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RESERVE

LABOR ORGANIZATION IN A NOMADIC PASTORAL SOCIETY
THE SAMBURU OF KENYA
A theoretical and methodological
framework for research.

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LABOR ORGANIZATION IN A NOMADIC PASTORAL SOCIETY

THE SANBURU OF KENYA

ABSTRACT

The proposed research examines labor organization in a nomadic pastoral society. It focuses on the Sanburu of Northern Kenya, milch-oriented herders who are presently the targets of a comprehensive development plan. The study seeks to highlight the complex tasks of herd management, the multiple pursuits associated with pastoralism, and the place of pastoralists in the regional economy.

Theoretically, the study aims to give more precise definition to the concept of 'pastoralism' and to the role of low-level production units as 'household' and 'domestic group'. It further seeks to clarify the operational meaning of 'labor' as it applies to partially-commoditized economies. The investigation acknowledges both the relativity of labor and its two aspects of social form and technical conditions.

Substantively, the study aims to describe the heterogeneous demands of rangeland pastoralism and the possibilities for wider herder participation in the regional economy. Labor is a critical factor of production in pastoral systems, yet information on both the qualitative and quantitative parameters of labor allocation is scarce. Investigations will elucidate task repertoires, cooperative arrangements, technical expertise and coordination in the use of range and water resources. Whether one is interested in safeguarding milch-oriented pastoralism or in facilitating change, it is essential to acquire a more refined knowledge of the labor patterns of herding.

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LABOR ORGANIZATION IN A NOMADIC PASTORAL SOCIETY

THE SAMBURU OF KENYA

1. Introduction

Nomadic pastoralism continues to be a mode of subsistence in much of Tropical Africa. Depending on one's particular perspective, this activity involves 57% of the land resources, 21% of the people and 50-75% of the potential meat production resources (ILCA 1981; Kates et al. 1977). In many African Countries, herding provides the only means of using large tracts of savannah. Kenya, the focus of this research proposal, has over 80% of its land in the arid or semi-arid isohyet (Pratt and Gwynne zone 6-zone 4), and approximately one fifth of its people subsist through herding.

The production system of nomadic pastoralists has been of especial international interest for almost two decades. The Sahelian drought of 1970-1974 brought acute distress to an area of one million square miles (Caldwell 1975) and caused migrations of an unprecedented scale (cf. Dalby et al. 1977, Swift 1977). Wide-ranging localized droughts- from the Sahel to Northeastern Africa- plagued Africa throughout the seventies and resulted in severe losses in livestock as well as growing transfers of emergency food aid (c. 800,000 tons in the mid-1970s to more than 1.3 million tons in 1978 (IBRD 1981). The most recent plight of Somali refugees (an estimated two million herders wandering between the Ogaden and Mogadishu) highlights the fact that nomadic pastoralists are particularly susceptible to the consequences of social upheaval as well as to the fluctuations of rain and forage. Such international emergencies have been treated with large scale monetary infusions(--mainly in famine relieve operations).

Within African nations, pastoralists have been the focus of political, social and economic concern since the first years of colonization. In the case of Kenya, both the British administrative posture and

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the independent government's involvement in pastoral areas have been initially investigated (e.g. van Zwabenberg and King 1975, Kitching 1980). In brief, colonial interventions of the 1920's sought to separate herders from burgeoning agricultural populations through quarantine restrictions and demarcation of trial grazing areas. Administrators aimed to conserve traditional social organization and identity. In the 1930's, growing concern with perceived range degradation led to various attempts at forced destocking and occasional large scale efforts to introduce grazing control. From 1945 to Independence, (1963) the colonial regime experimented with a variety of organizations for livestock development, e.g., grazingblocks and ranching schemes. Since the Government of Kenya, 1963, has been aiming to incorporate all rural Africans into the market economy. National desire for autonomy and material welfare can only be met through rising productivity of all Kenya's sectors. Pastoralists are looked to as suppliers of immature animals, destined for consumption as meat. Recently, the Government has embarked on an ambitious program for the development of arid and semi-arid lands, river valley basin development, rangeland ecological monitoring, ranching schemes, and reforestation programs are some of the projects planned to ameliorate pastoral areas (Migot-Adholla and Little, 1981).

Despite increasing political, economic and academic interest in herding systems--with foci on aversion to risk, rangeland management and maximization of output-- the 'economics' of the nomadic pastoral system of production continues to be poorly understood. Study has been extremely limited on such critical issues as the production of pastoral herds and flocks, the productivity of land and labor in pastoral use, pastoral consumption and the labor requirements of herding (Swift 1979). It is in reference to this last area of research that this specific proposal is addressed. Micro-level labor studies have been identified as an immediate research priority by many scientists working to bring security and economic growth to savannah herders (Dahl 1981, Rigby 1981 and Sandford 1981).

II Statement of the Problem: The Primary of Labor

This research will provide a detailed case study of labor organization among the Samburu of northern Kenya - a group of nomadic pastoralists. These milch-oriented herders are presently the targets of a comprehensive development plan.

Fieldwork investigations aim to elucidate 1) local-level organization as it relates to herding activities and 2) non-herding responses of pastoralists to the changing regional economy. This study of pastoral labor will be a catholic one; the means of production and their allocation, the forms of cooperation and the products (their distribution and value) will all be embodied within the research paradigm. Such microlevel analyses aim to elaborate the labor demands and organization of subsistence herding as well as the possibilities for pastoralist participation within the wider regional economy.

The focus on labor as the dominant production variable has heuristic value on a number of counts. Both the strength of a labor-focused investigation and sets of guiding research hypotheses will be elaborated below.

1. Labor is the critical variable in the economic development of African societies

The classical political economists placed labor at the center of their theories of development. Arthur Lewis, the Nobel laureate, has revived that tradition of 'labor as the true measure of productive value' and brought it to the center of contemporary development economics (Lewis 1954, 1978). Further, the view of this century's greatest economist is unequivocal:

It is preferable to regard labor, including of course the personal service of the entrepreneur and his assistants, as the sole factor of production, operating in a given environment of technique, natural resources, capital equipment and effective demand (Keynes 1936, emphasis added).

The primacy of labor has been equally posited within African agricultural systems. Cleave, in an analysis of fifty small-scale farming units over a twenty-year span, notes that his focus on labor is justified by its "overwhelming importance as a factor of production" (Cleave 1974). "The responsiveness of the family labor supply to opportunities for profitable employment, and the obstacles to the extended use of labor" are the fundamental considerations in development planning (Cleave 1974). Goody (1971, 1976) and Boserup (1965) similarly argue that in traditional African economies, with low level

of capital and technology, labor far outweighs land as the scarce factor of production.

The paramount importance of labor-specifically in relation to herding- is widely suggested, but as yet unsubstantiated (Johnson 1978). Within pastoral regions, the number of animals which can be herded at any one time is purportedly related to the amount of labor which can be mobilized (Horowitz 1979; Barth 1964, Konezacki 1978). Within the domestic unit 'threshold' situations develop whenever the subherd becomes too large to tend as a single unit and not enough labor is available to establish a new herd. (This varies considerably among different types of stock. (Dahl and Hjort 1976, Helland 1980). Shortage of labor for watering animals, for protection, for milking and for grazing is said to provide an impediment to the growth in size of total herds (Sandford 1976). Further, the dominant strategies of pastoral insurance, i.e., species diversification and herd mobility, require access to a large, often unavailable labor supply (Dahl 1981).

Thus-- increasing the efficiency of labor may provide the stimulus for improving overall pastoral production.

2. Labor analyses provide a means of describing the central mechanisms of pastoral herd management.

It is by focusing on what herders do that one can identify the significance of stock raising for human activity. A systematic study of labor should address both its technical and social dimensions. The former embraces the characteristics of the work force, the tools at their disposal, the object of their labor, and technical knowledge. The social organization of labor addresses how labor is divided, how it is recruited into cooperative units and how distributive relations enter into work organizations.

There has been little systematic discussion of labor in African herding societies. In general, two analytical tendencies may be discerned. The first consists of quantifying a limited range of herding tasks at a low-level of specificity. The second treats labor as being governed by social structure in the broadest sense.

A. Studies by Swift(1979), Torry (1973, 1977) and Grandin (1982) provide rare information on pastoral labor. However, even allowing for the admitted differences of the regions involved, the ethnographers reach somewhat polarized conclusions on the exigencies of labor.^{1,2} One failing of such studies is that the range of tasks undertaken by herders is never fully elucidated; the repertoires of animal husbandry and domestic activity are simplified; the pastoralists are isolated from the larger regional economy. Further, a major concern of quantitative studies has been the relationship between household viability and herd size, i.e., what are the limits of herd size needed to maintain 'X' demographic unit at 'Y' economic level (Asad 1970, Barth 1961, Brown 1971, 1977, Dahl and Hjort 1976). Criticisms of such an approach should be wide-ranging; e.g., the household is only vaguely defined; it is assumed a priori to be a self-contained production unit; production and consumption are seen as coterminous; the cycles of household and herd demography are held constant and, hence, longer-time horizons are obscured.

B. The British tradition of social anthropology has emphasized the social organization of herding often in isolation from technical conditions (Evans-Pritchard 1940, 1951; Spencer 1965, 1973). One of the more specific analyses in this genre is Cunnison's (1966) discussion of the social mechanisms for mobilizing labor among the Baggara. In general, however, these ethnographers have been content to leave the relationship between social structure and the coordination of labor on the ground vague. In addition, the connections between the rules of the division of labor, patterns of cooperation,

¹In the Kel Adrar case, total annual labor requirements for all tasks are low in relation to household labor...This would occupy only 11 per cent of the time of a reference household with one adult and one juvenile male working the animals. Considerable economies of scale are possible (Swift 1979).

Among the Gabra, "the average homestead needs 9 people working 9 hours daily to accomplish all tasks ... No. household can be economically self-sufficient" (Torry 1973).

²Grandin's (and ILCA's) ongoing work among the Masai presents the most refined of these quantitative studies. She discusses patterns of time allocation in Olkaria Group Ranch. Time-labor inputs are described in reference to the age/sex division of labor, wealth differentials, and seasonality of labor demands.

and the distribution of goods and property are made unsystematically, if at all. For example, Gulliver's "The Family Herds" (1955) elaborates the rights and obligations surrounding property with minimal reference to the substance of Jie and Turkana activity.

Three studies, each dealing with both social and technical aspects of labor, have stimulated the present research: Torry's Gabra study (1973, 1977), Dyson-Hudson's Karamojong monograph (1966) and Dahl's work on the Waso Borana (1979).

3. Focus on labor highlights the means by which herding is coordinated with its support activities.

'Herding' involves more than the direct care of animals. The means of production must be supplied, e.g., kraal construction, digging wells, manufacture of tools, animal medicines. Herd products need to be processed, e.g. preparation of milk, butchering, curing hides and skins. Transfers of animals and their products take many forms: bridewealth, stock partnerships, raiding, market sale and purchase. Finally, the supply of labor to herding requires long-term socialization (e.g. training herd boys and milk maids) and special mechanisms for organizing recruitment (e.g. marriage, labor pooling etc.). Herding families also devote their time and expertise to non-pastoral pursuits. The complex of domestic activities is the most notable of these; it embraces childcare, home construction and maintenance, the collection of water, wood and plants for human use, and food and drink preparation. Pastoralists sometimes engage in other extractive activities, e.g. hunting, cultivation and beekeeping. Few researchers have investigated the interlocking demands implied by juggling many activities simultaneously (Salzman 1980). Indeed, the few labor studies completed (e.g. Swift 1979) divorce the needs of animals from other work obligations of herders.

4. Labor analyses can demonstrate the articulation of herding (in the broadest sense) with the wider political economy through both market and non-market exchange.

Pastoralism itself must be seen as a component within a wider division of labor. Herders live in communities where they

exchange products with other specialist groups, for example, blacksmiths. Moreover, within the region, they often barter with other pastoralist and farming groups; livestock may be exchanged for grain, or goats for cattle. By selling their products in modern markets, herders are able to purchase imports from the international economy. Lastly, they now take part in national wage labor markets. The literature on herders has normally understated the degree of their participation in the wider political economy. Orlove (1977) and Koster (1977) have remedied this situation to some extent in Peru and Greece respectively. Within East Africa, Dahl's pioneering work on the Boran of Northern Kenya (1979) and Perlov's current research on marketing in Samburu (1981, 1982) provide close complements to the program anticipated by this study.

In summary, this study will elaborate pastoral labor organization in both its social and technical aspects. Such study is justified by 1) the critical factor of labor in production processes and by 2) the unique methodological tool which a labor-oriented study offers. By focusing on how pastoralists organize, allocate and effect the task of production and reproduction, the herding system can be represented in an expansive context. That is, pastoralists--male and female:

- a) tend their herds
- b) meet larger domestic and community obligations
- c) engage in multiple subsistence activities
- and d) are part of a larger political economy in which goods and services are bought, sold, exchanged, etc.

III Theoretical Framework

Before entering into a detailed discussion of research questions, site and methodology, it would be well to elaborate the theoretical framework which guides the specifics of this study of labor organization among the Samburu. This section first seeks to clarify two issues central to the investigations:

- 1) the definition of 'labor' and
- 2) the two sides of labor,

i.e. its social organization and material conditions. Second, it will apply each part of the theoretical design to a preliminary analysis of the Samburu case.

1. The Definition of labor

A. What is labor?

The difficulties of determining labor in a pre-industrial or industrial system become most apparent when one tries to determine what labor is not. The primary modern definitions contain subjective components and/or imply involvement in a direct market system. The range of meanings imputed to labor in contemporary usage is summarized below:

- Labor is:
1. Physical exertion directed to the supply of material wants of the community (Oxford English Dictionary 1971:1554).
 2. Physical or mental exertion of a practical nature as distinguished from exertion for the sake of amusement; work (American Heritage Dictionary 1976:730)
 3. The specific service rendered to production by the laborer and artisan (Oxford English Dictionary 1971:1554).
 4. Work for wages as distinguished from work for profits (American Heritage Dictionary 1976:730).

The efforts of childbirth, painstaking toil, and the idea of the working class as a collectivity are also subsumed under the rubric 'labor'.

It is clear that the above definitions allow for diverse interpretation.

Analysis of the components, however, reveals the following major themes:

1. Labor carries the strong connotation of physical exertion. At the same time, it is subject to social definition.

The Oxford English Dictionary's reference to 'material wants of the community' reminds one that labor' is a) a subjective means/ends relationship and b) always embedded in social codes. The American Heritage Dictionary, perhaps unwittingly, reveals its own cultural limitations when it speaks of the distinction between practical exertion and exertion for amusement. This work/leisure dichotomy is only meaningful in cultures where time is habitually demarcated into paid and unpaid segments.

2. Definition four (and possibly three) restricts the definition of labor to work for wages which is remunerated, in the last instance, under a capitalist system of production. Wages is a form of social labor when the community has been generalized to the scale of market economy. Neither of these definitions refers to physical exertion and, in the Oxford case, the use of the word 'service' specifically excludes any connotation of things.

There appears therefore to be an unresolved conflict between competing definitions of labor in current anglophone usage. On the one hand labor is defined as physical effort; thus it is tangible, material. On the other hand, labor is given a social quality, as such it is intangible, even ideal. The fields defined by these two aspects of labor overlap to a degree but are far from coterminous.

B. Problems of Identifying Labor

The definition of labor is not just a logical exercise. It is also an operational problem of identifying phenomena on the ground. Labour is recognizably objective when it is embodied in a physical product or when it is paid a definite wage. But there is a wide range of activities for which neither form of objectification exists but which still fall loosely within the scope of 'labor'. The pervasiveness of the market has pushed the problem to the periphery of industrial societies; it is more palpable in pre-industrial economies where the labors of subsistence are bound up with everyday routines of village life. Thus Polanyi (1957) speaks of economy as being embedded in the institutions of pre-

industrial societies, in contrast with markets which are allegedly detached from their surrounding frameworks.

There are few examples in the anthropological literature where labor has been given an operational definition (v. Lee 1979). Terray's classification of labor among the Gouro of the Ivory Coast (1972) is perhaps the most systematic. He begins by identifying types of labor according to their products; then he groups them in reference to the instruments of labor (tools); finally he develops a reduced classification resting on the principal forms of cooperation. This double emphasis on technical and social dimensions of labor is suggestive, but Terray is limited by a materialist conception of labor as something embodied only in things (goods). In all economies a significant portion of labor performed yields essential services, e.g. defense, education, health. The pervasive contrast between labor as a transformation of things and as a socially determined value finds a counterpart in the conventional distinction between goods and services as the tangible and intangible products of labor.

C. Goods and Services

A good can be separated from its producer; hence its objectivity is unquestionable. A service on the other hand is tied to its maker. While for much of history, service implied direct interaction, the telecommunications revolution has made global circulation of intangibles possible (Hart, 1982).

The distinction between goods and services is intrinsic to most economic classifications. The emphasis in these schemes is still weighted towards the production and circulation of goods. Thus a widespread three-fold typology identifies primary production as the extraction of goods from nature; secondary production as the manufacturing and processing of these goods; and tertiary production as their marketing, transport and storage (Hartwell 1973). Services which are not involved in the movement of goods are usually appended to the tertiary sector as a residual category.

The problem remains to identify services. In particular, one needs to clarify the concept of 'service' sufficiently to separate

it from its method of reimbursement. Once the worker of payment is removed, the question remains whether everything people do for one another constitutes a service. Orthodox economists normally assert that any social interaction predicated on scarcity is a service yielding a quantifiable value. In consequence, the significance of any practice is virtually impossible to establish. For example:

braiding the initiate's hair
collecting information on trading caravan prices
driving children to school
playing in the college band

all involve allocation of scarce time between competing ends. But whether such actions belong to the sphere of 'labor' is not at all obvious. Apparently, classifying the products of labour as goods and services does not resolve the issue of 'what is labor'.

2. The Relativity of Labor

A. Theoretical Introduction

The circularity in the definitions of labor results from an approach which attempts to distinguish absolutely between labor and whatever it is said not to be. The unambiguous labels of conventional usage treat their referents as if they were fixed and free of context. The subject matter of labor, on the other hand, covers a wide range of historical time and geographical space. The Gordian knot of absolute definitions is cut as soon as one recognizes that labor is a relational concept.

Labor is useful activity. ³Useful is a relative term implying that labor's purpose is to render a service. A service (whether it is embodied in a produced thing or not) is work done for another. There are thus two sides of labor: one is technical and refers to what is done (implying both mental and physical effort);

³The definitions of words underlined in this paragraph are taken from their prime referents in current North American usage. It is worth noting that major economics textbooks, such as Samuelson 1973, manage to avoid defining labor at all.

the other is social and refers to the structure of relations which defines an activity's purpose or usefulness. What people do may be considered labor in greater or lesser degree as it relates to the core tasks of livelihood in a given social formation. Until further specified, the core of something is whatever is central to its functioning. Livelihood is the way people secure the means of their support. It is less absolute than the notion of subsistence as material necessities (food, clothing, shelter), but it speaks to the central means by which a social aggregate definitively lives. The problem remains to discover the relative significance of an interlocking set of useful social tasks in any given case. What then is core or central to a social formation's livelihood?

There are several indices which could be used in identifying a core. All the following provide criteria for ascertaining which labor processes may be judged most significant:

- 1) Provision of material necessities, especially food (e.g. calories, protein)
- 2) Proportional allocation of labor time in the social formation
- 3) Production for exchange within a wider division of labor
- 4) The share of exchange value paid for particular forms of labor (where exchange is generalized)
- 5) Contribution to the reproductive needs of domestic groups
- 6) Reported cultural rank accorded to activities or products.

In some cases, and Samburu is one of them, the core of labor would be defined in the same way according to any of the six indices. But, even with Samburu, careful examination of numbers two and five above reveals a more complicated emphasis than their identification as cattle herders would suggest.

In many instances, however, the core is less clearcut and the various definitions may run counter to each other. Anthropologists have often focused on the main food staple (yams, rice, milk) when trying to identify the core of a preindustrial economy. This is a good index, especially where exchange is minimal. But it draws attention to consumption, not labor, and it becomes less important as markets and states rise in significance. Perhaps the allocation of time to the provision of livelihood within a social formation is an adequate indicator. What do people do most of the time? This is objective and empirical, but it leaves somewhat vague what 'working for others' means and time is relatively undifferentiated in many milieus. Specialization in the division of labor is usually identified by some product that is distinctive in a wider system of exchange. Thus a people may be known to outsiders by what they sell, even if it does not provide the bulk of their livelihood. In any case, exchange value is a reliable measure of labor's social character in the sense that what is produced will be consumed by someone alien to the producer. Whenever wages or commercial sales are prominent, contribution to share of exchange value will be a good index of what is considered labor in a given community.

All of the above (with the possible exception of the second) understate the usefulness of labor performed in the home as part of the routine tasks of social reproduction. This sphere is universally associated with women; it is less visible; its social horizons are intrinsically narrow; it may be less variable across societies. Since livelihood is intrinsically a matter of reproduction and domestic labor is always performed for others and occupies a large chunk of society's useful activity, it must be given a place at or near the core of any account of labor. Finally, all the above involve some objective research procedure; it is possible that soliciting the subjective preferences and ranked cultural values of the actors in a social formation would yield useful information.

It remains the case that identifying a core of labor will be more problematic in some cases than others.

B. Core and Residual Labor: The Samburu

The degree of specialization exhibited by the Samburu makes them particularly apt for illustrating the core/residual concept. The following empirical description is preliminary to any theoretical analysis of labor. The research can classify the more overt features of labor activity, but a comprehensive understanding of the labor process requires further analysis of both its social and technical dimensions.

The focus of Samburu material and social life is obviously revolves around herds. Herding has five principal components:

1. Herding as Labor Process.

- A. Herding tasks: animal husbandry involving stock and their ongoing products.
- B. Tasks supplying herding means of production
- C. Processing of herd products
 - 1. ongoing
 - 2. terminal
- D. Acquisition and disposal of live animals and their products
- E. Recruitment, socialization and organization of herding labor

These five aspects of core labor process in Samburu economy (and, indeed in all herding economies) combine a social and technical dimension. What makes this core particular is not merely the raising of animals, but the raising of animals within a specific social organization---one which differs, markedly, for example, from capitalist ranching. The above 'core' classification starts by identifying all the activities in which human beings interact directly with their animals (.A.). The means that enable animal husbandry to take place are then listed (I.B.). In the next two sections (I.C. and I.D.) the circulation of live animals and

the disposal of their terminal products are elaborated. Finally, the supply of human beings to herding enterprises is included as an integral part of their functioning (I.E.).

But there is more to herders than their herds. A variety of wants and needs must be met in ways which may be predicated on the herding focus but which do not directly involve livestock or people in their capacity as herders. The residual sector of production, being much more heterogeneous than the core, is classified along two principal axes. The first of these is the conventional distinction between goods and services, while the second separates flow internal to the herding economy from those which involve import/export transactions. Secondly activities may thus be grouped as follows:

II. Residual Activities of Herders:

- A. Internal provision of goods indirectly related to herding.
- B. Internal provision of services indirectly related to herding
- C. Import and export of goods not related to herding
- D. Import and export of services not related to herding

These residual activities should be seen as ancillary to those of the core. While they are infinitely expandable in theory, they are heuristically limited in practice. (See Table I, pages 18 A-E, for the full elaboration of this classification)

TABLE

LABOR PROCESS: THE SAMBURU

CORE

1. HERDING AS LABOR PROCESS

(This list must be applied separately to cattle, camels, sheep goats and donkeys where appropriate)

A. Herding tasks: animal husbandry involving stock and their ongoing products.

pasturing- leading to and from pasture
monitoring grazing, browsing, etc.

milking

watering- (including surface water, wells, vessels)

taking to salt licks

bleeding

animal health care- prophylactic and curative
delivered through modern veterinary
services and by indigenous means

animal reproductive services- breeding
castrating
weaning
ante- and post-natal care

identification- e. branding

animal socialization and discipline

chasing strays

supervisory tasks related to herding- stock distribution
movement decisions
daily

B. Tasks supplying herding means of production

Kreal construction and maintenance-stone pens, brush fences, movable pens

Guarding pasture and animals from human/animal predators

Digging and maintaining wells and troughs

Range modification- including burning vegetation

Transport of water for animal consumption

Manufacture of water vessels for animal use

Manufacture or purchase of other means of production:

herding sticks

milking vessels

branding irons

castration hammers

bleeding arrows

weaning decoys (muzzles)

whips

knives/spears

ropes

bells (wood, iron)

animal charms

animal medical preparations

animal chastity belts

building materials, e.g., cement

C. Processing of herd products

1. Preparation of milk for human consumption

processing of ghee

preparation of milk/blood gelatin

use of dung- for fuel and plastering

use of urine- for tanning, etc.

2. Terminal products

slaughter of animals

butchering

drying meat (sun-dried, smoked)

cooking meat

curing hides and skins

further processing of hide products for:

clothing

cord

sleeping mats

processing of other products: fats for lubricants
scrotum for mall bags
sinew for thread
horns for containers

D. Acquisition and disposal of live animals and their
Products

inheritance
bridewealth
marriage settlement
stock partnership
allocation of milking rights within homestead
loans of milk cattle beyond homestead
sacrifice
bloodprice
fines
gifts
barter
market sale and purchase of animals
raiding
stealing

E. Recruitment, socialization and organization of herding
labor.

Socialization of herders

training herdboys
age-set indoctrination
domestic education
transfer of oral tradition by elders

Recruitment of personnel

marriage
reproduction
adoption
reciprocal exchange of labor
hire
clientship

Coordination of labor activities

(allocation of tasks within the hut, homestead,
settlement, herding camp)

Conflict resolution related to herding

prevention of violence
dispute settlement

II. RESIDUAL LABOR ACTIVITIES OF HERDERS

A. Internal provision of goods indirectly related to herding

collection of plants

for manufactures: housewats, ropes

for medicinal purposes (human)

for cooking purposes

collection of wood

for fuel

for manufactures: vessels
furniture
utensils

hunting of large game

beekeeping

house construction and dismantling

weaving roof mats

making house frame

use of transport animals to
move house

food and drink preparation

acquisition of water for

human consumption

making fire

preparing tea

cooking maize meal

manufacture of other household goods

e.g. toys

gourd containers

tobacco pouches

B. Internal provision of services indirectly related to herding

Domestic services

- childcare
- cleaning house
- cleansing milk containers
- washing clothes
- repair of household goods

Ritual specialization

Medical specialization

Juridical specialization- meeting non-herding needs of herders

C. Import and export of goods not related to herding

- IMPORT
- tea
 - sugar
 - maize meal
 - blankets
 - soft drinks
 - matches
 - cooking fat
 - tobacco
 - jewelry
 - cloth
 - dishes
 - honey beer
 - firearms

EXPORT None (beyond herd products) (exception: poorer Sanburu may sell beaded handicraft and some, near towns, raise chickens to sell eggs).

D. Import and export of services not related to herding

- IMPORT
- education
 - hospital and general human health services
 - transport
 - government services
 - postal services

- EXPORT
- wage labor- especially
 - military and police
 - night watchmen
 - urban self-employment
 - teachers
 - charcoal venders
 - menial laborers

—urban

—rural

The above classification was derived from both ethnographic materials and preliminary research among the Samburu of Waaba Division, Samburu District. Fieldwork studies will seek to ascertain the specific characteristics of Samburu task repertoire: e.g. personnel, location, timing, content. Empirical determination of how people and activities are combined should lead to a modification of the original labor classification.

Most of the tasks listed in the core/residual list are divided according to a specific normative pattern emphasizing age, sex, and membership in corporate groups. Prescriptive social organization is normally most complex and visible when core activities are involved. Although there are some obvious exceptions, ancillary activities are more likely carried out on an individualistic basis and in an atmosphere of greater personal freedom. However, rigid the social organization of core activities may be, it must be flexible enough to ensure the continuous supply of necessary goods and services at times of scarcity.

The core/residual framework can be the basis for wide-ranging empirical generalizations concerning labor. But it takes Samburu activities out of their meaningful contexts. By itself, the taxonomy cannot describe how herders sustain a coherent system of production. One must look beyond the formal typology to the substantive features that underpin its dynamism and integration. This requires an elaborate analysis of labor for which the next section provides the framework.

3. The Two Sides of Labor

A. Theoretical Introduction

A study of labor in a particular social formation at a given point in time must mediate the artificial contrast between the locus of the study and its wider historical and geographical context. Analysis of the social and technical components of labor must be informed by such broader horizons since the determinants of localized phenomena often extend beyond the immediate field of study. The research design below incorporates a view of small-scale societies as evolutionary entities; accordingly, elements of modern markets and states are seen as integral to their functioning.

In some sense all human activity is both social (in being culturally influenced, if not directly cooperative) and material (in effect). Labor is useful activity. It is part of what people do. The process of analytical abstraction allows one to identify two complementary predicates of labor: the social organization of labor and the material conditions or technology. I choose to call the two sides of labor social and technical, combining in the latter term both physical and mental aspects of labor. The social organization of labor, though highly structured, allows for considerable variation in the carrying out of activity: rules are always realized as practical interactions between human beings. Equally, the material conditions of labor are always guided by the producer's practical knowledge. To put the point another way, all technical dimensions of labor are in some degree social; and all social dimensions have a technical aspect. Diagram I summarizes the components of the two sides of labor. It is followed by a discussion of technology and social organization which elaborates the analytical forms with specific reference to Samburu.

DIAGRAM I

The Two Sides of Labor

Empirical Description of Labor

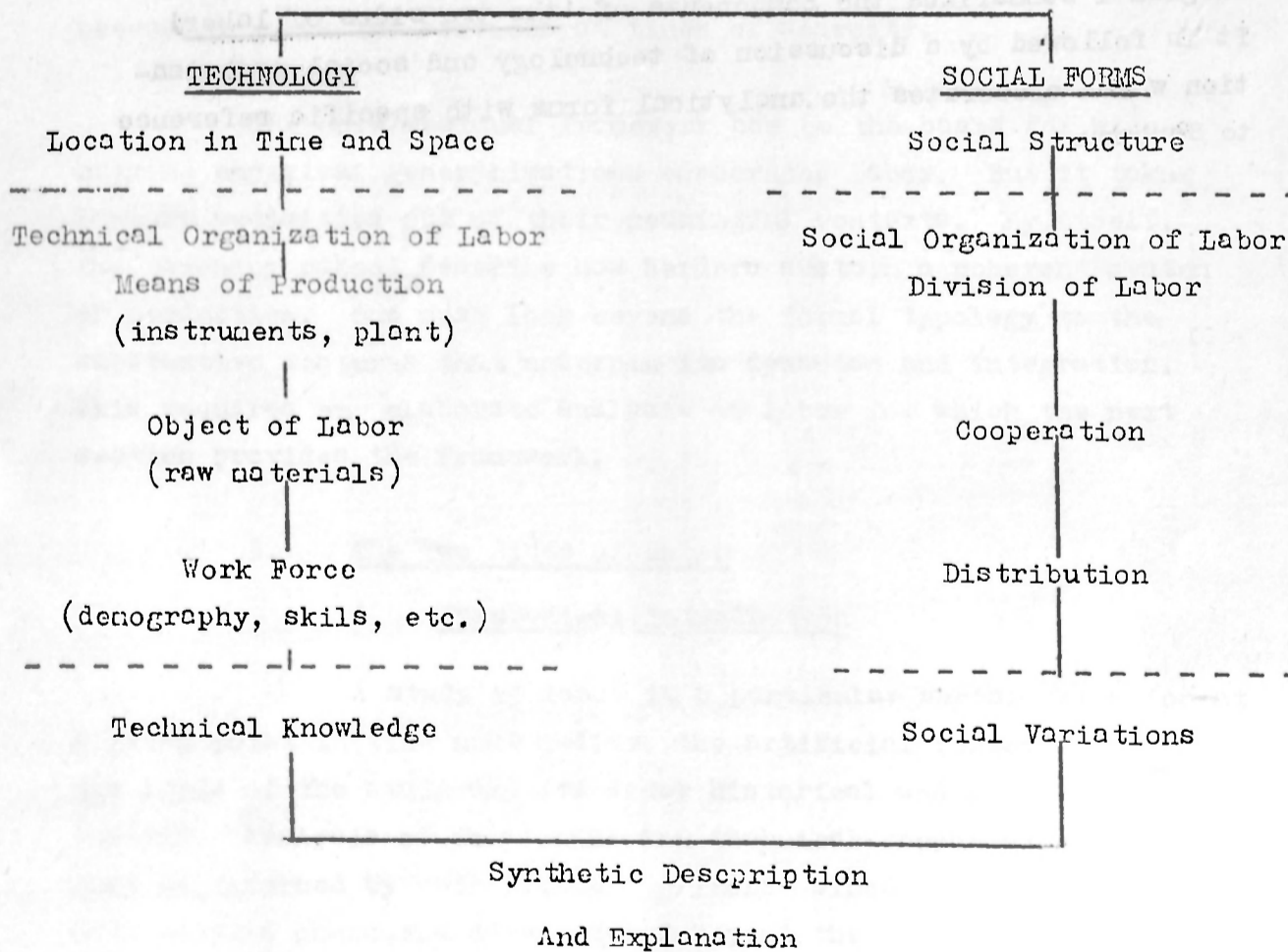
As Activity

In a Given Social Formation

(e.g. Table I)

CONTEXT

(History, Geography; Politics)



B. The Process of Labor: Technology

Any economy is predicated on specific material conditions. At one level these are temporal and spatial dimensions of laboring activity. At another, they are its technical organization. Finally, human knowledge of these conditions is integral to a discussion of labor as technique.

Location in Space and Time: Labor in any of its aspects must be mapped on fairly precise coordinates of space and time. In the Samburu case, particular attention will be paid to economic geography (especially the modern built environment), to ecology, and to changing land use patterns. The economic geography of Samburu is marked by a dearth of towns and infrastructure; the few roads require four-wheel drive vehicles and markets are concentrated on the more privileged plateau. Extra-regional communications are limited: one post office one telephone center, and several airstrips serving bureaucrats, doctors and tourists. The physical environment of Samburu District is extremely varied being characterized by a stark division between highland and lowlands. Rainfall is sparse, unpredictable and localized; and the patterns of wet and dry seasons change with altitude. Samburu land use is subject to two main influences: 1) the ecology of their arid savannah requires a complex regime of transhumance and 2) throughout the last century, their access to graze has been circumscribed by other pastoral groups, widespread theft and stock raiding, government administration and commercial activity.

Technical Organization of Labor: It is conventional in industrial economies to identify three principal components of the work process: means of production (physical plant, instruments), the object of labor (raw materials), and work force (human inputs conceived of as quantitative abstractions). Apart from the exiguous huts and tools of the herders themselves, the most visible means of production in Samburu District are government structures (e.g. dips, holding grounds). Modern veterinary medicine has become an indispensable tool of herding. The object of Samburu labor is conceived of as three main categories: animals, the range, and raw materials used for processing. Labor is concentrated over-

whelmingly on their cattle, camels, sheep and goats. Because animals are living energy converters, they serve simultaneously both as object and as an aid to human labor, as means of production (i.e. converting graze and water into meat and milk). Range modification takes place both through controlled grazing and limited burning. Most raw material processing is aimed at domestic consumption (e.g. roots for soup). The category of work force is particularly adapted to industrial wage labor markets, since it assumes that the timing and output of particular tasks is readily measured. Identifying quantitative labor inputs to Samburu herding is doubly difficult, in that the tasks are not easily isolated in time and outputs bear an extremely indirect relationship to labor inputs. In particular, even if a family's labor time could be measured, its contribution to the size and milk yield of an adult cow never could.

Knowledge: Technology is both the material conditions of labor outlined above and human knowledge of those conditions. This study is concerned more with the sharing of stored social knowledge than with the more transient perceptions of individuals. Samburu technical knowledge is not a closed or static entity. These herders have shown themselves to be innovative over a fairly wide front. A working assumption would be that this knowledge is highly focused on herding conditions. Relevant studies in East Africa (Fratkin 1980, Dunne and Western 1979) have shown that herders have elaborate technical repertoires dealing with animal physiology, range ecology and indeed their own health.

C. The Process of Labor: Social Forms

The material conditions of labor are given form by social organization. In this section the social organization of labor as such (division of labor, cooperation, distribution) is placed within the wider institutional setting of social structure in general. Finally, the formal analysis is extended to take account of social variation.

Social Structure: Social structure consists of the most formalized groups and rules of behavior in the institutional hierarchy of a social formation. It is thus a relative concept. The essence of social form is that it is presumptively invariant, while its content is variable. Social forms are, therefore, the more durable, and regular features of collective behavior. Within Samburu, three levels of social structure may be identified (see Spencer 1965, 1973; Furagalli 1977). 1) The largest social units are the tribe, its sections and clans, and their associated age-set organization. These are the highest-order corporate groups. 2) At the opposite extreme lies the intensive collaboration of domestic units formed by marriage and held together by the authority of a male head. Social relations are here governed by formally binding institutions of which bridewealth and the marriage settlement are the most important. 3) An intermediate level of association consists of camp formation, neighborhood ties and stock friendships. These more ad hoc networks are always informed by a strongly codified ethos of cooperation. Social relations at each of these levels are defined in ways that go beyond the labor process, but which directly influence its organization. One aim of the proposed study is to pursue these subtle connections in a systematic way.

The Social Organization of Labor: The social organization of labor is seen as having three interlinked aspects. Labor is first divided before it is combined into work teams. Division of labor is therefore the segregation of workers in specialized roles, while cooperation is the empirical performance of labor. Distribution refers to both the allocation of property rights in the conditions of labor and the apportioning of its products. In this analysis, distribution is intrinsic to the labor process itself. Investigations into the division of labor in Samburu will focus on three areas:

- 1) the allocation of tasks according to sex and age within the most intensive structures of collaboration
- 2) the exchange of products between herders and minority specialist groups such as blacksmiths
- and 3) Samburu specialization within the regional division of labor linking them to neighboring tribes and national markets. Cooperation in Samburu is not always a free association

of equals. Relations within domestic groups, for example, are structured by a potentially coercive pattern of authority." Beyond the homestead, however, local associations of elders and stock friends are conducted along more egalitarian and voluntaristic lines. Distribution is in many ways the most complex category in the analysis. Ownership rights in animals, water and graze are never clearcut in Sanburu; all property is subject to an overlapping set of inclusive rights and obligations. The complexity of distributional mechanisms is greatest where animals are concerned. The range of institutions depicted in Section I.D. of Table I above highlights the need to analyze market and customary forms of transfer within an integrated framework. In general, the time horizons of commercial activities are characterized by a precision which is absent from the majority of indigenous transactions. Thus, labor performed for wages has a short-term and definite payoff; whereas the connection between work and property is often both obscure and long-term in Sanburu.

Social Variations: Even though one axiomatic feature of form is its invariability, all forms may be seen to be variable when juxtaposed within more inclusive sets. Moreover, they generally appear to be less fixed when seen in the light of their less definite content. In the case of Sanburu social structure, corporate groups of a given type may vary in terms of their most crucial attributes. Thus, for example, Masula-section ignores the exogamy rule which defines all other segments of the tribe. Equally the rules for labor cooperation and property devolution permit considerable variation in practice: for example, a mother has a significant say in how the patriarch's herds are devolved onto her sons. Much of the ethnographic investigation will be devoted to exploring the relationship between the range of variation in actual behavior and the explicit rules governing, descent, age-organization and co-residence.

D. Synthesis

The detailed analysis of both sides of labor is a prerequisite to any synthetic description or explanation. The analytic framework outlined above permits an almost infinite range of synthetic questions to be posed. In the Sanburu case, the issue of herding strategies is particularly suited to an approach grounded in systematic

inquiry into the social and technical dimensions of labor. Take the example of selling a cow. The transfer of the animal has material consequences for the herd (depending on its age, sex health, etc.) and its value to the herder is measured in the short-term as a money return. But, every such sale is understood by the Santuru themselves as the removal of an animal from the social circuit linking the herder to his family, stockfriends and kinsmen. Thus what matters is not one isolated event, but the pattern of animal transfers over time. The determination of herding strategies should, therefore, rest on a substantial dossier of such events being placed in their wider context of social relations over time.

The ethnographic historical aims of the study are outlined in the section on methodology below. What follows directly is a number of specific research questions drawing both on the analysis of 'the two sides of labor' and on the synthetic possibilities which it affords.

IV. Specific Research Questions

The guidelines of this inquiry have been formulated to advance current knowledge of a) the technical conditions of herding and its ancillary activities and b) the social organization of pastoral labor. Further, they seek to identify the multiple economic pursuits associated with pastoralism and the role of the pastoralists in the larger regional economy.

The section is divided first into a series of questions reflecting the various components of the analysis of labor. Second, some examples illustrate the kind of synthetic investigation made possible by such an approach.

Much of this inquiry seeks to describe a series of unknowns:

1. What are the pastoral criteria for assessing rangeland resources?
2. How do herders pass information on water and graze?
3. How is herd reproduction monitored?

4. What are the observed labor margins for tending various types of stock (under what ecological, seasonal, security conditions)?⁴
5. Is knowledge of plant ecology, animal disease etc. specialized according to sex?
6. How specifically do herders recognize long-term cycles in resource fluctuations?
7. What are the territorial dimensions to social structure? Precisely what property rights are conferred by membership to corporate groups? How do these privileges relate to man-made units (e.g. wells, dips)?
8. How are internal specialists (e.g. blacksmiths, diviners) remunerated?
9. How do base camps and outlying camps coordinate their activities?
10. What are the terms under which labor is recruited from outside the homestead?
11. What sanctions reinforce precise arrangements for pooling labor?
12. How far do networks of stock partnerships extend in space and time?
13. What types of wage labor do pastoralists seek? What jural rights do wage laborers maintain in the herd?

Such research questions may be combined to generate particular areas of inquiry:

A. Division of Labor by Sex and Age

The division of labor in Samburu suggests that the workloads do not fall evenly on members of a pastoral household. Younger and older men engage in activities which allow for economies of scale. In the former case, young men and boys are predominantly out with herds on the pastures; in the latter, seniors are responsible for many of the supervisory tasks of home management and

⁴re: Labor margin-Dahl (1979) suggests that "once labor has been allocated to look after the needs of a particular herd or sub-herd, there is often a 'margin' where more stock can be brought into the unit at little cost."

livestock strategy. It should be emphasized that it is the women who engage in many of the tasks which multiply linearly, i.e. the more milking animals, children etc., the greater the work load. Further, the demand for all kinds of labor is intensified in the dry season. For women, food preparation takes longer, drinking water is fetched from afar, and grass/pods must be gathered for small stock. For men, livestock watering and grazing are more arduous, animals are slaughtered more often, and a larger number of herd units requires greater supervision. This study will examine the distribution of work between men and women as it varies seasonally. A proposition of this research is that the dry season places additional strain on the supply of female labor; the costs of this increase need to be assessed.⁵

B. Selective Emigration and Herd

Management Organization

Among the Boran, Dahl (1979) has noted that selective migration (of young men) has led to a shortage of labor for pastoral work; this sometimes compels herders to amalgamate dry season milch herds and flocks. Seasonal migration for wages, the effects of schooling on child labor, and longer-term absenteeism all modify the supply and composition of the herding labor force. The question is how far these trends have forced livestock management units to alter occupational roles and

⁵During preliminary fieldwork investigations, fifty Samburu households were asked to describe the seasonality of labor demands. All male respondents indicated that the dry seasons were the most labor intensive: wells had to be dug, animals taken to lala (dry season pasture). The women, however, were almost equally divided in their assessments of the seasonality of work. In the dry season, water for human consumption is harder to find, trips to town to buy maize meal are more frequent, more skins need to be tanned---all female chores. Yet many women (forty-five per cent) perceived that it was the wet season in which labor demands were the greatest: pens had to be built for newly born small stock, more animals had to be milked. (These initial interviews are only suggestive. Fieldwork research will analyze seasonal work schedules as they vary by animal wealth, access to water/forage resources and household size).

herding techniques. Wage earners make both positive and negative contributions to the viability of their home economy. Proposition: Selective emigration leads to fewer specialized herding units and/or a modification in the social organization of labor.

C. Domestic Units and Labor Organization

The East African literature, drawing from western models, often focuses on the household as the key to pastoral production. By analyzing labor as a social and technical process, as well as linking production to the distribution of products and ownership rights, this study will examine the concrete basis of domestic organization. In particular, it will show how the complex demands of production and reproduction necessarily generate a plural pattern of organizations aimed at co-residence, work, distribution and consumption. Behavior should be presented as a range of observed variations, rather than merely as uniform stereotypes owing little to systematic empirical research. The Working hypothesis of this study is that residential arrangements and labor organization do not coincide. Consequently, households are not isolable as units in which labor and co-residence are strictly combined.

V. Locus of Study: The Samburu

The Samburu of Kenya are particularly well-suited for a study of labor organization in a pastoral society. Their extreme economic dependence on livestock, relative autonomy vis-a-vis the national government and general pride in herding activity suggests that they are as committed to 'pastoral pursuits' as any African herding group.

The Samburu present an equally important arena for the study of pastoral development. The constraints being faced by these herders (encroachment by agriculturalists, loss of land to wildlife reserves) mirror those of many other savannah pastoralists. The scope of planned initiatives--group ranches and grazing blocks as well as a spate of non-herding commercial activity--is wide-ranging. Herders are now also shop-keepers, cattle trekkers, etc.

The reasons for the choice of the Samburu for a pastoral labor-oriented study are elaborated as follows:

1. In terms of pastoralism:

- A. The Samburu are one of the more specialized herding groups in East Africa.

Samburu District has been an important supplier of immature animals to the Kenya market (Perlov 1981) and researchers have variously assessed the cattle to people ratio at 17.5:1 to 8:1 (Schneider 1979, Spencer 1965)⁶. While the Samburu household itself (c. 10 persons) owns an average of 80 cattle, income disparities are considerable. A recent Samburu District Development Plan estimated that 50% of the population should be candidates for famine relief, with 10% being virtually destitute (Kenya, 1980). While some Samburu without stock are integrated into the herding community, many hundreds now perform menial tasks around towns (e.g., fetching water and firewood for others, sweeping courtyards).

- B. The constraints faced by the Samburu may be similar to those of many populations of East and Southern Africa.

The Samburu are heavily dependent on pastoral produce and committed to pastoralism as a livelihood. Their semi-arid grazing areas are predominantly bushed and wooded grassland and

⁶ Only the Barabaig of central Tanzania have a purportedly higher animal/people ratio of 18:1.

⁷ "All quantitative data relating to pastoral systems must be regarded with extreme caution... Semi-arid regions experience considerable instability and data collected at a particular time and place may have little representative, predictive or comparative value" (IDA 1980). Further, the data on off-take itself are inconsistent: 'off-take' may refer only to the fraction of the herd which enters the commercial market to the exclusion of the herds slaughtered for consumption by the herders themselves (Horowitz 1979).
N.B. The above figures also exclude small stock counts.

characterized by low-moderate rainfall (often unreliable).⁸ Water development prospects look dim (GOK 1980) and the traditional (higher potential) dry season pastures are being encroached upon by farmers and commercial ranchers. Given, however, that 77.0% of the District land has been classified as 'low potential', both the pastoralists and the government must be committed to the idea of herding in some form.

- C. The Samburu have been the subject of both previous ethnographic study and of extensive inquiry by administrators, explorers, etc.

The historical legacy of research on this pastoral population is unusual for its depth as well as its diversity: British colonial documents extend from the early 1900s; missionaries and traders leave diaries from the decades before (Neuman 1897, Von Hohnel 1894); more recent works by naturalists, historians, economists highlight select information 'gaps' (e.g. Van Zwanenberg and King 1975a,b, Dalleo 1975). Ethnographic research, past and ongoing, provides a firm framework for this specialized inquiry into labor organization (Spencer 1965, 1973; Fumagalli 1977; Perlov 1981, 1982; Ssenyonga, n.d.).

- 2. In terms of the position of herders in the changing regional economy and in terms of their responses specifically to livestock development initiatives:

- A. Samburu District is presently the target of a major integrated rural development plan.

Programs include: a) infrastructural facilities (roads, water systems, postal and telephone services, airstrips, etc.)
b) commercial crop production (particularly wheat and maize on Lorroki Plateau) c) fish farming d) forestry industry

⁸ Rainfall precipitation in the north and eastern parts of Samburu District (Nyiro, Njoto and Matthews Range) reach a high of 750-1250mm yet the majority of the District records 250-500mm of rain (GOK 1980).

(for wood pulp products) as well as (c) range and ranching schemes. As emphasized in the Samburu District Development Plan of 1980, the livestock development plan is expected to have the greatest impact. Adjudication procedures, aimed at sedentarizing the pastoralists, were officially initiated in 1972, with field-work beginning in 1974. To date, 300,000 hectares have been adjudicated.⁹ Such development plans are having concrete effects. Holding grounds have been set up near Suguta Marmar; livestock auctions were held in Samburu District in October 1981 and May 1983 (the only times in eight years).

- B. When given the choice to abolish grazing schemes in 1961 (just prior to Kenyan independence) the Samburu voted to abandon the range restrictions

The Samburu have had a long history of livestock management by uninvited overseers. In 1933, the British 'gave' them use of the Lorroki Plateau with the stipulation that "they would not be allowed to ruin the country by overgrazing and conditions would be imposed to prevent overgrazing" (Native Council Meeting May 14, 1933). Culling branding was introduced in 1939; grazing schemes were reinforced on the Lorroki Plateau in 1942 ('excess' stock was forcibly moved to the lowlands) (Doherty 1977). By 1960, 26% of the District (c.8,000 sq. miles) was under strict control (Spencer, 1965) and an additional 1,076,856 acres (1,683 sq. miles) were delineated forest areas and also subject to severe restrictions. In 1961, the Samburu elders cast a curse against anyone who had contributed to maintaining the colonial grazing plans (Fumagalli 1977).

- C. Since national independence, the Samburu have experienced a series of crises which have left many herdoowners stockless

The 'shifita' wars of 1964-1969, a pan-Somali secessionist movement in the Northern Frontier District, resulted in large

⁹This represents 15% of the District area. Government plans project that another 1.6 million hectares are to be adjudicated by 1983 (GOK, 1980).

losses of men and livestock. (In Wamba Division alone during the first two years of conflict, more than 12,000 head of cattle and thousands of small stock were slaughtered) (Funagalli, 1977). The droughts of 1959-61, 1965, 1970-71 and 1980 have contributed further to making a difficult situation more desperate.¹⁰ Widespread landitry and stock raiding continue to plague Samburu.

In summary, the Samburu provide an outstanding case of an historically strong pastoral production system which finds itself subject to ecological and economic constraints. Simultaneously, Samburu District is the arena of a diversified development initiative which aims to expand the range of productive activities and to modify milch-oriented herd management. How the Samburu are continuing to raise animals and to respond to the larger economic environment (both in terms of social organization and production technique) can be clarified through micro-level analysis of labor organization.

¹⁰ One-fifth of Samburu families currently has ten stock units or less (GOK 1980:10)

VI Methodology

1. Site

The locus of research is south-central Sanburu District, between Maralel and Wamba. The site has been selected for the diversity of its ecology and its partially urbanized economy. Specific fieldwork sites encompass both the semi-arid lowland savannah and the higher potential tree grassland of the Lorroki Plateau (zones VI to II (Pratt and Gwynne 1977) rainfall 500mm to 1000mm). Commercial opportunities are also varied: Maralel (with an estimated population by 1985 of 5700) is a rapidly growing urban complex and serves as the District administrative headquarters; Wamba, somewhat smaller (estimated 1983 population of 3600) is presently an expanding service center; Lodungkokwe is scarcely more than a trading post and way station.

As the herders themselves do, the writer will move among seasonal grazing areas. The research will be principally conducted in pastoralist camps. It will take part during a full cycle of wet season/dry season movements, and should therefore take a minimum of fourteen months on the range. Several encampments will be monitored throughout the year. The sample will be drawn to take optimal account of four variables: 1) the size of domestic groups and their stage in the developmental cycle 2) wealth differentials 3) diversity of economic interests and 4) location (esp. distance from water).¹¹

¹¹ Preliminary analysis shows water, more than graze, to be a determining factor in labor allocation and movement.

2. Introduction to Research Methods

The bulk of what follows outlines the formal methods to be adopted in this research. By their very nature, such methods aspire to objective and systematic results. Of equal importance, however, are the general tools of ethnographic fieldwork. These may be summarized as participant observation, interview, life history compilation and ad hoc conversation. Data gathered in this way are often more subjective and unstructured. The juxtaposition of formal and informal methods lends greater lucidity to each.

A. Research on herd management

Conventionally, Samburu herd management has been described as a series of four concentric rings (See Spencer 1965, 1977; Funagalli 1977):

- hut- the smallest domestic unit represented by a wife, her children and her allotted herd.
- homestead- the polygynous grouping of several wives, their children, their allotted and residual herds; this 'family' has been seen as the locus of herd management and property relations.
- Camp- a temporary grouping which shares herding tasks and is reorganized with resource fluctuations, changing herd composition, etc.
- neighborhood- 'local clan group' - an ephemeral cluster of camps which coordinates use of regional water resources and pasture.

Rather than assume such a typological model, however, this research aims to identify labor units as they vary by activity (e.g. milking, pasturing) and by season. Starting with the core of herding tasks, I will trace the relations among work teams, decision-making units, coresidence and consumption groups, and distribution arrangements. It is not expected that production, consumption and circulation units will be coterminous.

B. Research on ancillary activities, both market and non-market:

Work teams will be monitored in their range of activities: beekeeping, manufacture of material items, gathering of wild plants, chilucare etc. In addition, specialized 'activity centers' - such as holding grounds, trading posts, schools, health clinics - will provide foci of investigation, both in terms of personnel and user participation. The growing phenomenon of wage labor itself will be elucidated through surveys of both pastoral camps and neighboring towns. Clusters of Samburu will be interviewed on an opportunistic basis in Nairobi and Isiolo. More systematic labor profiles will be presented on wage earners in Samburu District.¹² These 'non-herding' studies aim to clarify a) the articulation of livestock management with complementary (non-herding) pursuits of the pastoral Samburu and b) the effect of cash-earning opportunities on Samburu social organization, herding strategy and general productive enterprise.

3. Data Collection

The research will include the following:

A. General description of labor processes

The range of activities is elaborated in Appendix I. Broad categories include:

I. Herding as labor process.

- A. Herding tasks: animal husbandry involving stock and their ongoing products
- B. Tasks supplying herding means of production
- C. Processing of herd products

¹² Initial investigations in April and May of 1983 indicate that many Samburu hire "foreigners" (esp. Turkana) as well as other Samburu to help them herd. Further, surveys of the three major District centers- Maralel, Wan'a and Baragoi- show that Samburu own a substantial number of town plots, although the actual running of shops is delegated to other ethnic groups. Study is too preliminary to estimate figures for these phenomena.

A. General description of labor processes cont.

I. Herding as labor process (cont.)

- D. Acquisition and disposal of live animals and their products
- E. Recruitment, socialization and organization of herding labor

II Residual labor activities of herders

- A. Internal provision of goods indirectly related to herding
- B. Internal provision of services indirectly related to herding
- C. Import and export of goods not related to herding
- D. Import and export of services not related to herding

The breadth of the description of the task repertoire has been outlined in section III.
The framework encompasses:

(i) Technology

- a. location in space and time
-
- b. technical organization of labor
 - object of labor
 - means of production
 - work force
-
- c. technical knowledge

(ii) Social forms

- a. social structure
-
- b. social organization of labor
 - division of labor
 - cooperation
 - distribution
-
- c. social variations

Comment: Such detailed analysis of the various labor processes draws from several precedents. See Oboler, 1982; Torry 1973, 1977; Terray 1972.

B. Specific description of operational units.

<u>Kind of data</u>	<u>reference unit</u>	<u>frequency</u>	<u>description</u>
Time-Labor Analysis	by activity by location main camp dry herding camp	(to be determined)	annual monitoring with particular emphasis on wet/dr season transitions

Comment: Time-labor studies will be effected through a variety of methods. Both labor recall and time allocation (or random visiting) techniques will be complemented by direct observation (see Grandin, 1982, Johnson 1975). Initially production units will be randomly visited four times a month and recall data will be collected for three consecutive days over a similar period. Results from the two will then be compared and the monitoring schedule adjusted. Such specific monitoring will take place only after three conditions have been met: 1) the task repertoire of Samburu has been elaborated; 2) the study of social organization is well under way; 3) the indigenous technical repertoire of Samburu has been initially examined. That is, the qualitative analysis will set the framework for the quantitative study. Along with task and time analysis, herders will be asked to specify the cooperative arrangements characterizing the activity (e.g. who was helping) and to provide a qualitative account of the work (obstacles? physical discomfort? repetitiveness?). Further, as Samburu herds are dispersed seasonally, enumerators will make several visits to outlying camps to reconstruct typical work patterns.

The units to be monitored will be differentiated along three major parameters:

- a) livestock wealth: within the same neighborhood (in which range, water and salt are equally available to all herders) studies will describe labor patterns as they vary by size of livestock holding.
- b) water access: initial surveys in several Wanba Division settlements (Ikisin, Sordo, Swaro) indicate that water, more than graze, is a critical variable in determining labor patterns. Encampments with ready access to water will be compared to those in which water provision necessitates long-distance travel.
- c) labor supply: households which have similar livestock holdings will be compared as they vary by number of workers. Research will particularly focus on labor strategies as they evolve with the house hold developmental cycle.

C. Mapping of herding population through space

- | | | |
|----|--|---|
| 1. | Mapping of empirical land use patterns | collection throughout fieldwork period |
| 2. | Mapping of land use patterns as revealed by cognitive maps | charting of potential pasture and water resources |
| 3. | Tracing of stock partnership networks

(distribution of animals) | |

Comment: The labor demands of herding are highly contingent on a range of variables: e.g. access to graze, water and minerals, social commitments, avoidance of raids, government regulations. The aim of the mapping strategy will be to identify the specific determinants and patterns of herders' movements. Regularities are directly observable as tracks of people and animals. Movements can also be mapped in reference to what herders perceive as their ideal range of options. Selection of precise camp sites and coordination of pasture use with other herders depends on the passage of information through channels which need to be investigated. Charting the movement of animals- through stock partnerships- will elucidate the spread of the herdowner's animals and the diversity of grazing reserves on which he draws at one point in time.

D. Historical reconstruction

sources:

Archival material

- travellers' accounts
- missionary records
- British colonial documents
- Kenya government publications

"Drought Calendar"/"Significant Events Calendar"

Life History Complications

Comment: The Samburu study needs to be put in the larger historical framework of Kenya's political economy during both colonial and post-colonial periods. While isolated documentary materials must be used with caution, taken together, they extend time and space dimensions of the fieldwork program. Several methods will be used to encourage indigenous recall of the events of the last 150 years.

Drought and Events Calendars sketch how the Samburu themselves perceive patterns of ecological resource fluctuation and histories of opportunities/constraints.¹³ Life histories specifically highlight the varied herder responses to the changing political economy. Apart from these subjective reports of people's lives, past and present governments have generated a mass of documentation bearing directly and indirectly on Samburu. Knowledge of colonial interventions and continuing political programs will be integrated into the ethnographic design.

4. Methodology: Summary

The methodology thus hinges on three research strategies: a) an intensive monitoring of rangeland pastoral labor organization which encompasses both herding practice and its ancillary activities over at least one full annual cycle b) investigations of individuals, activities and records that transcend the boundaries of camp life and link the pastoralist to a wider regional economy and c) historical reconstructions, including indigenous accounts and official colonial and government records, which highlight the opportunities and constraints faced by herders in both colonial and post-colonial eras.

¹³ Robinson's (1980) analysis of Gabbra history serves as an imaginative and precise model by which indigenous history can be reconstructed. Using oral data and written records, Robinson elucidates a century of Gabbra significant events and responses to recurrent natural disasters.

VII. Significance of Research

A. Relevance to Social Science

Substantively, such research will refine our notion of 'pastoralism' in the context of a highly specialized herding economy. The Samburu husband cattle, camel sheep and goats on a grassland savannah which sustains little other subsistence activity. The complex tasks which ensure that livestock both reproduce and yield ongoing products extend beyond the reductionist pasturing/milking/watering classifications (Swift, 1979). The monitoring of the full annual cycle, with a minimum of four season transitions, should broaden our knowledge of indigenous animal management. In addition, this research is designed to identify the multiplicity of activities which structure the growth of herds and herders. Domestic activity, manufacturing, and socialization of the labor force are integral to the pastoral routine; Table I suggests the scope of Samburu task repertoire. Finally, the intellectual framework of this fieldwork proposal places these Northern Kenyan pastoralists in the realistic schema of a larger political economy whose spatial and historical coordinates need be specified. The 'economics of pastoralism' (Aronson, 1980) can only be elaborated when researchers designate how herders herd and how pastoralists engage in activities beyond livestock keeping.

Theoretically, these investigations will test the operational utility of varied micro-level production units. The notion that corporate groups, agegrades, sections etc. provide the context for reproducing local level groups has been suggested but not demonstrated (cf. Bonte, 1981). Additionally, the reduction of production to the level of individual transactions (as advanced by Barth, 1966), runs counter to the main intellectual drift of this proposal. The growing interest in peasant models in European history has led several to embrace the 'household' or 'domestic mode of production' (Sahlins, 1972) as the focus of inquiry. Indeed, the household has been recently described as encompassing the activities of production, distribution, transmission, reproduction and co-residence (Wilk and Netting 1981). This study will

examine the low-level organization of production extensively and consider both the social and technical character of material reproduction. The utility of typological production models-- households, domestic groups etc.-- will be carefully considered.

The most ambitious theoretical goal of this research is to refine our analytical command of the concept of 'labor'. In partially-commoditized economies, the process of production cannot be dissociated from its social framework and many activities result neither in a product nor in a marketed service. Substantivist anthropologists might claim that this 'embeddedness' makes any definitive labor analysis impossible (Polanyi, 1957). Development economists, in contrast, manufacture quantification of pre-industrial labor demands with remarkable precision. They often fail to describe the breadth of activities as well as the social context of those activities (e.g. Cleave 1974, Delgado 1979). Researchers working in partially-commoditized economies need to elaborate the components of core production systems in a manner which permits the market/non-market schism to be bridged. Not only does 'labor' need to be clarified within the contents of social formations; but the relationship between the social organization of labor and its technological conditions has to be demonstrated at more than the normative, corporate level. The theoretical tools offered by a) the core/residual labor classification and b) an analysis of the social and technical domains of labor, lay groundwork for refining the concept of labor in all economies.

B. Relevance to Pastoral Development

Labor is a critical factor of production in pastoral systems. To date, however, there is a paucity of information on both the qualitative and quantitative parameters of pastoral labor allocation. Whether we are interested in safeguarding milch-oriented pastoralism or in facilitating change, it is essential to acquire more precise knowledge of the labor patterns of herding. This research aims to elucidate the social and technical repertoire characterizing Samburu material production.

Investigations will describe task repertoires, cooperative arrangements, technical expertise (knowledge and skill), and coordination of the use of range and water resources.

It is such background information which provides the framework for analyzing specific production units. As a study of labor--isolated by task, season and worker-- this fieldwork will start to differentiate the operative units of production involved in a range of pastoral activities. It may be possible to identify seasonal labor bottlenecks and periodic opportunities for combining herding with non-herding activity. Further, the relative efficiency of heterogeneous segments of the labor force can only be clarified through year-round micro-level monitoring.

The analysis of labor as both social and technical activity also permits investigation of qualitative production differentials. Proposed interventions must take account of the age/sex and wider social division of labor as well as describe the link between labor input and distribution. For example, several recent studies (Horowitz, 1979; Rigby, 1978; and Salem-Murdock 1979) suggest that male/female income and status differences become increasingly pronounced if cattle, previously husbanded for their ongoing products, are then herded specifically for commercial beef sale. Women lose control over allocation of milk, one of the few means of garnering cash and, hence allowing a measure of economic autonomy. Such comments are provocative and should be more fully documented to show how whole systems of pastoral production might be modified by social or technical innovations.

Finally, this study investigates Samburu labor in the broad context of regional (and, selectively, extra-regional) activity. Samburu increasingly buy and sell goods and services in centers beyond the rangeland. Debates over the future of Samburu and other pastoral societies must be informed by knowledge of the diversified options and far-reaching networks which link herders to the towns and cities of Kenya in the 1980s.

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