12 Social origins: sharing, exchange, kinship

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12.1 Introduction

This chapter considers three social aspects of the emergence of language: sharing, exchange, and kinship. I shall argue that the earliest full language coincided with the development of other forms of communication, including human kinship—with sharing practices and rules, marital alliance, kin classification, and ultimately kin category extension to the limits of social systems. Virtually all human hunter-gatherer societies retain completely universal systems of kin category extension (where in relation to any given individual, everyone is classified as some kind of “kin”), and the classification of kin among contemporary hunter-gatherers can provide clues to early human social structures. In both language and society, dispositions became rules. Social systems, like languages, evolved into extremely complex yet enabling structures.

12.2 Bickerton’s model of language evolution

My main goal is to suggest ways in which ethnographic comparison and classic anthropological theory might feed into understanding the social basis of the emergence of language. In the first part of the paper, I shall draw on the work of Robin Dunbar and of Derek Bickerton and William Calvin. Dunbar is the most prominent proponent of a social origin of language, and his view is known as the “social gossip” or “social bonding” hypothesis (Dunbar 1993). Language evolved in order to enable speakers

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to maintain social relationships. Other primates may have calls or some other form of primitive protolanguage, but they cannot, of course, exchange information about their communities at a distance. The other two main social views are Terrence Deacon’s (1997) “social contract” hypothesis, and Geoff Miller’s (1999) “Scheherazade effect” hypothesis. The social contract hypothesis states simply that language emerged in order to allow contracts; these contracts were formed among men to prevent the theft of their partners. The Scheherazade effect hypothesis states that the original purpose of language was to attract mates or keep them entertained. As Dunbar (2003a: 221) has suggested, all three of these hypotheses can easily be unified, in that all three are associated with increasing group size and group solidarity. Social gossip, in his view, comes first, ultimately out of social grooming among primates. This seems plausible to me, but I would add that all three hypotheses imply the development of notions of (human) kinship, and that Miller’s and Deacon’s also suggest some sort of exchange notion and indeed alliance theory (Lévi-Strauss 1949, 1969) in the minds of early linguistic people.

In 1990 Bickerton proposed two phases for the emergence of language. The first was the development of protolanguage with Homo habilis (followed by a protolanguage-using Homo erectus Out of Africa migration). The second was the genesis of full language with Homo sapiens sapiens (and the H. sapiens sapiens Out of Africa migration). According to Bickerton, like child language and like ape language, a pidgin is a kind of protolanguage, loosely reminiscent of the linguistic system of Homo habilis. Creoles, he argues, can emerge from pidgins within a generation. Producing them for the first time as true languages creates rules of grammar which in every way are reminiscent of those of any other true language (see, e.g., Bickerton 1990: 164–197, 1995: 110–111). Many of Bickerton’s ideas on pidgins and creoles are controversial, notably his rejection of the gradual development of creoles. His point here though is that the creation of creoles, perhaps within a generation, shows us that there is no in-between, no “interlanguage” (1990: 177–181, 1998). A creole, in short, is not half a language. Through the 1990s, Bickerton (e.g. 1998: 354–357) argued for a catastrophic rather than a gradual birth of language proper. Among his five arguments, one is that a gradual, say 2-million-year, evolution should have left some mark in the fossil record. Instead, he suggests, we have a “cognitive explosion” which occurred only
after the emergence of anatomically modern man in southern Africa about 120,000 years ago.

Bickerton has since modified his view, in his dialogical book written with William Calvin in 2000 (Figure 12.1). There is no interlanguage, but Bickerton does now suggest a modification of the two-phase model to allow for something called rudimentary language. This was the linguistic system of “archaic” *Homo sapiens*, before true language. Protolanguage might involve words and simple phrases such as “Ig take,” “Ug meat,” or “hit Ug.” According to Bickerton (Calvin and Bickerton 2000: 129, 136–137; see also Botha 2003: 76–81), when such phrases are coupled with a social calculus of reciprocal altruism, rudimentary language emerges. The social calculus entails knowledge of who grooms whom, who gives meat to whom, who supports whom in fights, and so on. In linguistic terms, it entails tags such as agent and theme. And so we have simple sentences, like “Ig take meat” or “Ig hit Og.” True language entails more fully parsable syntax, and in this later stage we have more complex sentences and rules such as agreement between subject and verb: “Ig hits Og and takes the meat.” What the in-between phase allows for is, in effect, an earlier existence of something we would recognize as language from a social as well as a neurological point of view, although it would lack the complexity of almost any true language we find today.

I am not concerned here with the technical rights and wrongs of their respective arguments on linguistic or neurological points. Rather, I want
to take this model as indicative of the process which surely led from the sort of societies possessed by *Homo habilis*, *Homo ergaster*, and *Homo erectus* to those of *Homo sapiens sapiens*. I propose that the phases suggested in Calvin and Bickerton (2000) correspond respectively to what we might call protokinship, rudimentary kinship, and true kinship.

Let me digress for a moment. The motto of the Republic of South Africa is !Ke e: /xarra //ke. It was created at the behest of President Mbeki in the year 2000. It is intended to mean “Diverse people unite,” or more literally “People who are different come together.” But it can also mean “People who are different are talking with each other.” !Ke is the unmarked form for “people,” not the form recorded as the “vocative.” There is no imperative particle in the motto, and //ke, in fact, means “talk together,” as well as “come together.” The motto is in the /Xam language, now extinct but spoken in the nineteenth century and well recorded. The president chose to have the motto put into what he calls “an ancient language of our people.” It rests beneath a coat of arms depicting two rock art figures greeting each other, because (in Mbeki’s words), this image “pays tribute to our land and our continent as the cradle of humanity, as the place where human life first began” (quoted in Barnard 2004: 6, see also 2003). Linguists have recently come to associate the beginning of language with the earliest material remains of human symbolic behavior—especially the two etched pieces of red ochre from Blombos Cave on the Indian Ocean coast. These were discovered in 1999 and 2000 and are dated to 77,000 years ago (Henshilwood et al. 2002). Of course there is no reason to suppose that the language spoken then at Blombos Cave was any closer to nineteenth-century /Xam than to modern French or German. But the image, and the /Xam words, are evocative.

Two questions about all this come to my mind. Why might “people who are different” come together, or talk together? And what would they talk about? Stone and bone tools, very probably, or indeed art or ritual (see, e.g., Watts 1999). But I would suggest something else as well. Lévi-Strauss, speaking at the Man the Hunter conference in 1966 (Lévi-Strauss 1968: 351), speculated that two or three hundred thousand years ago there were probably people with minds like those of Plato and Einstein. But in the absence of philosophical discourse or theoretical physics, what did they think about? What did they talk about? I quote Lévi-Strauss: “they were probably more interested in kinship!”

One area where language would have become essential is indeed in kinship designations. Therefore, an exploration of kinship terminology
structures, as well as of social institutions related to kinship such as sharing and exchange (including marital alliance), should help us to understand better the social origins of language. Figure 12.2 represents my hypothesis of the co-evolutionary relation between language and kinship. The language part, at the top, is based essentially on Bickerton’s proposal, while the kinship part, below, is mine. The latter takes into account a now widely accepted notion of a further relation between neocortex size and group size among primates (Dunbar 1993; Aiello and Dunbar 1993). It has also been incorporated by Calvin and Bickerton (2000) in the suggestion that syntax is created through reciprocal altruism, in the social calculus that emerges with the first expansion of group size among the first representatives of Homo sapiens.

12.3 Neocortex size, group size, and the evolution of kinship

Chimps spend about 20% of their time grooming, and we humans spent about 20% of our time in social interaction, most of it in conversation (Dunbar 2001: 190–191). As group size increases, the requirement to
transform grooming relationships into linguistic ones also increases, as the effort required for grooming would otherwise be dramatically increased. According to Dunbar (2003b: 173–175), with a group size of 150 it would have to be 43%. His suggested threshold by which some form of language (or protolanguage) must have existed is 30%, in the *Homo erectus* period. Using predicted figures, we have australopithecine group sizes averaging around 65 or 70, *Homo habilis* at around 75 or 80, *Homo erectus* variable, but typically at around 110, “archaic” *Homo sapiens* 120 or 130, and Neanderthals at around 140 or slightly higher. The figure for anatomically modern humans is given in most sources at an average of 148, or 150.

At least half a million years ago our ancestors had developed the anatomical capability of speech (Mithen 1998: 175), and they had already evolved communication skills. Why had they not evolved language? Or had they? According to Dunbar, when groups became too large to make grooming the basis of society, rudimentary language took over. It became a selective advantage to develop language, because it allowed information to be shared with larger numbers. At first language was essentially social, and later it became generalized to communicate much more beyond the social. Art, symbolism, religion, mathematics, and so forth would follow.

Mutual grooming is a form of sharing, and it still exists in this context at least among hunter-gatherers—often among close kin and between spouses. Sharing of food also occurs within this sphere. In the Kalahari, hunted meat traditionally came in the form of large animals, and hunting success was (and to some extent still is) spread throughout kin groups through the sharing of meat, with parents-in-law entitled to the best meat a man “owns.” I say “owns” rather than kills, because ownership can be determined by ownership of the killing arrow, and arrows are loaned to others. Meat is shared very widely, while vegetable food is not. Vegetable food is shared normally only within a nuclear family. Of course, modern hunter-gatherers are fully modern, but their subsistence activities allow us a model through which to speculate about the distant past. A shift from mainly gathering to large-scale hunting, coupled with the technology to hunt larger animals, would involve a propensity for meat sharing. This, in turn, might be related to other aspects of communication, and therefore social interaction.

*Homo erectus* was the longest lasting of known hominid species and lived in Africa for at least 500,000 years, before venturing off to Asia around a million years ago (Gamble 1993: 96, 117). It was not only their
ability to produce tools which made this possible, but their abilities in communication, not least to teach tool-making skills to each successive generation. Clive Gamble (1993: 108–112) provides a speculative ethnographic diary of two weeks in the life of a band of undifferentiated ancient hominids, either australopithecine or early Homo. He supposes a group size of some 20 to 50, which is quite usual for African hunter-gatherer bands today, although the size of the social unit of identity, what I’ve called the band cluster (a group of several bands), will be much larger. In Gamble’s imagined scene, the range of the group of 20 or 50 consists of seven habitats. In the imaginary habitat in which the group is camped, food is running out. The group moves around that habitat, while younger members, as individuals or small parties, scout each of the other habitats in the range. They find one habitat is best, and the group moves there. He calls this calculated migration.

In Gamble’s scenario, what is important is to find the best habitat—not for the males, but for the females. Among more primitive primates, an alpha male might control a group of 15 to 20. Among australopithecines, Homo habilis and Homo erectus, females were much smaller than males, and according to Gamble they would have been controlled by males in the group. Alpha males would be restricted in their movements, because they needed to keep track of the females. The core group therefore relies on the subadults, teenagers, for information about foraging possibilities. He suggests that males might cooperate in order to defend territory and share access to the females. Hunting, in Gamble’s view, though not so among all experts, is less significant than gathering. He argues that the impetus for exploration of foraging habitats is not adaptive curiosity, but “the cooperative alliances, negotiated and contested between core and peripheral members of the social group” (1993: 110). The subadults, presumably male, are peripheral here, and the alpha males and the females are the core. In all this, some kind of communication is essential. But in no sense, yet, is there anything we would recognize as a (human) “kinship system.”

To me, Gamble’s description relates to a social situation at best reminiscent of that of proto-kinship. I have long felt that a merger of the ideas of the great rivals Morgan (1871, 1877) and McLennan (1970 [1865]), in the nineteenth century, represents the best pre-Lévi-Straussian model for the origin of human kinship. Gamble’s description sounds a bit like a stage at the dawn of Morgan’s phase of primitive promiscuity, or of the
cohabitation of brothers and sisters; and if alpha males were to share their females with the exploring and scouting, such stages are possible. The essence of Morgan’s early phases is a lack of incest prohibition; and the essence of McLennan’s is, in a later stage, exogamy—a term which McLennan invented.

12.4 Society, symbolic culture, and language

There is a growing consensus that in order to understand language, it is necessary to understand the evolution of its social as well as its linguistic aspects (Studdert-Kennedy, Knight, and Hurford 1998). Bickerton’s (2002) most recent work actually takes him in a different direction, away from that consensus, towards ecological origins for protolanguage, with the social emerging as significant only after early Homo’s acquisition of a few dozen or a few hundred either oral or manual symbols. I think that is a mistake on his part.

Meanwhile, one of the leaders in the social view, Chris Knight (2002: 155; this volume) sees speech, as well as language, emerging from a social revolution rather later—about 130,000 years ago. I part company with Bickerton in his ecological hypothesis, and tend to side with Dunbar in his suggestion that protolanguage was an evolutionary development from grooming. I part company with Knight too, in that I cannot see a single revolutionary origin for everything from language to egalitarian social organization, to art, to religious ritual, to religious belief. Knight’s (1991) basic hypothesis is of a female sex strike: synchronous menstruation, demand of meat for sex, and so on, as leading instantaneously to such a revolution.

Knight’s theory only makes sense to me as one of several possibilities leading ultimately to religious practice and belief. In a way, it is a feminist version of Freud’s theory, the final essay in Totem and Tabu (1960 [1913]), though obviously with better evidence from archeology and ethnography (prehistoric art, the use of ochre, initiation ritual, mythology, and so on). What Knight’s theory fails to explain is what happened before that revolution. Knight’s implication is that there was just the one revolution, whereas Dunbar’s hypothesis of neocortex size, group size, and language is commensurable with a step-by-step model. Not with gradual evolution, but, if you like, with a series of revolutionary advances which can be
correlated with any number of other events. These could include: evolutionary stages in cognitive development, changes in social group size and the *Homo erectus* and *Homo sapiens* Out of Africa migrations, stages of language development, and, of course, the beginnings of systems of kinship. It is the multi-revolution hypothesis that makes most sense to me.

Let me leave linguistics and archeology now for a brief excursion into classic kinship theory. Since the early twentieth century, we have become used to thinking in terms of the differentiation of various “types” of terminology structure: “bifurcate collateral,” “Sudanese,” and so on. Or in the later twentieth century, sometimes in terms of a differentiation of “Iroquois” from “Dravidian,” either with reference to second-cousin classification or in terms of the logical concomitants of something called “prescription.” These are all useful as comparative ethnographic descriptions. However, in evolutionary terms, some structural distinctions are more basic than others.

In essence, there are only two kinds of kinship terminology structure. All others can be collapsed into these. The prime distinction is inherent in the opposition between Morgan’s own English language and Iroquois, whose terminology structure he discovered in the 1840s. However, it is not quite as he thought: *descriptive* versus *classificatory*. In such a scheme, Hawaiians, for example, line up alongside Iroquois as classificatory, whereas I would place them alongside English in the other category. This is because Morgan’s distinction rests on the presence or absence of a lineal/collateral distinction (as in English). I would place the emphasis instead on the presence or absence of a parallel/cross distinction (as in Iroquois, and most South African languages). Why? Because the essential meaning of a system like English or Hawaiian, which makes neither distinction, is: kinship is based on relative genealogical proximity and distance (see Figure 12.3). The same is true, incidentally, of some systems that make both lineal/collateral and cross/parallel distinctions (so-called “Sudanese” systems). All others, including Iroquois and so-called “Dravidian” structures, and “Crow” and “Omaha,” are based not on genealogical proximity or distance, but instead on classification: with categories like joking/avoidance, marriageable/unmarriageable, and so on. There are no names for these two logical opposite forms of kinship mentality, but I might suggest something like *genealogical* and *classicalogical*. Same-sex sibling equivalence is more widespread and, I believe, more likely than the notion of genealogical distance for the earliest true kinship system. Let
me suggest that at some point an incipient genealogical system became classificational, and that at that point categories, rules of behavior, and a full “grammar” of kinship, coinciding with the explosion of real (linguistic) grammar, came into being.

Beyond that, there are two radically different views concerning the possibilities of structures in the first true kinship system. Consider for a moment the global migration of Homo sapiens, in the third phase: after the establishment, in Africa, of true kinship. On the one hand there is the sociocentric view of early kinship, of Lévi-Strauss (1949) and of N. J. Allen (e.g. 1982, 1986), where moieties or sections define one’s position in a structure; and on the other, the egocentric possibility, based on relationship terminology alone. I favor the latter. The difference between the two views really depends on whether we see African models, or Australian or South American models, as the basis for the earliest system. Lévi-Strauss looks to South America, and Allen to Australia. The difference is whether we do or do not admit to the significance of alternating-generation equivalence as a second primal rule, after marriageable/non-marriageable.

Allen, as a south Asianist, follows Dumont (e.g. 1975) in assuming such a rule. My notion of a primal egocentric structure, reminiscent of some San kinship systems, is quite consistent with Lévi-Strauss’s definition.
of elementary structures, and is just as elementary, in his terms, as a moiety system.

Elementary structures of kinship are those in which the nomenclature permits the immediate determination of the circle of kin and that of affines, that is, those systems which prescribe marriage with a certain type of relative, or, alternatively, those which, while defining all members of the society as relatives, divide them into two categories, viz., possible spouses and prohibited spouses (Lévi-Strauss 1969 [1949]: xxiii).

Most British writers in the 1970s and 1980s were fixated by the concept of “prescribing marriage,” whereas my own emphasis was, and is, on the second part of Lévi-Strauss’s definition: “defining all members of the society as relatives.” I called this “universal kin categorization” (Barnard 1978), and virtually all hunter-gatherers and some small-scale cultivators, but not herders or anyone else, have such a system. It applies as much to Bushman systems, which are egocentric, working through individual kin terminologies, as it does to those of Australia or South America, which operate through sociocentric moieties, sections, or subsections.

Classic kinship studies are built on an evolutionary model, beginning with Maine’s *Ancient Law* in 1861. Maine (1913 [1861]) rejected social contract theory and substituted instead a model of progressive evolution of the family (from Roman times to modern). Morgan did much the same, though in a much larger timescale, from primitive promiscuity to civilization. And in 1975, Robin Fox did the same, from primate kin behavior to human kinship (Fox 1975). But we also have revolutionist theories that see kinship more in the mold of Hobbes, Locke, or Rousseau—precisely the vision that Maine objected to. The most important of these is Lévi-Strauss’s, but I would also put into this category Freud and Chris Knight.

Is there continuity or discontinuity between primate and human kinship? Slow evolution or revolution? This is analogous to the question of whether Kanzi’s preferred “word order” for the use of lexigrams on his computer keyboard constitutes a linguistic rule, or merely a personal preference (see Aitchison 1996: 114–116). I want to suggest that both the social contract and the family models are correct, but that they are correct for different purposes. There were two separate stages: the first was based on the social contract, and the second on the family. The
gradual evolutionist approach might be right for the development of protolanguage, and I would say also in a way for proto-kinship—although the advance of the habilines was of course also revolutionary. Only with the second and the third phases do universals appear. Just as there are language universals, there are also kinship universals, or at least near-universals. In his address on “The study of kinship systems,” Radcliffe-Brown (1952 [1941]: 49–89 passim) hints at two: the unity of the sibling group, and the principle of alternating generations. The former accounts not only for behavior, including the incest taboo, but also for the generation of the cross-parallel distinction still found in most of the languages of the world.

So which is the earlier, African kinship, or, say, Australian (see Barnard 1999)? And do we have direct exchange, bride capture, or husband capture? Husband capture would seem implausible, but the other two possibilities would work, though possibly with differential dispersal of mothers to teach the mother tongue to children who inherit language genes (cf. Rodseth et al. 1991: 236–237). Here an analogy with Pierre Bourdieu’s (1972) theory of social practice is relevant. I make no comment on whether or not Bourdieu was right about the nature of society. That does not matter here. Rather, I suggest that a Bourdieuan model may be applicable to an early phase of both kinship and language. In Bourdieu’s understanding, the Saussurianism of modern social science is wrong in its emphasis on distinctions between diachronic and synchronic, signifier and signified, and so on. And, in his view, social scientists should reject external or pre-existing rules and structures in favor of what he called “dispositions” which make up a “habitus” (or environment of dispositions). His model allows for individual choice within constraints.

At some level, no doubt his model is a truism. But I see its relevance to our problem in determining the origins of language and kinship not in opposition to structuralism, as he did, but rather as a possible model for pre-structured kinship, and by analogy, for pre-structured language. The Bourdieuan habitus (plural) of species-specific, and even “archaic” Homo sapiens kinship, lie at the root of kinship systems like those postulated by Lévi-Strauss. What is required to transform a Bourdieuan model into a Lévi-Straussian model is the reformulation of dispositions into rules. This requires language, not just in the sense of speakers being able to state rules, but also in the sense of people being able to name categories to which rules
One need not start with moiety organization, as in traditional readings of Lévi-Strauss’s model, or with moieties plus intersecting generation categories, as in Nick Allen’s. Rather, the propensity to exchange people in sexual unions or marriage necessarily leads to the creation of marriageable and non-marriageable categories. These can be defined either sociocentrically (as in the case of Australian Aboriginal systems) or egocentrically (as in the case of Kalahari San systems). All kinship systems have egocentric categories, but only some have sociocentric ones in addition. Rules of marriageability in purely egocentric systems can be generated with a principle of exchange, and the natural concomitant of any such rule is kin category extension such that members of subsequent generations know, for themselves as individuals, who is marriageable and who is not.

Exchange of siblings as spouses leads, in two generations, to a distinction between cross and parallel cousins, with siblings being equated with parallel cousins. One does not need a rule of descent. In N. J. Allen’s model, a rule of generation (mine/the other one) will do. San or Bushmen do not have either of these sociocentric sets of categories (unilinearly defined moieties or sociocentric generation categories), but find their kinship categories through entirely egocentric means, such as name links (in the case of Ju’hoan and Naro) or simply friendship links (in the case of G/wi and G//ana). Very unusually for hunter-gatherers, Ju’hoansi do not make a cross/parallel distinction, but they do extend kin categories universally. That is, everyone in Ju’hoan society is related to everyone else as if a close relative. My namesake’s sister, I call “sister,” and I am not allowed to marry her. The system works, in that where contradiction might occur with two people classifying each other differently, the older classifies the younger, who then reciprocates appropriately. If I call the young woman “sister,” then to her I am a “brother.” It is not just marriageability that is at stake, but how close two people may sit, whether they may joke or not, behave informally towards each other, and so on.

Naro kinship is in a sense analogous to the creation of a creole. I studied Naro kinship first in 1974–5 and commented some years later (Barnard 1988a) that, when one compares the terminology structure of Naro and other Khoe languages like G/wi, to Ju’hoan, which is different, it is clear that Naro has elements of both structures. The Naro have been in contact with Ju’hoansi for hundreds of years, and they have apparently borrowed
the Ju/'hoan naming system, although importantly, not their use of the lineal/collateral distinction. (Naro and G/wi, like Iroquois, distinguish parallel from cross-relatives, whereas Ju/'hoan, like English, distinguishes lineals from collaterals.) Among Ju/'hoansi, one is named after a grandparent, or if one's parents are out of grandparents to name their children, one is named after an uncle or aunt, which alters the structure. In the Naro case, one is always named after a grandrelative; for them, cross-uncles and aunts are grandrelatives too, and the Khoe parallel/cross distinction is not altered. Rather, at a lower level of structure the senior/junior distinction of other Khoe terminologies disappears; Naro has borrowed a Ju/'hoan word tsxò to use for grandrelative, and this term is applied both to seniors and juniors. This is coupled with the fact that a namesake is structurally equivalent to one's self, and for example, one's father's namesake is equivalent to one's father. My father's name was John. Anyone bearing the name John will be my “father,” including, let us say, my own son.

In Bickerton's view, a creole language is a “nativized pidgin.” The early mixture of Khoe and Ju/'hoan kinship was analogous to a pidgin in this sense; and the system which emerged, Naro, to a creole. The Naro case is unique in southern Africa, but we know of Australian examples of the creation of new kinships systems, and indeed ones with sections and subsections. Provided groups are allowed by their neighbors to exist without violent interference or subjugation, they can sometimes in a generation or two create a new kinship system. The point is that the system created really is a kinship system. It is not half a kinship system. And most certainly it is not a kinship system where different people play by different rules.

Like creoles, kinship systems are always fully formed, even if they are mixed. They are always “grammatical.” That is, each follows its own internal logic, due in part to the law of uniform reciprocals. This is best illustrated by “Crow” or “Omaha” terminology structures. For example, in a “Crow” system, if I call my father's sister's son “father,” I have to call my mother's brother's son “son,” because I am his father's sister's son and he will call me “father.”

12.5 Conclusion: a theory of three revolutions

There are still several, related, remaining questions. Which came first, kinship or language? Or did they evolve, or spring up suddenly, together?
Was one spontaneous and the other slowly developing after, or for that matter one more slowly evolving, and the other relatively spontaneous later? Were women first exchanged as wives, as in Lévi-Strauss’s model, or for food? Or were women doing the exchanging, sex for food, as in Knight’s model? I propose that mechanisms of universal kin category extension evolved simultaneously with the growth of population size, either through expansion of groups or through amalgamation. Amalgamation, not necessarily of physical bands coming to the same place, but of groups recognizing common sociality as a product of spouse exchange plus parenthood. Figure 12.4 shows my theory of the co-evolution of language and kinship.

Let me state my basic idea in simple terms. I propose that there were three biologically induced human social revolutions. Each has consequences for the evolution of language and for the evolution of kinship. Let us call the first the “signifying” or “sharing revolution” (in the original, spoken version of this paper I had called it the habiline

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Words, symbolic communication; inclusive kinship; sharing

Sentences; us/them kinship; incest avoidance; exchange

Full syntax; fully developed kinship systems; universal kin categorization; explicit rules of sharing, exchange, and kin behavior

Fig. 12.4 A theory of the co-evolution of language and kinship.
revolution). It is associated with increased neocortex sizes over those of australopithecines, with consequent increases in group size from 65 or 70 to 75 or 80, which, others have argued (e.g. Dunbar 2001), triggers with the production of the first stone tools, protolanguage, and forms of sharing. Sharing (as with chimpanzees, possibly previously existent but not strong beyond the family) replaces grooming as a central form of social interaction, and individuals bear names, identities enabled by the increase in self-and-other-awareness (which is a product of neural evolution); and there is a form of proto-kinship. For me, this phase is analogous to Morgan's phase of group marriage.

Let us call the second phase the “syntactic revolution” (previously the archaic revolution), associated in fossil terms with “archaic” *Homo sapiens* or *Homo heidelbergensis* neocortex size increases, and with it group size to 120 or 130. Sharing is supplemented by exchange. People have greater need to communicate, and they do so in sentences. As in Sahlin’s (1965) essay on “The sociology of primitive exchange,” there is sharing or generalized reciprocity within the kin group and exchange or balanced reciprocity beyond it, but within society. Beyond one’s own society, there is no doubt negative reciprocity: fighting, raiding, and possibly exchange of people as spouses. If the first phase is Morganian (or of Morgan), the second phase is McLennanist. There is rudimentary kinship, perhaps classification and incest avoidance. But there is as yet no fully structured kinship system, because kinship terminology is not yet extended throughout society. The second phase would, however, involve what Runciman (2005: 129) has recently called “cultural selection for strong reciprocity sustained by specific pressure from the palaeo-ecological environment.”

These first two revolutions are possibly new, with this paper, but the third phase already has a name. It is commonly called the “symbolic revolution.” There are different ideas about concerning its elements and its impetus, Knight’s being the most prominent. For the moment, I prefer to think strictly in terms of the kinship and language model being proposed here, and I see this as a Lévi-Straussian revolution, the result of which is the diversity of kinship structures and of languages found in the world. And ultimately, the transition of elementary structures into complex ones and universal systems of kin classification into non-universal ones, as non-kinship mechanisms of social control take over. The presence of this last revolution is now widely accepted, although the relation of the earlier two to fossil finds and indeed the relation between
the linguistic and social revolutions is less secure. For example, whether the signifying, sharing, or habiline revolution is associated literally with *Homo habilis* or with *Homo erectus* might be a matter for further examination. At this stage, my bridge theory should be taken simply in broad terms, as indicative of the kind of co-evolution to be expected between language and sociality. It is perhaps less a complete explanation, and more a route to an explanation.

Earlier I made a distinction between genealogical and classificational terminology structures. I am certain that systems have changed through time and in either direction. However, if “archaic” *Homo sapiens* classified kin with kin terms at all, it seems reasonable to suppose that genealogical distance would have been important to them. With the increase in the significance of exchange, either gradual or revolutionary, the pressure to identify classes of people (marriage/unmarriageable, in particular) must have been great. However, with the symbolic revolution, and fully formed kinship structure, classificational kinship structures came to form the basis of human societies. Let me therefore end with the hypothesis that what Blombos Cave implies, in relation to kinship, is that, as language, art, and ritual emerged, genealogical reckoning became classificational and incest avoidance became incest taboo. Lévi-Straussian elementary structures appeared from the Bourdieuian habitus, and the earliest systems were egocentric. In the subsequent tens of thousands of years, the vagaries of history led to a multiplicity of kinship systems and of languages, the evolution of more elementary sociocentric systems (like those of Australia and South America) and of Lévi-Straussian “complex” ones, and with the latter a return in some systems, to the genealogical.