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Redefining the social link: from baboons to humans

In the last decade, a wealth of data on human and non-human societies contain a hidden challenge to existing ideas about the nature of society and the social link. The ambiguities and discrepancies in these data have completely swamped earlier attempts to define society in simple terms. Are these incongruities and inconsistencies merely the result of "practical difficulties" that will be eliminated with more data, better methodology and better insulation of scientific endeavours from ideology and amateurism? In this paper we will not take this conventional position but rather offer a different way to approach the problem.

What if the discrepancies are real and the frame of reference is wrong? In order to explore the implications of such a shift in framework, we will first consider alternative paradigms of society and then take a specific case: the history of ideas about baboon society. Next we will investigate the consequences of adopting a different meaning of social for our ideas about the evolution of the social link. We conclude by suggesting the usefulness of our new framework in resolving several existing problems in human and non-human sociology including the evolution of "politics".

Redefining the notion of social

Sciences of society currently subscribe to a paradigm in which "society", although difficult to probe and to encompass, is something that can be the object of an ostensive definition. The actors of society, even if the degree of activity granted them varies from one school of sociology to the next, are *inside* this larger society. Thus, social scientists recognize a difference of scale: the micro-level (that of the actors, members, participants) and a macro-level (that of society as a whole) (Knorr and Cicourel, 1981). In the last two decades this ostensive definition of society has been challenged by ethnomethodology (Garfinkel, 1967) and by the sociology of science (Knorr and Mulkay, 1983), especially of the social sciences (Law, 1986) and the sociology of technology (Latour, 1986a). In the light of these studies, the conventional distinctions between micro- and macro-levels become less clearcut and it is more difficult to accept a traditional definition of society. Instead, society is more compellingly seen as continually constructed or "performed" by active social beings who violate "levels" in the process of their "work".

The two positions, the ostensive and the performative model, differ in principle and in practice, with crucial consequences for how the social link is characterized. These two views can be summarized as follows.

Ostensive definition of the social link

1. It is, *in principle*, possible to discover the typical properties of what holds a society together, properties which could explain the social link and its evolution, although *in practice*, it may be difficult to detect them.

2. These properties or elements are social. If other properties are included then the explanation of society is economic, biological, psychological, etc.

3. Social actors (whatever their size — micro or macro) are *in* the society as defined in 1. To the extent that they are active, their activity is restricted because they are only part of a larger society.

4. Because actors are in the society, they can be useful informants for scientists interested in discovering the principles of society. But because they are only *part* of society, even if they are "aware", they can never see or know the whole picture.

5. With the proper methodology, social scientists can discover the principles of what holds society together, distinguishing between actors' beliefs and behaviour. The picture of society as a whole, thus devised, is unavailable to the individual social actors who are within it.

According to the traditional paradigm, society exists, actors enter it adhering to rules and a structure that are already determined. The overall nature of the society is unknown and unknowable to the actors. Only scientists, standing outside of society, have the capacity to understand it and see it in its entirety.

"Performative" definition of the social link

1. It is impossible, *in principle*, to establish properties which would be peculiar to life in society, although, *in practice*, it is possible to do so.

2. A variety of elements or properties contribute to the social link as defined by social actors. These are not restricted to the purely social and can include economic, biological, psychological, etc.

3. *In practice*, actors (no matter what their size — macro or micro) define, for themselves and for others, what society is, both its whole and its parts.

4. Actors "performing" society know what is necessary for their success. This may include a knowledge of the parts and of the whole and of the difference between beliefs and behaviour.

5. Social scientists raise the same questions as any other social actor and are themselves "performing" society, no more and no less than non-scientists. They may, however, have different practical ways of enforcing their definition of what society is.

According to the performative view, society is constructed through the many efforts to define it; it is something achieved in practice by all actors, including scientists who themselves strive to define what society is. To use Garfinkel's expression (1967), social actors are transformed, in this view, from "cultural dopes" to active achievers of society. This shifts the emphasis from looking for the social link in the *relations between actors* to focusing on *how* actors achieve this link in their search for what society is.

Going from the traditional to the performative framework creates two sets of inverse relationships, one that reveals a strange symmetry among all actors and another that points out a new asymmetry. The first inverse relationship is the following: the more active the actors,

the less they differ from one another. This shift in definition is tanta-
mount to saying that actors are fully fledged social scientists
researching what the society is, what holds it together and how it can
be altered. The second inverse relationship is this: the more actors are
seen to be equal, *in principle*, the more the *practical* differences
between them become apparent in the means available to them to
achieve society. Let us now see how we can apply these principles in
the case of baboon societies.

Baboons: history of ideas

When Darwin wrote that we could learn more from baboons than
from many of the western philosophers, he knew very little, in fact,
about baboons (Darwin, 1977). It was the Darwinian revolution that
initiated the modern scientific study of the behaviour and society of
other animals.

   Pre-scientific folk ideas about baboons claimed that they were a dis-
ordered gang of brutes, entirely without social organization, roaming
around at random (Morris and Morris, 1966). A picture of an orderly
society emerged with the first "scientific" studies. The early laboratory
studies of monkeys (Kempf, 1917) and studies of captive baboons
(Zuckerman, 1932) incorporated only a very small amount of knowl-
edge about the behaviour of the animals in the wild (Marais, 1956,
1969; Zuckerman, 1932). Despite this, the studies did demonstrate
that baboons had a society, albeit very simply organized. Sex and
dominance were the primary factors at work (Maslow, 1936;
Zuckerman, 1932). Sex held society together, or rather the desire of
males for sexual access to females. Baboons were thus both the
earliest and the most classic representatives of the orderly and simple
society of primates.

   The modern baboon field studies initiated in the 1950s (DeVore,
1965; DeVore and Hall, 1965; Hall, 1963; Washburn and DeVore,
1961) were among the pioneering attempts to understand primate
behaviour in its natural, hence evolutionary, setting (Washburn and
Hamburg, 1965; Washburn et al., 1965). The data suggested that
society was not based on sex; the social structure was, instead, pro-
vided by the effects of male aggression and the dominance hierarchy it
created. Social not sexual bonds held the group together. Comparing
their results, Washburn, DeVore and Hall (DeVore and Hall, 1965;
Hall and DeVore, 1965; Washburn and DeVore, 1961) were

impressed by the similarity of their baboons, although three species were involved and the different populations lived from a hundred to thousands of miles apart. Not only were baboons paragons of orderly social life but they persisted in that same society regardless of geography or even species distinctions.

As primate field studies proliferated in the 1960s and 1970s, so did studies of baboons (e.g. Altmann and Altmann, 1971; Ransom, 1984; Rowell, 1966, 1969; Stoltz and Saayman, 1970). Some observations of baboons in a variety of habitats challenged accepted ideas about baboon society. Forest-living baboons in Uganda (Rowell, 1966, 1969) lacked a stable male dominance hierarchy and a variety of "adaptive" male behaviours documented earlier. Kinship and friendship appeared to be the basis of baboon society (Ransom, 1984; Ransom and Ransom, 1971; Strum, 1975a, 1982) rather than the male dominance order. These new discoveries were made possible by new methods which included following individually recognized animals over long periods of time. Soon, each baboon troop under observation diverged from the norm, and variations in its behaviour undermined both the nice species pattern and its evolutionary interpretation.

One way out of the dilemma of intra-species variability, a way to eliminate the accumulating discrepancies (and, by implication, the increasing unpredictability of baboon behaviour), was to reject data and the views of the observers. A common position was this: other baboons did not behave differently, they were just inaccurately studied. Baboon social structure did exist in a stable way underneath the variety of observations.

Yet the amount of variation documented among baboons (and for other primate species) eventually subdued, to a degree, the methodological argument. Scientists accepted the idea that both behaviour and society were flexible (e.g. Crook, 1970; Crook and Gartlan, 1966; Eisenberg et al., 1972; Gartlan, 1968; Jay, 1968; Struhsaker, 1969). The difficulty was to find principles that governed the variability. The best candidates at that time were ecology and phylogeny but only the socio-biological approach of the mid-1970s (Wilson, 1975) provided a new synthesis. This revamped evolutionary framework supplied a compelling solution to the question of the principles of society. Stable properties were not in the social structure itself but rather in individual genotypes. Groups were not selected, as earlier evolutionary formulations had implied, individuals were. The society itself was a stable but "accidental" result of individual decisions, an Evolutionary Stable

Strategy (ESS) and ESSs varied with circumstances (Maynard Smith, 1976; Maynard Smith and Parker, 1976; Maynard Smith and Price, 1973).

The socio-biological solution left moot the question of the proximate means by which society could be achieved. Smart gene calculators might be appropriate actors in an "ultimate" scenario but whole individuals coexisted, competed or co-operated as real participants in society. It is the most recent stage of baboon (and primate) research which had addressed this proximate level. The information comes primarily from long-term studies of baboons in the wild (field sites: Kenya — Amboseli, Gilgil/Laikipia, Mara; Tanzania — Gombe, Mukumi; Botswana — Okavango).

The recent research is of great interest to our argument. The trend has been in the direction of granting baboons more social skill and more social awareness (Griffin, 1981, 1984) than the socio-biological "smart biology" argument allowed. These skills involve negotiating, testing, assessing and manipulating (Strum, 1975a,b, 1981, 1982, 1983a,b,c, in press; Western and Strum, 1983). A male baboon, motivated by his genes to maximize his reproductive success, cannot simply rely on his size, strength or dominance rank to get him what he wants. Even if dominance was sufficient, we are still left with the question: how do baboons know who is dominant or not? Is dominance a fact or an artefact? If it is an artefact, whose artefact is it — is it the observer's, who is searching for a society into which he can put the baboons? (Even in the classic dominance study, the investigator had to intervene by pairing males in contests over food, in order to "discover" the dominance hierarchy.) Or is it a universal problem, one that both observer and baboon have to solve?

If baboons are constantly testing, trying to see who is allied with whom, who is leading whom, which strategies can further their goals, as recent evidence suggests, then both baboons and scientists are asking the same questions. And to the extent that baboons are constantly negotiating, the social link is transformed into a process of acquiring knowledge about "what the society is". To put it in a slightly different way, if we grant that baboons are not *entering into a stable structure* but rather negotiating what that structure will be, and monitoring and testing and pushing all other such negotiations, the variety of baboon society and its ill fit to a simple structure can be seen to be a result of the "performative" question. The evidence is more striking in reverse. If there was a structure to be entered, why all this behaviour geared to testing, negotiating and monitoring (i.e.

Strum, 1975a,b, 1981, 1982, 1983a,b,c; Boese, 1975; Busse and Hamilton, 1981; Cheney, 1977; Dunbar, 1983; Gilmore, 1980; Hamilton et al., 1975; Hausfater, 1975; Kummer, 1967, 1973, 1978; Kummer et al., 1974; Nash, 1976; Packer, 1979, 1980; Popp, 1978; Post et al., 1980; Rasmussen, 1979; Rhine, 1975; Rhine and Owens, 1972; Rhine and Westlund, 1978; Sapolsky, 1982, 1983; Seyfarth, 1976; Smuts, 1982; Stein, 1984; Walters, 1980, 1981; Wasser, 1981)? And baboons are not alone among the non-human primates (e.g. Bernstein and Ehardt, 1985; Chepko-Sade, 1974; Chepko-Sade and Olivier, 1979; Chepko-Sade and Sade, 1979; DeWaal, 1982; Drickamer, 1974; Gouzoules, 1984; Kaplan, 1978; Kleiman, 1979; Parker and MacNair, 1978; Seyfarth, 1977, 1980; Silk, 1980).

We can summarize the baboon data and argument as follows: first, the traditional, ostensive definition of baboon society has been unable to accommodate the variety of data on baboon social life. As a result, some information has been treated as "data" and other information as discrepancies to be ignored or explained away. Second, more recent studies demonstrate that baboons invest a great deal of time in negotiating, testing, monitoring and interfering with each other.

A performative definition of society allows us to integrate both sets of "facts". Under this definition, baboons would not be seen as being *in* a group. Instead they would be seen as striving to define the society and the groups in which they exist, the structure and the boundaries. They would not be seen as being *in* a hierarchy, rather they would be ordering their social world by their very activity. In such a view, shifting or stable hierarchies might develop not as one of the principles of an overarching society into which baboons must fit, but as the provisional outcome of their search for some basis of predictable interactions. Rather than entering an alliance system, baboons performing society would be testing the availability and solidity of alliances without knowing for certain, in advance, which relationships will hold and which will break. In short, performative baboons are social players actively negotiating and renegotiating what their society is and what it will be.

The performative version of society seems better able to account for the longitudinal data from one baboon site than can the traditional model. This is true when examining predatory behaviour (Strum, 1975b, 1981, 1983), male interactions (Strum, 1982, 1983a,b), agonistic buffering (Strum, 1982a,b), social strategies (Strum, 1982, 1983a,b, in press), the evolution of social manipulation (Western and Strum, 1983), and the fission of the main study troop (Strum, in

press). Baboons "performing" society might also allow a more consistent interpretation of the cross-populational data and data from other species of monkeys and apes.

Social complexity and social complication

When we transform baboons into active performers of their society does this put them on a par with humans? The performative paradigm suggests an important distinction. What differs is the *practical* means that actors have to enforce their version of society or to organize others on a larger scale, thereby putting into practice their own individual version of what society is.

If actors have only themselves, only their bodies as resources, the task of building stable societies will be difficult. This is probably the case with baboons. They try to decide who is a member of the group, what are the relevant units of the group that have to be considered, what is the nature of the interaction of these other units, and so on, but they have no simple or simplifying means to decide these issues or to separate out one at a time to focus upon. Age, gender and perhaps kinship can be taken as givens in most interactions. To the extent that dominance systems are linked to kinship, dominance rank may also be a given (Chapais and Schulman, 1980; Hausfater et al., 1982). But even age, kinship and kinship-linked dominance may be the object of negotiation at critical points (Altmann, 1980; Cheney, 1977; Chepko-Sade and Sade, 1979; Popp and DeVore, 1979; Trivers, 1972; Walters, 1981; Wasser, 1982; Wasser and Barash, 1981). A profusion of other variables impinge simultaneously. This is the definition of *complexity*, "to simultaneously embrace a multitude of objects". As far as baboons are concerned they assimilate a variety of factors all at once.

For the rest of our discussion we will consider that baboons live in *COMPLEX* societies and have complex sociality. When they construct and repair their social order, they do so only with limited resources, their bodies, their social skills and whatever social strategies they can construct. A baboon is, in our view, the ideal case of the *COMPETENT MEMBER* portrayed by ethnomethodologists, a social actor having difficulty negotiating one factor at a time, constantly subject to the interference of others with similar problems. These limited resources make possible only limited social stability.

Greater stability is acquired only with additional resources;

something besides what is encoded in bodies and attainable through social skills is needed. Material resources and symbols can be used to enforce or reinforce a particular view of "what society is" and permit social life to shift away from complexity to what we will call *complication*. Something is "complicated" when it is made of a succession of simple operations. Computers are the archetype of a complicated structure where tasks are achieved by the machine doing a series of simple steps. We suggest that the shift from complexity to complication is the crucial *practical* distinction between types of social life.

To understand this point better, we might look at what baboon-watchers do in order to understand baboon social life. First, individuals are identified and named, and the composition of the group is determined by age, sex and kinship, and perhaps also dominance rankings. Items of behaviour are identified, defined and coded. Then attention is consciously focused on a subset of individuals, times and activities, among the variety of interactions that occur simul-taneously. Of course we could interpret this procedure as merely a rigorous way of getting at the social structure that exists and informs baboon societies. This interpretation of the scientific work fits nicely with the ostensive definition of society. In our view, however, the work that human observers do in order to understand baboon societies is the very same process that makes human societies different from baboon ones. Modern scientific observers replace a complexity of shifting, often fuzzy and continuous behaviours, relationships and meanings with a complicated array of simple, symbolic, clear-cut items. It is an enormous task of simplification.

How does the shift from social complexity to social complication happen? Figure 1 illustrates how we imagine this progression. The first line represents a baboon-like society in which socialness is complex, by our use of that term, and society is complex but not complicated because individuals are unable to organize others on a large scale. The intensity of their social negotiation reflects their relative powerlessness to enforce their version of society on others, or to make it stick as a stable, lasting version.

The second line positions hypothetical hunter–gatherers who are rich in material and symbolic means to use in constructing society compared to baboons, although impoverished by comparison with modern industrial societies. Here language, symbols and material objects can be used to simplify the task of ascertaining and nego-tiating the nature of the social order. Bodies continue their social

FIGURE 1
Complexity versus complication: the trade-off
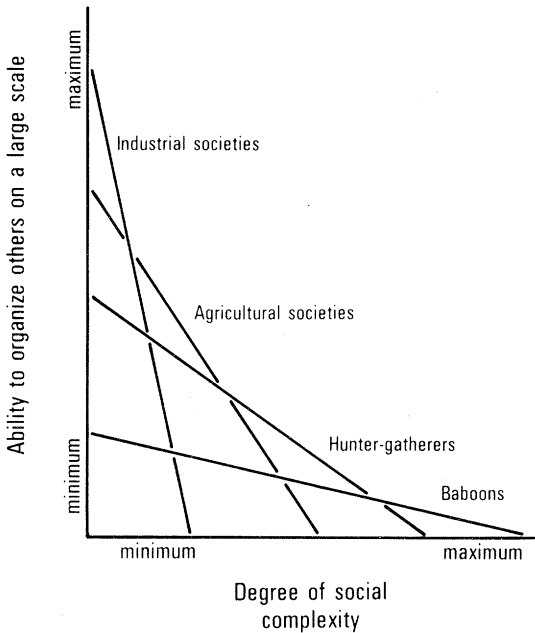
strategies in the performation of society, but on a larger, more durable, less complex scale. Material resources and the symbolic inno-vations related to language allow individuals to influence and have more power over others thereby determining the nature of the social order.

Line 3 represents agricultural societies where even more resources can be brought to bear in creating the social bond. In fact, the social bond can be maintained in the relative absence of the individuals. These societies are more complicated and more powerful than hunter–gatherer groups and the performation of society is possible on a larger scale because negotiations at each step are much less complex.

Modern industrial societies are depicted by the fourth line on the diagram. Here individuals are able to organize and "mobilize" others on a grand scale. According to our scheme, the skills in an industrial society are those of simplification making social tasks *less complex* rather than making them more complex by comparison with other human and animal societies. By holding a variety of factors constant

and sequentially negotiating one variable at a time, a stable *compli-cated* structure is created. Through extra-somatic resources employed in the process of social complication, units like multinational corporations, states and nations can be constituted (Latour, 1987). The trend as we have sketched it, is from complex sociality, as found among baboons, to complicated sociality as found among humans. Starting with individuals who have little power to affect others, or enforce their version of society, or make a lasting social order, we encounter a situation where individuals employ more and more material and "extra-social" means to simplify social negotiations. This gives them the ability to organize others on a large scale, even when those others are not physically present. By using additional new resources, social actors can make weak and renegotiable associations, like alliances between male baboons, into strong and unbreakable units (Callon and Latour, 1981; Latour, 1986a).

The evolution of the performative social bond

Our use of a performative framework produces two important permu-tations. First, it grants full activity to all social participants. Individually and together they create society and, in theory, they are all equal. But, secondly, new asymmetries are introduced when we consider what practical means actors have to enforce their own definition of the social bond and to organize others according to individual views of what society is.

This suggests a novel way to examine the evolution of the social bond. What follows is really a classification of meanings of social which may have implications for an evolutionary scenario.
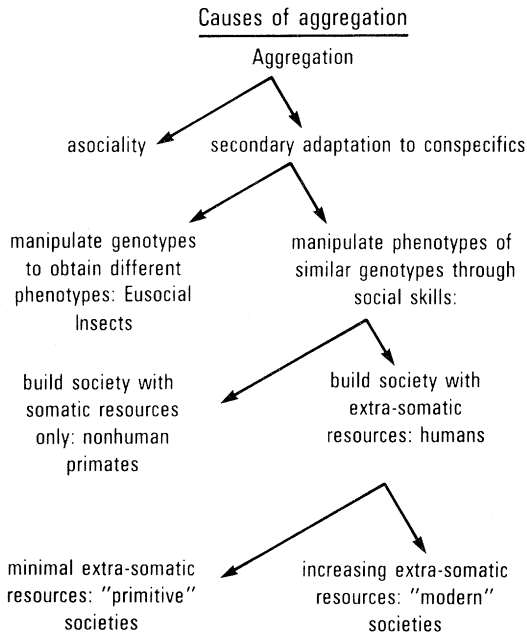
We can begin with the common definition of social — "to associate". But how does an actor make the social link hold? Some associations are weaker while some are stronger and longer lasting. Our comparison of complexity and complication, from baboons to humans, suggests that resources play a role in the construction of society and in social stability.

The etymology of the word social is also instructive. The root is seq-, sequi and the first meaning is thus "following". The Latin "socius" is a fellow sharer, partner, comrade, companion, associate. "Socio" means to unite together, associate, to do or to hold in common. From the different languages, the historical genealogy of the word "social" is construed first as following someone, then enrolling

and allying and, lastly, having something in common. These three meanings are quite appropriate for baboons. The next meaning of social is to have a share in a commercial undertaking. "Social" as in the social contract is Rousseau's invention. "Social" as in social problems, the social question, is a nineteenth-century innovation. Parallel words like "sociable" refer to skills enabling individuals to live politely in society. As is clear from the drift of the word, the meaning of social shrinks as time passes. Starting with a definition which is coextensive with all associations, we now have, in common parlance, a usage that is limited to what is left after politics, biology, economics, law, psychology, management, technology and so on, have taken their own parts of the associations.

The performative framework we are advocating, in effect, gives back to the word "social" its original meaning of association. Using this definition we can compare the *practical* ways in which organisms achieve societies. Figure 2 summarizes our views about the possible

FIGURE 2
The evolution of the performative social bond

Causes of aggregation

Aggregation

asociality ← secondary adaptation to conspecifics

manipulate genotypes to obtain different phenotypes: Eusocial Insects

manipulate phenotypes of similar genotypes through social skills:

build society with somatic resources only: nonhuman primates

build society with extra-somatic resources: humans

minimal extra-somatic resources: "primitive" societies

increasing extra-somatic resources: "modern" societies

evolution of the performative social bond. We focus on the types of resources that actors have with which to create society and to associate, but we do not restrict the idea of "resources" in any sense.

Aggregations of conspecifics is the first meaning of social in various accounts of the origin of society (see Latour and Strum, 1986 and references included there). However, most accounts fail to distinguish between this aggregation and the origin of social skills. Once aggregation occurs, whatever its cause (e.g. Alcock, 1975; Hamilton, 1971), two different strategies are possible in our model. The first is for the actor to depart, fleeing others as soon as possible. This option generates asocial animals who exist alone except for brief reproductive interludes and temporary associations.

The second option is of greater interest. If the aggregated individual is not going to flee, he or she must adapt to a new environment of conspecifics. This is the meaning of social most common in the animal behaviour literature: to modify one's behaviour in order to live in close proximity to others of the same species. Acquiring the skill to create society and hold it together is then a *secondary* adaptation to an environment made up, in large part, of conspecifics. In order not to be exploited by their new social environment, individuals must become smarter at manipulating and manoeuvering around each other.

Once the social option has been chosen, two other possibilities appear. In the first, it is the genotypes that are modified until they are socially distinct. Insect societies are an example where the actors' own bodies are irreversibly moulded. In the second possibility we find a different meaning of social. In this case the genotypes produce similar phenotypes. These phenotypes are then manipulated by the ever-increasing social skills of individuals. This option also branches into two alternatives.

Baboons provide an example of the first. Social skills are necessary to enroll others in the actor's definition of what society is. But baboons have only "soft tools" and can build only "soft" societies. They have nothing more to convince and enlist others in their definition than their bodies, their intelligence and a history of interactions built up over time. This is a *complex* task and only socially "smart" and skilful individuals may hope to be successful in baboon society.

The second possibility is to acquire additional means of defining and strengthening the social bond. Here we have the human case where the creation of society uses material resources and symbols to simplify the task. Social interactions become more *complicated* but not more complex. Much of the skill necessary to achieve society in

the other, baboon-like, option now resides in the creation of symbolic and material bonds. The result is that actors, rather than appearing to create society, now appear to be inserted into a material society that overpowers them (the traditional paradigm discussed earlier).

For human societies there is an additional branching: "primitive" societies are created with a minimal amount of material resources; increasing such resources produces "modern" societies. Thus technology becomes one way of solving the problem of building society on a larger scale. In this sense even modern technology is social. It represents a further resource in the mobilization of individuals in the performance of society.

To summarize our theoretical model, once individuals are aggregated and choose not to avoid each other, there must be a secondary adaptation to a new competitive environment of conspecifics. Two strategies are possible: manipulate the genotypes to obtain different phenotypes (eusocial insects) or manipulate the phenotypes of similar genotypes through increasing social skills. Similar bodies adapting to social life have, themselves, two possibilities: build the society using only social skills (non-human primates) or utilize additional material resources and symbols, as necessary, to define the social bond (human societies). In the human step different types of societies are created depending upon the extent of new resources that are used.

Politics

What relevance does our exploration of the meanings of social have for politics? The answer depends, of course, on how politics is defined (Mackenzie, 1967). At the simplest and broadest level, politics is simply that which is characterized by policy, of "sagacious, prudent, shrewd persons" or of "expedient, skillfully contrived actions" (Oxford English Dictionary). Schubert (1986) proposes a definition of politics that would allow cross-species, evolutionary comparisons. For him, politics is the manner in which individuals seek to influence and control others who are not closely related to them but live together in large social groups. In these groups there are subgroups that co-operate or compete for control over the policy that determines the group's cultural rules.[1]

Both our approach and Schubert's suggest that the ability to

influence and control conspecifics is an important aspect of political behaviour. In shifting to a performative definition of social, we conceive of the social link as an *active* exercise in negotiation and control. What is different, between different species and between different human groups, is the scale on which others can be organized, mobilized and influenced. In our model, material resources and symbols play a significant role in creating the difference between a "soft" society with limited stability, where individuals have minimal power to influence others, and a "hard" and stable society, where others can be influenced without even being present.

Can we identify the beginnings of political behaviour in the beginnings of socialness, as we have redefined it and traced its development through our version of the evolution of the social bond? Certainly the traditional view that individuals are relatively passive and enter into a society that overpowers them would lead us to believe that political action begins when individuals become "actors", taking the initiative in determining "what society is". In this view such initiative comes very late in the evolutionary time-scale. But if all social actors "perform" society to some degree, are active participants from the *beginning*, probing and investigating, negotiating and renegotiating, where would we comfortably place the beginnings of political behaviour? Should we exclude the eusocial insects because the major negotiations occur before the phenotypes appear? Should we exclude non-human primates because their sphere of influence is limited by the extent of their material and symbolic resources?

While the thrust of Schubert's "biopolitical behavioralist" definition is to urge caution when attributing political behaviour to non-human primates, at least as some recent animal studies have done (e.g. deWaal, 1982), the thrust of our argument is to draw a closer parallel between what we call "social" and what has been defined as political. These efforts do not erase the significant differences between ants, baboons and, for instance, the technocrats of the Pentagon. Rather they highlight the source of those differences in a new way: the resources used and the practical work required in mobilizing them. In our definition of resources, genes, power, language, capital and technology, for instance, are all seen as strategic means of enhancing one's influence over others in increasingly more durable ways. Politics is not one realm of action separated from the others. Politics, in our view, is what allows many heterogeneous resources to be woven together into a social link that becomes increasingly harder and harder to break.

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Note

1. Until recently, "cultural rules" might have excluded non-human animals, a priori. Now the evidence is striking for animal "mental models" (e.g. Griffin, 1981, 1984).

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