

The Social Organisation of Fishing in a Sinhalese Village*

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1. Introduction

This paper is primarily concerned with the social organisation of fishing in one small village in Sri Lanka. As such, my aims are parochial in the extreme and have little relevance for anything outside the village. This community is in no way "typical" of Sinhalese fishing villages: indeed there could be no such thing as a "typical" fishing village. Yet by examining what goes on in this one small community I hope to show the utility of a certain analytical framework which has a much more general relevance to the study of economic activities in countries such as Sri Lanka. Through the study of the particular in some detail it becomes possible to recognise more general problems—and perhaps produce more general answers. Thus as an introduction, it might be worthwhile to say something of the intellectual background to this paper. This involves what has been called, "the new peasantology", plus recent attempts to use Marxist ideas and concepts in understanding non-industrial societies.

An important feature of the new peasantology has been its attempt to delineate a model of the peasant economy which is valid irrespective of geography and period, an attempt which has given rise to the concept of a specifically "peasant" mode of production. Whilst the intellectual ancestors of this project are usually seen as Chayanov and Marx, the results of this exercise are perhaps best seen in Shanin's survey articles on the peasant economy (Shanin 1973; 1974). Here, he distinguishes a set of more or less interdependent characteristics of the peasant economy. Shanin claims that in such an economy, there is no distinction between a class of owners of the means of production and another class who use the means of production. The technology of production is simple: the division of labour minimal. The household owns the means of production and the division of labour is encompassed within the household. In such an economy, production is governed by use values: to satisfying the consumption needs of the household, exchange being marginal. Finally, Shanin argues that peasants are in some way "exploited" by outsiders; by non-peasants.

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The work of the new peasantologists is open to many criticisms, but it has resulted in new and important questions being asked of the available data. Most important of all, it shifts the focus of interest away from considerations of peasant "culture" or "personality" and from such mystifications as "the image of limited good" or "peasant conservatism" towards more significant and realistic questions concerning the workings of material and economic forces. Furthermore, through an odd dialectic, by affirming the separate nature of peasants as a historical and sociological category, it has brought them into an over-all schema of sociological understanding rather than leaving them in a somewhat embarrassing limbo.

Marxist anthropologists have also focussed on the process of production, seeing it as in some way determinant of other levels in a social formation. Writers such as Terray (1969) and Meillassoux (1972; 1973) are essentially technological reductionists, but other writers, notably Freidman (1974; 1975) and Godelier (1972) deny such reductionism and produce more satisfying analyses. Friedman for instance distinguishes between the "forces of production": "the totality of the technical conditions of production", and the "relations of production": "the set of social relations which determine the internal rationality of the economy, the specific use to be made of the means of production, and the distribution of the total social labour time and product" (Friedman 1975: 162)¹.

Both the peasantologists and the Marxist anthropologists have been concerned primarily with situations in which the producers are directly dependent on the land, Kahn's essay on the Minangkabau blacksmiths being one of a few exceptions (Kahn 1975). Yet if little has been written on non-agricultural groups in primarily agricultural societies, even, less has been written on fishermen. Shanin, for instance, fails even to mention them in his list of "analytically marginal groups of peasantry (Shanin 1971: 296-298). This omission is even more striking when one considers that one of the most famous anthropological studies of "peasants" is Raymond Firth's volume on Malay fishermen (Firth 1966).

In contrast with a land based economy, production in an economy based on fishing must be production directed towards exchange, the level of production being determined by exchange value rather than use values. Thus the analytical framework which I shall try to develop in this paper is essentially concerned with the implications of production for exchange and the relationships between particular forms of exchange and the actual social organisation of production. Rather than talk about the inter-relationship between "forces of production" and "relations of

1. In certain respects, these distinctions parallel those made between "infrastructure" and "superstructure" in Sahlins' work on the Domestic Mode of Production (Sahlins 1972). From another angle, a striking feature of recent Marxist work in anthropology is its similarity to the ideas developed by Fortes in his discussions of the developmental cycle in domestic groups (Goody 1958).

production" or between "infrastructure" and "superstructure", I shall argue in terms of an inter-relationship between the "forces of production" and the "mode of exchange". I shall try to show that the actual social organisation of production is governed by an interplay between these two sets of factors. Furthermore, I shall try to show that whilst in particular details the organisation of production in this village bears close similarities to Shanin's definition of the peasantry or Chayanov's characterisation of Russian peasants, the logical structure of their economy is very different.

The village itself I shall call "Wellagoda" and is situated about fifty miles north of Colombo, Wellagoda lies on a narrow isthmus between a lagoon and the sea, the only effective access to the mainland being by bridge at the nearby town of "Moragama"². All together, there are around 140 households in Wellagoda, 100 of which depend directly on fishing for their livelihoods.

The social organisation of production in Wellagoda is easily summarised. Each household—which consists normally (and ideally) of a nuclear family—is an independent economic unit engaged in attempting to maximise its income. Co-operation between households is rare, fragile and transient. Finally, all households own their fishing gear: there is no distinction between a class of owners and a class of workers. What I shall do is to treat this particular organisation of production as problematic and show in what manner it is determined.

2. The Forces of Production

In Sri Lanka, there are a number of traditional fishing techniques which appear to vary from area to area depending upon ethnic and ecological factors. Later in this paper I shall say something about beach-seine or *Madel* fishing, but in Wellagoda the only traditional form of fishing is gill-net fishing from craft known as *theppans*³.

Theppans are basically rafts consisting of four shaped logs (*kutti*) joined together at the bow and stern by two pegs (*kombo*) passing through and lashed over the *kutti*. *Theppans* must be beached daily otherwise they quickly become waterlogged. Even so, *theppan* must be dismantled every five or six weeks, the logs dried on the beach and treated with oil. Properly maintained, a *theppan* should last four or five years before it has to be replaced. *Theppans* vary in size from 12' to 20' in length, the larger ones carrying crews (*kandi*) of two men whilst smaller *theppans* are manned by one or two men depending upon sea conditions and the type of fishing engaged in.

2. "Wellagoda", "Horagama" and "Demelagama" are all pseudonyms.

3. For general discussions of techniques of fishing in Sri Lanka see Bartz (1959) and Gunasekera (1970). The best accounts of traditional techniques are to be found in the writings of James Hornell, especially his 1943 paper. But Hornell was not completely accurate in his descriptions of *theppans*.

Since 1970, the larger *theppans* have been progressively replaced by 18' fibre-glass boats and by 1975 only one large *theppan* remained in use. The new craft can carry more nets; are faster through the water and much more comfortable to use. Although much more expensive than *theppans* (see table 1) they require less maintenance and last longer, although how much longer is still unclear. Like the large *theppans* these boats carry crews of two men.

TABLE 1
Cost of Craft

	(Rupees)	
	1970	1974
Theppans (small)	250	400
Theppans (large)	600	-
Fibre-glass boats	3750	8000

Means of propulsion have also changed over the last few years. Until the mid-sixties, all the *theppans* were powered by paddles or by sails. The paddles are little more than lengths of split bamboo; the sails are square and used in conjunction with lee boards and wooden steering paddles. Since 1965 or 1966, outboard engines have become popular in Wellagoda. Usually $5\frac{1}{2}$ horsepower, these are attached to the stern of the *theppan* making travel to and from the fishing grounds faster and easier and also allowing more distant waters to be fished. According to the fishermen, these engines need to be replaced every two or three years-but the Fisheries Department who control access to these engines claim that they should last four years. By 1975, the small outboard motors had begun to be replaced by fifteen horsepower motors which made the working of the boats even faster. Prices of these engines are given in table 2[†].

TABLE 2
Cost of Engines

	(Rupees)	
	1970	1974
$5\frac{1}{2}$ Horse power	1450	-
15 Horse power	-	3000

The final category of gear worth considering, ignoring items such as ropes, floats and weights, are nets. Until the early sixties, the nets used in Wellagoda were made out of cotton and were known as *kapu dhel*. The raw cotton was bought locally, spun into thread, and then used to form

†. An interesting discussion of the mechanisation of fisheries in Sri Lanka is given by Alexander (1975).

nets by the fishing households themselves. There seems to have been very little trade in these nets, but the situation is unclear. The introduction of nylon nets in the sixties was perhaps the most important technical innovation in the history of Wellagoda. It freed the fishermen from reliance upon home made nets and allowed them to build up much greater holdings of nets. Furthermore, nylon nets are much more durable than cotton nets and do not require daily drying as do cotton nets. By 1969, not one *kapu dhel* remained in use in Wellagoda.

There are a number of net types used in Wellagoda. These differ in the size of mesh and each net type is named after a species of fish generally caught in that type of net. Nets are bought in sections, a variable amount of sections being joined together to make a complete net. Each piece of net lasts from three to five years, but the life of nets varies greatly depending upon the amount of use and quality of maintenance. Details of the prices of different types of nets and the number of sections in each net are given in table 3.

TABLE 3
Net Types and Prices

Type of net	Price per piece		Number of pieces per net	Cost of net	
	1970	1974		1970	1974
Hurulu	75	150	10-20	750-1500	1500-3000
Kumbalava	75	85	5-8	375-600	425-680
Crab	70	150 (?)	3-4	210-280	450-600
Rayfish	120	425	2-3	240-360	850-1275
Shark	180	1000	4	720	4000
Salayo	70	140	9-12	630-840	1260-1680

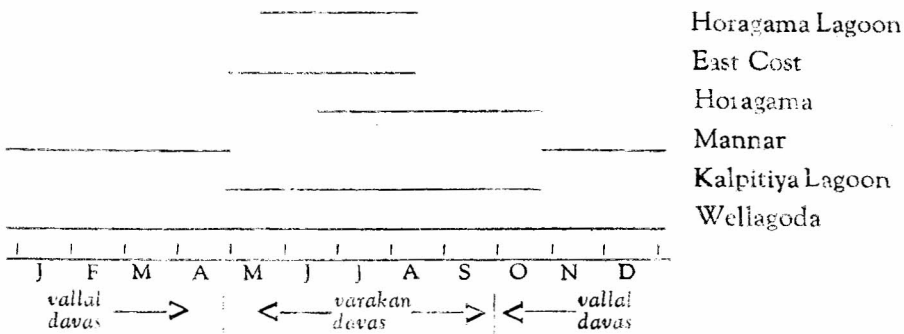
Any description of such fishing equipment is rather meaningless except in the context of certain ecological factors. Basic to fishing in Sri Lanka is the monsoon system. From around October until May, the north-east monsoon is dominant and the sea on the west coast of the island is calm. During this period, known as the *vallal davas*, fishing is easy from the open beach at Wellagoda. But for the rest of the year, the south-west monsoon is dominant, and during this period (the *varakan davas*) fishing from Wellagoda is difficult: at times impossible. Secondly, at different times of the year, different species of fish are plentiful or scarce. For instance *Hurulu* (a type of sardine) is only plentiful when the shoals move north along the coast between June or July and October. Ray fish are only common for a short period between September and November.

The result is a rather complex set of fishing possibilities. The most basic decision is whether or not to migrate. During the *varakan davas*, many Wellagoda fishermen migrate, mainly to fish in the sheltered waters

of Puttalam lagoon but others to the nearby Horagama lagoon. A few move to the east coast of Sri Lanka, and in 1974 and 1975, a number of fishermen began to fish in the irrigation tanks of the dry zone during this period. There is also the possibility of migration during the *vallai davas* to the area around Mannar where the shoals of *hurulu* which were around Wellagoda earlier in the year are to be found between November and March. Finally, towards the end of the *varakan davas*, many fishing units move to Horagama and use the estuary to go to sea. These possibilities are shown in figure 1.

Figure 1

Migration from Wellagoda

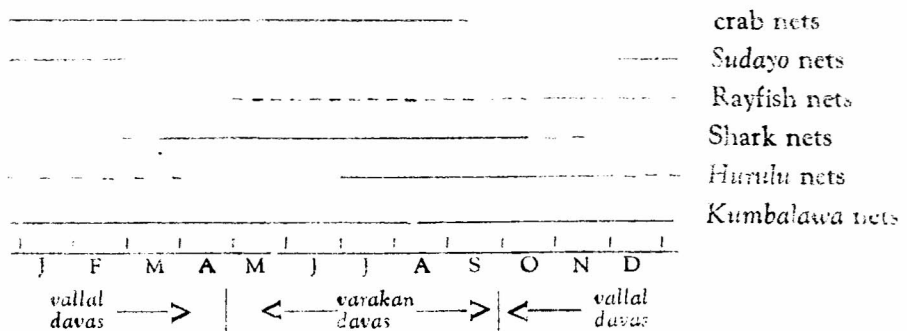


Obviously decisions concerning the ownership of gear and decisions over migration are closely related. For instance, boat ownership effectively precludes migration to Puttalam lagoon where boats are impractical, and such migration would leave the boat unused for many months. Rather, the decision to own a boat tends to imply migration to Mannar. Alternatively, decisions to migrate tend to define certain types of gear as being important.

In this paper, I am not concerned with processes of decision making as such, but rather with the character of the techniques available to Wellagoda fishermen. Here, two points are worthy of elaboration. First, various types of gear can only be used at certain times of the year. Secondly, certain types of gear are more risky in terms of the income they produce.

In figure 2, I show in diagrammatic form the periods of the year during which different nets can be used. Thus *kumbalava* (a sort of mackerel) nets can be used throughout the year. They are used close inshore with small non-engine-powered *theppans*, and, even though the catch from *kumbalava* nets is rarely spectacular, there is usually some catch. In sum *kumbalava* fishing is relatively low-risk, low-income fishing. *Hurulu* fishing is rather different. First of all, it requires more pieces of nets than *kumbalava* fishing, and hence a greater outlay. Secondly, *hurulu* nets can only be used at certain times of the year. Thirdly, *hurulu* fishing is deeper water fishing and thus engines, large *theppans* and boats become involved. Finally, *hurulu* fishing is much more risky than *kumbalava* fishing. There are many days when the catch from *hurulu* nets is low or

Figure 2 Net use in Wellagoda



non-existent. But when catches are good, they are excellent. We can also briefly consider fishing for ray-fish (*madhu malu*). Ray-fish nets are very expensive; they can only be used for a short period of the year, and catches are either very good - or very bad. Fishing for rays is relatively high risk, high cost and high income fishing.

In sum then, it is important to note that there are qualitative differences in the types of gear used in Wellagoda. Simply to compare the value of gear owned by each household as I do in table 4 is to ignore the fact that different types of gear vary in terms of how many months of the year they can be used and how secure is the income generated from them.

Having outlined, admittedly in a rather cursory fashion, the technical aspects of fishing in Wellagoda, I now want to make some general points about the characteristics of these techniques.

The most obvious feature of *theppan* fishing is that the technically required division of labour is minimal. The largest productive unit inherent in the technology is a unit of two men, but one man can fulfill most of the potentialities inherent in this technology of fishing. Indeed, it is difficult to conceive of a mode of sea fishing involving a less complex division of labour.

Secondly, the capital equipment involved in *theppan* fishing is highly divisible. It comes in small units and can be built-up over a long period of time in a piecemeal fashion. There are no large "lumps" of capital involved. Thus entry into *theppan* fishing is easy and cheap⁵. Furthermore, the qualitative differences in fishing gear: the differences between "low-risk" and "high-risk" fishing means that a newcomer can build up from low-risk to high-risk: from, say *kumbalawa* fishing to *hurulu* fishing. Only once a fisherman has a good stock of low-risk gear need he venture

5. The obvious contrast with *theppan* fishing in this context is that which employs beach seines, and which I discuss briefly in section 5. Here, capital is very "lumpy", and the organisation of production is very different from that in *theppan* fishing.

into the field of high-risk (and high-income) techniques of fishing. (See tables 4 and 5 for details of gear ownership and values of output in Wellagoda.)

TABLE 4
Value of Gear per Household (1970)

Value (Rs)	Number
Under 2000	1
2001 - 4000	3
4001 - 6000	3
6001 - 8000	4
8001 - 10000	4
10001 - 12000	5

TABLE 5
Annual Gross Income per Household (1970)

Income (Rs)	All Techniques	Fibre-glass Boats	Mechanised Theppans	Non-mechanised Theppans
2501-5000	1			1
5001-7500	1			1
7501-10000	5		2	3
10001-12500	2		1	1
12501-15000	7	1	6	
17501-20000	1		1	
20001-22500	1	1		

Thirdly, there are no long-term assets in *theppan* fishing for gear wears out and has to be replaced. Perhaps fibre-glass boats will last much longer, but at the moment the life of any item of gear is at the most six or seven years.

Finally, technical innovations over the last fifteen years have had little effect on the character of the techniques of production. The means of production are still perishable and do not create any more complex technically determined division of labour. What these innovations have done is to introduce a certain "lumpiness" in *theppan*-fishing capital which I shall discuss below, and they have made fishing in Wellagoda more capital intensive and the fishermen more dependent on extra-village (and even extranational) sources of supply.

Not surprisingly, these characteristics are in harmony with the social organisation of production outlined in the introduction. The division of labour is such that the household is potentially an economic unit and there is no technically determined need for inter-household co-operation. The nature of the capital is such that any household can become an independent economic unit. Entry into fishing is easy, and it is relatively easy to

build-up full stock of fishing gear. Furthermore, the perishability of fishing gear means that in contrast with a land-based economy, there is nothing that a senior generation can retain to control members of a junior generation. Household fission is simple- or at least, there is nothing inherent in the forces of production to prevent fission.

Yet whilst the forces of production make possible the particular social organisation of production in Wellagoda, they alone do not determine it. It is still possible to envisage situations where the fishermen do not own their fishing gear; where they co-operate in production and where extended family household exist. To understand why the situation as it is in Wellagoda, we must look elsewhere: at what happens to what is produced.

3. Relations of Exchange

Production of fish in Wellagoda is production for exchange: it is not governed by immediate use values but exchange values. Indeed, fishing as a full-time occupation must be directed towards exchange, for man cannot live on fish alone. Wellagoda's whole existence depends upon the existence of a demand for fish. The village only came into existence in the late nineteenth century and was closely related to the rise of coconut estates in the hinterland of Horagama and the progressive northwards expansion of population at that time. At first, government records indicate that the only fishermen here were migrants from the south who came to fish during the *vallal davas*. Only around the turn of the century did they take up permanent residence in Wellagoda.

Secondly, unlike other fishing communities in Sri Lanka and elsewhere, there is very little else that can be done in Wellagoda; no other means of earning a living. The soil is nothing but sand. There is a scrap of paddy land and attempts have been made to grow manioc, but such resources are marginal: they provide no-one with a living nor are they significant economic resources for more than a handful of families. Wellagoda is totally dependent on the commercial production of fish.

Simply to state that in Wellagoda, production is directed towards exchange is to say very little. "Exchange" is a very general term, and modes of exchange are multitudinous. Thus in different parts of Sri Lanka fishermen dispose of their fish in many different ways, some of which I shall mention later in this paper. But Wellagoda fishermen when fishing from Wellagoda and Horagama dispose of their entire catch through a market at Horagama - and it is the mode of exchange in this market which interests me here.

As I indicated previously, the only access to the mainland from Wellagoda and other villages on this isthmus is over the bridge at Horagama. Whoever controls this bridge effectively controls the fish trade of the whole isthmus. By the bridge lies a daily market - and all fish caught from the isthmus has to pass through this market.

I do not know how old Horagama market is, but it definitely predates the foundation of Wellagoda. Until the late nineteenth century it seems to have been controlled by the Catholic Church who used it as a means of obtaining a tithe from Catholic fishermen. Later it was taken over by Horagama Town Council (later Urban Council). As far as the council was and is concerned, the role of the market is two-fold: first, to act as a source of produce, both fish and agricultural goods for the urban population of Horagama, and secondly as a source of revenue for the town. Until 1970, the rights to run the market and collect market dues were sold on an annual basis to a market renter. Since 1971, the market has been run directly by the Urban Council, but this has had little effect on how the market actually works.

Essentially, fees or dues are levied on everyone using the market for trading purposes. Thus people who sell fish in the market have to pay a fee which varies depending on what type of fishing they are engaged in, how much fish is involved, and where they come from. Traders who come to the market are similarly liable to pay fees, which vary depending upon what type of transport they use to take fish from the market.

Obviously, the aim of those who run the market - either the renter or the Urban Council - is to maximise their income. The means to do this are first, to maximise the flow of fish through the market and second to prevent producers and traders by-passing the market. Here, the strategic position of the bridge is the central, but not the only, factor involved. Force has been freely used by the market boss to prevent traders going direct to the fishing villages on the isthmus such as Wellagoda. Furthermore, those who control the market have attempted to keep transactions in the market as impersonal and anonymous as possible, thus preventing the development of any long-term personalised relations between buyers and sellers which might encourage by-passing of the market place.

In Horagama market, fish is sold either by auction or by haggling. Fish sold through the auction is normally either very large species of fish or very large lots of small fish, neither of which are generally produced by *theppan* fishermen. *Theppan*-caught fish is generally sold by haggling.

With very few exception the fish caught in Wellagoda is sold by the wives and mothers of the fishermen. On purely practical level, men simply do not have time to both catch and sell the fish, but there is also a conceptual division which makes fish-selling-indeed anything to do with money-part of the female domain. Thus in Horagama market we find a large number - many hundreds-of women selling fish. The buyers are a similar number of very small-scale traders from the interior: from the estate areas and agricultural villages-who buy as much fish as they can carry on their

bicycles.⁶ The result is something remarkably akin to a situation described by economists as "perfect competition". Here we have a large number of small-scale buyers and sellers meeting in one market site. Prices are fixed through the workings of demand and supply. Buyers and sellers haggle over prices and this competition is not restricted to members of two opposed categories, for buyers are also competing with one another as are the sellers. Such is the market situation that buying and selling in the market is atomistic and highly individualistic. No long-term associations are set up in the market-place, all transactions being settled immediately for cash. The morality of the market-place is one of maximisation; of getting something for nothing.⁷

Over all, the result is that the exchange of fish is characterised by a particular rationality: that of competitive individualism. This, as I've said, is encouraged by those who control the market for their own purposes, but it is aided by the small scale of production in *ihappan* fishing, and the existence of hordes of small-scale petty traders. Furthermore, it should be stressed that despite the fact that exchange is through a system of "perfect competition", this does not mean that the fishermen (and the traders) are not "exploited". They are: by those who control the market.

Now, if we can characterise the system of market exchange in which the people of Wellagoda participate as one of "competitive individualism", and if production in Wellagoda is production for exchange, then in Godelier's (and Friedman's) terms, the "rationality" which governs the social organisation of production in Wellagoda is that of competitive individualism. This ideology does not exist in itself, but is a direct result of the mode of exchange, and is conveyed into the social fabric of the village by the women who sell the fish and who move daily back and forward between Wellagoda and Horagama. In the next section I shall show how this particular rationality of the market-place in conjunction with the forces of production determines certain aspects of social organization in Wellagoda, particularly the structure of the household and the nature of inter-household relations.

4. The Organisation of Production

So far, I have outlined the two parameters which determine the organisation of fishing in Wellagoda. On the one hand are the forces of production: the particular techniques of fishing employed in this village and the character of these techniques in terms of the nature of the investment

6. Further details of the mode of exchange in Horagama market can be found in Stirrat 1974.

7. I must stress that I am not saying that there is a situation of perfect competition in Horagama market. Rather, I am saying that there are certain close similarities between the situation in so far as it concerns the relationship between fish sellers and fish buyers, and the relationships which would be generated in the economists' model of perfect competition. A full discussion of this point would require a paper as long as this one.

function and the technically determined division of labour. On the other are the relations of exchange: the particular market situation in which Wellagoda exists. The problem now is to show how the interaction between the forces of production and the relations of exchange determine the social organisation of fishing in Wellagoda.

One of the characteristics of fishing in Wellagoda which I mentioned in the Introduction is the continual attempt by households to maximise their income. Production is not geared to satisfy certain well-defined set goals as the model of the "peasant economy" suggests for other communities. Rather, production is geared to open-ended goals: to the maximisation of income at all times. And this, as many writers have pointed out since Marx, is a direct concomitant of commodity production: of production for exchange through a market system. If the rationality of the free market is one of competition: of maximisation, then, since production is for exchange, so production is geared towards maximisation.

Now of course, "money": the specie that is received in exchange for fish, is not the be-all and end-all of this process. It is simply a means to an end. The maximisation and competition which Wellagoda households engage in takes the form of social competition: of conspicuous consumption and investment; of large dowries and fine clothes. What is striking in Wellagoda is the degree of social competition for what one might call "standing" and the conscious realization that the route to such standing is through money. What Veblen called "the pecuniary canon of reputability" dominates status relations in the villages.

Thus the rationality of market exchange does not simply result in the attempt to maximise income: it also makes itself manifest in the social organization of Wellagoda. Relations between households are competitive, each household being forced in on itself. Furthermore, there are no expectations of continuity and stability in terms of "standing" such as one finds in other parts of Sri Lanka. Thus caste, inherited status and so on are played down. Households rise and fall, a process aided by the nature of the forces of production in particular that fishing equipment does not last for long. Of course, households attempt to make secure their standing through other investments, notably land. But income comes from fishing, and resources in land do not produce the income necessary to maintain one's place in the fight for standing.

Maximisation of income is only one strand of the rationality derived from exchange. Another is individuation. The rationality of exchange sets off not only seller versus buyer but seller versus seller. In the particular context of Wellagoda, the seller is female: she complements her husband (and other males in the household) and it is this unit, the producers and

the sellers, which constitute the productive unit. The individuation found in the selling situation is itself found in the constitution of the social units in the village: the elementary family household.⁸

But there is more to this than simply "individuation". Given the propensity towards maximisation of income and the competition for standing, then after marriage, there is little to keep a couple in a parental household. In such cases, they are part of a greater unit; their productive efforts are directed not only towards their own ends but also towards those of the wider unit; younger siblings and so on. Furthermore, the longer they delay creating their own economic unit, the greater the cost in terms of the equipment they could have accumulated if they had separated earlier.

Thus the rationality of the market (which in turn governs production) tends to promote nuclear family households, each an independent economic unit. These units attempt to maximise their income, and the ethos of competition derived from the market works itself out in the competitive social relations between households.

Not surprisingly, if we look at the actual composition of households, the empirical picture fits the theoretical expectations generated in this model. To be a viable unit in this situation, a household must consist of at least one adult of each sex, but preferably two adult males and one female. In such situations, the technically required minimal division of labour can be realised. Thus, of the 100 fishing households in Wellagoda, 71 are 'nuclear' or 'sub-nuclear'. Only 10 of these households contain more than one married couple. Almost all of these consist of a couple; a recently married child and spouse, and a grandchild, but this is a temporary, transient stage in the developmental cycle of the domestic group. The three cases in which the second couple in a household are not in their first two years of marriage are situations in which the younger couple are in effect caring for elderly parents. More often, elderly couples, even when too old to work, tend to live alone even if supported by their offspring. The other 19 households in the fishing sector of Wellagoda consist of married couples; widowed parents and the couples unmarried siblings though again, this is a transient stage. The forces in the economy work so as to disintegrate larger domestic units into the smallest which can cope adequately with the technology.

In the composition of households in Wellagoda: in the existence of the household as a unit of production, we are seeing the working-out of the centrifugal tendencies inherent in the economic structure of fishing in this area. Although the domestic organisation of production is similar to that

8. The stress I place on "individuation" here makes the people of Wellagoda sound like the infamous Ik. But they aren't, or at least, do not engage in the excesses reported by Turnbull. Elsewhere (Stirrat, forthcoming), I have tried to show how this stress on individuation worked itself out in the peculiar kinship terminology employed in Wellagoda.

described by Sahlins in his concept of the "domestic mode of production" they must not be confused for they are parts of totally different economic structures. (Sahlins 1972). The independence which Sahlins discovers in an auto-subsistence economy; in a situation where there are neither super-structural nor technical constraints working centripetally is here replaced by an independence whose roots lie partly within the super-structure, and partly within infrastructure.

Perhaps the most interesting area of analysis in the present context concerns both the existence of, yet the inevitable break-down of co-operation in production⁹. Whilst the total economic system implies individuation, co operation does arise in particular situations. This co-operation is especially obvious, (a)

when, innovations in the technology of production arrive in Wellagoda and (b)

when, within the household, the capital / labour ratio gets out of balance. In such situations the centrifugal tendencies implicit in the Wellagoda economy are overcome through pressures at work within the forces of production. However, these are only temporary situations, doomed to dissolve into household isolation and individualism.

The first situation worth considering is the joint ownership of items of fishing equipment by otherwise independent households. The first time this occurred was in the mid-sixties when engines were first introduced into the village. How many instances of such co-ownership there were and how long they lasted I don't know, but by 1970 they had disappeared. The second instance of co-ownership took place when glass-fibre boats were introduced in the 1970's, and here I do have some information. In August 1974 there were 41 boats in Wellagoda, of which 8 were jointly owned. In the same month in 1975, the number of boats in the village had risen to 48, of which 6 were jointly owned although another 9 had at some time previously been jointly owned.

Reasons for joint ownership are simple to perceive. Engines and boats represent relatively large lumps of capital. In the sixties, the cost of an engine represented a major investment, too large for many single households to bear. Similarly in the seventies boats are major items of investment, much more expensive than other items of fishing equipment. To benefit from such innovations joint ownership was and is often essential.

Yet such co-operation is usually short-lived. First of all, joint ownership often means joint working. Thus co-ownership of a boat often results in an adolescent son being left without work, a potential source of income

9. In this context, the similarities between the approach I am employing here and that of Fortes in the "developmental cycle" are fairly obvious.

which is not being used. To maximise the income accruing to the household, the boat must be solely owned by the household. Furthermore, if the boat is producing a noticeable increment in income, so it becomes possible for one or other co-owning household to become sole owner. Whilst the cost of the boat may necessitate co-ownership, the income generated by the boat is sufficient to allow an escape to individual ownership.

Besides co-operation in production stemming from co-ownership of the means of production, there are also three other situations in which co-operative fishing occurs although equipment is not jointly owned.

- (a) Two men of separate households pool their equipment, and work in one boat or *theppan*, sharing the income equally.
- (b) Members of two or more households working two or more *theppans*, pool the total proceeds and share equally.
- (c) "Child borrowing".

The second type of co-operation and sometimes the first, is known as *havula rassaava*: "partnership work". All the types of co-operation arise in certain set situations; tend to be fragile: are of a limited duration and usually end in acrimonious disputes.

The first situation - two men of different households working one craft tends to be limited to households in which children are too young to work - i.e., where there is only one active fisherman in the household. During periods such as the *varakan davas* when one-man operations are impractical, two such households may combine. But this co-operation lasts only for the period when two-man fishing is essential. When fishing conditions change, the partnership ends. Such partnerships occasionally re-form year after year although more commonly partners change. Any partnership ends once one or both households have male children old enough to fish with their father.

Havula rassaava occurs in rather different situations. "True" *havula rassaava* must involve two or more *kandis* and two or more households. Normally, there are only two households involved, and the crew of each *theppan* consists of members of both households - just to make sure that sharing actually does take place. *Havula rassaava* occurs throughout the year, and in two situations. The first is where one household has too much labour and too little equipment and another has too much capital and too little labour. *Havula rassaava* allows the two households to mobilise more fully their economic resources. The second situation is one in which households are seeking security. At certain points in the economic life of households there may arise situations in which the resources of the household are fully stretched and where risk must be avoided. Thus if a household has recently bought nets or an engine on credit, it may be in a position where

low catches could mean economic disaster. By being involved in a co-operative venture, each household involved can minimize risk by having at least a share in the catch from two or more different types of fishing. Normally, such situations involve one *theppan* involving itself in what I have earlier called "low-risk" fishing and the other in "high-risk fishing."

As with the previous type of partnerships, *havula rassaava* is short-lived. The imbalance in the capital/labour ratios within households or the need for high security of income, are events which take place at particular points in the life of a household. They are not permanent states of being and the autonomy of the household soon re-asserts itself.

Finally, there is what I have called "child borrowing." This is not adoption: rather it is an arrangement whereby a child (or more properly, a young adolescent) lives with and is treated as part of a household not his own for a number of years or months. Perhaps this should not be called "co-operation" yet it arises - and is dissolved - in the same sorts of situations as inter-household co-operation and displays once more the inter-relationships between the forces of production and the rationality derived from the exchange processes.

"Child borrowing" involves both female and male children - usually in their early teens. A "young" household (i. e., one with only small children) borrows such a child: maintains it; treats it very much as a member of the household. A male child helps the husband with fishing: a female child helps the wife. If anything, the latter is more common, for as the wife must go to Horagama every day, someone must look after small children; prepare the food and generally look after the house.

These borrowed children come from households who have more children than they need. By lending them out, they save the costs of maintaining them. But as elder children leave the household, so the lent children are brought back to the parental unit, and as young children mature, so the need to borrow a child diminishes.

In sum then, co-operation between households is transient; a passing phenomenon appearing at certain stages in the life-cycle of the household as a procreative and economic unit, the result the developmental cycle of the household and the tensions between the forces of production and the technical requirements therein implied. The rationality which governs production is such as to destroy these extra-household ties almost as soon as they arise.

Wellagoda people themselves don't talk about co-operation and non co-operation in terms of the analysis I have proposed here - which isn't really surprising. Rather, they see co-operation as involving a "loss" - *paduwa*, for the household only receives 50 of the total proceeds, even less if more than two households are involved. This attitude towards co-operation

seems to me to express two other strands of the rationality which governs the organisation of fishing in Wellagoda. First, the stress on what, for want of a better term, I shall call "total income," and second, the competitive relations existing between households.

The second point is perhaps the place to begin. I have argued above that the competitive relations of the market-place are manifest within the village in competitive inter-household relation. Equality between households is a rare quality in the conceptual system of Wellagoda fishermen. But co-operation implies equality: it implies equal income to both parties to the relationship. Thus co-operation: the sharing of proceeds, is a "loss" in that it denies the possibility of superiority over one's partners.

Now, this is linked with the first point I made, which in turn is at base a point made by Chayanov in his discussion of Russian peasants. Given a situation where the household is the productive unit; where it encompasses the productive possibilities inherent in the technology, then, Chayanov argues, distinctions such as those made in capitalist societies between "rent," "returns to labour," and "returns to capital," cannot be made, for they can only exist-or at least can only be analytically useful-in an economy organised in terms of such categories. Chayanov argued that in the case of a peasant economy, what is important is the total income accruing to the household. Thus decisions over investments are not to be understood simply in terms of the returns to capital of that investment - i.e., in terms of the opportunity cost involved, but in terms of the increments that such an investment will make to the total income of the households - i.e., both the "returns to labour" and the "returns to capital."

The situation is similar in Wellagoda. Economic activity is conceived of within the context of the household's income as an undifferentiated totality. An investment - say in new types of equipment - will take place as long as the total returns to the household are expected to be greater than the cost of the investment. The opportunity cost of labour is in effect zero-and no calculation of labour costs need enter the decision.

In sum, then, the economic unit is the household plus its fishing gear: this is the only relevant category. Co-operation - and sharing - denies such a totality: it involves a unit of production which is at variance with the ideological status of the household. And thus sharing involves a loss: it involves sacrificing part of what should be a totality.

Similar considerations become relevant when we consider the final characteristic of the organisation of production mentioned in the introduction: the lack of a class of owners as distinct from workers. Obviously, the divisibility of capital in *theppan* fishing makes a situation where the workers own the means of production possible. Entry into *theppan* fishing

is easy; the accumulation of fishing gear a smooth process. In such a situation, why work for another? Why sacrifice part of what could be one's own income?

From the point of view of potential capitalists, the situation of employing propertyless *theppan* fishermen is similarly problematic. Besides the difficulty of obtaining such workers, there is another problem: that of organising and controlling such small units. The technology of *theppan* fishing is, in a sense, inherently democratic. The smaller the units of productive activity, the greater the problems of controlling the parts. Very simply, the bigger the units of capital involved; the more "lumpy" it is, the easier for a would-be capitalist to control the venture.

But I think there is a more basic reason for the lack of a class of owners in *theppan* fishing which is a product of the different rationalities implicit in two very different situations: where workers and owners are differentiated, and where they are not. Simply put, if there is no distinction between owners and workers, then production can take place at total rates of return much lower than those required to attract a class of equipment-owning capitalists. For the latter, investment is only worthwhile as long as the proceeds from the investment minus the cost of labour is greater than the cost of labour. For the former, as long as returns from an investment are greater than the cost of the investment, then investment is worthwhile.

Figures to back up such an argument are rather difficult to obtain. But what they do seem to indicate is that returns to a capitalist in *theppan* fishing would be only about 50% of those in other types of fishing. But this does not mean that *theppan* fishing is necessarily less efficient than other techniques. The apparent inefficiency is simply the result of two different ways of running productive enterprises.

5. Supplementary Data

So far in this paper, I have limited myself to the generalities concerning production and exchange which involve fishermen and their families in Wellagoda. In this section, I wish to introduce some further data to support my basic thesis that the interplay between the mode of exchange and the forces of production determine the social organisation of production. Thus here I shall examine the limits to the system in Wellagoda; the different situation which arises in the fishing camps, and the different technologies and modes of exchange in a fishing village close to Wellagoda.

In Wellagoda, as well as *theppans* and small fibre-glass boats, three households have purchased so-called "3½ ton" boats in the last six years or so. These craft are 30' wooden boats with inboard engines. They are generally employed in deep-sea fishing and carry crews of five men. In contrast

to *theppan* fishing, this sort of fishing requires relatively large units of capital and creates a division of labour which demands the co-operation of social units greater than the nuclear family.

Not surprisingly, where these boats are involved, we find a social organisation of production markedly different from that which rules in *theppan* fishing. First of all, we find a clear distinction between owners and workers. One man owns the boat: the rest are workers, dependent on the boat-owners for access to the means of production. Furthermore, given the character of *theppan* fishing in Wellagoda, crewmen for these boats are rarely available within the village. Rather, they have to be recruited in such places as Horagama. Effectively, these boats are not part of the Wellagoda fishing economy.

Secondly, and closely related to this first point, the household ceases to be the unit of production. Rather, production and consumption are organised through different social institutions. Thus, thirdly the logic of the fishing enterprise changes. What governs the running of the production unit is not the maximisation of the total income of the household but the maximisation of "profits" by the owners, for now there is an empirically defined category of profit relevant to the organisation of fishing. And not surprisingly, these boat owners have had difficulty in running their new enterprises, for the logic of production in which they are now involved is very different from that which they previously experienced.

If we label these owners of the 3½-ton boats as the successes of Wellagoda, then the obvious counterpoint to the discussion are the failures: those who shift to this new technology cross one boundary to the system; those who fail in *theppan* fishing cross the other boundary. And we might expect that the latter form the crews of the boats owned by the former.

In actual practice, things don't quite work out like this—for the simple reason that such are the techniques of *theppan* fishing that it is difficult to fail except through drunkenness and injury, and in such cases, these failures are eminently unsuitable for work as crewmen. Of course, there are cases of temporary failure; where *theppan* fishermen lose their equipment or whatever. In such cases, they may work temporarily as hired labour, but in the long run they move back into *theppan* fishing aided by the low threshold of entry; the divisibility of capital and the fact that the totality of a *theppan*-fisher's income is his own.

As I mentioned in section 2, Wellagoda fishermen are migrants. At various times of the year they can be found fishing in Puttalam lagoon, around Mannar, and on the east coast south of Mullaitivu. In such situations, they enter into very different exchange relations from those which exist in Horagama market (see Stirrat 1974). Rather than the fish being sold in an open market situation, it is sold at fixed prices to traders

who (often) have given advances to the fishermen. In other words, although fishing in such situations is still "commodity production," the mode of exchange is radically different – and we should expect the social organisation of production to be different.

This is indeed the case. In the fishing camps, co-operation in production and even in living arrangements are much more common than in Wellagoda. Men who at home fish separately here fish together, either as partners or in *havula rassaava* relationships. The temporary huts (*wadiyas*) are not the preserve of particular households but house men from a number of different families, often not even related. The competition and individuation derived from the market are here absent.

Finally, and very briefly, I want to examine the situation in another village I shall call "Demelagama." This lies about twelve miles north of Horagama; is Tamil and Hindu rather than Sinhalese and Catholic, and depends on *Madel* (beach-seine) fishing.

Demelagama always seems to have depended on *madel* fishing and techniques do not seem to have changed over the last century or so. But what has changed is the nature of exchange – and the organisation of production.

"Traditionally" (if one can use such a term) the *madels* in Demelagama appear to have been owned through a share system. Thus a number of men would each own a share in the net and as well as receiving a share of the proceeds would be responsible for a share in the cost of maintaining the net. Furthermore, shareholders would also work on the net. How many workers were actually shareholders is impossible to determine, but the myth today at all social levels in Demelagama is that there were very few propertyless workers. At this time fish caught in the *madels* was dried or salted. It was then taken by Demelagama people into the interior of Sri Lanka by bullock cart to be sold.

This traditional form of organisation began to change in 1944. Until then, Demelagama was very isolated. Like Wellagoda, it is situated on an isthmus between a lagoon and the sea, but access to the mainland was very difficult. In 1944, however, a road and bridges were built linking Demelagama to the main Colombo road – and things began to change.

First of all, the old trade in dried and salted fish rapidly declined. In its place, there arose a trade in iced fish direct to Colombo, the fish being conveyed by lorry to St. James' market in the Pettah where it was sold by commission agents. Now here, yet another mode of exchange; yet another "logic" governing commodity production can be seen at work. For commission agents, the important factor is to maximise the quantity of

fish passing through their hands. There are too many agents for any one agent to hope to control the price: what he can do however is to guarantee his supplies of fish.

Thus commission agents make advances to suppliers of fish, the advance guaranteeing the supply of fish. In Demelagama, these advances were in turn used to buy out shares in the nets. By ensuring their supplies through advances, it seems that the Colombo commission agents brought about a marked increase in the concentration of ownership of *madels* in Demelagama. Thus today, there are 25 *madels* in the village. Fifteen of them are owned by 14 individuals, one man owning two nets. The other 10 are owned by shareholders many of whom own shares in a number of nets, and are related to each other as are the individual net owners. Over all, around 100 men own all the *madels* in Demelagama whilst well over 1000 are directly involved in *madel* fishing.

Furthermore, just as the Colombo commission agents make advances to the *madel* owners, so the latter make advances to the *madel* workers. Just as the agents wish to ensure the supply of fish, so the *madel* owners wish to ensure a supply of labour. The production of commodities has resulted in the transformation of people into commodities.

6. Conclusion

I hope that the arguments proposed in this paper are clear enough not to require a detailed exposition here. Essentially, what I have done is to analyse the interplay between the forces of production and the relations of exchange and show how these generate the actual social organisation of production. What is important here is not simply that production in a fishing village such as Wellagoda is not only production for exchange. The crucial feature is the form that this exchange takes, and that as forms of exchange vary, so does the social organisation of production.

Whilst the analysis in this paper has been almost exclusively concerned with what happens in Wellagoda, I have tried to show that perhaps my arguments have some more general validity. And besides my brief discussion of Demelagama, I would suggest that the data available for other fishing communities in South and South-East Asia would make perfect sense in terms of the analytical framework I have proposed here. Furthermore, I would suggest that the same is true in land-based economies. For instance, the production of fresh vegetables in the up-country of Sri Lanka is very much production for exchange, and I would expect that as the mode of exchange of these vegetables changes, so does the actual organisation of production. Another case worthy of examination would be petty commodity production such as pottery in Sri Lanka.

Implicit in the introduction to this paper was, perhaps, the question of whether or not fishermen such as those in Wellagoda are "peasants." Admittedly, this is a matter of terminology; of "butterfly collecting," and on this level the question can only be dismissed as banal and pointless. But what one calls people affects how one deals with them, and to lump such fishermen with - say - paddy producers would be highly misleading. The point about fishermen is that they are wholly enmeshed in an exchange economy, whilst paddy producers can if necessary live on what they produce. Any general policies predicated on the experience of paddy producers would seem, on *a priori* grounds at least, to be unsuited for fishermen. What appear as similarities in the two cases, such as the prevalence of the household economy, are really the results of very different economic structures, and these structures are what is important. Of course, paddy producers and fishermen in Sri Lanka are all part of one greater totality, but the ways in which these separate structures articulate with this greater whole are different.

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