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A place holder: the social sciences of monkeys and apes

Un lieu en friche : les sciences sociales des primates non humains

Véronique Servais

1 Introduction

- 1 Because of the extreme polarization of the nature/culture duality which has widened the gap between natural and social sciences (cf. Kaufmann and Cordonnier, 2011; Whitehouse, 2001; De Fornel and Lemieux, 2007; Ingold, 1990; 2003; Guillo, 2012) it has been convenient to assign the study of all the characteristics of non-human animals to natural sciences. They are considered to have neither an authentic society (absence of norms, taboos, intersubjectivity etc.), nor a real culture, and even though primatologists today use the term “culture”, it must be recognized that the notion itself is often explained in terms of behavior or biology. Animal behavior, therefore, is considered as entirely the product of biology. In the absence of an alternative, the theory of evolution is the unique explanation of social behavior, which easily leads to the conclusion that social behavior is the product of selection and is genetically determined. This situation leads to a systematic overestimation of the role of biology, and selection and genes in particular, in the determination of social behavior in primates. This in turn has repercussions for mankind, when an evolutionary approach to behavior is concerned, suggesting that the biological component of behavior is overestimated as well. It must not be forgotten that social behavior involves another level of determination: that of social systems themselves. Of course these systems are partially determined by the ecological environment, but individuals who, by the impact of their actions, construct social relationships also produce them. Social relationships are not - or are not only - abstract structures reconstructed by researchers. They also constitute the emotional environment in which individuals grow and develop as well as the context which gives meaning to their signals. Although somewhat intangible, social relationships are constructed by individuals endowed with emotions and specific cognitive and communicative skills.

These relationships produce configurations that become autonomous and within which a part of individual cognition is contained. Taking account of this strictly social aspect of the explanation requires the serious application of social sciences to primatology. Evidently, a way to do this needs to be found, but doing so should make it possible to specify and better identify what, in terms of social communication and behavior, comes under the area of biological determination (and therefore genetic determination) and which stems from individual learning, from the network of relationships that pre-dates individuals and possible local affective cultures. Restoring an explicative autonomy to the structures that connect individuals should both limit evolutionary inflation in the assessment of social behavior and make it possible to empirically research the connection points between the biological and the social.

2 A place without a name

- 2 Despite repeated attempts, neither biology nor cognitive ethology has satisfactorily been able to offer an explanation for a certain number of observations linked to social behavior, notably among apes. The reason for this failure is partly due to the fact that their social skills are not present as such inside individuals, but partially in situations. The example below serves to clarify this. Zoos are often confronted by the problem of female gorillas, chimpanzees or orangutans that are incapable of caring for their offspring correctly. The negligence or incompetence is so pronounced that it can cause the death of the infant without external help. To remedy the problem, vitamins are given to the mother, an attempt is made to lower her stress levels (caused for the most part by the infant herself and the fact that the mother doesn't know how to deal with her), or an attempt is made to teach the mother how to care for the infant. For example, she is shown how to give the child a bottle, with only limited success. All these "solutions" presuppose that the origin of the problem is to be found somewhere "within" the mother, in her biology or cognition. However, we can alternatively consider that the skills necessary for taking care of the infant are not to be entirely found "within" the mother, either biologically or even cognitively, but are precisely distributed among a functioning social group (Hutchins, 1991). Once the integrity of the group and the links that maintain and update knowledge from generation to generation are broken, these skills are difficult to restore. What is particularly interesting in this example is the fact that this knowledge and skill, which are crucial for the *survival* of the species, are thus "placed" in an order of reality that must be called social as it is neither strictly biological nor strictly psychological. This order of reality has a kind of autonomy in relation to individual biological and psychological determinations and partly constitutes the evolutionary environment of the species. Although it does so somewhat crudely, this example shows where biology fails and suggests that there is a limit to what biology is capable of explaining given its own conceptual tools. The areas for study that exist beyond these limits are left in the wilderness so to speak, and are abandoned to social science. Should social sciences refuse to take an interest in these areas simply because doing so would involve a radical overhaul of their methods and identity, and continue to limit themselves strictly to the study of human beings? I do not believe that they should. The sociology of primates will certainly be different to human sociology. Perhaps the sociology of primates may not even be "real" sociology but it is certain that the phenomenon alluded to in the example cited above belongs neither to the realm of biology nor psychology, and it

appears logical that social sciences should take an interest in this unnamed area. Social sciences would certainly be transformed during this process. But it wouldn't necessarily be prejudicial to them. I believe that, on the contrary, by cultivating an interest in this new field, social sciences would be really challenged to reconsider their objects, renew their points of view and increase their understanding of human societies.

3 Social skills in situation

- 3 The second point of my discussion takes an in-depth view of the problem of the decontextualization of social cognition in primatology. Decontextualizing means isolating skills from the interactive context in which they become current and thus transforming social skills which are linked to a situation into independent cognitive skills *located in the minds* of individuals (cf. Wieder, 1980, in particular). What a certain number of studies on social cognition show, if we agree to read them from this point of view, is that social competence is not totally transferable and that a part of social cognition is recorded in the structures that link individuals to each other. Indeed, the experiments which I will briefly give an account of here show that when the interactive fabric that allows chimpanzees to give meaning to the social situation and to act while being part of a situation is broken, for example by an experimental method which aims to identify "pure" cognition free from all contingencies, chimpanzees "lose" certain cognitive skills which they actually exhibit in real life. I will concentrate on two types of work here: studies which have attempted to show the existence of a calculated reciprocity ("win-win") in chimpanzees and orangutans (de Waal, 1997; Chapais, 2006; Schino, 2007; Melis *et al.*, 2006b; Melis *et al.*, 2008; Melis *et al.*, 2010), and studies which have focused on cooperation and the way this is linked to food tolerance in *Panidae* (Melis *et al.*, 2006; Melis *et al.*, 2009; Hare *et al.*, 2007; Jaeggi *et al.*, 2010).
- 4 A well-known difficulty with the theory of evolution is that it has difficulty explaining altruism when this is not directed toward relatives. And yet, monkeys and apes show a lot of altruistic and cooperative behavior (Packer, 1977; Chalmeau and Gallo, 1995; Clutton-Brock, 2009). In order for this altruism to be explained by Triver's theory of reciprocal altruism, it would be necessary for individuals to be capable of keeping an account of favors given and received, and of detecting "cheats". A number of studies have been completed in order to establish whether chimpanzees, orangutans, capuchins and several species of macaques are capable of "calculated reciprocity" (Seyfarth and Cheney, 1984; de Waal, 1997; 2000; Brosnan *et al.*, 2006; Brosnan *et al.*, 2009, Hauser *et al.*, 2003; Pelé *et al.*, 2010; Dufour *et al.*, 2009; Koyama *et al.*, 2006). With regard to chimpanzees, the results are contradictory (Schino, 2007) and actually depend on the study method: experimental versus observation in a socially valid environment. When placed in experimental situations, chimpanzees do not show a preference for helping a fellow-creature who previously helped them (Melis *et al.*, 2008), and yet, if we observe who shares food with whom within a group, we see that chimpanzees show a preference for sharing with another chimp who had groomed them during the preceding few hours (de Waal, 1997). Different theories have been offered to explain this phenomenon but primatologists do not seem to go far enough to reach the obvious conclusion: the limitations observed in experimental situations are not of a cognitive nature but are social or emotional. It is not that chimpanzees are not capable, cognitively of resolving a calculated reciprocal task ("I give or I come to the assistance of someone who has helped

me in the past”), because they do this every day. It is rather the case that experimental situations prevent them from doing so by matching them with randomly chosen fellow-creatures. In this way the social and relational variables are neutralized and chimpanzees are placed in situations where *only decontextualized calculation* (cognitive calculation) allows them to make choices. The inability of chimpanzees to resolve this task is more a reflection of the inability to build a relationship based on “pure” exchange, in the absence of political or emotional issues which would give meaning to the situation. It seems therefore that only part of reciprocity is based on the cognitive competence of an individual, the other part depending on information distributed in the building of relationships. In other words, it is a mistake to place the entire strategy of “calculated reciprocity” in the head of individuals, and then draw evolution-based conclusions about the way such a “strategy” was able to be selected. A large part of the definition of the situation is supported by *the social situation itself*, and is not represented as such in the minds of chimpanzees. As individuals of flesh and blood, dominated by emotions and located at a particular point in the social network, they can only have a partial view and a limited awareness of this group. To believe that chimpanzees have the same thing in their minds as the researcher needs to have in his in order to understand their behavior is to commit what the sociologist Pierre Bourdieu called the “intellectualist bias” (Bourdieu and Wacquant, 1992): this involves putting into the heads of the participants what we need in order to explain their behavior (strategies, intentions, etc.). But it is evident that the participants, whether animal or human, as actors *involved in a situation*, clearly have a very different vision to that of the researcher who is observing from a position of detachment. In order to have a clearer vision of what, as part of a strategy for example, was able to be selected by evolution and that which results from the situation, it is important to recontextualise behavior and resituate it in the embodied logic of the participants. This approach does not exclude all biological determinations of behavior but raises the question as to the place where the determining factors act by virtue of their nature and the way they are included in systems of social logic which go beyond them and which they still contribute to organizing.

- 5 It is ironic that it is the primates themselves who, by their failures, remind the researchers that cooperation or reciprocity are not “simple” cognitive skills but skills that take place in individuals who are emotionally involved in situations. It is probable that this applies to other social or perceptual skills and that many of these are partly determined by the situation. That is to say that their identification must be accompanied by a detailed description of the social situation to avoid the risk of overestimating the importance of biological determinism in social behavior.
- 6 Experiments on cooperation and its links to food tolerance offer a good example of the connection between a given biological fact, individual learning and what could be called local emotional cultures within a determined group. Melis *et al.* (2006a) tested cooperation in chimpanzees during a task in which two animals had to pull on a device in order to obtain food. They showed that their performance was closely related to the relationship between the cooperators. More precisely, the constraints weighing on the ability to cooperate were not cognitive but emotional: the chimpanzees cooperated very well when they had to work with a fellow-creature with whom they were capable of sharing food. It was therefore a question of tolerance for food-sharing rather than cognitive ability. To be capable of cooperating with a fellow-creature, chimpanzees needed to have developed a relationship in which they felt sufficiently at ease to accept to

feed beside each other and share a resource. Cooperation could arise in a relational context of food-sharing but not in the absence thereof. The more pairs of chimpanzees were tolerant with regard to cooperation the higher their food-sharing scores were. Another study (Hare *et al.*, 2007) compared the performance of chimpanzees and bonobos in the same cooperative task. As anticipated the bonobos were seen to be more tolerant with regard to food-sharing and performed better with regard to cooperative tasks. The authors concluded that there was a specific difference here, which was understood to be linked to the skills specific to the species: the bonobos were more tolerant with regard to food-sharing and were therefore more cooperative. But a more detailed examination (Hare and Tan, 2013) revealed that the difference between chimpanzees and bonobos mostly concerned males, and only developed progressively as individuals joined their social group and acquired the relational models of their group, a model which in this case was that of “their species”: competitive for the chimpanzees and cooperative for the bonobos. The young chimpanzees were as tolerant with regard to food-sharing (and therefore as cooperative as the young bonobos). Finally, another study (Jaeggi *et al.*, 2010) showed contradictory results: in two captive groups studied, the chimpanzees were more tolerant than the bonobos with regard to food-sharing.

- 7 This led to the unmistakable conclusion:
 - 1- That food tolerance is not (or not entirely) an innate or typical trait of the species;
 - 2- That competitive or cooperative relationships, and therefore the fact that individuals become more or less competitive or cooperative, are partially acquired: chimpanzees are not born chimpanzees but become chimpanzees;
 - 3- That food tolerance and therefore cooperation are the result of interactive modalities that individuals have the means and the possibility to construct given their communication skills, their biological systems and the type of relationship that pre-existed them and which they need to join. This can vary according to local conditions. On the other hand, it is possible that once certain relationship models are acquired it is very difficult to change them (Bateson, 1977). Here is where the notion of *affective culture* assumes its full meaning: it concerns interactive modalities and emotional learning which is handed down from generation to generation but which is only partly related to individual biology or psychology.
- 8 With these examples we went from biological hypothesis that ascribed social skills to individuals (and which the theory of evolution should logically have taken account of) to much more modest hypothesis which give way to a certain indetermination of the social by the biological.
- 9 The scope for variation left by this indetermination is one of the unexplored areas mentioned above, which neither biologists nor psychologists can really study due to a lack of adequate methodologies and conceptual tools and which the social sciences could take on board. The area is vast and unexplored but it seems to me that there are important issues here for social sciences. It requires taking possession of an area that belongs to social sciences in their own right and upon which evolutionary biology and psychology purport to have a legitimate claim despite the fact that, as we have earlier established, these disciplines are poorly equipped to take up this challenge. It is also a question of limiting the influence of evolutionary theories on the social sciences by means of empirical studies.

4 The inflation of adaptation theories in the social sciences.

- 10 Adaptationist theories have enjoyed increasing success with regard to the social sciences, provoking debates which are often more ideological than empirical (cf. Kaufmann and Cordonnier, 2011; Whitehouse, 2001; De Fornel and Lemieux, 2007; Ingold, 1990; 2003; Guillo, 2012). And yet, the overestimation of biology in the social behavior of primates has an impact on the way the social sciences incorporate natural sciences. This is because when ethological data are imported into the social sciences, it leads to a truncated vision which consequently leads to concepts in the social sciences that are needlessly finalistic. The importation of finalistic concepts tends to reinforce the nature/culture duality by placing skills on either side of the wall. In addition, this obscures empirical research of what is (or could be) innate or biological in humans. Drawing from the examples of primitive social forms of Kauffman & Cordonier (2011) and pointing in dogs and primates, I would like to demonstrate that finalistic reasoning could easily lead to a poor identification of the entities that are supposed to have been selected and that it would be better to put forward the theory that we are dealing more with evolutionary concoctions (Gould and Lewontin, 1979) and composites of nature/culture than selected skills for the purpose of a precise function.
- 11 Neutralist theories of evolution (Langaney, 1999), which put the importance of selection into the perspective of the mechanisms of the evolution of species, are relatively neglected by behavioral biologists and totally neglected by evolutionary psychologists (Ehrlich and Feldman, 2007). The latter seem to think that selection and adaptation to an environment are the main forces behind evolution. From this, they draw the conclusion that if a specific aptitude exists it is because it has been selected and that, if it has been selected, it conferred an adaptational advantage on the individual that was endowed with this skill. Yet we know that many errors of reasoning which have been denounced many times (eg. Gould and Lewontin, 1979; Panksepp & Panksepp, 2000; Ingold, 2007; Ehrlich & Feldman, 2007) form the structure for this form of thinking: adaptationism, ad hoc theories, disconnection from phylogenesis, confusion of evolutionary strategies and individual strategy: the problems are numerous and sufficiently serious to lead to the conclusion that behavior cannot, in its own right, have been the object of selection in our own species at least: “[...] most population geneticists – remembering linkage, pleiotropy, epistasis, and developmental complexity – reject evolutionary psychology as a theoretical paradigm: its predictions ignore how difficult gene-gene and gene-environment interactions make it *for selection to operate on just one phenotypic attribute*. If we had trillions of largely independent genes, then it might be possible for selection (if it were strong enough and time available long enough) to program us to rape, be honest, detect cheaters, excel at calculus, or vote Republican. But the number of *independent* genes is much smaller than twenty-five thousand” (Ehrlich and Feldman, 2007, p. 11, our emphasis). It is never a pointless exercise to recall: because a competence exists and is adapted to a function does not mean that it has specifically been the object of selection.
- 12 This is why evolutionary psychology, despite the strange hold it has on the minds of researchers, is probably nothing other than a sort of speculative bubble which, having undergone a sudden inflation will burst when the place of selection in evolution, and notably the evolution of cognition and behavior, is correctly reassessed.

- 13 Having said this, human beings are indeed the result of evolution and their evolutionary environment has, for thousands of years, been as much made up of the natural environment as the social environment which their actions and reciprocal actions define. The study of the differences between humans and their nearest relations the *Panidae* (chimpanzees and bonobos) is interesting because it makes it possible to identify gaps that could have played an important role in making us what we are. Certainly the reconstitution of the major stages that marked hominization and which makes mankind such a particular species (tools, language, intersubjectivity, bipedalism, cooperation etc.) remains speculative but we still know a little more today than yesterday about two or three things that distinguish us with regard to the cognition and social cognition of chimpanzees and bonobos.
- 14 In a text that is both inspiring but understandably controversial, Laurence Kaufmann and Laurent Cordonier (2011) put forward the theory that there is an innate cognitive apparatus in all human beings made up of specialized systems for processing information and that among these some concern the social world. This is the way, according to them that “the brain that equips the members of our species was ‘calibrated’ by evolution in such a way as to manage the sense of belonging, exchange and coalition that is indispensable to the survival of the individual.” Within the same perspective, they write that “social facts, far from being reduced to causally inert epiphenomena, are endowed with a causal power in the long run, one which gives structure to our cognitive apparatus” (2011, p. 16, our translation). This perspective seems to me to be uselessly finalistic. Adaptations do not appear “in order to” resolve a problem (it is not in order to be able to communicate that language appeared but because languages appeared new possibilities opened up). Therefore, it was not “in order to” adapt to a type of society that did not yet exist that our brains evolved in this direction, but rather because our brains became capable of managing these connections that certain types of arrangements and social complexity became possible. We should also remember that, in order for an adaptation to be passed on from generation to generation with the result of endowing all the members of a species, the adaptation must confer a net advantage in terms of reproduction and survival to those who are the carriers of this adaptation. It is often difficult to demonstrate how a cognitive improvement actually allows those who are endowed with it to reproduce and survive better than those who are not endowed in this way – and who have survived very well up to that point.
- 15 This does not, however, invalidate the theory that our brains are endowed with specific cognitive abilities which take the form of a “naive sociology”, that is to say “a system of identification of typical forms of social relationships and a system of inference, anticipation and prediction concerning what should normally occur within these relationships [...]” (Kaufman and Cordonnier, 2011, our translation). For the moment, we have no idea what such a system might materially look like. We do not know *what*, within this system might be innate or how it could have evolved or even if it exists. This is open to empirical research but we must not suppose, if we base our suppositions on what we know about other social skills such as cooperation or pointing, that this system, if it exists, is a single skill; it is rather a set of skills.
- 16 What the phylogenesis of cognitive skills such as pointing or cooperation suggests, is that what appears to us in its “completed and adapted” human form, such as a single cognitive aptitude, is, in reality, made up of the combination of different elements that can exist in different and incomplete states in different species, which combine to give rise to a

complex skill. In the case of pointing for example, the difference between dogs (who understand it, Soproni *et al.*, 2002) and wolves (who don't) could be explained not by a cognitive "leap", but by a modification, during the domestication process, of the intensity of emotional responses (fear and aggression) in the presence of humans (Hare *et al.*, 2002, 2005, 2007; Trut, 1999). This is how the domestication of foxes, by successive breeding of less fearful and aggressive individuals, leads to a line of foxes that not only carry traits that are typical of domesticated species (Trut, 1999) but are also capable of understanding pointing... (Hare *et al.*, 2005). In this case, it is changes in the agonistic response system (the "emotional reactivity hypothesis", Hare *et al.*, 2007) which allows the manifestation of a cognitive skill. It is not a world where pointing was useful that created this skill; it is a world where it was useful to have animals that were less fearful and less aggressive. Chimpanzees, for their part, understand pointing in competitive situations, but not as a form of cooperative communication for similar reasons possibly (Hare and Tomasello, 2004). Pointing which has long been considered as a symbolic skill that is typically human, therefore exists in incomplete and/or contingent forms in other animals, where its appearance depends on the inhibition of emotional responses. We are therefore not dealing with a purely cognitive skill that developed due to its adaptive character, but rather due to a mosaic of cognitive and emotional elements which combine to create skills which, in each species, assume different forms. In the human species, pointing is combined with intersubjectivity which leads to a total reconfiguration of the relationship with others that it involves. We should therefore not necessarily suppose that innate social skills, if they exist, have been selected as such – even though this could well be the case – nor that they constitute indivisible and innate units. They could constitute aggregates whose elements need to be empirically identified.

- 17 In summary, it appears that empirical research can be carried out on naive sociology and on social skills for example (Hirschfeld, 2001) without postulating that these are genetically determined (we need to be prudent given the current state of our knowledge of this subject) or that they have been perfected by evolution because they conferred an adaptive character on those who carried them. On the other hand, it is much more heuristic to ask what elements these social skills could be made up of, which ones are likely to be innate and how they function in particular situations. Based on comparisons with other species of primates, evolutionary theories could be formulated. This is therefore another possible contribution by sociology to natural sciences: the supply of precise descriptions of actual social interactions – to form a basis for comparison with non-human primates – and not the fantasy-driven interactions that evolutionary psychology is only too often content with.
- 18 However, it must be pointed out that there is a difficulty linked to naïve sociology as long as it is seen as a cognitive system of processing social information. This is because competition, cooperation, affiliation, submission or dominance are first and foremost, among primates, children or adult humans, relationship models which mobilize affects. Yet to neglect the emotional dimension of communication (human or animal), and reduce communication to a question of exchange and information processing, has the consequence of transforming animals into calculators which make choices, develop strategies and "refrain from replying" etc. (cf. on this point Servais, 2007). It matters little here that we are speaking of animals who "really" calculate or that possess an analysis mechanism that has been "perfected by evolution". What counts is that the animals are taken from the relational fabric which allows them to exist and to react, and that the

social nature of communication is transformed into reasoning : another example of decontextualization. For example, does the fact that a monkey uses a different cry to call for help when his attacker is a member of his family or another line (Hauser, 1996) mean that he conceptually “recognizes” the relationship, even minimally? The cry is therefore a kind of etiquette describing the nature of its relationship with the aggressor. An alternative approach is to consider that the animal finds itself in the grip of a very different situation according to whether his attacker is a family member or not. The cry would therefore be more inclined to be part of an act than the description of a relationship. This type of “*pars pro toto*” encoding is common in animal and non-verbal human communication (Bateson, 1977b). This argument is all the more valid when we switch our interest from primates to animals such as chickens or other birds, among whom evidence of audience effects have been demonstrated. Marler *et al.* (1991) showed that a cock, for example, who is presented with seeds will create food-call sounds the quantity and variety of which will vary according to whether he is alone or in the presence of hens he knows, the presence of hens he doesn’t know, or in the presence of a rival. The interpretations of ethologists neglect the pragmatic dimension to this communication and analyse it purely on a cognitive level. Therefore they speak about the cock who “restrains” his calls for food in the presence of a rival or who “chose not to inform” a rival...in inverted commas of course. This is how cocks “deliberate” and “make choices”... (Marler *et al.*,1991). And yet the cock, in the presence of a rival or a strange hen is, necessarily, in very different dispositions. These dispositions depend on the nature of the relationship in which he finds himself, and a cock that shows a different orientation in the real situation is one who makes food calls or not. Reducing all this to a “choice” and placing the mechanism of choice in the mind of the cock is to transform an elementary social situation, or a relational one, into a purely cognitive processing of information. The intellectualization of animals is another consequence of the decontextualization of social cognition which isolates rather than taking an interest in the individual *in situ*, connected by specific motivation modalities towards their fellow-creatures. The same line of arguments is developed by Costall and Leudar (2009) about the Theory of Mind, and by Menzel (1988) in the case of Machiavellian intelligence.

5 Conclusions

- 19 The examination of studies on cooperation in *Panidae* suggests that biology is not sufficient to explain the social strategies of individuals. By neglecting the fact that a part of social skills is distributed in the situation, and supposing that the entire strategy is to be found “within” individuals, biology and evolutionary psychology overestimate the importance of individual cognition in social determination; in the same way, they then overestimate the importance of selection in the evolution of this cognition. Once it is admitted that the entire explanation is not to be found in selection, we can formulate questions relating to the manner in which relationship models emerge, change or are transmitted in groups of non-human primates. This is why primatology could benefit from serious ethnographies which are likely to help distinguish what stems from individual skills and what stems from situations. These ethnographies could also recontextualise behavior and understand it within the context of relationships and interactions which count for the actors. If social sciences want to gain a grasp of these questions, this would have the effect not only of limiting evolutionary inflation in social

sciences, but also of reassessing, on an empirical basis, what is potentially innate or inherited and what depends on situations. It means to take an interest in social skills as nature/culture composites. The social sciences have the means to respond to annexationist programs of evolutionary psychology on condition of accepting to become involved in new fields and with new objects. On the other hand, some attempts are being done in biological sciences to stress the crucial significance of the socio-cultural and to include the environment in the theory, i.e. in developmental systems theory (Oyama *et al*, 2001)

- 20 In order to invest in these unexplored fields, sociologists or anthropologists will be given the challenge of inventing appropriate methodologies and redefining their objectives. It will be necessary to accept opening up modern categories of nature and the social and take on the task of recomposing constituent elements. I plead in favor of opening up this unexplored and abandoned area, that is to say, the connection between the biological and the social to empirical research within the context of social sciences. The new objects that this will necessarily cause to appear will mark a step towards the reconstruction of scientific disciplines surrounding problems defined outside the realm of the nature/culture dualism. While it is indispensable that social sciences open up to natural sciences it seems to me that it is also necessary to envisage the opposite, that is to say an opening up of natural sciences, in particular primatology, to social sciences and their methods. It will mean big changes in the social sciences – but it is worth doing.

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ABSTRACTS

With the rise of cognitive sciences, the nature/culture debate has been reignited, and this debate often takes the form of a discussion about the opportunities and dangers of the naturalization of the social. Faced with what they perceive as a threat and an invasion of their discipline by the natural sciences, social science researchers often react by denying that natural sciences have any relevance for their own discipline, as though the biological and cultural aspects of human beings were separate entities, each one being a subject for individual study. This only serves to widen the gulf between two sister-disciplines, increases the polarization of the nature/culture duality and makes it even more difficult to connect the two. The point of view put forward in this paper shifts the emphasis of these discussions slightly. It does not take account of the contributions, whether desirable or not, made by natural sciences to sociology or anthropology, but rather argues in favor of a sociology of primates. By using examples drawn from cooperation studies, this paper aims to point to some problems that demonstrate the limitations of biological explanations for social behavior in primates. If we look beyond these limitations, there lies an unnamed world ripe for exploration by social science. This involves the invention of new methods and the definition of new objects (such as “affective cultures” for example) that appear to be composites of nature and culture. An empirical study of these composites would perhaps pave the way for a future understanding of the way in which biological and social determinants are woven into the reality of individual and collective histories. This would, in turn, make it possible to better identify the innate elements of the social skills of primates and to limit the importation of adaptationist theories into social sciences. In other words, the issue here is to replace an ideological debate with empirical questions. This paper is a revised version a paper previously published in *SociologieS* under the title : “Faut-il faire la sociologie des singes?”

Avec l'arrivée des sciences de la cognition, le débat nature/culture a repris vigueur, souvent sous la forme de discussion quant aux opportunités et dangers de la naturalisation du social. Face à ce qu'ils ressentent comme une menace et un envahissement de leur discipline par les sciences naturelles, les chercheurs en sciences sociales réagissent parfois en niant toute pertinence aux sciences de la nature pour leur propre discipline, comme si les parts biologiques et culturelles de l'humain étaient séparées, chacune faisant l'objet d'études autonomes. Ceci agrandit le fossé entre disciplines voisines, aggrave la polarisation de la dualité nature/culture et rend plus difficile encore leur articulation. Le point de vue qui sera développé ici déplace légèrement l'axe de ces discussions. Il ne s'intéresse pas aux apports, désirables ou non, des sciences de la nature pour la sociologie ou l'anthropologie, mais à l'inverse il plaide pour une véritable sociologie des singes. Il se propose de pointer, notamment à partir d'exemples empruntés aux études sur la coopération, quelques questions problématiques qui suggèrent l'existence d'une limite aux explications biologiques du comportement social chez les primates, et d'argumenter qu'au-delà de cette limite s'étend une contrée sans nom, restée en friche, qu'il reviendrait aux sciences sociales d'investir. Cela implique l'invention de nouvelles méthodes et la définition de nouveaux objets (comme les « cultures affectives » par exemple) se présentant comme des composites de nature et de culture. Etudier empiriquement ces composites permettrait probablement de comprendre sous un autre jour la manière dont déterminations biologiques et sociales s'imbriquent dans la réalité des histoires individuelles et collectives des primates humains et non humains. Ceci à son tour permettrait de mieux identifier quels sont les éléments innés dans les compétences sociales des primates, et de limiter l'importation des hypothèses adaptationnistes en sciences sociales. En d'autres mots, l'enjeu est de remplacer un débat idéologique par des

questions empiriques. Cet article est une version révisée de l'article « Faut-il faire la sociologie des singes? » publié précédemment dans Sociologies.

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