

## THE OPPOSITION BETWEEN THE MATERIAL AND THE SOCIAL: TIM INGOLD AND THE "SHARING" MODE OF PRODUCTION

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Two recent works by Tim Ingold (*The appropriation of nature*, Manchester 1986a; *Evolution and social life*, Cambridge 1986b) reconsider the problem of the mode of production of hunting-gathering societies.

The definition of this mode of production has always been a puzzling problem in anthropological literature (see Jordaan 1975; Lee 1980; Meillassoux 1976).

A common point of departure is that the mode of subsistence, bearing upon the material aspect of life, must be contrasted with the mode of production, which bears upon the social dimension. That is to say, a mode of production is the way in which social relations govern material actions devoted to the production and consumption of the means of subsistence.

Ingold tries to explain the fundamental distinction between what is material, pertaining to the «natural history of man» (Moscovici 1976; Schmidt 1971: 76-78), and what is social, pertaining to the "human history of nature" (Ingold 1986a: 111).

Particularly in what concerns hunter-gatherer societies, Ingold outlines a logical separation between non-domesticated resources, belonging to anybody, and domesticated resources, the appropriation of the former based on a «principle of collective access, the other on a principle of divided access to living animal resources» (1986a: 113).

He makes a further distinction between material relations, predation and cooperation, on the one hand, and social relations, hunting and sharing on the other. Sharing is opposed to cooperation as hunting to predation, «as production to execution, action to behaviour, appropriation to extraction» (1986a: 111). The real

basis of this distinction is the labour process, which intentionally harnesses physical force and material behaviour to the purpose of production. «Once the hunter is brought back into hunting, it is no longer possible to restrict the latter to the execution of subsistence technique» (1986a: 110).

What then are the social relations of hunting-gathering production?

Following Marx and Godelier (1969), Ingold insists that production and appropriation must be kept distinct and that the rules governing production are technical, whilst those governing appropriation are quasi-jural and define «the rights that members of a society exercise in relation to means of production and products» (1986a: 107).

Lee (1979, 1980) characterizes the foraging mode of production by sexual division of labour, non-exclusive rights to territory, generalized access to resources and sharing of produce. Ingold seems to accept this point of view and stresses that «the principle of collective appropriation is summed up in the ... concept of sharing» (1986a: 113).

This is, I believe, the heart of the problem. I would say that if hunter-gatherers enjoy free access to resources belonging to anybody, consequently they have the right to use their means of hunting (alone or cooperatively). We must not forget however that hunters do not live alone but in the realm of a social structure. Thus access to resources has to be managed collectively in order to remain free to all, and sharing output within this social framework is (1) the *conditio sine qua non* for maintaining collective access to resources for everyone belonging to that social entity and (2) the *conditio sine qua non* for maintaining the society itself. In this perspective only does Ingold's theory make sense.

But Ingold seems to have a somewhat different opinion. He says: «We can recognize hunting as a process whereby hunters mutually create and recreate one another through the medium of their encounter with prey» (1986a:111), and later on: «through a history of sharing, each person encompasses all other and hence the collectivity, in his production he confronts nature as a domain of collective resources, whose appropriation for this reason takes the form of hunting» (1986a: 117).

The theoretical ground of these assumptions is that «sharing has its foundation in the social constitution of the agent and not in the technical character of the labour process» (1986a: 118). It means, in other words, that cooperation must be kept apart from

sharing and that the former may be assumed merely as one of the various possible means of producing a hunt. This is right only if we are speaking of material cooperation in hunting. But why should it be so? Ingold's answer is that «if the essence of hunting is the intentionality that sets the body to work, through sharing the intentions are those of collectivity ... sharing constitutes the common purpose that, in hunting, engages human bodies in cooperative interactions whose material outcome is predatory extraction» (1986a: 125).

Thus sharing seems to be the mode that encompasses the social relations of production and the consequences of which are collective access to resources and collective appropriation of product.

Put this way, the social nature of sharing comes before the society itself, a sort of hypostasis of sociality. What I want to stress is that, despite Ingold's avowed Marxism, he derives the economic from the social, for sharing is considered a social value in itself, while the economic structure (access to resources and product) seems to be a consequence. Another implication of these assumptions is, I believe, that the means of production is the territory, and collective access consists in «territorial behaviour that establishes a form of co-operation» (1986a: 11). Therefore Ingold prefers «an approach to tenure somewhat analogous to Mauss's celebrated treatment of the gift» (1986a: 138). This is perfectly understandable: he cannot solve the problem that arises when sharing is set as the source of collective access to resources. He declares: «... territoriality is one aspect of the organization of work, governing not the social appropriation of land but the practical conduct of its exploitation... it pertains to the forces rather than to the relations of production» (1986a: 143). Thus he makes a distinction between «territoriality [that] belongs to the forces of production... [and] tenure [that] belongs to the relations of production regulating access to, and control over, the resources of nature» (1986a: 136). In this perspective tenure is the «nexus of social relations... which may be viewed either in their economic or in their religious aspect» (1986a: 141). It probably means that a social nexus (= reciprocity, sharing) binds together economic and symbolic aspects of land tenure. Thus the relations of production (tenure=collective control of territory and resources) are derived from a social principle, and the social reality stems from "territorial behaviour", a concept with a rather vague meaning.

Ingold's sharing mode of production has some fundamental

aspects in common with the economics of altruism based on the substantivist concept of reciprocity.

He follows Mauss and Gregory (1982, 1983) holding that gift-giving is «an exchange without alienation which by definition distinguishes gifts from commodities» (1986*b*: 266).

Notwithstanding this he seems aware of the economic nature of sharing: «Through the widespread sharing of food and other produce, hunters are directly and deeply involved with one another in the mutual production of their existence, quite irrespective of whether the conduct of their exploitative activity is solitary or co-operatively organized. Even should a man hunt alone, he confronts nature as a subject of social relations, and just as his life is produced through the activity of others, so the products of his activity are as much theirs as his» (1986*b*: 252). And furthermore: «In a hunting and gathering society... generalized reciprocity appears ... as a generalization across the collectivity of the kinds of relations that under Domestic Mode of Production [see Sahlins 1972: 41-148] are internal to the household. When a hunter who has taken initial custody of a kill exercises his right in distributing the meat, he forgoes nothing, since he has no greater claim to its consumption than anyone else. Rather than sharing stuff out in spite of an entitlement to reserve it for his exclusive use, he shares it out because the right of enjoyment is lodged with the collectivity» (1986*a*: 233).

These statements seem to contradict the previous arguments and we must wonder whether, according to Ingold's theory, sharing is the cause or the consequence of a collective right to exploit the territory.

In both cases Ingold should explain what benefit people obtain from sharing. Accurate as Ingold may be, he does not seem to realize that a collective right can be grounded only on a collective utility. What can it mean to say that «sharing has its foundation in the social constitution of the agent», if the social constitution has no utility for the agent? Or should we argue that this social constitution is a biological feature?

It is quite amusing to imagine bands of hunter-gatherers, which Ingold claims are «effective subsistence units» (1986*a*: 118), driven to work solely by the wish to share. It would legitimize the question: is sharing useful? Not to answer this question is tantamount to considering people abstractly and not concretely encompassed in the social relations of production.

I would suggest that the problem of a foraging mode of pro-

duction must consider such other aspects as flux in the composition of the bands and the work expenditures of their members. Otherwise the analysis of the hunting-gathering way of life has no connection with reality.

Sahlins says that foragers are truly affluent societies, because their work effort is supposed to be very low. According to Lee's figures (1969: 67; 1979: 255-257), !Kung Bushmen seem to work very little: from 1.2 to 3.2 days per adult per week. Lee did his survey over a period of four weeks. Between the first and the fourth week some significant differences emerge.

First of all, there is a mean group size of 25.6 individuals during the first week with a mean daily work force of 5.2 adults. During the fourth week, there is a mean group size of 35.6 individuals and a mean daily work force of 11 adults (Lee 1969: 66). Lee's fourth week comes at the middle of the dry season (July 27 – August 2, 1964), and the main resource of !Kung (*mongongo* nut) together with other wild resources were becoming scarce.

We may wonder whether it would have been more profitable for !Kung to spread out, as the G/wi Bushmen do during the dry season (see Silberbauer 1981), than to join together. Lee himself provides the answer:

1. the camp was located near a permanent water hole;
2. more importantly, the territory around the camp was rich in *mongongo* trees;
3. one can choose to expend more effort in obtaining *mongongo* even if less desirable food resources are closer at hand (Lee 1969: 59-62).

Lee, *malgré lui*, pushes us to adopt a formal economic point of view. In fact the ecological features of !Kung environment explain the relative inelasticity of demand (points 1 and 2). Moreover, the economic peculiarity of the main food resource may be explained in terms of the capacity of marginal substitution (point 3). The increasing number of occupants of the camp may thus be explained in terms of some sort of benefit in people joining together in a band. Might we argue that the reason is low work expenditure? If so, we should judge that social structure is the product of economic utility, the reason why territoriality becomes tenure and sharing becomes exchange. Why indeed should people live together in a camp, gathering and hunting, with the purpose of sharing the collective resources, when they could live in minimal units? As far as anthropological knowledge of these societies is concerned, it is well known that socialization needs and cere-

monial purposes can be satisfied within a camp as well as within a dispersed population.

Fortunately Lee provides the necessary data for investigating the economic structure of a band and for testing an hypothesis that I should like to set forth.

It is arguable, I think, that one would not join together with others if he thought he would have to work harder to achieve the same ends. To take this reasoning another step forward, one could argue that the ideal consortium is one in which each individual expends his work effort as everyone else. What would be the optimal situation for an individual or a family? The answer is very simple: one with the least work expenditure.

I do not think that hunter-gatherers need timepieces or other instruments to measure their worktime or their nutritional intake; Lee assures us that they are fully able to regulate themselves.

At this point, it is necessary to introduce a concept that Ingold's obsolete Marxism would certainly reject. This is the concept of supply and demand, which is too often restricted to the market economy but which may help our understanding of other situations as well.

We may reasonably argue that people are willing to join a band in pursuit of a situation in which they can best allocate their work force. It means they are supplying their work potential to the other members of the group and demanding the work potential of the others. In this perspective the members of a band can be considered as both suppliers and demanders of work. What then is the best economic situation for a group in which everyone works equally hard? The one, I repeat, in which everyone can expend a minimum of work for a maximum return.

Since suppliers and demanders are the same and since the higher the demand the less the supply, we can plot a demand curve  $U$  in the shape of an ideal utility curve as an equilateral hyperbola (Fig. 1). This is made possible by considering  $Ox$  as the work effort (= output per work unit, i.e. quantity of wild resources daily captured by one worker and enough to feed  $Ox$  individuals) and  $Oy$  as the cost (= daily work team, i.e. number of individuals daily involved in foraging activities). This model implies that the demanded labour  $D$  is the equivalent of the individual work effort and the labour cost  $S$  is the equivalent of the collective labour. The model implies also the functional relation  $x \cdot y = k$ , i. e. the nutritional need of the band ( $k$ ) is the product of the number of individuals daily involved in foraging activity, mea-

sured in work units ( $y$ ), multiplied by the quantity of resources (captured per work unit) measured in consumption units ( $x$ ), given that 1 work unit = 1 consumption unit.

In demand curve  $U$ , the best point  $P$  is the nearest point to the origin and corresponds to the square root of  $k$  measured in work or consumption units, i.e. the square root of the number of consumption units living in the band. In the Fig. 1  $OdPs$  is the ideal output (= the nutritional need of the population) with  $Od$  as ideal individual output (= work effort) and  $Os$  as ideal daily work team (= labour cost).

This is basically a model of economic equilibrium but it must be stressed that such an equilibrium is the result of a continuous population flux.

In the same Fig. 1,  $Y$  is the supply curve. It measures the increasing disutility of the individual output (=supplied work). The point  $P$  must lie at the intersection of the curves  $Y$  and  $U$  because only there the producer's and consumer's returns are equivalent.

To clarify this point we shall consider two hypothetical cases (see Fig. 1). If labour cost is high, say  $s'$  (a daily work team of all the members of the band), then its demand will be low. It means that I will have not more than  $Od'$  (the daily caloric intake of one person in terms of my individual output): a very low level of cooperation, since everyone is working for himself and must work every day. It is reasonably arguable that the supply will rapidly increase otherwise people would find it more profitable to look for another camp given the practical inutility of that group.

If instead labour cost is very low, say  $s''$  (a daily work team of only one person), then demand will be high, since I am willing to have  $Od''$  (the entire caloric need of the band) in order to be nourished almost every day without working. We may argue that the supply will rapidly decline otherwise more and more people would find it more profitable to join that happy band.

We should now recognize that the benefit deriving from living together is only the exchange of labour, and that this particular type of exchange makes it possible to enjoy "leisure" time allowing people to satisfy their needs of socialization and many other important aspects of the social life. If the maximum individual utility corresponds to the maximum social utility (= the minimum social cost) it can explain why a society can come into existence.

Lee's data seem to prove this hypothesis because, during the first week, a mean of 5.2 daily work units corresponds to a mean

group size of 25.6. Detailing the model, we have  $Os' = 5.2$  (work team) and consequently we should have  $Od' = 4.9$  (output per work unit enough to feed 4.9 individuals) (see Fig.2).

Individual daily effort is the amount that can be spent given the availability and predictability of resources. It seems, according to Lee's data (1979: 269-270), that the maximum capacity of a gathering woman is a backload of 10-15 Kgs for a one-day foraging trip (6-8 hours). In the case of !Kung «each 12-Kg backload of *mongongo* nuts contained 1,800 g. of edible nutmeats» (Lee 1979: 270). This represents 11,700 Kcal (650 Kcal per 100 g. of edible nutmeat [Lee 1979: 480]). The value of 11,700 Kcal is the full daily caloric intake of 4.9 people, since Lee (1979: 271) gives 2,355 Kcal as the daily intake per person ( $2,355 \times 4.9 = 11,700$ ) comparable to the Batek Dé of Malaysia (see Endicott 1984: 49). 4.9 is the exact value of  $Od'$  (Fig.2).

We have thus identified the point of economic equilibrium at which the system, among !Kung, can operate at an average level, since every day any individual expends as much work effort as anyone else for the best satisfaction of collective demand.

We may argue from the available data concerning numbers of foraging groups that a level of efficiency is assured through a system of cooperation based on labour exchange. Indeed the very fact that these groups generally show an optimum diet level is an index that their social organization, together with their mode of subsistence, guarantees the system's equilibrium.

They have no economic consultants nor nutritional advisers, but there is no need for them.

Given these assumptions, it is clear that food resources, specially those with the highest nutritional value (e.g., meat and *mongongo*), must be shared, because sharing is the necessary consequence of the exchange of work effort.

People share food, but they exchange labour, and only this can be assumed as the key to a foraging mode of production.

Following Ingold's style, we could say that food-sharing pertains to the material aspect of society but labour-exchange pertains to the social aspect of a population.

I think we may conclude that this aspect is social because it is economic and encompasses the social relations of production.

It may be objected that the ratio between demand and supply changes between the first and the fourth week among !Kung. During the fourth week mean group size is 35.6 persons and the mean daily work team is 11 adults. It simply means that the band



is economically less efficient due to increasing ecological constraints, which Lee amply describes. Each daily worker captures a smaller amount of resources on his foraging trips. Therefore a larger number of people must work every day in order to maintain the same level of nutritional intake. Labour productivity declines but the structure of labour-exchange still remains useful because every individual works as hard as anyone else and a profitable return in terms of "leisure" time still persists.

Beyond the capacities of an individual's work effort or the technical means adopted, the labour-exchange system collapses when it reaches a point at which it is impossible to maintain the optimum diet level with an acceptable return for labour. This generally occurs when availability and predictability of resources fall below a lower threshold level.

It might also be objected that there are many foraging groups in which meat forms a larger part of the diet than with the !Kung (see Estioko-Griffin & Griffin 1981; Harako 1976, 1981; Hart 1978; Tanno 1976; Werner, Flowers, Ritter & Gross 1979) and in which most of the available time is devoted to hunting (see Hill & Hawkes 1983). It seems that the Aché spend twice as much time hunting as the !Kung do (about 6 days and 3 days per week respectively). Hill & Hawkes suggest that «more information is needed on what exactly !Kung men do with the time they are not hunting» (1983: 185). More information is also probably needed to explain why the Aché, like other South American hunters, seem to move continuously in search of game and pursuit.

According to data presented by Kaplan & Hill (1985), 9.6 Aché hunters produce a daily meat output of 49,277 Kcal, or 1,955 Kcal *per capita* for a mean group size of 25.2 individuals. It accounts for up to 60-65% of the daily caloric requirements of an adult male, 20-40 years old weighing 60 Kgs and engaged in very strong physical activity (see Aa. Vv. 1973: 82-85). Moreover it seems that daily protein intake of the Aché totals around 100 g. proteins *per capita*, whereas an average of 34 g. is recommended for an adult male as above (*id.*: 91).

It is quite unlikely that the Aché diet is so heavy in animal protein throughout the year, and more research seems to be needed to settle this point.

Hill & Hawkes (1983: 185) say: «Despite their high returns from hunting, our data for the Aché do not support the contention that hunters take the "Zen road to affluence", working only a few hours a day (Sahlins 1972)».

However it is worth noting that the work effort of foragers is actually not as low as Sahlins claims. In fact, in the best case, it is as low as it must be. Among the !Kung it doubles in the fourth week, and that is really very high. We may argue that if it continued to rise, the group would lose its utility, people would leave the camp and spread out in order to reduce it. This is what actually happens among most foraging groups in arid ecosystems like, for example, the G/wi.

In my opinion the work effort of the Aché seems to be quite high. That group could maintain efficiency at a much lower level of labour allocation. It is quite likely that some fundamental aspect of the South American hunter economy is still obscure. More detailed information on the allocation of labour among men and women and on year-round food intake ought to clarify the matter.

There is insufficient space here to develop and discuss all the implications of the proposed model. I intend to do so in the near future. Two points, however, strike me as worthy mentioning here: (1) it is labour and not natural resources or territory that is the scarce commodity and the only means of production among foragers; (2) it is not strictly food resources that comprise the return on labour, for the actual individual return is the food obtaining during the time free from work.

Thus sharing may be considered as a system of compensations for obligations contracted in labour-exchange.

Such a system is grounded on mutual cooperation allowing nuclear families and individuals ample leisure time that they would not have if they had to provide subsistence on their own.

This is a picture of societies that are concretely and not abstractly egalitarian (Woodburn 1982). In fact labour is the means of production, it is owned individually but exploited socially. This is the basis of the social relations of production, and it is also the basis of the collective access to resources and the collective appropriation of product.

From a band's point of view, resources should be considered a pre-requisite and sharing the social mechanism that allows the system of labour-exchange to operate for the reproduction of society and for the utility of all.

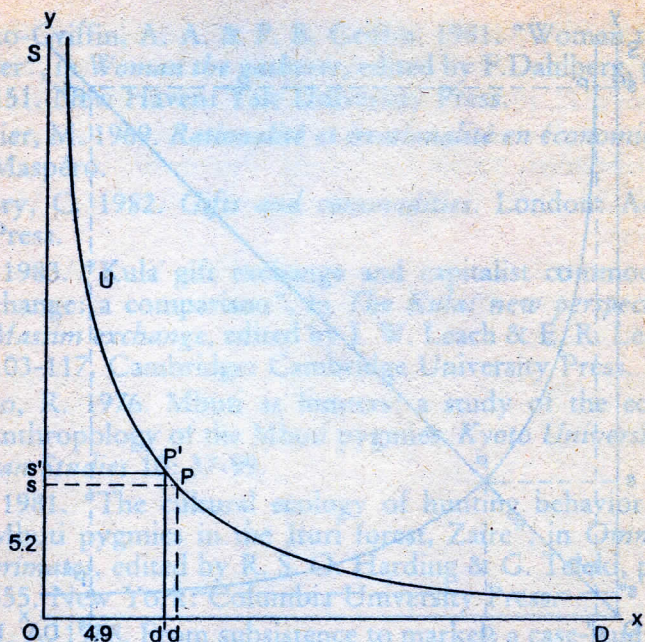


Fig. 1

- U Curve of the demand (utility)
- Y Curve of the supply (disutility)
- D Labour demanded and/or supplied (individual work effort)
- S Cost of labour (collective labour)
- P Point of economic equilibrium

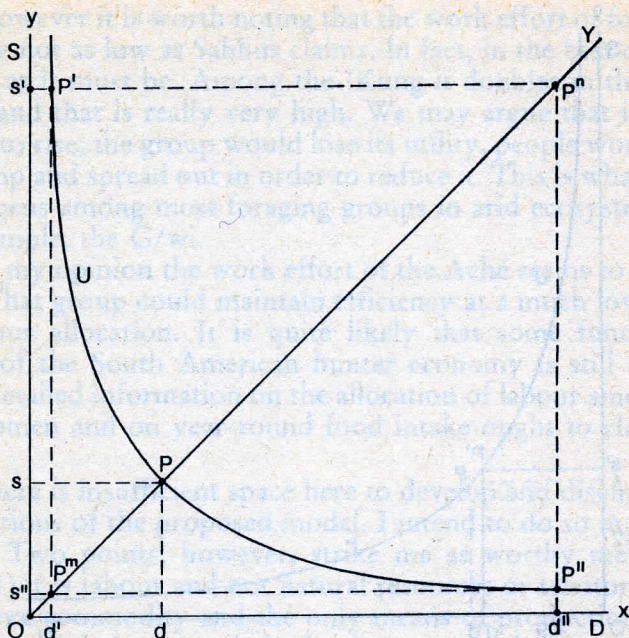


Fig. 2 – Economic equilibrium among !Kung during the first week

- U            Curve of the utility of labour  
 Os'        daily work team (5.2 people)  
 Od'        individual output (11,700 Kcal as a mean = 4,9 times the individual  
             caloric need)  
 Od'P's'    total output of a foraging day  
 P'         point of actual economic equilibrium  
 P         point of theoretical economic equilibrium  
 OdPs     theoretical optimum with Os = Od = 25.2

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