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The ethnographical conception of diffusion and its relevance to the question of continuity and discontinuity in the evolution of man and the emergence of ancient society +

Frederik G.G. Rose*

Abstract

In the early part of this century there was a debated among ethnographers around the issue of "diffusion versus evolution" concerning the spread or independent development of ethnographical traits or complexes thereof. Dognamtic adherence to one or other of these extreme viewpoints was shown to be unproductive and compromises were effected invoking "histori-cal" considerations. Such considerations were essentially idealistic raised as ideological counterpoints to progressive 19th century bourgeois evolutionism and particularly to historical materialism.

The concept of diffusion of cultural traits is of value in helping to elucidate the socio-biological process of hominisation. Some cultural traits are manifestly conservative while others change relatively quickly.

The ethnographic record shows that the main instruments of production are fabricated from perishable organic materials, largely of wood. This situation most probably existed during the hominisation period. But the archaeological record provides almost exclusively artefacts of non-perishable inorganic material and only rarely of organic material.

There is evidence that Archanthropus used pointed sticks as jabbing spears and seemingly during the Middle Palaeolithic Palaeoanthropus began acquiring the throwing spear, the use of which probably became general with Neanthropus.

The construction of these two types of spear is fundamenally different as is also the modus operandi of their use in hunting. This is elucidated on the basis of Australian ethnographic data where, in historical times, both types of spear were in use. The "social" consequence of the changeover from the jabbing to the throwing spear is indicated.

It is not suggested that the changeover could not have been made independently although not simultaneously in a number of centres. What seems more likely is that the main method of acquisition of the throwing spear was by diffusion. This ultimately led to the biological development of Neanthropus from Palaeoanthropus. But because diffusion is an irregular phenomenon Neanthropus would have emerged earlier in some parts of the inhabited world than in others.

Key words: Ethnography, conception of diffusion, Australia, spear, emergence of ancient society

It is nearly 30 years ago that Steenbeck wrote: "One can often obtain basic and new types of knowledge when scientific fields of diverse types come in touch with one another" (Steenbeck 1960, 13; translated F. R.). His words are very pertinent to our deliberations. We come from various disciplines and apart from a common interest in hominisation the scientific methods we employ are varied. Nonetheless, I think I am correct in saying that all of us endeavour to approach our particular subjects as materialists.

Because of our common interest in hominisation it is inevitable that we put forward hypotheses which impinge on the subjects of other sciences. Although a particular hypothesis cannot be upheld against criticism by representatives of other disciplines, precisely because of such criticism an improved hypothesis may well emerge that better fits the knowledge that is currently available. That, in my opinion, is just as it should be and, I think, is in the sence of what Steenbeck wrote.

I, for my part, have put forward my share of hypotheses not only in my own science of ethnography but also as they relate to hominisation (Rose 1987a). To use a homely English folk

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* Prof.(emer.) Dr. Frederik G.G. Rose, Berlin, died in 1991.

saying: I have put up my share of "Aunt Sallies" which have been "shied at" and in many, if not the majority of cases, have been knocked down. In this paper I shall put up a few more "Aunt Sallies" to be "shied at".

But to come to the specific subject of the discussion here: the question of continuity and discontinuity in the hominisation process. My understanding of the use of these terms is that advanced types of *Homo* are observed to have been contemporaneous with less advanced types of *Homo* in other geographical areas, in some cases perhaps contiguous areas. This is the discontinuity side of the contradiction. The continuity aspect is that despite these discontinuities there is nonetheless an overall continuity of anthropological development leading ultimately to anatomically modern man. In other words what the contradiction expresses is the description of anthropological development as a network pattern. This conception has been used for a decade or more.

I see no difficultly in accepting in the light of F. Engels' labour theory of hominisation the continuity in the process. That by no means signifies that the process was straight-forward nor that there are many lacunae in our knowledge of the details of how the process actually took place. What is more difficult to comprehend is the discontinuity side of the contradiction.

But hypotheses can be advanced to explain this discontinuity. The first consideration is that in no case does the palaeoanthropologist deal with entire populations of extinct forms of *Homo*. If he is lucky he has a complete skull for examination but more likely a tooth, a piece of cranium or some post-cranial bones. It is obvious that few statistically significant conclusions on the population as a whole can be drawn from such finds.

The second point is that gene flow leads or led to changes in the anthropological characteristics of a population. Models can be drawn up on the basis of definite assumption on the rate of gene flow. But because of apparently fortuitous conditions, for instance the existence of geographical barriers, what occurs or occured in practice may have been quite different. This too would lead to discontinuity.

Movement of population by migration is or was a third component that would further have complicated what is observed and which would have contributed to discontinuity.

These first three considerations are matters that fall within the province of the palaeoanthropologist, geneticist or palaeodemographer and clearly I, as an ethnographer, can hardly offer a considered opinion other than perhaps remarking that the date available can and often is interpreted in various ways by different representatives of the respective disciplines. This is, of course, a natural situation when one is working on the frontiers of scientific knowledge and in this respect ethnography is no exception.

My fourth point however does fall within the scope of the ethnographer, namely the question of diffusion of cultural traits. It is certainly not my intention to deal with this problem in any comprehensive way and I shall restrict my comments to the distribution of the man's main instrument of production as observed in Australia from the ethnographical record. I have intentionally made this selection as it is unnecessary for me to underline the importance of the instruments of production in the labour theory of hominisation.

The man's main instrument of production in Australia was the throwing spear. It was found universally throughout the continent and moreover it took many forms. The simplest was a straight stick sharpened at one end with a fire-hardened point. This was found in Tasmania which had been separated from the mainland for 12,000 years. Other spears were composite instruments of two or more types of wood with or without points of stone or other inorganic or sometimes organic materials.

The bow and arrow were not found in Australia although only a few kilometres across the Torres Strait the bow and arrow were used virtually universally in Papua and New Guinea. On the north coast of Australia the bow and arrow have been reported but not as a hunting weapon but as a toy possibly introduced a few centuries ago by Macassar visitors.

Another wooden instrument which can be regarded as an adjunct of the spear was the spear-thrower or woomera. But this in contrast to the spear itself was not found universally in Australia. Its distribution was apparently quite sporadic. It was not found in Tasmania in the south nor among the Tiwi in the far north.

There is evidence that the spear-thrower was acquired at the end of the Pleistocene or early Holocene. On the other hand the throwing spear was in use at the time of the first Australian rock

art probably 20,000 BP or earlier. The accepted view is that the ancestors of the Aborigines brought the throwing spear with them when they first arrived in greater Australia 45,000 years BP or earlier. It would probably have been similar to the simple one-piece spear observed in use by Tasmanians in historical times.

Inevitably we think in categories that we have acquired in our upbringing in a civilised society. One of these categories is that a weapon that can be projected further, and precisely because of that, is more efficient than one that has a shorter range. The ultimate at the present day is the inter-continental ballistic weapon. The logic of the argument in this acquired category is that the throwing spear is more efficient that the jabbing spear; a spear projected with a woomera or spear-thrower is more efficient than one projected by hand, and the bow and arrow are more efficient than the spear projected with the spear-thrower. The argument in this category immediately presents a contradiction. Why did the spear-thrower not diffuse throughout Australia, or perhaps more significantly why did the Australian Aborigines or their ancestors not acquire the bow and arrow metaphorically being used on their doorstep?

The contradiction as observed in the ethnographic present in Australia was compounded by two other considerations. The first was that the manufacture of the throwing spear whether projected by hand or by the spear-thrower was not very efficient. The second was that the Aborigines were not very accurate in projecting it. Yet they were highly efficient hunters. How then was this contradiction arising from our thought categories resolved by the Aborigines?

The cardinal point that needs to be emphasised in that with projectile weapons - and this applied also to the bow and arrow - the animal was not only tracked but was also stalked so as to approach it as close as possible without the hunter being observed before he projected his weapon. The Australian Aborigine in order to ensure hitting the animal had to approach within 15 metres or less (Tindale 1925/26; Whitnell 1901) of his quarry. This not only required an extensive knowledge of bushcraft but also a fundamental understanding of the behaviour of the animal.

One consequence of this was that the actual stalking - as distinct from the tracking - was of necessity an individual and not a collective activity. This was fundamentally different from collective hunting with jabbing spears where the animal was aware that it was being hunted. Such collective hunts were also carried out by Australian Aborigines when circumstances were favourable but they were secondary in importance to the individual hunt with the throwing spear.

What is of interest is that other early hunters in the ethnographic record using the bow and arrow also approached their quarry very closely. Thus Woodburn (1968) reports the Hadza bowman as approaching his quarry to within 23 metres or less before releasing his arrow.

In fact the spear using a spear-thrower was a more efficient hunting weapon than a spear thrown by hand, as a primitive bow and arrow was more efficient tha a spear projected by the spear-thrower. But this was not because of the greater distance that the weapon could be projected but because of the higher velocity with which the projectile was given by the hunter. As soon as the projectile was released the quarry became aware that it was being hunted and would take evasive action. The fraction of the second that the weapon took to cover the distance from the hunter to the quarry before the latter reacted was decisive and had to be kept to the very minimum. The hand-thrown spear required approaching the animal somewhat closer than when using a spear-thrower which in its turn was was somewhat closer than when using an early type of bow and arrow (Rose 1987b, 75-81).

The type of contradiction - resulting from irregularities in diffusion of the men's main instruments of production - observed in the case I have given on the ethnographic time scale, could well have contributed to discontinuities in the much longer hominisation time scale.

I have elaborated on this question of the man's main instrumente of production as exemplified from the ethnographic record also for another reason. I did this to show that some categories of thought which we have aquired - as it were with one's mother's milk - and accepted as universal truths need reassessing in the light of ethnographic data. There are several other examples which I could cite but time only allows me to mention one. I note that the question of the female and the emergence of the family are to be dealt with by a number of speakers. This naturally is a question which also concerns the ethnographer.

In Australia the main reasons for the not infrequent homicide were undoubtedly disputes arising from the abduction of women or from feuds

resulting therefrom. Almost without exception, especially in the older literature, these killings were portrayed as crimes of passion arising from sexual jealousy on the part of the injured husband (e.g. Nind 1831). This accords precisely with the prevailing bourgeois morality of the observers. For a long time this interpretation was accpeted uncritically almost as a universal truth.

But a reassessment of the older literature and in the light of new information (Rose 1987b, 35-37, 123-124) it has been shown that sexual jealousy has no relevance to the killings. A woman was regarded as a valuable asset by the patrilocal/patrilineal clan or gens into which she married. This was not only a economic producer but also as the reproducer of the main productive force, the children who would ultimately replace the members of the clan into which she married. If she were stolen by or eloped with a man outside the clan into which she married, then her attributes as a producer and reproducer would be lost to her husband's clan. This was the cause for homicide not the sexual jealousy of the husband.

In the final section of my paper I want to address my remarks to something quite different viz. the apparent discontinuity between F. Engels' labour theory of hominisation and the historical materialist teachings of K. Marx. One would not err greatly of one described Marx's teachings on historical materialism as a labour theory of society. As is well known, what Engels wrote was a fragment that was to serve as an introduction to a more topical article, which, in fact, was never written. It is not to belittle Engels' work by saying that although it corresponded to the knowledge available at the time, it did not evidence the depth of investigation or acribie which Marx had put into this theory of historical materialism.

But from the archaeological record there is clearly a continuity in what occured in the transition from the hominisation to the historical period of *Homo sapiens sapiens*. However, the laws of Marx's historical materialism and those which we can infer from Engels' labour theory of hominisation are apparently quite discrete and, at first sight, mutually exclusive. Thus, simply to apply the concepts of Marx to the hominisation period is quite pointless because one, if not the key concept in this teaching is that man as the chief productive force is a constant in his potential for development. But it was precisely the equivalent parameter *Homo* in the hominisation period which was subject to change and development.

Unlike Marx's teaching on the historical materialism Engels' labour theory of hominisation was not formulated in exact terms so as to present a definite law (or perhaps series of laws) governing the development of *Homo*. If we were only dealing in the hominisation period with the movement of matter in the biological form then the discreteness I have mentioned might be understandable, for Marx was dealing with the movement of matter in its social form. But in the hominisation period we are studying the movement of matter not only in its biological but also in its social form, moreover this latter is ultimately determinant.

As I see it, if Engels' labour theory of hominisation can be more exactly formulated then there would be no discontinuity with or discreteness from Marx's teachings on historical materialism which could be regarded as a special case where the parameter *Homo* or man as the chief productive force has become a constant. It goes without saying that variation and selection were the fundamental elemenents in the biological development of *Homo* but with the decisive condition that it was social factors i.e. ultimately labour, that determined how selection occurred.

This whole question or perhaps complex of questions have occupied me for some time. I would hardly claim that I have any final answer. But I am convinced that we are approaching a position where the process of hominisation can be shown to be governed by exactly formulated objective laws based on Engels' labour theory. This should enable the apparent theoretical discontinuity in the transition to Neanthropus to be removed.

In conclusion I will refer once again to what Steenbeck (1960) wrote: "Wesentliche und neuartige Erkenntnisse lassen sich oft gewinnen, wenn Wissensgebiete verschiedener Art miteinander in Berührung kommen" for it is in this sence that my contribution should be regarded.

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