One of the most salient paradoxes in the study of kinship systems is their sheer analytical complexity, from the point of view of an external observer, and simultaneously the ease by which those very same systems are assimilated by the natives themselves. Whereas no special training, costly rituals, harsh indoctrination seems to be needed to master the intricacies of kinship terminologies and marriage rules for those who are born into them, the situation for the anthropologist seems to be the very opposite. What could be the reason for this apparent inconsistency, simplicity for the native and complexity for the stranger? My hunch is that the paradoxes of kinship run very deeply into the nature of what human kinship is all about. Far from solving (or dissolving) this paradoxical nature, the purpose of this text is to contribute to its clarification by means of a comparison between kinship, language and religion.

Let us start with the comparison between kinship and religion. In the scientific study of religion a crucial distinction should be drawn between popular religion and what we might call erudite or systematic theologies. Whereas there is no such a thing as a 'religious system' in what concerns popular religion, the systematic character of theological knowledge is all too apparent (I'd like to thank Benson Saler for drawing my attention to this important point). In popular religion we normally have a rather fragmentary and quite often inconsistent or incoherent set of beliefs and practices. Very little explicit or formal instruction is needed to elicit this set of practices and beliefs, for they manage to colonise human minds through an inferential process instead of explicit semantic indoctrination (Boyer 1994; Sperber & Wilson 1996). Popular religion cannot be said to form a 'cultural system' in any way. Neither is it 'systematic' nor 'cultural' stricto sensu. Even though some exposure to a particular cultural environment is certainly needed for any form of popular religiosity to emerge, this is very far from the explicit and costly cultural indoctrination needed to assimilate fully fledged cultural systems such as science and, needless to say, theology.

Now would kinship systems fall closer to the 'theology' or to the 'popular religion' pole? Kinship systems are certainly 'systematic' as the name implies. They do not consist of a bunch of fragmentary beliefs and practices but they clearly possess an internal logic. So at first sight they look very much like theologies rather than popular religions. But then here is the paradox: it takes long years of harsh study in theological faculties or seminaries to assimilate all the theological knowledge of a particular religion, whereas nothing of that is needed for the assimilation of a kinship system, I insist, for those who are born into it. In other words, despite being clearly systematic they do not seem to be very 'cultural'. Would that mean that kinship systems are in any way innate? Or, rather that we possess some sort of innate deep kinship grammar that enables humans to learn their respective kinship systems, in spite of the poverty of the associated cultural stimulus? Here is where the comparison with language is instructive.

Consider the case of the grammatical rules of human languages. At first sight, we are confronted with a similar situation: despite the outstanding complexity of those rules, children learn their native languages with no special difficulty. Of course, ever since Chomsky we know that this paradox as far as language is concerned is more apparent than real. Children do not have major problems in learning their native languages precisely because they do not have to learn those complex grammatical rules for they have them already hard-wired into their brains. The problem lays not in learning those rules but in learning them consciously, since we already possess them as unconscious knowledge. Now could the very same thing apply to kinship systems? Do we have a kinship grammar in the same way as we have a language deep grammar? Thus, it would be the transformation of such grammar into a set of explicit rules what would make the study of kinship systems so hopelessly complex to the foreign anthropologist, but not its unconscious assimilation by the native. In other words, the anthropologist's role would be equivalent to that of the linguist, who approaches the study of a natural language by means of sophisticated formal methods acquired through years of intense training, whereas those born into a particular kinship system would correspond to 'mere'

native speakers of that natural language.

But if there is a deep grammar for kinship systems – a kinship module – the questions arises as to its evolutionary origins. This is different from the evolutionary origins of language deep grammar, for it could be cogently argued that the ability to learn and use a language clearly increased the inclusive fitness of our hominin ancestors (Pinker 1994) – whatever might have sparked the initial mutations in their preverbal forebears, a controversial issue in itself but which can be set aside in the present discussion. Notice that kin selection is of no help here – and this is a remarkable fact that needs to be emphasised. Kin selection could have been operative in language evolution by increasing the reproductive fitness of a mutant female who, thanks to her enhanced verbal skills, could improve the communication with her offspring, and vice versa. But the same argument cannot be applied to kinship, for biological and cultural kinship are different, as anthropologists have been tirelessly emphasising for eons, since the very beginning of the discipline of social anthropology. But the question is what should we make of such difference? One way of addressing this issue is exemplified by Dunbar's reassessment of Hughes seminal sociobiological approach to the evolution of human kinship (Dunbar 2011; Hughes 1988). There is a lack of correspondence between biological and social (cultural) kinship, Dunbar concedes, but this lack of correspondence is not random. 'If there is any degree of consistency between social and biological kinship, no matter how small, then, form an evolutionary point of view, investing in one's social kin will have the consequence, on the long-term average, of investing in one's biological kin. Evolution is a statistical process, not a deterministic one, and a very great deal of statistical slop can often be tolerated' (Dunbar 2011: 137; see Hughes 1988: 130-131 for a parallel argument).

Let us pause for a moment: investing in one's social kin has the consequence, on the long-term average, of investing on one's biological kin. But how could that be? Take the case of so-called classificatory kinship terminologies, which is the type of kinship terminology that we normally find in tribal societies. In a bifurcate merging system I use the term 'mother' to refer to my biological mother and to all her parallel female cousins. But whereas I share fifty percent of my genome with my biological mother, my degree of genetic relatedness with, say, my mother's fourth cousin is practically equivalent to what I share with any other member of the human species! And yet my kinship system makes me call the two women by the same term. I fail to see how any 'statistical slop' could give a selective advantage to any hominin who called 'mother' his mother's fourth parallel cousin, specially taking into account that, as Dunbar himself recognises, after a few generations relatedness becomes 'smeared out' across the whole population (2011: 142). No matter how many people or how much they invest on their mother's fourth cousin, their investment will not revert to their biological mother in the long run. It does not seem to me that statistical reiteration could make these kinship terminologies adaptive in any way. So we are back to the paradox mentioned above: kinship systems seem to be 'cultural' despite the fact that they are not assimilated through any specific process of cultural indoctrination.

An apparent way out of this dilemma would be to postulate that there is no domain-specific kinship module in the human mind but that kinship systems are merely the product of the activation of domain-general cognitive principles, that is, those also prevalent in other systems of classification. This was the thesis put forward by Kemp and Regier (2012), according to which a kinship terminology is a system of classification resulting from the trade-off between two principles: simplicity and informativeness. The simpler a particular system of kinship categories is the less informative it will be (the more different kinship types will be subsumed under the same category), and conversely, the more informative (the more categories we have or the closer they are to actual biogenetic relationships) the more complex it will be. In all probability, kinship systems do actually conform to this model of classificatory logic. Kemp and Regier compare kinship systems with systems of colour classification precisely to illustrate how the same domain-general principles apply

to both. Hence kinship terminologies would be just an instance of the general capacity of human minds to classify things, be these colours or human beings. But this domain-general approach misses a very important characteristic of human kinship and the comparison with colour classification turns out to be particularly informative in this sense.

Whereas we all see colours, even though we might not classify them in the same way, nobody can see his or her kin! Again, kin selection plays no role here, for even if humans might have some innate device to detect individuals with whom they share a substantial part of their genome, their kin in biological terms, these very often do not coincide (too often to be mere exceptions to the rule) with the members of their kinship systems, their kin in cultural terms, as we have seen with the case of classificatory kinship terminologies. In other words, the members of a kinship system are created by the very system they belong to, something which cannot be true of a system of colour classification. A very similar point has been recently made by Dwight Read (2012: 30-31): 'The constructed system of kinship is not an elaboration upon, nor emergent from, a system of biological relations. Instead, it is the essence of what we mean by a cultural idea-system—a constructed (in the sense that it is not modeled on what is extrinsic to us) conceptual system with an internal logic that ensures common understanding and meaning for that system of concepts by those who share it in common through enculturation'.

Certainly, once again we seem to get closer to the 'theology' pole than to the 'popular religion' pole. But notice how peculiar is this process of enculturation, how different it is from the enculturation of theology or any other standard cultural system. This is a quasi-natural process of enculturation in which individuals learn a system of cultural categories, their kinship system, with the same ease with which they learn their natural languages, but without any kinship-acquisition device. Everything looks as if kinship systems were the 'missing link' in human biocultural evolution: the half-biological half-cultural connection that would enable humans to transcend the limits on social life imposed by natural selection, i.e. the limits on cooperation imposed by reciprocal altruism and kin selection, but without the need for a fully-fledged cultural system – such as that of moral gods (Norenzayan 2013) – with its costly rituals and harsh indoctrination. Perhaps the old Lévi-Straussian dictum that human kinship embodies the transition from nature to culture was not so far fetched after all.

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