, James Mill, and later in childhood

³ I am especially grateful to Susan Shapiro for reminding me of Gluckman's distinction and pointing out the relevance of it to my analysis.

would discuss critically with his father and with Jeremy Bentham drafts of his father's manuscripts. John Stuart Mill probably had no extraordinary genetic endowments, and his father's learning was no more extensive than that of some other men of the time. The central difference was the time and effort spent by the father with the child on intellectual matters.

In one public school district in the United States where texts for school use were purchased by children's families, school authorities were puzzled to discover that a number of Asian immigrant families purchased *two* copies of each textbook needed by the child. Investigation revealed that the family purchased the second copy for the mother to study in order to help her child do well in school. Here is a case in which the human capital of the parents, at least as measured traditionally by years of schooling, is low, but the social capital in the family available for the child's education is extremely high.

These examples illustrate the importance of social capital within the family for a child's intellectual development. It is of course true that children are strongly affected by the human capital possessed by their parents. But this human capital may be irrelevant to outcomes for children if parents are not an important part of their children's lives, if their human capital is employed exclusively at work or elsewhere outside the home. The social capital of the family is the relations between children and parents (and, when families include other members, relationships with them as well). That is, if the human capital possessed by parents is not complemented by social capital embodied in family relations, it is irrelevant to the child's educational growth that the parent has a great deal, or a small amount, of human capital.⁴

I will not differentiate here among the forms of social capital discussed earlier, but will attempt merely to measure the strength of the relations between parents and child as a measure of the social capital available to the child from the parent. Nor will I use the concept in the context of the paradigm of rational action, as, for example, is often done in use of the concept of human capital to examine the investments in education that a rational person would make. A portion of the reason for this lies in a property of much social capital not shown by most forms of capital (to

⁴ The complementarity of human capital and social capital in the family for a child's development suggests that the statistical analysis that examines the effects of these quantities should take a particular form. There should be an interaction term between human capital (parents' education) and social capital (some combination of measures such as two parents in the home, number of siblings, and parents' expectations for child's education). In the analysis reported, here, however, a simple additive model without interaction was used.

which I will turn in a later section): its public goods character, which leads to underinvestment.

Social capital within the family that gives the child access to the adult's human capital depends both on the physical presence of adults in the family and on the attention given by the adults to the child. The physical absence of adults may be described as a structural deficiency in family social capital. The most prominent element of structural deficiency in modern families is the single-parent family. However, the nuclear family itself, in which one or both parents work outside the home, can be seen as structurally deficient, lacking the social capital that comes with the presence of parents during the day, or with grandparents or aunts and uncles in or near the household.

Even if adults are physically present, there is a lack of social capital in the family if there are not strong relations between children and parents. The lack of strong relations can result from the child's embeddedness in a youth community, from the parents' embeddedness in relationships with other adults that do not cross generations, or from other sources. Whatever the source, it means that whatever *human* capital exists in the parents, the child does not profit from it because the *social* capital is missing.

The effects of a lack of social capital within the family differ for different educational outcomes. One for which it appears to be especially important is dropping out of school. With the *High School and Beyond* sample of students in high schools, table 1 shows the expected dropout rates for students in different types of families when various measures of social and human capital in the family and a measure of social capital in the community are controlled statistically.⁵ An explanation is necessary for the use of number of siblings as a measure of lack of social capital. The number of siblings represents, in this interpretation, a dilution of adult attention to the child. This is consistent with research results for

⁵ The analysis is carried out by use of a weighted logistic model with a random sample of 4,000 students from the public schools in the sample. The variables included in the model as measures of the family's financial, human, and social capital were socioeconomic status (a single variable constructed of parents' education, parents' income, father's occupational status, and household possessions), race, Hispanic ethnicity, number of siblings, number of changes in school due to family residential moves since fifth grade, whether mother worked before the child was in school, mother's expectation of child's educational attainment, frequency of discussions with parents about personal matters, and presence of both parents in the household. The regression coefficients and asymptotic standard errors are given in the App. table A1. An analysis with more extensive statistical controls, including such things as grades in school, homework, and number of absences, is reported in Hoffer (1986, table 25), but the effects reported in table 1 and subsequent text are essentially unchanged except for a reduced effect of mother's expectations. The results reported here and subsequently are taken from Hoffer (1986) and from Coleman and Hoffer (1987).

TABLE 1

DROPOUT RATES BETWEEN SPRING, GRADE 10, AND SPRING, GRADE 12, FOR STUDENTS WHOSE FAMILIES DIFFER IN SOCIAL CAPITAL, CONTROLLING FOR HUMAN CAPITAL AND FINANCIAL CAPITAL IN THE FAMILY^a

	Percentage Dropping Out	Difference in Percentage Points
1. Parents' presence:		
Two parents	13.1	} 6.0
Single parent	19.1	
2. Additional children:		
One sibling	10.8	} 6.4
Four siblings	17.2	
3. Parents and children:		
Two parents, one sibling	10.1	} 12.5
One parent, four siblings	22.6	
4. Mother's expectation for child's education:		
Expectation of college	11.6	} 8.6
No expectation of college	20.2	
5. Three factors together:		
Two parents, one sibling, mother expects college	8.1	} 22.5
One parent, four siblings, no college expectation	30.6	

^a Estimates taken from logistic regression reported more fully in App. table A1.

measures of achievement and IQ, which show that test scores decline with sib position, even when total family size is controlled, and that scores decline with number of children in the family. Both results are consistent with the view that younger sibs and children in large families have less adult attention, which produces weaker educational outcomes.

Item 1 of table 1 shows that, when other family resources are controlled, the percentage of students who drop out between spring of the sophomore year and spring of the senior year is 6 percentage points higher for children from single-parent families. Item 2 of table 1 shows that the rate is 6.4 percentage points higher for sophomores with four siblings than for those with otherwise equivalent family resources but only one sibling. Or, taking these two together, we can think of the ratio of adults to children as a measure of the social capital in the family available for the education of any one of them. Item 3 of table 1 shows that for a sophomore with four siblings and one parent, and an otherwise average background, the rate is 22.6%; with one sibling and two parents, the rate is 10.1%—a difference of 12.5 percentage points.

Another indicator of adult attention in the family, although not a pure measure of social capital, is the mother's expectation of the child's going to college. Item 4 of the table shows that, for sophomores without this

parental expectation, the rate is 8.6 percentage points higher than for those with it. With the three sources of family social capital taken together, item 5 of the table shows that sophomores with one sibling, two parents, and a mother's expectation for college (still controlling on other resources of family) have an 8.1% dropout rate; with four siblings, one parent, and no expectation of the mother for college, the rate is 30.6%.

These results provide a less satisfactory test than if the research had been explicitly designed to examine effects of social capital within the family. In addition, table A1 in the Appendix shows that another variable that should measure social capital in the family, the frequency of talking with parents about personal experiences, shows essentially no relation to dropping out. Nevertheless, taken all together, the data do indicate that social capital in the family is a resource for education of the family's children, just as is financial and human capital.

Social Capital outside the Family

The social capital that has value for a young person's development does not reside solely within the family. It can be found outside as well in the community consisting of the social relationships that exist among parents, in the closure exhibited by this structure of relations, and in the parents' relations with the institutions of the community.

The effect of this social capital outside the family on educational outcomes can be seen by examining outcomes for children whose parents differ in the particular source of social capital discussed earlier, intergenerational closure. There is not a direct measure of intergenerational closure in the data, but there is a proximate indicator. This is the number of times the child has changed schools because the family moved. For families that have moved often, the social relations that constitute social capital are broken at each move. Whatever the degree of intergenerational closure available to others in the community, it is not available to parents in mobile families.

The logistic regression carried out earlier and reported in table A1 shows that the coefficient for number of moves since grade 5 is 10 times its standard error, the variable with the strongest overall effect of any variable in the equation, including the measures of human and financial capital in the family (socioeconomic status) and the crude measures of family social capital introduced in the earlier analysis. Translating this into an effect on dropping out gives 11.8% as the dropout rate if the family has not moved, 16.7% if it has moved once, and 23.1% if it has moved twice.

In the *High School and Beyond* data set, another variation among the schools constitutes a useful indicator of social capital. This is the distinc-

tions among public high schools, religiously based private high schools, and nonreligiously based private high schools. It is the religiously based high schools that are surrounded by a community based on the religious organization. These families have intergenerational closure that is based on a multiplex relation: whatever other relations they have, the adults are members of the same religious body and parents of children in the same school. In contrast, it is the independent private schools that are typically least surrounded by a community, for their student bodies are collections of students, most of whose families have no contact.⁶ The choice of private school for most of these parents is an individualistic one, and, although they back their children with extensive human capital, they send their children to these schools denuded of social capital.

In the *High School and Beyond* data set, there are 893 public schools, 84 Catholic schools, and 27 other private schools. Most of the other private schools are independent schools, though a minority have religious foundations. In this analysis, I will at the outset regard the other private schools as independent private schools to examine the effects of social capital outside the family.

The results of these comparisons are shown in table 2. Item 1 of the table shows that the dropout rates between sophomore and senior years are 14.4% in public schools, 3.4% in Catholic schools, and 11.9% in other private schools. What is most striking is the low dropout rate in Catholic schools. The rate is a fourth of that in the public schools and a third of that in the other private schools.

Adjusting the dropout rates for differences in student-body financial, human, and social capital among the three sets of schools by standardizing the population of the Catholic schools and other private schools to the student-body backgrounds of the public schools shows that the differences are affected only slightly. Furthermore, the differences are not due to the religion of the students or to the degree of religious observance. Catholic students in public school are only slightly less likely to drop out than non-Catholics. Frequency of attendance at religious services, which is itself a measure of social capital through intergenerational closure, is strongly related to dropout rate, with 19.5% of public school students who rarely or never attend dropping out compared with 9.1% of those who attend often. But this effect exists apart from, and in addition to, the effect of the school's religious affiliation. Comparable figures for Catholic

⁶ Data from this study have no direct measures of the degree of intergenerational closure among the parents of the school to support this statement. However, the one measure of intergenerational closure that does exist in the data, the number of residential moves requiring school change since grade 5, is consistent with the statement. The average number of moves for public school students is .57; for Catholic school students, .35; and for students in other private schools, .88.

TABLE 2

DROPOUT RATES BETWEEN SPRING, GRADE 10, AND SPRING, GRADE 12,
FOR STUDENTS FROM SCHOOLS WITH DIFFERING AMOUNTS OF SOCIAL
CAPITAL IN THE SURROUNDING COMMUNITY

	Public	Catholic	Other Private Schools
1. Raw dropout rates	14.4	3.4	11.9
2. Dropout rates standardized to average public school sophomore ^a	14.4	5.2	11.6
	Non-Catholic Religious		Independent
3. Raw dropout rates for students ^b from inde- pendent and non-Catholic religious private schools	3.7		10.0

^a The standardization is based on separate logistic regressions for these two sets of schools, using the same variables listed in n. 5. Coefficients and means for the standardization are in Hoffer (1986, tables 5 and 24).

^b This tabulation is based on unweighted data, which is responsible for the fact that both rates are lower than the rate for other private schools in item 1 of the table, which is based on weighted data.

school students are 5.9% and 2.6%, respectively (Coleman and Hoffer 1987, p. 138).

The low dropout rates of the Catholic schools, the absence of low dropout rates in the other private schools, and the independent effect of frequency of religious attendance all provide evidence of the importance of social capital outside the school, in the adult community surrounding it, for this outcome of education.

A further test is possible, for there were eight schools in the sample of non-Catholic private schools ("other private" in the analysis above) that have religious foundations and over 50% of the student body of that religion. Three were Baptist schools, two were Jewish, and three from three other denominations. If the inference is correct about the religious community's providing intergenerational closure and thus social capital and about the importance of social capital in depressing the chance of dropping out of high school, these schools also should show a lower dropout rate than the independent private schools. Item 3 of table 2 shows that their dropout rate is lower, 3.7%, essentially the same as that of the Catholic schools.⁷

⁷ It is also true, though not presented here, that the lack of social capital in the family makes little difference in dropout rates in Catholic schools—or, in the terms I have used, social capital in the community compensates in part for its absence in the family. See Coleman and Hoffer (1987, chap. 5).

The data presented above indicate the importance of social capital for the education of youth, or, as it might be put, the importance of social capital in the creation of human capital. Yet there is a fundamental difference between social capital and most other forms of capital that has strong implications for the development of youth. It is this difference to which I will turn in the next section.

PUBLIC GOODS ASPECTS OF SOCIAL CAPITAL

Physical capital is ordinarily a private good, and property rights make it possible for the person who invests in physical capital to capture the benefits it produces. Thus, the incentive to invest in physical capital is not depressed; there is not a suboptimal investment in physical capital because those who invest in it are able to capture the benefits of their investments. For human capital also—at least human capital of the sort that is produced in schools—the person who invests the time and resources in building up this capital reaps its benefits in the form of a higher-paying job, more satisfying or higher-status work, or even the pleasure of greater understanding of the surrounding world—in short, all the benefits that schooling brings to a person.

But most forms of social capital are not like this. For example, the kinds of social structures that make possible social norms and the sanctions that enforce them do not benefit primarily the person or persons whose efforts would be necessary to bring them about, but benefit all those who are part of such a structure. For example, in some schools where there exists a dense set of associations among some parents, these are the result of a small number of persons, ordinarily mothers who do not hold full-time jobs outside the home. Yet these mothers themselves experience only a subset of the benefits of this social capital surrounding the school. If one of them decides to abandon these activities—for example, to take a full-time job—this may be an entirely reasonable action from a personal point of view and even from the point of view of that household with its children. The benefits of the new activity may far outweigh the losses that arise from the decline in associations with other parents whose children are in the school. But the withdrawal of these activities constitutes a loss to all those other parents whose associations and contacts were dependent on them.

Similarly, the decision to move from a community so that the father, for example, can take a better job may be entirely correct from the point of view of that family. But, because social capital consists of relations among persons, other persons may experience extensive losses by the severance of those relations, a severance over which they had no control.

A part of those losses is the weakening of norms and sanctions that aid the school in its task. For each family, the total cost it experiences as a consequence of the decisions it and other families make may outweigh the benefits of those few decisions it has control over. Yet the beneficial consequences to the family of those decisions made by the family may far outweigh the minor losses it experiences from them alone.

It is not merely voluntary associations, such as a PTA, in which underinvestment of this sort occurs. When an individual asks a favor from another, thus incurring an obligation, he does so because it brings him a needed benefit; he does not consider that it does the other a benefit as well by adding to a drawing fund of social capital available in a time of need. If the first individual can satisfy his need through self-sufficiency, or through aid from some official source without incurring an obligation, he will do so—and thus fail to add to the social capital outstanding in the community.

Similar statements can be made with respect to trustworthiness as social capital. An actor choosing to keep trust or not (or choosing whether to devote resources to an attempt to keep trust) is doing so on the basis of costs and benefits he himself will experience. That his trustworthiness will facilitate others' actions or that his lack of trustworthiness will inhibit others' actions does not enter into his decision. A similar but more qualified statement can be made for information as a form of social capital. An individual who serves as a source of information for another because he is well informed ordinarily acquires that information for his own benefit, not for the others who make use of him. (This is not always true. As Katz and Lazarsfeld [1955] show, "opinion leaders" in an area acquire information in part to maintain their position as opinion leaders.)

For norms also, the statement must be qualified. Norms are intentionally established, indeed as means of reducing externalities, and their benefits are ordinarily captured by those who are responsible for establishing them. But the capability of establishing and maintaining effective norms depends on properties of the social structure (such as closure) over which one actor does not have control yet are affected by one actor's action. These are properties that affect the structure's capacity to sustain effective norms, yet properties that ordinarily do not enter into an individual's decision that affects them.

Some forms of social capital have the property that their benefits can be captured by those who invest in them; consequently, rational actors will not underinvest in this type of social capital. Organizations that produce a private good constitute the outstanding example. The result is that there will be in society an imbalance in the relative investment in organizations that produce private goods for a market and those associations and rela-

tionships in which the benefits are not captured—an imbalance in the sense that, if the positive externalities created by the latter form of social capital could be internalized, it would come to exist in greater quantity.

The public goods quality of most social capital means that it is in a fundamentally different position with respect to purposive action than are most other forms of capital. It is an important resource for individuals and may affect greatly their ability to act and their perceived quality of life. They have the capability of bringing it into being. Yet, because the benefits of actions that bring social capital into being are largely experienced by persons other than the actor, it is often not in his interest to bring it into being. The result is that most forms of social capital are created or destroyed as by-products of other activities. This social capital arises or disappears without anyone's willing it into or out of being and is thus even less recognized and taken account of in social action than its already intangible character would warrant.

There are important implications of this public goods aspect of social capital that play a part in the development of children and youth. Because the social structural conditions that overcome the problems of supplying these public goods—that is, strong families and strong communities—are much less often present now than in the past, and promise to be even less present in the future, we can expect that, *ceteris paribus*, we confront a declining quantity of human capital embodied in each successive generation. The obvious solution appears to be to attempt to find ways of overcoming the problem of supply of these public goods, that is, social capital employed for the benefit of children and youth. This very likely means the substitution of some kind of formal organization for the voluntary and spontaneous social organization that has in the past been the major source of social capital available to the young.

CONCLUSION

In this paper, I have attempted to introduce into social theory a concept, "social capital," paralleling the concepts of financial capital, physical capital, and human capital—but embodied in relations among persons. This is part of a theoretical strategy that involves use of the paradigm of rational action but without the assumption of atomistic elements stripped of social relationships. I have shown the use of this concept through demonstrating the effect of social capital in the family and in the community in aiding the formation of human capital. The single measure of human capital formation used for this was one that appears especially responsive to the supply of social capital, remaining in high school until graduation versus dropping out. Both social capital in the family and social capital outside it, in the adult community surrounding the school,

showed evidence of considerable value in reducing the probability of dropping out of high school.

In explicating the concept of social capital, three forms were identified: obligations and expectations, which depend on trustworthiness of the social environment, information-flow capability of the social structure, and norms accompanied by sanctions. A property shared by most forms of social capital that differentiates it from other forms of capital is its public good aspect: the actor or actors who generate social capital ordinarily capture only a small part of its benefits, a fact that leads to underinvestment in social capital.

APPENDIX

TABLE A1

LOGISTIC REGRESSION COEFFICIENTS AND ASYMPTOTIC STANDARD ERRORS FOR EFFECTS OF STUDENT BACKGROUND CHARACTERISTICS ON DROPPING OUT OF HIGH SCHOOL BETWEEN SOPHOMORE AND SENIOR YEARS, 1980–82, PUBLIC SCHOOL SAMPLE

	<i>b</i>	SE
Intercept	- 2.305	.169
Socioeconomic status	-.460	.077
Black	-.161	.162
Hispanic104	.138
Number of siblings180	.028
Mother worked while child was young	-.012	.103
Both parents in household	-.415	.112
Mother's expectation for college	-.685	.103
Talk with parents031	.044
Number of moves since grade 5407	.040

SOURCE.—Taken from Hoffer (1986).

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