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3 | Ethnographic Overproduction, Tribal Political Economy, and the Kapauku of Irian Jaya[1]

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It would be easy to quote works of high repute, and with a scientific hall-mark on them, in which wholesale generalizations are laid down before us, and we are not informed at all by what actual experiences the writers have reached their conclusions. . . . [A] survey . . . ought to be forthcoming, so that at a glance the reader could estimate with precision the degree of the writer's personal acquaintance with the facts which he describes, and form an idea under what conditions information had been obtained from the natives.
B. Malinowski, *Argonauts of the Western Pacific, 1961, p. 3*

Interpreting the Kapauku Papuans has become a basic exercise for theoreticians of primitive economics. The Kapauku problem, most starkly drawn, has been this: Are these West New Guinea people "primitive capitalists" as suggested by Pospisil, or do they conform to the substantivist model of a big-man political economy? More is at issue than interpreting a particular group living in a small village in the highlands of Irian Jaya[2] (see Figure 3.1). There

[2] The names of political entities carry heavy symbolic loads. While a colony of the Netherlands, western New Guinea was known as Dutch New Guinea. It emerged from colonial status as a province of Indonesia and was named Irian Jaya ("Irian Victorious"). Today there is a substantial independence movement there and its supporters refer to their land as West Papua New Guinea. Our use of Irian Jaya in this paper reflects the area's current political status and is not a statement of where our political sympathies lie.

has been little disagreement that the Kapauku fall within the broad category of unstratified societies subsisting on domesticates—that stage in cultural evolution known variously as "tribal," "segmentary," or "ranked." One's interpretation of the Kapauku has served as an indicator of one's position in the general debate on the nature of tribal economics. That the Kapauku have achieved this ethnologic renown is due largely to the staggeringly complete ethnography compiled by Leopold Pospisil (1958, 1963a, 1963b).

We will begin with a discussion of these theoretical concerns. Along the way we will sketch the interpretive debate, more closely examine Sahlins' model of the classic Melanesian big-man, and suggest an alternative model derived in the main from Pospisil's information about his own impact on the Kapauku. In the end, these particular analyses lead us beyond the ethnographic to a conclusion that the focus of the Kapauku debate has been misplaced and to a consideration of the nature of tribal economies.

The Kapauku Problem

In his initial interpretation, Pospisil presented the Kapauku as an ethnographic problem for reigning theories of primitive economics. He was particularly concerned with critiquing the primitive–civilized dichotomy of the substantivist school found in the works of Polanyi, Arensberg, Firth, and Malinowski (1963a:399–400). The term "primitive" as Pospisil understood it in the use of these writers, meant specifically a lack of private property, a communistic ethos, a lack of quantitativeness, a concern with nonmaterial wealth, and a political economy organized by status, not contract. In Pospisil's estimation, the supposedly primitive Kapauku lack these patterns and behave in ways characteristic of Western Capitalism.

Pospisil characterizes the Kapauku as: "strictly speaking, profit motivated, [acting in a] true money economy, [having an] obsession with counting, [and possessing a] strong version of individualism, which I daresay, could hardly be surpassed in our capitalistic society [1963a:401–402]." Their strong individualism shatters notions of primitive generosity: "Kapauku individualism permits some natives, especially children from poor homes who are periodically starving, to develop severe symptoms of undernourishment, while individuals from prosperous households are well fed [Pospisil 1963a:403]." These are traits of Western Capitalism, not primitive society; and contemplating this leads Pospisil to say that:

> If I were forced to establish some general types for the economic systems of the world I would not hesitate to put Western Capitalism and Kapauku shell money economy into one category, and distinguish both of these from economic systems such as that of the Trobriand Islands [1961a:400].
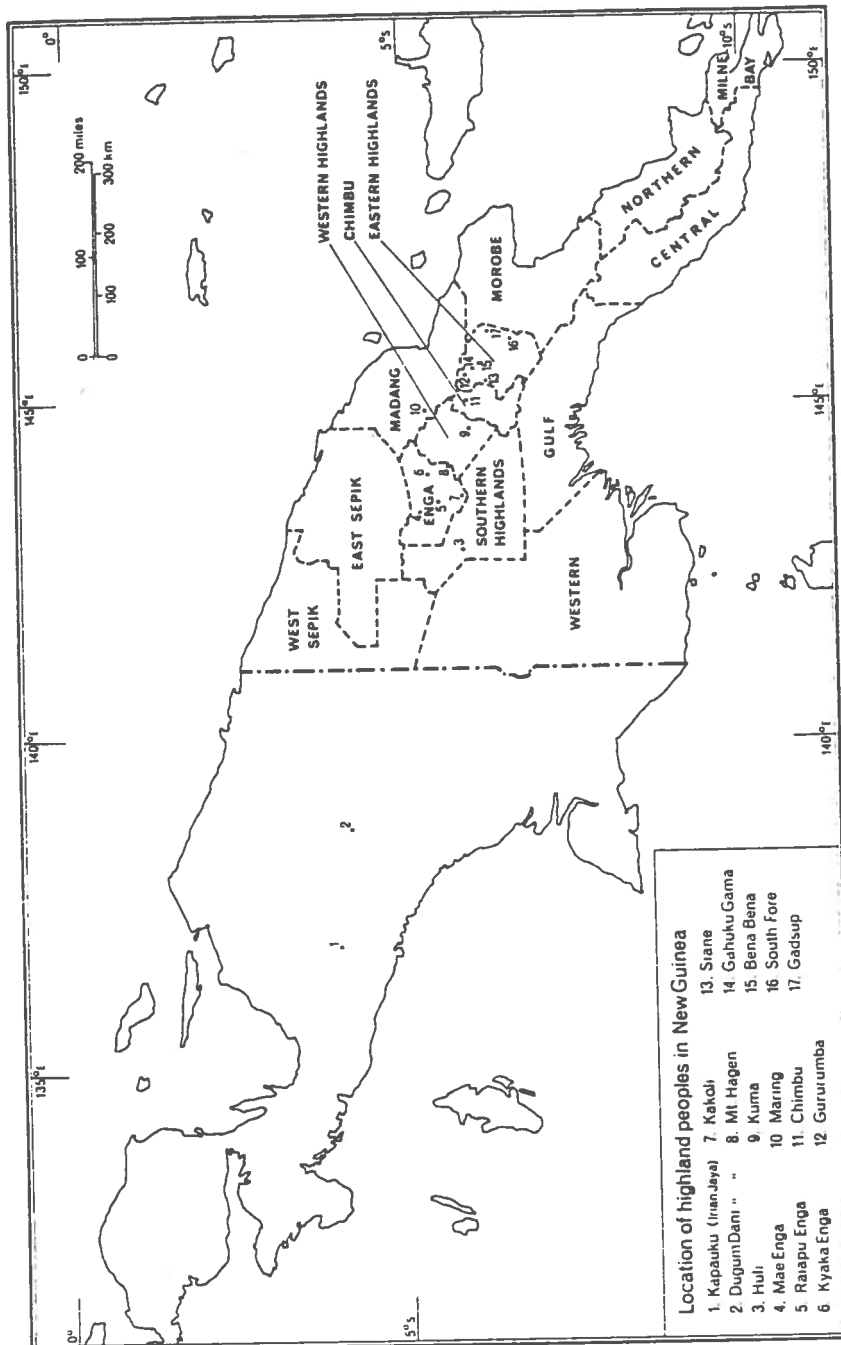
FIGURE 3.1 *New Guinea (Reprinted with permission from Brown 1978).*

Location of highland peoples in New Guinea

1. Kapauku (Irian Jaya)
2. DugumDani " "
3. Huli
4. Mae Enga
5. Raiapu Enga
6. Kyaka Enga
7. Kakoli
8. Mt Hagen
9. Kuma
10. Maring
11. Chimbu
12. Gururumba
13. Siane
14. Gahuku Gama
15. Bena Bena
16. South Fore
17. Gadsup

Sahlins (1972) and Harris (1975:305–308) have objected to this interpretation. Harris' major point is that too much is obscured by cataloging the relatively egalitarian political economy of the Kapauku with the class structure generated and supported by Western Capitalism. The importance of this distinction is illustrated by the Panai Lake big-man who was killed for trying to limit access by others to his own wealth (Harris 1975:307–308; Pospisil 1958:80). Harris trenchantly sums up his position that a principle other than capitalism underlies the Kapauku: "The truth of the matter is that the Kapauku rich man is an egalitarian redistributor rather than a capitalist. He has capital, but he does not control its disposition: *he cannot afford not to give it away on demand* [1975:307]."

Sahlins has also reinterpreted the Kapauku, both in his use of the Kapauku as the paradigmatic case of the impact of a big-man political economy on the domestic mode of production (DMP) (1972:101–148), and in his notes "On the sociology of primitive exchange." In these notes, Sahlins explicitly calls attention to his differences with Pospisil:

> Described by the ethnographer as sort of upland New Guinea capitalists. The big-man pattern, however, is an ordinary (sweet potato) garden variety. "Loans" and "credit" put out by Kapauku big-men (*tonowi,* generous richman) are not interest bearing in the standard sense . . . they are means of developing status through generosity. . . . The big-man's status sinks if he loses the wherewithal for generosity [1972:59]; . . . if he is excessively demanding he is likely to face an egalitarian rebellion [1972:250]. . . . Wealth is not enough: . . . a selfish individual who hoarded his money and does not lend [sic] it, never sees the time when his word will be taken seriously and his advice and decisions followed, no matter how rich he may become [1972:215].

Thus, the particulars of their behavior and the overall logic of their system fail, in Sahlins' estimation, to support Pospisil's lumping of the Kapauku with Western Captialism.

Harris' and Sahlins' critiques capture the themes of the substantivist responses to Pospisil and present strong alternative interpretations analyzing the Kapauku in terms of egalitarian redistribution. Overall, we agree with Pospisil's critics. Many of Pospisil's behavioral parallels between the Kapauku and Western Capitalism seem strained, and, more importantly, the systemic interrelations are best modeled by a totally different political economy operating under a totally different logic.

However, we do not think that Sahlins' alternative of the classic Melanesian big-man system constitutes the best analysis. In fact, his model exhibits the shortcomings of many models of primitive economies, which will become apparent in a closer examination of the Kapauku. Before beginning this inquiry and presenting our alternative to Sahlins' interpretation, we must attend more closely to his model of the big-man political economy.

The Classic Melanesian Big-Man Political Economy

Sahlins has elaborated and developed his concept of the big-man political economy in many publications (1963, 1968, 1972); we sketch only its salient features here. Of primary importance is that the big-man political economy is embedded within the segmentary tribe. From the outside, the segmentary tribe appears as *hierarchically organized segments,* each segment existing in relative political and economic autonomy from the others—an autonomy enhanced by their spatial segregation (1968:21–22). Intersegment integration is possible, particularly along kinship lines, in the proper contexts. From the perspective of a household the rest of the tribe appears as a set of *concentric sectors.* People from each are further in social space from the close household members as one moves out through the rings (1968:15).

The big-man plays an important role in integrating these atomistic segments and in bridging social distance between sectors (Sahlins 1972:137). The most explicit expression of the integrative effort of the big-man is the public feast that culminates in a giveaway by the big-man of the fruits of his own and his faction's labor. The motive force behind this apparent generosity is the leader's search for renown, which is in direct proportion to his reputation as a feast giver. Rival factions, which are the beneficiaries of the giveaway, are obligated to reciprocate the event at a later date or suffer a diminuation of their own leader's renown. Thus does the competition for renown between big-men lead to a to-and-fro flow of goods that serves to integrate the autonomous tribal segments into higher order sociocultural system:

> In the greater perspective of the society at large, big-men are indispensable means of creating supralocal organization: in tribes normally fragmented into small independent groups, big-men at least temporarily widen the sphere of ceremony, recreation and art, economic collaboration, of war, too [Sahlins 1963:292].

However, a mobilizing effort across segmentary units for these public giveaways is ultimately contradictory. Basically, reciprocity—the big-man's source of leverage within his faction—cannot bear intensification.

> One side of the Melanesian contradiction is the initial reciprocity between a big-man and his people. . . . But, on the other side, a cumulative enlargement of renown forces the big-man to substitute extortion for reciprocity . . . for the final measure of success is to give one's rivals more pigs and food than they can hope to reciprocate. But then, the faction of the triumphant big-man is compelled to "eat the leader's renown" in return for their productive efforts. At this juncture, let the leader beware [Sahlins 1968:90].

As a result of this contradiction, the processes of faction building and exploitation aimed at the quest for renown result in a fairly predictable big-man cycle. During the first stage of a big-man's career, he depends on his own

household. Marriage is a strategy for increasing the size and productive potential of his own household so that big-men tend to have more wives than other men. Realization of the household's potential and the judicious distribution of the resulting produce is critical as the basis for building a support faction of other men and their households—the sign of a successful big-man. Loyalty is thus gained through calculated acts of generosity.

The second phase of his career consists of spreading his renown beyond the confines of his own faction through competitive public giveaways. In order to mobilize the goods required for the giveaway he must draw on the fund of good will established by his earlier acts of generosity. To the extent that these demands seem excessive to his followers, he is in danger of disaffection within his faction, which can result in desertion of its members, or even in the big-man's assassination. With no way to compel loyalty except through generosity the big-man is thus restrained in the scope of his activities, either through his own restraint, the loss of his faction, or his life.

In Sahlins' model the processes establishing and limiting the big-man are of the village-scale, small group variety. A big-man may integrate segments, but he can do it only by consolidating a faction within a segment, and then building out:

> Yet always this greater societal organization depends on the lesser factional organization, particularly on the ceilings on economic mobilization set by relations between center-men and followers. The limits and the weaknesses of the political order in general are the limits and weaknesses of the factional in-groups [1963:292].

So, the big-man political economy, as modeled by Sahlins, is a dynamic system driven by a unique logic. The big-man is the incarnation of society, bridging the segmentary households. Initially his leadership is based on the production of his innermost sector—his closest kin. Then through reciprocity, he broadens and deepens his power–production base by adding segments from more distant sectors and driving his followers to efforts of surplus labor. Ultimately this accumulation of social power is checked by the ability of the big-man's support base—the faction—to withdraw support. Thus, the centripetal social tendency of the big-man is checked by the centrifugal tendency of the opposed segments. It is against this framework of the segmentary tribe that Sahlins considers the impact of the big-man political economy on the domestic mode of production (DMP).

CHAYANOV ANALYSIS—PARADIGMATIC BIG-MAN

For Sahlins, the Kapauku are the paradigmatic case of the impact of the big-man political economy on the DMP. Before considering this particular analysis, we need to examine Sahlins' notion of the DMP.

The domestic mode of production (DMP) is a theoretical construct, a particular form of the Marxist concept of the mode of production: "The

household is to the tribal economy as the manor to the medieval economy or the corporation to modern capitalism: each is the dominant production-institution of its time [1972:76]." Specifically, the DMP has these qualities:

> The household is as such charged with production, with the deployment and use of labor-power, with the determination of the economic objective. Its own inner relations, as between husband and wife, parent and child, are the principal relations of production in society. . . . How labor is to be expended, the terms and products of its activity, are in the main domestic decisions. And these decisions are taken primarily with a view toward domestic contentment. Production is for the benefit of the producers [1972:76–77].

We have encountered this in a slightly different form before in the segmentary model of the tribe. Thus, the DMP is the abstract model of production congruent with the social model of the segmentary tribe.

A measure of this productive effort is the intensity of labor of each household. The intensity of work is explicitly formulated for the DMP as Chayanov's Rule: "the intensity of labor per worker will increase in direct relation to the domestic ratio of consumers to workers [1972:102]." Social relations beyond the household are an imposition on this mode of production, and thus require greater productive effort to sustain them. This greater productive effort is then observed as deviations from Chayanov's Rule (1972:102).

Sahlins presents a formal method for investigating these deviations that we call *Chayanov Analysis*. Briefly, Chayanov Analysis works as follows. Chayanov's Rule, as interpreted by Sahlins, predicts a linear, positive relation between worker intensity (WI) and a domestic unit's demand. Demand is a function of household size and also of household composition. Quite simply, the household cycle (Goody 1958; Thorner, Kerblay, and Smith 1966) creates differences in household demand based on changing household size and age-sex composition. Thus, the effort of a worker is better understood as being driven by the ratio of consumers to workers (C/W) in a household.

Formally, Chayanov's Rule can be expressed as a linear model—that is WI is positively and linearly related to C/W. Specifically:

$$Y = A + BX \qquad (1)$$

where

$Y = WI$ (worker intensity)
$X = C/W$ (consumer–worker ratio)
$B =$ the slope, that is, the number units change in Y for a change in X
$A =$ the Y intercept, that is, the level of WI when C/W is 0.

Theoretically, the value for A is 0; no demand drives no effort. The theoretical value for B can be determined based on culturally defined notions

of individual worker reproduction. An expected Chayanov line can then be drawn. Sahlins illustrates these theoretical derivations using both Mazulu and Kapauku data (1972:102–123).

Sahlins uses regression analysis based on the least-squares method to estimate A and B from the observed data. With this method he constructs an observed line relating WI to C/W. Comparison of the line produced by this formula with the expected Chayanov line is the basis for studying the impact of a particular political economy on the DMP. Specifically, Sahlins compares the overall pattern of the expected Chayanov line and the observed line; the impulse to surplus labor (1972:111); the distribution of the impulse to surplus labor (1972:113); and the contribution of surplus labor to the total social product (1972:114).

Sahlins' analysis of the Kapauku (1972:119ff) was duplicated using SPSS Scattergram procedure (Nie and others 1975:292–300) and is presented in Figure 3.2 (data supporting Figure 3.2 are contained in Tables 3.1 and 3.2). The value for B (693.6 kg of sweet potatoes per 8 months)—the daily ration of kilograms per worker times 8 months—was given by Sahlins (1972:117) as developed from Pospisil's data. This is the expected effect on worker intensity of adding one consumer per worker. The formula for the Chayanov expected line was:

$$Y = 693.6X \qquad (2)$$

The observed line formula obtained by the least-squares method was:

$$Y = 52.61 + 959.96X \qquad (3)$$

Sahlins reports that the impulse to surplus labor was that "69 per cent of the Kapauku domestic units, comprising 59 per cent of the labor force, are working at an average of 82 per cent above normal intensity [1972:121]." Our calculations indicate that 56% of the domestic units worked at 78% above normal intensity. Furthermore, we found a slope of 959.96 rather than 1007 reported by Sahlins. These discrepancies are unaccountable and, relatively speaking, minor. We agree that the distribution of the impulse is "slightly to the right of the average household composition [1972:120]," and that "35.37 per cent of the social product is the contribution of surplus domestic labor [1972:121]." The overall interpretation of these measures and graphic patterns is that of a greater intensity of effort above that expected for the DMP.

The reason for performing Chayanov Analysis is *not* to find a good fit to the Chayanov prediction. The atomization of segmentary units characteristic of the tribe is inherent but not usually realized; it is a driving force in Sahlins' analysis that is countered by larger integrating mechanisms if society is to survive (1968:7; 1972:101). Thus, it is the *deviations* from the Chayanov Rule that are of interest as they are due to suprahousehold relations. In this instance, the deviations are due to the effect of big-man political economy.

FIGURE 3.2 *Chayanov Analysis: Botukebo, 1955* (---expected relation of kilos/worker to consumers/worker; ——observed relation of kilos/worker to consumers/worker; M = Mean household composition; compare with Sahlins 1972:19). S = Observed mean surplus labor; E = Expected mean surplus labor; M = Mean household composition; compare with Sahlins 1972:19).
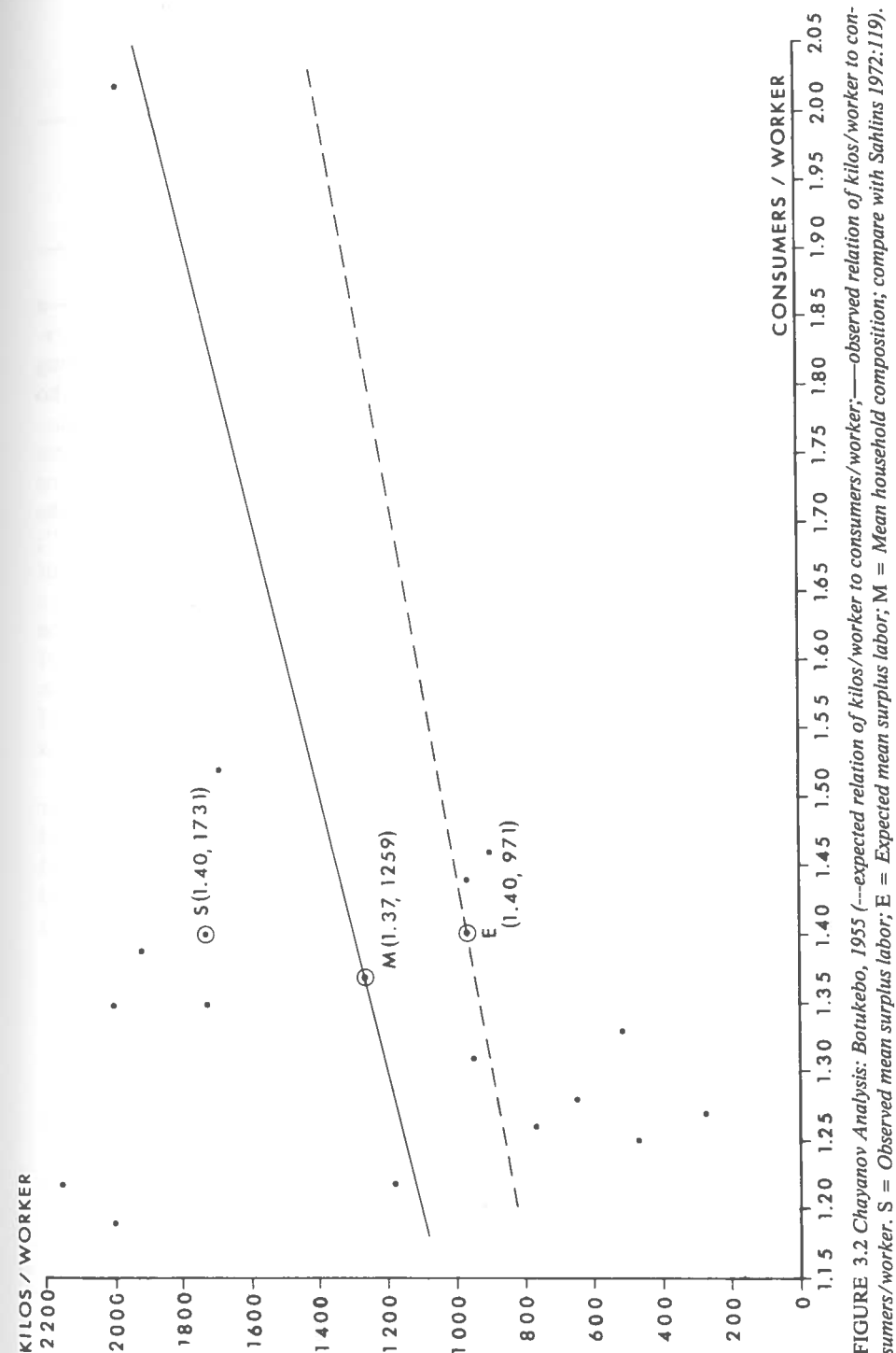
TABLE 3.1
Regression Statistics: Sahlins' Analysis

$r = .29294$	$r^2 = .08581$	Standard error of estimate $= 641.12590$
$A = -52.61181$		Standard error of $A = 1155.26188$
$B = 959.96290$		Standard error of $B = 837.39367$
$N = 16$		

The deviations found in the Kapauku analysis are a distinctive pattern—a cluster of nine households fall above the Chayanov expected line while the remaining seven are below. Sahlins interprets this pattern of deviations as being characteristic of the effect of a big-man. Recall that "a big-man is one who can create and use social relations which give him leverage on other's production and the ability to siphon off an excess product—or sometimes he can cut down their consumption in the interest of the siphon [1963:292]." The nine overproducing households are interpreted as being "the big-man or would-be big-men and their followers, whose production they are able to galvanize"; while the remaining seven are "content to praise and live off the ambition of others [1972:117]." Sahlins goes beyond the particulars of the Kapauku analysis and considers the Kapauku exemplary of Melanesian big-men. "The idea seems worth a prediction: that this bifurcate, 'fish-tail' distribution of domestic labor intensity will be found generally in the Melanesian big-man systems [1972:117]." That is, one might expect the pattern in the deviations of a parabola opening toward the left when a big-man political economy is operating.

Thus, Sahlins has presented two formal models. The first is the linear model relating C/W to WI based on Chayanov's Rule. This formal model represents the underlying centrifugal tendency of tribal segments. The second is an empirical curvilinear model based on data from a big-man political economy. The curvilinearity represents the big-man extracting surplus from some—not all—households in a village.

CHAYANOV ANALYSIS—CRITIQUE

Two somewhat technical problems arise in Sahlins' use of linear regression analysis. The first methodological problem lies in trying to study the relationship of C/W to WI on the ground. The basic problem concerns moving from the metaphorical notions of consumption and work intensity to specific measures of these qualities *that do not distort the posited linear relation*. This can be easily illustrated with the notion of a worker. The work capacities of all individuals are not the same, so we cannot expect that households with the same number of members will necessarily have equal work capacities. For example, a household with two adults and three very young children would not have the same work potential as a household made up of five adults, even though both have the same total number of members. If a study did not dis-

TABLE 3.2
Data for Chayanov Analysis: Botukebo, 1955[a]

Household number	Number of consumers	Number of workers	Kilos of sweet potatoes per household	Consumers-workers	Observed kilos of sweet potatoes per household	Expected kilos of sweet potatoes per household	Deviation
4[b]	9.5	8.0	16004	1.19	2000	825	+ 1175
7[b]	11.6	9.5	20462	1.22	2154	846	+ 1308
14[b]	7.9	6.5	7654	1.22	1177	846	+ 331
15	5.6	4.5	2124	1.25	472	867	− 395
6	11.3	9.0	6920	1.26	769	874	− 105
13	9.5	7.5	2069	1.27	276	881	− 605
8	5.1	4.0	2607	1.28	652	888	− 236
1[b]	13.8	10.5	9976	1.31	950	909	+ 41
16	4.0	3.0	1557	1.33	519	922	− 403
3[b]	5.4	4.0	8000	1.35	2000	936	+ 1064
5[b]	7.4	5.5	9482	1.35	1724	936	+ 788
2[b]	14.6	10.5	20049	1.39	1909	964	+ 945
12	10.7	7.5	7267	1.44	969	999	− 30
9	9.5	6.5	5878	1.46	904	1013	− 109
10[b]	3.8	2.5	4224	1.52	1690	1054	+ 636
11[b]	9.1	4.5	8898	2.02	1978	1401	+ 577

[a] Adapted fom Sahlins 1972:116, 120.
[b] Overproducers.

tinguish between these households in estimating workers, we would not be surprised to learn that the expected linear relationship was not observed.

Sahlins presents a straightforward procedure for estimating C/W so as not to distort the linear relationship. He starts with estimates of the ability to work and consume for different age and sex classes. Setting an adult male's capacity at one, the other categories are some proportion (1972:115). These proportions are multiplied by the number of individuals in a household in a category to obtain C/W ratio for a household. While one may differ with the proportions used (and Sahlins differs with Pospisil on this), as long as the basic demographic data are there, the recalculations are no problem.

Sahlins does not exercise similar care with the other variable in Chayanov's Rule—worker intensity. Collecting information on energy expenditure is usually beyond the capabilities of most ethnographic field workers and is certainly not commonly reported (however, see Thomas 1973). So, Sahlins suggests measuring WI with a surrogate based on production. Specifically, Sahlins used kilograms of sweet potato production per worker in the Kapauku instance (acres–producer in the Mazulu example). Minge-Kalman (1977) has quite appropriately pointed out the problem of using only part of a worker's labor in estimating worker intensity and the problem of using surrogate measures of intensity. Our conceptualization is different from hers and not at odds with her critique.

Recall that Chayanov's Rule states a linear relation between intensity of productive effort and demand. By using productive output, Sahlins is suggesting that this, not intensity of effort, is linearly related to demand. Clearly, the functional relationship between work input and production output is not a priori linear. In fact, it is a function of the peculiarity of the local ecology and production technology. At the most general level, the law of diminishing returns (Found 1971:13–15) can be invoked to suggest a more reasonable expectation of some nonlinear relationship (approximated by an exponential)—but even this would be affected by the local situation. Clearly, using the wrong formula (i.e., simple linear) to specify the Chayanov Rule can lead to a rather distorted image of the productive characteristics of a household.

So, while the theory linearly relates WI to C/W, some surrogate measure of WI based on production is not likely to be linearly related to C/W. Thus, when WI is estimated with a surrogate, it is necessary to specify the new expected Chayanov relationship between the surrogate and C/W. That is, one must specify the function that relates a measure of production output to the desired measure of Worker Intensity. Minge-Kalman (1977) in effect specifies this relation in transforming yields into labor inputs: Recasting Chayanov's Rule in a nonparametric form seems a desirable procedure.

The second technical point has to do with the strength of the relationship between C/W and WI. Sahlins quite appropriately shies away from using regression analysis in this instance as a technique in inferential statistics, in treating it only as an indicator of the "main drift" in variations from the ex-

pected (1972:108–109). The vagaries of small sample size and its effect on sample representativeness makes such interpretive conservatism commendable (Evans 1974). However, even using regression analysis for descriptive purposes, it is still possible to evaluate the strength of association between the variables. This can be done with the r^2 statistic also known as the coefficient of determination.

> The r^2 statistic or its complement ($1-r^2$) indicate proportions of variation explained and unexplained, respectively (Nie, Hull, Jenkins, Steinbrenner, and Bent 1975:325; see Snedecor and Cochran 1956: 167–169 on the relationship of the correlation coefficient r its square r^2 and the regression coefficient b for the appropriateness of using r^2 to assess the strength of a regression relationship).

These are descriptive measures, not necessarily inferential, that simply state the amount of variation in kilograms of sweet potatoes attributable to variation in the C/W ratio.

In the Kapauku analysis, Sahlins does not report this measure. It can be easily obtained and was part of the output from the SPSS Scattergram procedure. For the Kapauku analysis this value of .08581 means that variation in the C/W ratio accounts for only about 9% of the variation in the surrogate measure of WI. This certainly fits Sahlins' interpretation that something other than the DMP is operating in this instance. However, methodological problems involved in estimating C/W and WI may also account for this poor fit, thus vitiating the interpretation in favor of Sahlins' explanation. We are not in a position to sort this out—though the usefulness of reporting the r^2 should be abundantly clear.

One final point concerns fitting mathematical models in general. Sahlins is aware of the methodological problems of using mathematical models in behavioral research, though his very cogent argument and presentation of Chayanov Analysis does invite abuse by others. Specifically, Sahlins notes:

> Clearly the task of research is not finished by the drawing of an intensity profile; it is only thus posed. Before us stretches a work of difficulty and complexity matched only by its promise of anthropological economics, and consisting not merely in the accumulation of production profiles, but of their interpretation [1972:121].

The problem is this: Time and again researchers have found that more than one behavioral model can produce the same mathematical model. This is precisely why arguments based on strong inference (Platt 1964)—that is, rejecting formal models rather than accepting them and using a research strategy incorporating multiple working hypotheses—are used in conjunction with statistical analysis. And just such an alternative interpretation is the subject of the next section.

Ethnographic Overproduction

Our inquiry has become quite narrow: Why were nine households over-producing at Botukebo in Irian Jaya, while the remaining seven were working less hard? Sahlins proposes that this is due to the effect of a classic big-man political economy. Alternatively, we propose that this pattern is due to the presence of a less endogenous factor, the ethnographer.

Our argument begins by considering how Pospisil inserted himself into Kapauku society.

> My first intention was to cross the Kamu Valley and settle in the southwestern part, at that time little known. However, the natives of the first village we entered, Botukebo, were so persuasive that they induced me to change my plans and stay in their territory. They staged a great welcoming party during which they presented me with a pig. Upon the advice of the Dutch officer, I immediately reciprocated with a gift of several steel axes. . . . With the assistance of the natives and the police I started to build myself a house between the villages of Botukebo and Kojogeepa [1963a:19].

Constructing the house was a critical event for Pospisil's study. After four days, the police left.

> I noticed that many young men helped me continuously with my construction. They even built themselves some shelters around my house. All they seemed to want for their help were long Latin personal names. The longer and harder to pronounce they were, the better they liked them. . . . What I did not know at that time was that Kapauku have a laudable custom by which boys and young men can live with wealthy individuals of their society. If the wealthy man likes them, he "adopts" them by giving them names. . . . So, before I realized what I was actually doing I became the "father" of 48 Kapauku boys and 3 girls. Although I was quite content to assume such a role on an honorary basis I became alarmed, after having realized that my Ford Foundation grant would have to feed not just one student of anthropology but 51 additional hungry Kapauku youngsters [1963a:19].

Pospisil's ritual fatherhood proved ultimately profitable for Pospisil and ethnography, as it was through this network of informants that he was able to compile his extraordinarily detailed ethnography.

Pospisil's ritual fatherhood clearly has implications for our problem of overproduction. In his only comment identifying his charges, Pospisil parenthetically discloses that they "did not come from Botukebo [1963a:395]." Clearly, the addition of 52 consumers to a population of 181 (1963a:59) may have driven Botukebo to overproduction.

If Pospisil met his obligations, then he clearly was adding demand for production. The mechanisms by which he fed them are not clear. He only mentions that "the food proved to be inexpensive [1963a:20]." But that he did

strive to meet them is abundantly and, to his credit, clearly presented. Included in an accounting of sweet potato and mixed crop production (1963a:395–396) is an entry for "sold to L.P." Pospisil estimates that he bought approximately 10% of Botukebo sweet potato production and between 17 and 18% of their production of other crops during his 8-month study period. Clearly, Pospisil was driving some overproduction at Botukebo.

The following points should be noted regarding these percentages. First, Pospisil evaluated the crops in terms of beads, an exchange medium that he used as his unit of accounting. While the sweet potatoes were reported in both kilograms and beads (13,830 of a total 138,730 kg; 4088 of a total 38,835 beads) the mixed crops were reported in beads only (1200 of a total of 6853 beads of mixed crops). Second, these values are only approximations because of a quirk in the manner of calculation. He arrived at these figures in the following manner. He independently estimated (a) the production of sweet potatoes, other crops, and pigs, and (b) consumption of these items. He found these independently collected estimates yielded encouragingly similar results for sweet potatoes, especially when added to "the amount of tubers which I ate with my 'sons' [1963a:395]." Discrepancies between the total arrived at through production estimates and independently through consumption estimates were included in the figure sold to him. It is unclear, however, whether the discrepancies should be added or subtracted from these values to obtain a more accurate estimate of his demand on Botukebo production.

The extent of Pospisil's indirect impact can be estimated in one other manner. Sahlins, using Pospisil's estimates, assumes a daily ration of 2.89 kg of sweet potato per adult male (1972:117). Adolescents are evaluated as consuming the same amount as adults, resulting in an estimate of 35,651.04 kg demand created for sweet potatoes by Pospisil and 48 males (i.e., 49 × 693.6) and 3 females (i.e., 3 × .8 × 693.6). This estimate is quite high, yielding a daily intake of 4338.85 cal from sweet potatoes alone for the males (calories per pound of sweet potato is taken from Rappaport 1968:280). Pospisil did not supply the 35,651.04 kg of sweet potatoes to meet this demand (or a lower figure that is more reasonable) but it seems plausible that the supplement was nevertheless the result of local (Botukebo) production. Pospisil may have indirectly driven another 12,000 kg of surplus production. However, we will use the 13,380 kg of sweet potatoes for the estimate of Pospisil's impact. It seems more reasonable in the absence of any report of endemic overweight among the Kapauku and besides, its derivation seems more secure. It is also analytically useful to do so because it tilts the case in favor of least ethnographic impact.

In spite of this tilt, Pospisil's impact appears to be considerable. By his presence, and by adopting 51 sons and daughters, he increased the demand for sweet potatoes by about 10% and for other crops by about 18%. This observation certainly forms the basis for an alternative to Sahlins' model—namely, that Pospisil was driving the overproduction at Botukebo. Evaluating

this against Sahlins' model that a big-man political economy was driving the overproduction is considered in the next section.

Model Evaluation

The narrow problem of overproduction is still at issue. Sahlins proposes that the overproduction is driven by the dynamics of a big-man political economy; we have suggested that Leopold Pospisil has driven the overproduction by adopting 51 sons and daughters. They both could reasonably account for the results of the Chayanov Analysis—thus underlining our methodological point about jumping to conclusions when using mathematical models. Resolving this dilemma lies in better identifying who the overproducers are and seeing if implications of these competing propositions are born out by closer consideration.

Two lines of analysis are considered. The first concerns the specific mechanisms driving the overproduction in each proposition. The second is a reanalysis of the Kapauku data with Chayanov Analysis after adjusting for the impact of Pospisil's demand. We analyze the mechanisms of overproduction first.

As in most attempts at post hoc analysis, desirable data are often missing. Specifically, we would expect if Pospisil were driving the overproduction that:

1.1 *Pospisil bought more of his food from the overproducing households than from the others.*

1.2 *The ritual sons and daughters were differentially related to the overproducing households in a manner that led to those households rather than the others looking after their welfare.*

While Pospisil presents good data on the extent of his impact, he does not detail how he obtained the food. Thus, these and other implications concerning Pospisil's articulation cannot be evaluated.

It was possible to evaluate Sahlins' propositions concerning how big-men drive overproduction. The big-man's strategy aims at capturing the labor power of others by capitalizing "on kinship dues and by finessing the relation of reciprocity [1963:291]."

Two test implications follow from a generalized strategy based on both kin and "finance":

2.1 *Big-man households are among the overproducers.*

2.2 *Big-men are "financially" linked to a greater degree to overproduction.*

To carry out these evaluations, it is necessary to identify the big-men of Botukebo (the overproducers are identified in Sahlins' Chayanov Analysis as reported before). In his discussion of Kapauku politics, Pospisil identifies

three big-men by referring to them either as *tonowi,* "political and legal authority" (1963a:46), or as rich men, one of the primary characteristics of *tonowi* (1963a:45–46). The sublineage leader and village headman was Awiitigaaj (identified by Pospisil's index number as 6/1) "a wealthy *tonowi*" (1958:107) who however was considered to be a "rather selfish individual" (1958:108). Public popularity lay with Timaajjidainaago (7/1) "a rich man . . . who is generous, popular, and kind. However, the trouble is that this man is too quiet and shy [1958:110]" to challenge Awiitigaaj for leadership. Bunaibomuuma (1/1) was "the only person who opposed Awiitigaaj," unsuccessfully. He was without popular support and his opposition to Awiitigaaj was thus ineffective. In fact, Bunaibomuuma was considered a "notorious criminal" (1958:108).

Table 3.2 (which incorporates Tables 3.4 and 3.5 from Sahlins 1972:116, 120) allows an evaluation of the first implication. The sublineage leader's household is *not* overproducing. Bunaibomuuma's household is just barely overproducing and, given the size of the work force (10.5), this hardly counts as much of an impulse to overproduce. Interestingly, the popular Timaajjidainaago is the *tonowi* who best fits Sahlins' implications with his household consisting of the most intense laborers in the village.

Sahlins was aware of the discrepancy in the behavior of Awiitigaaj's household and suggested that this was because he had amassed enough credits so as not to have to exploit his close kin (1972:117). One would expect that he had managed to tap the labor of other households in the village sector to replace his close kin sector's labor. More generally, this leads to another implication:

2.3 *The big-men who do not have overproducing households should have strong "financial" links to village sector households.*

This and implication 2.2 concerning the links to overproducers can be partially evaluated with "financial" information presented by Pospisil. In January of 1955 he collected information on the debt structure at Botukebo. A few words need to be said about using "financial" data on "debts" in a big-man political economy. We agree with Sahlins (1972:250–251) that these were reciprocal relations rather than "loans" in a Western sense. But, as Pospisil has little place for reciprocal gifts in the Kapauku economy (1963a:334–348) separate from loans, this information should be representative of outstanding obligations. Note in particular that one category is for "debts" owed to members of one's own household. Again, we agree with Sahlins that being in financial debt to members of one's household is better interpreted as reciprocal relations. However, these "loans" are still of interest. Specifically, they are a measure of the potential of a household head to mobilize his immediate kin's labor—the all important first step toward becoming a big-man in Sahlins' model. Thus they are reported as: "Debts between members of the same household." Table 3.3 presents this debt structure, which is based on Table 31 in Pospisil (1963a:448–453).

TABLE 3.3
Total Household Debt (in Glass Beads) to Individual Creditors: Botukebo, 1955 (creditor identification numbers are Pospisil's index numbers)

Creditors (individuals)									Debtors (Households)										
	1[b]	2[b]	3[b]	4[b]	5[b]	6	7[b]	8	9	10[b]	11[b]	12	13	14[b]	15	16	R[c]	S[d]	Total
1/1[a]	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	0	603
1/6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	360	0	360
1/9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2160	0	2160
2/1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1830	1830
2/2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	30
2/14	0	0	0	0	0	0	0	0	3	0	0	0	6	0	0	0	2765	0	2774
3/1	0	0	0	0	21	0	300	0	0	0	0	0	60	0	0	0	0	0	381
3/2	0	0	0	0	30	0	30	0	0	0	0	0	0	0	0	0	330	0	390
4/1	0	0	0	0	1860	0	30	0	0	0	0	0	0	0	0	0	0	1800	3690
5/1	0	0	0	0	0	0	222	0	0	21	0	0	0	0	0	0	300	0	543
5/2	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	1800	210	2070
5/5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150	150
6/1[a]	0	0	0	150	600	6480	0	0	0	0	0	0	0	0	0	0	25200	19020	50733
6/6	0	0	240	0	60	0	279	0	0	0	0	0	0	0	0	0	0	0	579
6/8	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15
7/1[a]	0	0	0	0	18	1800	3540	0	1800	150	0	0	1200	0	0	0	1860	1800	12900
7/7	0	0	0	0	15	0	0	0	0	0	0	0	3	0	0	0	0	0	18
7/14	0	0	0	0	0	0	0	0	60	0	0	0	69	0	0	0	90	600	819
8/1	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	15
8/4	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	15
9/1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
9/2	0	0	0	0	0	0	90	0	0	0	0	0	0	0	0	0	0	0	90
9/8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1860	0	1860
9/9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	30
10/1	0	2850	0	0	18	0	240	0	0	0	0	0	0	0	0	0	2127	0	5235
10/2	0	0	0	0	0	0	0	0	0	0	0	0	0	30	60	0	330	270	693
11/1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
11/2	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	30	0	42
11/12	0	0	0	0	0	0	0	0	0	0	0	0	0	240	1800	0	600	0	2640
12/1	0	0	0	0	0	300	150	0	150	0	0	300	0	0	0	0	900	0	5919
13/1	300	60	0	180	0	0	240	0	0	0	0	0	0	150	0	0	0	3339	135
13/3	0	0	0	0	0	0	75	0	0	0	0	0	0	0	0	0	0	60	150
13/5	0	0	0	0	0	0	0	0	0	0	0	0	0	150	0	0	3150	9900	13050
14/3	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150	0	210
15/1	0	0	0	0	0	0	0	0	2760	0	0	0	0	0	0	0	1800	0	4560
15/2	0	0	0	0	0	0	0	0	0	0	0	0	0	1800	0	0	1950	3000	4959
16/1	0	0	0	0	0	0	0	0	30	0	1800	0	180	0	0	1800	1950	0	16915
R	2850	0	0	0	660	4380	1495	0	0	0	1800	0	180	1800	0	1800	0	0	16915
S	1200	30	1800	0	0	420	1890	0	1800	1920	2610	0	369	3765	1860	1800	0	0	7140
I[e]	405	4380	0	7305	0	420	270	0	39	2091	4410	7080	1923	6135	1860	1800	48395	42039	26643
Total	4755	7386	2040	7635	3297	13800	8794	0	6642	2091	4410	7380	1923	6135	1860	1800	48395	42039	

Source: Pospisil, 1963a:301–305; 351; 411–415; 448–453.

[a] Big-men.
[b] Overproducing households.
[c] R = Kin not from Botukebo.
[d] S = non-kin not from Botukebo.
[e] I = internal household loan.

TABLE 3.4
Social Category of the Leading Creditor for Each Overproducing Household

Social category of creditor	Total number of debtor households
Resident of Botukebo	7: Total
Big-man	1 (household no. 7)
Other resident, from a different household	1 (household no. 5)
Other resident, from the same household	5 (household nos. 2, 4, 7, 11, 14)
Nonresident of Botukebo	3: Total
Kinsman	2
Stranger	1

Awiitigaaj is still anomalous. He is clearly the financial kingpin at Botukebo, but his relations are neither with the overproducers nor even with Botukebo residents. In fact, 99.9% of his credits are with nonresidents, 43% being with nonresident nonkin (strangers). Bunaibomuuma, who is not a very active lender, has made 99.5% of his loans to nonresidents, in this case all relatives. Again, it is the popular Timaajjidainaago who has made loans to Botukebo residents, but even he has 41.1% of his loans going to nonresidents. Moreover, Timaajjidainaago is not strongly linked to the overproducers. Only 20% of his loans are to overproducers, and of this only 9.6% of his loans go outside his own household.

We have been asking if the big-men derive support from the overproducing households. With the exception of Timaajjidainaago, the answer is no, and in his case the answer is only a qualified yes. Even so, it is still possible that the overproducers are stongly and disproportionately in debt to the big-men. Table 3.4 investigates indebtedness from the perspective of the overproducers. It identifies the social category *to which* each overproducer is *most* indebted. Again, the household of Timaajjidainaago (household 7 in Table 3.5)

TABLE 3.5
Overproducer's Debts (Percentage of Total Debts) to Big-Men

Overproducing Household	Bunaibomuuma (1/1)	Awiitigaaj (6/1)	Timaajjidainaago (7/1)
1	8.5	.0	.0
2	> .1	.0	.0
3	.0	.0	.0
4	.0	.0	.0
5	.0	.0	18.2
7	.0	.3	43.3
10	.0	7.2	.0
11	.0	.0	.0
14	.0	.0	.0

best fits Sahlins' model. Its members are in debt to a big-man, namely, Timaajjidainaago (7/1 in Table 3.5), the household head. Strikingly, the other overproducing households are overwhelmingly *not* in debt to big-men. In fact, as shown in Table 3.5, big-men debts are a small percentage of the total debts of overproducing households.

This analysis, based on the "financial" data, is of course potentially fraught with sampling problems—though we think it represents Botukebo relations. First, it was collected only a few months after Pospisil entered the field, so the accuracy might be questioned. However, his overall meticulousness and his eventual "best friend" status with the big-men mitigates this possibility. Second, there may be a cycle in debts so that any one month is biased. Though we cannot demonstrate this, such short-term fluctuations seem unlikely. The role of these debts in creating political factions would tend to make these long-term relations. Supporting this, Pospisil notes that "the creditor's prosperity makes it highly probable that the debt will not have to be repaid [1963a:31]." This does not release the debtor from the power of the creditor for it is exactly this situation that is the basis of factions at Botukebo: "People usually follow decisions of a wealthy man because they are his debtors and are afraid of being asked to return what they owe, or out of gratitude for past financial aid, or because they expect future financial favors [1963a:45]."

To summarize, investigations of Botukebo's "finances" are not consistent with Sahlins' model that the big-men are driving their kin and/or debtors to overproduce. While the data do not conclusively counter Sahlins' model, the explanations making them consistent with his proposition have an ad hoc quality. This is certainly surprising for a supposedly paradigmatic ethnographic example of the big-man political economy.

Our second line of evaluation involves reanalyzing the Kapauku data. We reasoned that if Pospisil were responsible for the overproduction, then by subtracting this amount from the production of the overproducers, a closer approximation to Chayanov should be obtained. Figure 3.3 is the graphic Chayanov Analysis of these adjusted figures and Tables 3.6 and 3.7 supply the supporting data.

It is immediately obvious that the observed intensity *does* more closely approach the Chayanov expected line. This is similarly reflected in the value for the impulse to surplus labor (Sahlins 1972:111), which is reduced from 82% for 59% of the labor force (1972:121) to 57% for 49% of the work force.

TABLE 3.6
Regression Statistics: Adjusted for Pospisil's Effect

$r = .22170$	$r^2 = .04915$	Standard error of estimate = 540.40113
$A = 282.14305$		Standard error of A = 973.76324
$B = 600.44145$		Standard error of B = 705.83405
$N = 16$		

KILOS/WORKER

FIGURE 3.3 Chayanov Analysis: Adjusted for Pospisil's Demand (--expected relation of kilos/worker; —observed relation of kilos/worker to consumer/worker).
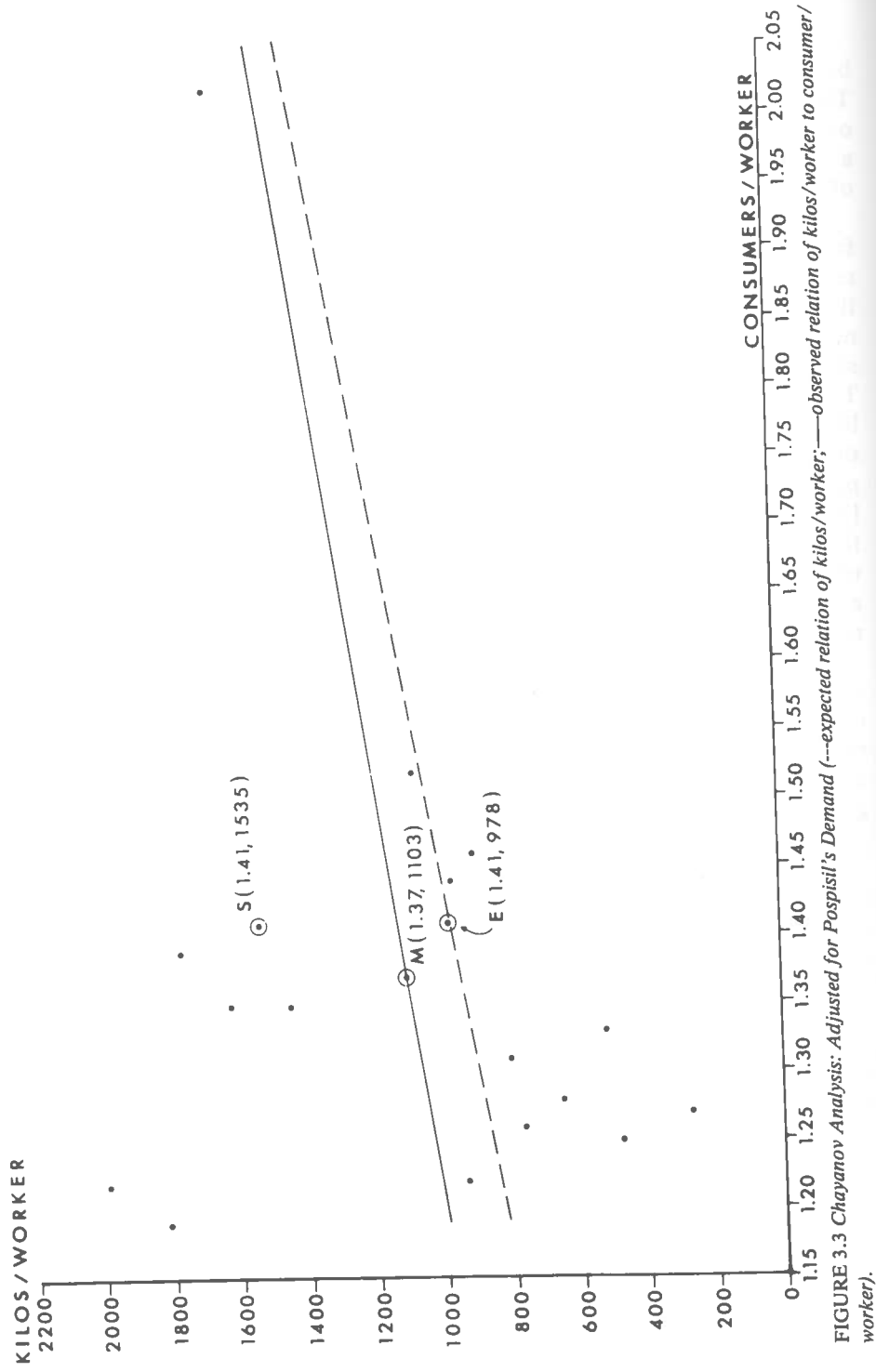
TABLE 3.7
Data for Chayanov Analysis: Adjusted for Pospisil's Demand

Household number	Number of consumers	Number of workers	Kilos of sweet potatoes/ household	Consumers/ workers	Observed kilos of sweet potatoes/ household	Expected kilos of sweet potatoes/ household	Deviation
4	9.5	8.0	14463	1.19	1808	825	+ 983
7ª	11.6	9.5	18925	1.22	1992	846	+ 1146
14ª	7.9	6.5	6117	1.22	941	846	+ 95
15	5.6	4.5	2124	1.25	472	867	− 395
6	11.3	9.0	6920	1.26	769	874	− 105
13	9.5	7.5	2069	1.27	276	881	− 605
8	5.1	4.0	2607	1.28	652	888	− 236
1	13.8	10.5	8439	1.31	804	909	− 105
16	4.0	3.0	1557	1.33	519	922	− 403
3ª	5.4	4.0	6963	1.35	1616	936	+ 680
5ª	7.4	5.5	7945	1.35	1445	936	+ 509
2ª	14.6	10.5	18512	1.39	1763	964	+ 799
12	10.7	7.5	7267	1.44	969	999	− 30
9	9.5	6.5	5878	1.46	904	1013	− 109
10ª	3.8	2.5	2687	1.52	1075	1054	+ 21
11ª	9.1	4.5	7361	2.02	1636	1401	+ 235

ª Overproducers

Surplus production (1972:114) expectedly drops from 35.37% to 28.82% of the total village product. Also, Bunaibomuuma's household, when corrected for the hypothetical effect of Pospisil's demand, drops below the Chayanov expected line, leaving Timaajjidainaago as the only overproducing big-man household.

Two observations emerge from this reanalysis. First, by adjusting for Pospisil's demand among the overproducing households, a closer approach to the Chayanov expected was obtained. This is consistent with our proposition that Pospisil's demand is driving the overproduction. Second, and just as clearly, Pospisil is not the only force driving overproduction. What is left after Pospisil's demand has been taken into consideration is an intensity profile consistent with Sahlins' model for a big-man political economy. That is, the observed intensity line is above and parallel to the Chayanov expected line and the values about the Chayanov line are fish-tailed in shape. So while the reanalysis is consistent with our proposition, it is also consistent with that of Sahlins.

The overall impression is that neither Sahlins' model nor Pospisil's presence fully accounts for the overproduction at Botukebo. But, just as importantly, neither is inappropriate. Pospisil clearly had an impact on their production efforts and it seems reasonable that he is partially accounting for the deviations from Chayanov expected. Internal household debt is also a key mechanism. It drives both the labor intensity of Timaajjidainaago's household and is the primary form of indebtedness for four other overproducers as well.

The key to building a more appropriate model lies in the other relation of indebtness, which may be driving overproduction. Table 3.5 shows that after Pospisil, indebtedness to *non*-Botukebo individuals is the most important source of credit among the overproducers—not big-men or close sector residents. Similarly, the Botukebo big-men had made considerable portions of their loans to nonresidents of Botukebo. This suggests the importance of regional processes operating in the economy of the Kapauku. And just this perspective helps deal with the anomalous (in Sahlins' model) behavior of Awiitigaaj, and the easy insertion of Pospisil into Kapauku society.

The American Connection

In the previous section, data were presented supporting the notion that a big-man political economy was driving overproduction at Botukebo; but data were also presented that contradict certain implications of Sahlins' model, suggest that something else is going on, and point a finger at Pospisil as an agent of overproduction. The strands of a model that can support these two observations exists in the literature; it is toward a synthesis of these strands that we address the following sections. We begin by inquiring of the status of

the ethnographer in a tribal setting. We find that he represents the interaction of two sets of interregional processes: The one located in the highlands, the other articulating the highlands with wider cultural spheres. Each of these itself is capable of driving overproduction, yet neither is an important part of Sahlins' model.

Considering the ethnographer from the vantage point of North America, Pospisil is just one agent of Western penetration. This, in turn, is only one of a number of such penetrations from outside the highlands. Inland populations in New Guinea have long-standing trading relations with coastal populations, and through the overseas trade networks of these communities, to the products of other Melanesian islands (Harding 1967; Hughes 1973). Participation in this trade clearly has had an impact on local level political economy. Less clear is the extent of Indonesian influence in New Guinea prior to the advent of Europeans there.

At this point, however, we wish to take up the question of past contact with agents of European societies and its effect on the nature of Kapauku political economy. There is a substantial literature assaying the nature of culture change in New Guinea following the establishment of direct political control and sustained contact with European institutions. But the central thrust of New Guinea research is on the aboriginal culture. Monographs characteristically begin with a brief narrative of the history of contact with Europeans that stresses how recent sustained contact has been and is designed to assure the reader that the analysis, which is to follow, is of a tribal society untainted by acculturating influences. This approach is consistent with the prevailing ethnographic tactic:

> Anthropologists, except as they become interested in recent cultural changes, rather like to think that the natives still exist in their pristine state—or at least talk about them that way. We adopt the convention of the "ethnographic present," discussing the Iroquois or Hawaiians as they were at the time of European discovery—that is, when they were "really" Iroquois or Hawaiian. . . . for comparative purposes it is necessary to characterize primitive cultures apart from distortions introduced by Europeans [Sahlins 1968:3–4].

Here Pospisil and Sahlins are in accord and in keeping with this anthropological tradition, Pospisil does not include an analysis of the Papuan–European interaction in his monograph. Europeans are not, however, completely invisible, and one passage near the end of *Kapauku Papuan Economy* falls like an ethnographic bombshell.

> How dependent political leadership is on credit can be seen from the effects of the acculturation situation in 1959. At that time the Dutch administration started to build an airport at Moanemoni in the Kamu valley, thus providing the young and ablebodied with an easy income. As a consequence young men were not forced to borrow money from the native *tonowi* and the amount of credits and debts in the region dropped to one fourth of the figure in 1955. This change in economic bal-

ance had, as a consequence, *a complete loss of influence of the tonowi type of headman and a consequent disintegration of the former headmanship and political structure* [1963a:393, italics added].

In one sense this observation confirms the validity of the strategy of the ethnographic present: Pospisil arrived in time to record the aboriginal political economy before it disintegrated as a result of European influence. But a question nags at us: What if the ethnographer had first arrived at Botukebo in 1959, 1964, or 1974 instead of in 1954 as Pospisil actually did? What then would the ethnographic record show? Perhaps it would show an acculturation situation derived from a recently collapsed big-man system. But it is also possible—given the anthropological penchant to construct a historical analysis based on field observation—that it might show a more egalitarian ethnographic present than Pospisil recorded, one politically more fragmented and without big-men. There is, of course, no way to know, but the question leads us to carefully examine Pospisil's work for information on Papuan–European interaction before and during his stay in Botukebo.

In passing, Pospisil mentions a number of elements in relations between Papuans and Europeans that were approximately coeval with his period of research:

1. Cowrie shell money, originating at the coast and traded overland to eventually arrive in Botukebo, had been augmented by glass beads of European manufacture (1963a:338). In addition, cowrie shell 'blanks' were brought in by air and obtained by the Kapauku directly from the local Dutch government station. Some of the local Kapauku were using these blanks to make counterfeit currency.

2. European-made implements, especially steel axes and machetes, were in common use.

3. Several exotic domesticates, including manioc and the chicken, had been deliberately introduced and promoted by the Dutch and had earned some favor with the Kapauku (1963a:109–110). There is an enigmatic reference to the "distribution" of rice by the Dutch (1963a:363).

4. Some Kapauku women were selling food to the Dutch, earning money that, without these sales, they would not have controlled (1963a:150).

5. There is evidence that the prestige and authority of the Dutch were already considerable. This is apparent in the role of the patrol officer in introducing Pospisil into Botukebo (1963a:19), in the native police officer using his office as the basis on which to farm out a pig to be raised in Botukebo (1963a:217), and in an instance of the Dutch patrol officer adjudicating a "financial" dispute between two Papuans (1963a:221).

It is also clear from Pospisil's work, and from other sources, that the Kapauku had experienced intermittent direct contact with Europeans since the 1920s and indirect contact for an even longer period of time. Steel axes had reached the Kapauku area even before the Europeans did, being traded over existing trade routes between the uplands and the coast. These same trade

routes had also carried an increasing flow of cowrie shells and other currencies as a result of European activities on the coast. With Europeans reaching the highlands in the 1920s, these were injected directly into the highlands, greatly expanding the total volume of valuables in circulation there (Dubbeldam 1964).

It is clear from these references that numbers of points of articulation between Kapauku and Europeans had been established well before the time of Pospisil's research. It is certainly possible that, individually and in sum, these had an insignificant impact before 1954–1955. Indeed, Pospisil implies as much in referring to the 1959 situation as an "acculturation" situation, leaving a clear supposition that 1954–1955 was preacculturation. But the kind of detailed analysis that Pospisil brings to economic and legal relations among Papuans is absent in the matter of Kapauku–European relations. Although these contacts may seem minor and insignificant in comparison to the power of the locally derived patterns of interaction that Pospisil does analyze, we may perhaps be excused from raising questions of their significance in view of the fact that the construction of a single airport could cause "a complete loss of influence of the *tonowi* and disintegration of the political structure."

It seems plausible to us that these contacts may well have had a significant impact on the nature of Botukebo political economy. Dubbeldam's (1964) analysis of the role of the inflation in currency in creating 'devaluation' and undermining the authority of the Kapauku *tonowi*, Meggitt's observation of the complex inflationary effect of European goods on the *Te* exchange networks (1971:200–209), and the analyses of Sharp (1953) and Salisbury (1962) on the political impact of the introduction of steel axes in other areas increase our suspicion that even indirect contact with Europeans might have produced radical transformations in political economy. This suspicion is further deepened by Kelly's recent information on Etoro depopulation as a result of casual encounters with Europeans in the 1930s, with its concomitant and lasting impact on their social organization (1977:25–31). The age structure figure for Botukebo presented by Pospisil would be consistent with a similar past population drop for the Kapauku (1963a:60–61; compare Kelly 1977:29).

Two conclusions based on these observations seem permissible. One is that Pospisil's way into Botukebo was paved by the Europeans who had gone before him. The Kapauku were familiar with resident Europeans who exchanged exotic and often useful items for native produce and from the day of Pospisil's arrival, supported by the Dutch, it was clear that he was prepared to play this role. Second, direct and indirect contact with Europeans had clearly been an aspect of Kapauku political economy for more than half a century, yet neither Sahlins nor Pospisil have taken it into account in their analysis.

BOTUKEBO BIG-MAN—A.K.A. LEOPOLD POSPISIL

So, from the perspective of North America, Pospisil is one of a series of agents tying the West New Guinea Highlands to the capitalist West. In what follows we take the perspective of a Papuan and see that, surprisingly,

Pospisil's entry into Botukebo and the role he played there throughout his field study were also prepared by the existing rules of interaction among Kapauku Papuans. Furthermore, these phenomena, particularly Pospisil's adoption practices and the shell inflation, can be seen to have driven overproduction at Botukebo. Clearly, processes such as these are not an integral part of Sahlins' model of tribe. Take note, this is not a particularist critique. As idiosyncratic events, these particular forms of interaction would not likely be of general interest. As examples of interregional processes, however, they point out a serious deficiency in the tribal model. In the following we make a case for the general importance of long-range interactions for understanding any tribal situation.

As in the previous section, we start with the ethnographer, only this time the perspective is internal to a tribal model. What is the social position of the ethnographer in Sahlins' model of the tribe? Recall the sectoral model in which there was a rough correlation between distance in physical space and social space, both inversely correlated with sociability.

> The several sectors of a tribe are graded by sociability. High and positive in the inner sphere of close kinship, sociability declines as the sector of social relations expands, becoming increasingly neutral in distant circles and ultimately, the intertribal field, altogether negative [1968:18].

Pospisil, in this model, is from the furthest circle; he should be the stranger and potential enemy who may and should be cheated in economic dealings. This stands in rather stark opposition to the festive greeting he received which had the effect of changing his research plans. This cannot be easily resolved with Sahlins' model.

Alternatively, Pospisil offers an interpretation of his easy fit into the system: "Since I was a white man with plenty of strange and, in Kapauku eyes, certainly expensive artifacts, I was regarded as particularly wealthy [1963a:19]." He thus accounts for his entourage of sons and daughters.

But more was operating than his strangeness and the expensiveness of his gifts—which is to say his Westernness. Significantly, in giving Latin names, he was also giving access to food. That is, his simple act of taxonomic generosity enmeshed him in a persisting complex set of obligations. Clearly, the sons and daughters were not acting in a social vacuum by attaching themselves to a Westerner. Rather, their behavior is consistent with attaching themselves to a Kapauku big-man.

Pospisil can be seen acting as a Kapauku big-man in a number of social situations. He states that "it is a custom in the Kapauku culture for adolescent boys and young men to come to live for a long period of time with a rich man [1958:4]."

> Besides the debtors a wealthy man has usually several additional ready supporters in his apprentices, who he calls *ani jokaani* "my boys." These young individuals

usually come from poor families and join the rich man's household in order to obtain from him a good education in business administration and politics, to secure his protection, to share his food and, finally, to be granted a substantial loan for buying a wife. For these favors, in turn, they offer their labor in the gardens and around the house, their support in legal and political disputes, and their lives in case of war [1963b:51].

Thus, in one of Pospisil's first acts, adopting the sons and daughters and indicating he liked them by giving them names, while they were building his house, he indicated that he was like a big-man.

Not only did adolescents perceive him as a big-man, but so eventually did the Kapauku big-men. Pospisil notes that "the second great advance in my relations with the people occurred at the time when three important headmen of the Ijaaj–Pigome Confederacy and a shaman asked me to become their best friend [1963a:20]." Relations between "best friends" are institutionalized in Kapauku society and are characterized by "deep mutual affection, exchange of gifts of high value, and assistance in financial troubles, wars, and legal disputes [1963a:31]." This relationship becomes a very important tool in political dealings, particularly at the interconfederational level: "A shrewd politician is very particular in selecting as his best friends only those individuals who are themselves important and have a lot of followers [1963a:51]." Thus, the inference of Pospisil as big-man seems borne out by the behavior of the Kapauku big-men in asking him to become their best friend.

Pospisil's easy fit into Kapauku society suggests that Kapauku society regularly has big-men integrating regional systems—not simply integrating intravillage segmentary units. In other words, the logic of the Kapauku system appears to operate regularly in a much larger arena than the limited one implicit in Sahlins' model of the tribe.

The importance of such large-scale ties can be found in the literature for other areas of New Guinea. For example, Meggitt identifies extra-parish big-men connections among the Mae Enga. He notes rather striking differences in participation in the *Te* ritual with big-men from different parishes dominating the exchange and doing this at the expense of their local supporters:

> Almost all the Big Men I have known act very much as do Tammany Hall incumbents, keeping the system running tolerably smoothly by paying off these supporters whose aid is essential to them by also retaining for themselves whatever resources they can abstract at the expense of the weaker and poorer members of the group, those whose claims they can safely ignore for a time [1974:190].

This interparish big-man connection takes on the character of "incipient social strata, something approaching two classes of people defined by differential access to particular scarce and valued resources [1974:191]." This big-man relation, Meggitt feels, contributes to the overall adaptation of the Mae Enga at the regional scale. Thus, the theoretical processes driving the

behavior of big-men, which are exogenous to the local setting, are at least as important as those endogenous to the village (see also Meggitt 1971:191–200).

Moylan similarly stresses the importance of regional processes when considering the ecological dynamics of New Guinea populations. Specifically with regard to the Kapauku he notes:

> there are indications that the relations within the local system of Botukebo are unstable in the long run and, further the integration of the system seems to exhibit a considerable degree of looseness, such that variation within one or more components of the system might not materially affect relations with other components [1973:67].

After considering other New Guinea cases (Tsembaga Maring and Mae Enga) along with the Kapauku, he concludes that village level demography and ecosystem processes are likely to be misleading.

> Indeed, we ought not to expect that local systems tend toward equilibrium at all, but only that the behavior of local systems contributes in some way to the interactions which compose the regional system tending towards equilibrium [Moylan 1973:68].

While we do not see the necessity for even regional systems to seek equilibrium, we do agree with Moylan's conclusions that little sense is to be made of New Guinea tribes—particularly the Kapauku—from just the intravillage perspective.

An even more extreme statement of the importance of intervillage relations is made by Brookfield and Hart who "regard the very large number of local small communities as local, open systems, all interconnected and aggregated into a wider system that can only notionally be bounded at the edges of Melanesia [1971:77]." This extremely large-scale model is based on their observations of demographic processes in both pre- and post-contact Melanesia. These processes have the effect of spreading population pressure around between the various small but open tribal units found across the Melanesian landscape (1971:92).

Broad-scale models of New Guinea and Melanesian society are certainly consistent with studies of the long-range trade systems for which the area is as famous as it is for its big-man complex (Freedman 1967; Harding 1965, 1967; Hughes 1973; Irwin 1974; Malinowski 1961; Meggitt 1974). These broad-scale studies present both data, which are not easily subsumed under Sahlins' model of tribe, and alternative—though only partially formulated—models of tribe, which stress different processes.

Finally, these broad-scale studies help resolve some of the problems encountered when analyzing the Kapauku with Sahlins' model. First, these processes integrating the extravillage sector allow us to consider Pospisil's easy fit into Kapauku society. Furthermore, Meggitt's ideas about political economy

help account for Awiitigaaj's heavy investment in external strangers (possibly other big-men?) and the general negative attitudes of big-men followers. In Sahlins' model, extravillage integration is accomplished by big-men who regularly collect the surplus production of small communities and deploy it outward in their search for renown. Yet it is clear that in Botukebo people were "financially" involved with outsiders at least as often as they were with their fellow villagers, big men included. These outsiders were often "strangers" (Pospisil 1963a:348–356, Tables 30–37, 447–455). These behaviors are less consistent with Sahlins' model where distance makes enemies and power is almost exclusively the result of local faction building. Pospisil's acceptance and Awiitigaaj's behavior make much more sense in a theory of primitive tribal economies, which is areal rather than local in scope.

We would like to make one more point in order to emphasize that the argument for a broader perspective goes beyond the criticism that the New Guinea data—and specifically the supposedly paradigmatic Kapauku—only loosely fit Sahlins' model of tribe. On a theoretical plane, these broader models are more satisfying as a basis for a social theory of tribal society. Let us consider the forces driving Sahlins' model.

Sahlins posits the household–family as a basic theoretical concept. The separation of these segmentary units (households) is essential to his design of the tribe. He implies that they can be pitted against the larger concept of society with a tension between the centripetal forces of society organizing the households and the centrifugal forces of the households shattering society: "The constraints of the household economy are, however, overcome in tribal societies—or else the society is overcome [1968:78]." That is, the reproduction of the DMP is counter to the reproduction of society at large.

This last tension is analytically weak, though central to his argument. A notion of household that could truly create a centrifugal force capable of negating society would not only organize production, but also *reproduce* the conditions for its existence. Production entails bringing labor power together with tools and raw materials to transform the raw material. Thus, we need a notion of household that can transform raw materials with reproducible labor forces and technologies.

Households, as modeled by Sahlins, are capable of reproducing technology and appropriating nature. However, they are not likely to be capable of reproducing the necessary labor power to continue production. Wobst (1974a) has considered the problem of the minimum size of the human-mating network that will reliably reproduce itself under various forms of primitive social organization. Consistent reproduction does not become a reasonable outcome in human-mating networks smaller than about 350 people. Thus, not even the Kapauku village of Botukebo could likely reproduce itself without others.

What this means is that the logic of the household economy *requires* society—it does not, as Sahlins would have it, *contradict* society. True, there are centrifugal forces generated within the household, but there is also the cen-

tripetal force of reproducing labor power that implies extrahousehold, and very often, extravillage relations (Wobst 1974a, 1974b). This is consistent with the observations of regional integration for New Guinea societies.

By considering the extravillage character of labor reproduction, a more satisfactory origin for "society" in the tribal model can be developed. At the local scale, as interpreted by Sahlins, society enters as a psychological variable. In Sahlins' design of the tribe the big-man is an important agent of society, integrating the atomistic segmentary units of the households. What, then, is the logical source for the big-man? For Sahlins, the big-man behaves as he does because of ambition: "Any ambitious man who can gather a following can inaugurate a societal career [1968:89]." And similarly by psychological drives, the big-man intensifies production: "Jealous of his increasing reputation, a big-man comes under increasing pressure to extract goods from his followers, to delay reciprocities owing them, and to deflect incoming goods back into external circulation [1968:90]." By considering regional processes one can avoid reducing society to a psychological foundation.

Specifically, the aforementioned New Guinea researchers have suggested that the atomistic segments are socially integrated to control demographic growth and resultant biodegradation. Here, we point out that atomistic households must be socially joined as a precondition for the perpetuation of the domestic economy. Neither of these approaches (which are by no means mutually exclusive) requires psychological drives to account for society in a tribal system.

Lest we be misunderstood, we need to state clearly that we are not advocating throwing out Sahlins' baby with the psychological bathwater. We have found reasonable support for his faction building big-man in some of the activities of Timaajjidainaago, and for his exploitative big-man Awiitigaaji. What is lacking is an explanation for why these men, and especially "notorious criminals" such as Bunaibomuuma, regularly and successfully squander their capital in intervillage relations, and why even "the political boundaries of the confederacy of lineages is no limit whatsoever to business relationships [Pospisil 1963a:356]."

We also agree with Sahlins methodology—a methodology Sweezy calls the "method of 'successive approximations.' " Considering this a bit further indicates a way toward a joint model. The method of successive approximations "consists in moving from the more abstract to the more concrete in a step-by-step fashion, removing simplifying assumptions at successive stages of the investigation so that theory may take account of and explain an ever wider range of actual phenomena [Sweezy 1942:11]." Clearly this is Sahlins' strategy in constructing the DMP—with its abstract, isolated households exerting a centrifugal force, which is only countered by the ambitions of the big-man. Developing this force as a theoretical process requires simplifying assumptions concerning the nature of primitive society. Sweezy goes on to note the criteria by which this method is best judged.

In each case, the following three questions should be asked about the simplifying assumptions (or abstractions) which give rise to criticism: (1) are they framed with a proper regard for the problem under investigation? (2) do they eliminate the non-essential elements of the problem? (3) do they stop short of eliminating the essential elements [1942:20]?

Our point is not the inappropriateness of Sahlins' method—rather it has to do with criterion 3. Sahlins stopped short of identifying big-man–big-man relations as a regular and necessary feature of both his tribal design and of his model of the DMP. And this is because he drew his system too narrowly. Even considering production, the imports are labor and potential labor—husbands and wives, mothers and fathers.

Thus, we are not advocating disregarding Sahlins' model and processes of big-man political economy. We are trying to integrate these intravillage processes with extravillage processes that seem necessary for a fuller model. This does mean changing some aspects of Sahlins' model. But the exploitation dynamics, limits, and big-man cycle remain. Our point is that these are not the only dynamics or limits.

Here we can only sketch such a synthetic model. The tribal problematic is a lack of stratification associated with an economy based on domesticates. By emphasizing the broader scale, some new perspectives are offered on this problem. The first, suggested in Meggitt's work, is that stratification is a very real impulse in tribal society. Minimally, this is due to the unequal distribution of resources throughout a region—and, hence the potential for socially regulated unequal access to strategic resources. By emphasizing the importance of regional connections as a means of population regulation, Moylan's and Brookfield and Hart's work hints at a mechanism which damps this impulse to stratification. This is accomplished in the short run through Sahlins' limitation on exploitation. In the long run, however, the impulse is damped by redistributing the key limiting resource—labor—over the landscape. The effect is a relatively nonstratified self-damping system of greater size—demographic, spatial, and energetic—and complexity than is usually associated with prestate formations. And certainly this system is of greater dimension than that encompassed by Sahlins' model of tribe.

Conclusions

This began as an inquiry into the Kapauku problem and has gone well beyond that to theoretical issues in economic anthropology. The problems in theories of large-scale processes—both in practice and principle—are provoked by Pospisil's behavior at Botukebo. Understanding this depends on understanding both a neolithic and a capitalist world system.

First, let us consider the neolithic world. We agree with Brookfield and Hart's vision of New Guinea as an open system made up of only semiauton-

omous villages and tribes. Pospisil's interactions with the Kapauku are further evidence for the existence of such a system. His entourage of sons and daughters from outside of Botukebo and his best friend relations with the big-men of other places replicated the behavior of Kapauku big-man within the indigenous system. Studies for other areas of New Guinea suggest that big-men integrate regional scale systems regularly, and are affected much more by processes operating at this larger level than at the level of the local faction. These are convincing evidence for the existence of a neolithic world system.

There is little place for these relations in Sahlins' model of the tribe. Considering larger-scale interactions contributes not only to understanding the ethnography of New Guinea, but to a theory of primitive economies as well. In Sahlins' model, "society" integrates the atomistic segments of the tribe through the agency of the big-man. But what are the origins of the big-man? Sahlins looks to psychology. However, concern with large-scale processes suggests the culturological nature of these ties as mechanisms relating the population to its environment and damping out incipient stratification.

Working out the structure and organization of a neolithic world system is well beyond the scope of this chapter, yet some tantalizing leads do emerge from considering the Kapauku. The problematic of the neolithic world system is to perpetuate nonstratification on a potentially powerful and diverse energy base. The demographic instability of small populations, demonstrated by Wobst, gives an outward thrust to the DMP. Against Brookfield and Hart's backdrop of open tribal communities, this can regulate population pressure and damp out tendencies toward stratification. By redistributing the population throughout the region, population pressure can be averted. Because labor is the limiting resource in production, stratification is damped. Thus the centralization of the crucial resource of labor power within a big-man's faction, with a concomitant Boserupian impulse towards stratification, is circumvented.

We found that Kapauku integration into a neolithic system was one factor that helped Pospisil to fit into Botukebo. Another was Kapauku participation in the modern world. Pospisil was one in a series of agents and phenomena that have intruded into New Guinea from the developed sectors of the world system. This observation led us to a consideration of the significance of these contacts on Kapauku tribal economy.

Elsewhere than New Guinea, tribal social formations have come to be understood not as survivals from the pristine neolithic past, but as products of the growth of civilization. The classic studies by Secoy (1953) on the Plains Indians and by Leacock (1954) on the Indians of the North American boreal forests demonstrated that crucial elements in these social formations had been forged from early contact with Europeans. Similarly, research on nomadic groups in the Middle East and Central Asia, once seen as a cultural type predating the origins of civilization, have been found to be a by-product of civilization, an ecological and political–economic form that developed among

populations expelled by or retreating from the advances of civilization (Lattimore 1962; McNeill 1964; Bates 1971; Irons 1974). It is also now clear that so-called tribes in Africa and Asia were influenced by indigenous state-formation processes long before Europeans arrived on the scene and that some of the apparently most conservative communities in Indonesia and mid-America are the product of European conquest (Wolf 1957).

The accumulation of case studies demonstrating the role played by civilization in creating and perpetuating what we have been calling tribes has been accompanied by attempts to assess their theoretical significance. Service (1962) began by suggesting that certain forms of 'bands' and 'tribes,' which he called *anomalous* and *composite,* were in fact populations of refugees that had come together after a period of depopulation and disorganization resulting from initial contact with Europeans. Later Service (1971) decided that he had not gone far enough and concluded that most so-called primitive societies had been severely altered as a result of such contact. Referring to modern scientific ethnographies he said, "No matter how much confidence we may have in their accuracy, the reports normally describe the cultural remnants that have survived the devastation caused by Euro-American colonial and imperial expansion [1971:152]." (See also Godelier 1977:70–96.) Fried has followed a parallel line of reasoning to the conclusion that, before the arrival of Europeans, primitive cultures in most places had been fundamentally altered by the existence of states. For Fried and Service, pristine tribes are ones that interact only with other tribes. Since they have been articulated with more complex cultures for centuries, all tribes that we know of from anthropological research or historical reference are at least in part the product of civilization. Fried concluded his essay evaluating the concept of tribe with the observation that "tribe is a secondary sociopolitical phenomenon, brought about by the intercession of more complexly ordered societies, states in particular. I call this the "secondary tribe" and I believe that all tribes with which we have experience are of this kind [1975:114]." Certainly these are controversial conclusions, but they are strongly compelling and it is clear that research on so-called tribes will in the future have to assess carefully the history of their relations with other groups and the implications of these relations for internal sociocultural arrangements. The evidence strongly suggests that what anthropologists have in fact been studying is not a collection of autonomous traditional tribes, *but the tribal sector of the world capitalist system.*

Does this conclusion apply equally to New Guinea? The prevailing thrust of ethnographic literature is that it does not. Most ethnographic reports are silent on this question. Where it has been raised, thoughtful scholars have concluded that New Guinea, or at least the highlands, are an exception. Thus:

In all the world, only inland New Guinea provides an opportunity for understanding an extensive system of neolithic trade in all its complexity–its ecological basis, its physiographic constraints, and the cultural adaptations of those that took part.

Elsewhere the neolithic traders are dead and have left no records other than a handful of durable artifacts. Most of the area of this study remained prehistoric until the 1930s, some of it until the 1950s [Hughes 1973:97].

However, there is suggestive evidence that sporadic direct contact, or even indirect contact with Europeans through existing trade networks, resulted in cowrie shell inflation, the introduction of steel tools, and possibly even severe depopulation; any one of these could have radically affected indigenous political economy and social organization. Moreover, we do not know the possible impact of complex civilizations such as the Indonesian, on New Guinea, even before Europeans found their way to Melanesia. We therefore conclude that it is problematic whether the Kapauku, as observed by Pospisil, were a contemporary stone age culture, or whether they were a tribal segment of the world capitalist system.

The specific behavior of overproducing households and big-men, whether from Botukebo or New Haven, will be better understood as ethnographic literature expands to include more information on the small, local-scale processes identified by Sahlins, the larger-scale ecological and regional relations suggested by Meggitt, Brookfield and Hart, Moylan, and others, and on the processes incorporating New Guinea into the world capitalist system.

However, our examination of the ethnological treatment of the Kapauku has led us to conclude that the basic problem is not one of insufficient data, but of underdeveloped and misdirected theory. The processes that are organizing a tribal sector of the modern world system are best known by their material results—the trade goods that find their way into remote regions. The political economy and ideology of these relations have been less completely explored. Moreover, the processes organizing past world systems, specifically the neolithic world system, are but dimly perceived.

What the ethnographer actually observes is the remains of neolithic systems transformed by the demands of a succession of state-dominated world-systems. We mistrust attempts to read directly from the enthnographic present to the neolithic past. We also mistrust mechanical reconstructions from the scant remains of archaeology, although we recognize that any model of neolithic systems must be consistent with archaeological data. Our claim is that what is most needed now is a theory of neolithic political economy freed from the biases of the "ethnographic present," yet informative for both archaeological and ethnographic data. We have made some suggestions concerning a theory of large-scale tribal systems, but they fall well short of a complete or satisfying development. We expect fuller elaboration to capture our attention in the near future.

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