

Modernization, Urbanization and Stress: A Controlled Comparison from East Africa¹

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Colonialism, a political form that engulfed East Africa by the eve of World War I, ushered hundreds of thousands of subsistence horticulturalists into the modern era with market oriented, capitalist modes of production and bureaucratic forms of social organization. Colonialism brought state systems of government, stratification into class structures, and national systems of Western-style health care and Western-style formal education. Initially through coercion, and later motivated as much by desire for new opportunities and products as for need of tax monies to support the new regimes, individuals began to participate in the new institutional forms imposed by colonial regimes. It has long been hypothesized that participation in such new institutional forms leads to changes in attitudes and behaviors at the individual level (Inkeles and Smith 1974: 265-277). It is still far from settled, however, which among the multitude of experiences presented individuals newly incorporated into such emerging complex systems contributes to changes in behavior and attitudes (Swanson 1975). Another aspect of this complex experience is also far from agreed upon: is the experience of this sort of change stressful for those experiencing it? Some believe that these experiences are stressful and disorienting; others feel that this is not the case (Inkeles and Smith 1974: 12-14, 261-264).

Most studies addressing themselves to these issues in Africa have concentrated their attention on males involved in sociocultural change, including Inkeles and Smith's (1974) recent massive cross-national study. Because of this imbalance in the literature, and because

it is not at all clear that women have the same modernizing experiences as men, in this paper we have chosen to review some findings from a controlled comparison of women reared in two different East African cultural traditions, who are currently residing in two distinct settings, and who are differentially involved in emerging complex economic and sociocultural systems. The two cultural traditions are Kikuyu and Abaluyia; the two settings are rural and urban.

In the course of this paper we will summarize the results of another study (Weisner and Abbott 1977) which examines the relationships between a measure of individual modernity, a self-report psychophysiological symptom scale, and several commonly used independent variables. Once we have identified and assessed the strength of summary background variables which contribute to our understanding of the effects of modernization processes, we will present a descriptive analysis of contextual factors in the lives of East African women pointing toward the complexity of relationships between modernity and stress. This complexity is a fact that escapes the attention of those too easily claiming an all-or-none relationship between these processes and the phenomenon of psychophysiological stress.

Women in Africa

In a recent article, Bledsoe (1976: 373-374) has characterized much of the new wave of literature on women in Africa as either attributing to them unique institutions, motivations, and behavior patterns, or as over-emphasizing women's economic production roles as the basis for any power or status they might have (Boserup 1970; Paulme 1963). In agreement with Bledsoe, we feel that such emphasis leads to as much

error, though a different error, as the approach typical of much of British social anthropology (Fortes 1950; Gluckman 1950; Radcliffe-Brown 1950; Evans-Pritchard 1950), which concentrates on formal relationships between roles in economic and political institutions. These studies leave out altogether questions of individual strategy in interpersonal relations during adaptation to the massive change spawned under colonialism. Though within this paper we concentrate our descriptive and analytic efforts on women, they are seen as participants in the same emerging institutional systems as are their male consanguines and affines. We also must agree with Bledsoe that these women are potentially motivated as much or as little as men toward the acquisition of power, prestige, and security. Power is based traditionally on control of other people and increasingly in the production of subsistence goods, cash crops and wages, as well as through acquiring political support from those beyond the bounds of the conjugal unit and lineage (Bledsoe 1976: 374).

Further, in trying to understand the situation of the East African women discussed in this paper, we must not ignore the effects of cultural ideologies regarding appropriate behavior for males and females, in spite of the obviously powerful effects of capitalist market systems, state political systems, and bureaucratic organizational forms (Abbott 1975; Abbott 1976; Abbott and Arcury 1977). Colonial ideologies regarding appropriate roles for the sexes acted to limit or enhance access to emerging institutions, setting up patterns of access little changed today despite withdrawal of colonial politicians and bureaucrats. The sex-role ideologies of the cultures affected by colonialism also acted, and continue to act, in similar fashion. Access to and control over land as well as access to formal education are two critically important resources for successful participation in the capitalist market system and state bureaucracies that are linked into both traditional Kikuyu and Abaluyia sex-role ideologies and their attendant jural rights, as well as colonialist and post-colonialist traditions within the modern sector. Contrary to a strict Marxist or materialist position (Van Allen 1976: 75), a people's belief system regarding sex-roles must be examined if the full complexity of the position of these women is to be appreciated.

The Kikuyu and Abaluyia Women

We utilized three samples of women in Kenya, each of which provided insight into non-institutionally localized modernization and stress among **some** African women.

We say "some" because Kenya is relatively highly involved in the international economy and culture compared to other African countries, and what we find to characterize these Kenyan women may not generalize to other African women unless they occupy similar contexts.

The first sample of women is from a sub-tribe of the Abaluyia of Western Kenya who live both in Nairobi and in their rural home communities. The women and their husbands are members of a rural-urban network of kin who divide their time and resources between urban and rural settings (Weisner 1973; Ross and Weisner 1977). Sixty-seven women from the urban and rural settings were studied as part of a larger study of the effects of urban residence on family life. This sample is based on a study of 24 matched pairs of men; half the men are living in Nairobi (some with their wives and some without) and their matched counterpart is living in their rural home village. The rural men do not currently have wage jobs, although most have worked in cities in the past. The men are matched on age and educational level, and all these men are members of the same large patrilineal, patrilocal clans in their rural home villages in Western Kenya. The group of men and their spouses and children form a social network which extends between the city and the rural home community (Weisner 1976). The women interviewed for the rural-urban network sample are all residents of these men's homes, or in related, neighboring homesteads. The rural resident women (N=33) are all actively engaged in horticultural work, and the urban resident women (N=34) engage in at least some farm work during those parts of the year when they return to their husbands' rural homes. If women remain in the city, they usually continue to have some indirect managerial or other functions relating to farm work. The Abaluyia women thus participate indirectly in modernizing institutions through their involvement in rural-urban networks of kin; they themselves are not directly employed, nor are they permanent city residents.

The Abaluyia rural-urban sample women live in a wide variety of family settings. Fifty-eight percent live in nuclear homesteads while resident in the rural community; another 19 percent live in three-generation expanded families, and 23 percent are in large extended family units in joint co-residence with the husbands' siblings. The families in the rural-urban, commuter sample are similar in their size and personnel to a larger sample of families from Kisa, the rural home community. This rural community, like most East African horticultural societies today, relies on urban migration

and the remittance of some cash income to supplement subsistence farming. During the life cycles of most men, periods of time will be spent seeking (and hopefully attaining) urban employment; the spouses of these men will similarly spend some portion of their time visiting with their husbands, and some time living on their rural homesteads. The number of visits to the city while a woman's husband is employed varies within the commuting group, but the modal number of visits is two a year. These women are usually receiving some economic aid from their husbands (an average of 20 percent of men's urban wages are remitted home). Both men and women often alternate periods of rural work with urban visits, and the mobility of women in terms of visits to the city as well as to their own natal homes provides them considerable flexibility in dealing with both economic and social pressures. As we shall see sub-

sequently, this multiple resource base for Abaluyia women contrasts sharply with the contexts for change experienced by our two other groups of women.

All of the urban Abaluyia women came from a single housing estate in Nairobi called Kariobangi. Adjacent to the Kariobangi housing estate is a large and flourishing market. The market is divided into two parts. One is a trading center established by the city council with shops licensed for the sale of a variety of goods. Next to these shops a large shanty market (not legal by city council definition) has emerged. Many shops in this shanty market are either owned or managed by Kikuyu women who in almost every case are full-time permanent residents of Nairobi. These women were chosen as our second comparison sample.

Table 1

Comparisons of Three Samples for Education,
Age and Marital Status

	RURAL KIKUYU WOMEN		URBAN KIKUYU MARKET WOMEN		ABALUYIA WOMEN	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
FORMAL EDUCATION (years)						
none	39	52.7	28	41.8	36	58.0
1-4	20	27.0	20	29.8	13	21.0
5+	15	20.3	19	28.4	13	21.0
Total	74	100.00	67	100.0	62	100.0
Mean	2.17		1.90 ^a		2.58	
s.d.	2.55				2.90	
MARITAL STATUS						
married	61	82.4	8	11.9	67	100.0
divorced, widowed, separated	13	17.6	55	82.1	0	00.0
single	0	00.0	4	6.0	0	00.0
Total	74	100.0	67	100.0	67	100.0
MEAN AGE (years)						
s.d.		42.33		29.31		31.46
		15.03		8.03		11.97

^a Some of the educational data for the urban Kikuyu market sample were inadvertently grouped at the time of field collection, and so a standard deviation is inapplicable.

The urban Kikuyu women are working as shopkeepers for a variety of reasons. Some of the women were detained in camps or controlled villages during the 1950s by the British during the Mau Mau struggles. Others were forced to leave the rural areas due to divorce or for other personal reasons, and settled in town. Most of the women do not have land available in the rural areas and few are currently formally married. Sixty-seven urban Kikuyu market women were interviewed who had been identified from previous work as shopkeepers. As can be seen from Table 1, these women are about the same age as the Abaluyia women (mean about 19). They have approximately the same amount of education as do the Abaluyia women, but differ in several respects. These women are all employed either as entrepreneurs (self-employed) or work for others as businesswomen. Almost all the women receive their total income and support from the shops where they work. Most are cut off from the economic support of a rural home base. The urban Kikuyu market women are usually widowed, divorced, separated, or single. This sample of Kikuyu market women thus contrasts sharply with the Abaluyia women, and with a third group of rural Kikuyu women.

The life circumstances of the rural Kikuyu women are broadly similar to those of rural Abaluyia women. Many are also involved in rural-urban networks though with some important differences due largely to differential distance from Nairobi and differential involvement in the cash crop economy in the rural area itself. Seventy-four women were studied in one local community in Nyeri District, about 90 miles from Nairobi, as part of a larger community study on the effects of male labor migration on family life (Abbott 1974, 1975, 1976).

Of the 74 rural Kikuyu women, 61 are married, 11 are widowed, and two are divorced. As a group they represent levels of experience with formal education that are similar to the other samples. Their overall age span, however, is greater than either the Kikuyu urban market women or the Abaluyia women, due primarily to differences in the design of the original studies.

All these women are full-time horticulturalists who grow the majority of their families' subsistence food. Most are also engaged in cash cropping (coffee and milk primarily, with some tea) to the extent that their land holdings and subsistence needs will permit. In contrast to the Abaluyia women, heavy commitment to cash cropping in this community serves to curtail the frequency and ease with which these rural women can visit absent husbands in the urban areas. European breeds of dairy

cows, the only kind now owned in the community, require intensive daily care that includes cutting fodder for the animals because of severe limits on available pasturage. Tea must be picked 3 or 4 times a week, and coffee picking and processing requires similar time commitment during 3 or 4 months of the year. Reliance on cooperative patrilineal work group assistance to complete heavy horticultural chores like initial ground preparation, planting, and weeding is increasingly giving way to reliance on paid casual labor if funds are available; still many women report doing this work unassisted. Availability of child labor has been dramatically curtailed by the time demands of Western-style formal education. Over 90 percent of all appropriately aged children attend primary school in this community. Such facts document the degree of change already present in the traditional division of labor, including creeping atomization of at least some patrilineages.

Contact with urban-resident husbands occurs for one-third of these women no more frequently than a few days every 3 or 4 months, while another third see their spouses somewhat more frequently—a few days at a time every month or two. The remaining third see their spouses weekly, or every few weeks. This dramatically highlights the level of isolation from spouses typical for most women whose husbands engage in wage employment outside the local rural community. In addition, many women perceive their husbands as unreliable in meeting their paternal and conjugal duties. They expressed marked concern that these urban-resident husbands would waste precious earnings on alcohol and women, or even desert the family altogether. They indicated that fights between spouses are a fairly common occurrence when these absent husbands do visit their families briefly in the rural area. This sample of Kikuyu women increasingly experiences a lack of balance in marital and familial reciprocity.

All three groups of women vary in their adherence to Christian religion and in their multilingualism. Access to other modern services—health care, transportation, mass media, and so on—is roughly equivalent for the Abaluyia and rural Kikuyu women, while such access is greater for the urban Kikuyu women.

The overall differences and similarities in modernizing contexts have now been identified. This brief description has emphasized contextual factors of modernization or sociocultural and economic change associated with the impact of Western institutions. It is now possible to review the results of Weisner and Abbott's analysis (1977) of the relationships between measures of indi-

vidual modernity, self-reports of psychophysiological symptoms, and a series of commonly used independent variables.

Individual Modernity, Symptoms of Stress, and The Summary Variables

Inkeles and Smith's Overall Modernity Scale (OM) and a psychophysiological symptom scale were utilized as measures of the dependent variables, individual modernity and stress in a study concerned with the effects of context on these phenomena.² The study was motivated in part by concern over some of the limits the investigators saw in Inkeles and Smith's approach to the general problem of the effects of social, economic, and cultural change on individual behavior, beliefs, and attitudes. Some interesting patterns emerged in the course of analysis which are fully reported in Weisner and Abbott (1977) and which will only be briefly summarized here.

In an attempt to understand further the correlations of modernity and stress, Weisner and Abbott examined several variables. Among the most important were the popular summary variables of age, education, urban or rural residence at the time of the interview, and income. They looked at these variables singly in relationship to both modernity scores and stress scores, as well as examining them for interaction effects using analysis of variance techniques.

Analysis of the modernity scores revealed that age was a significant influence for the Abaluyia sample but not for either Kikuyu sample. Educational differences did not distinguish the rural Kikuyu sample, though they were strongly related for Abaluyia and urban Kikuyu women, and thus a factor in modernity. Urban or rural residence

at the time of interview did not make a difference for the Abaluyia women. The Kikuyu women were all either permanently rural or urban residents. The mean reported stress score did not influence the modernity score for any of the samples.³

Moving now to psychophysiological stress scores, age differences were not significant for any group but were somewhat stronger for the Abaluyia women. Similarly for education: neither group of Kikuyu women was affected in their stress by educational level but the Abaluyia women were. Urban and rural residence did **not** affect reported stress for the Abaluyia women, nor did modernity for the Kikuyu women. However, there was a significant difference reported for the Abaluyia on psychophysiological symptoms as influenced by their modernity scores. This relationship was compounded with age and educational effects however, since younger, better educated women have higher modernity scores.⁴ Finally, income was not significantly related to stress for either the Abaluyia women or the urban Kikuyu, while for the rural Kikuyu women **cash crop income** was highly related to stress, but husbands' wages were not.

The modernity measure showed little difference between the two groups of Kikuyu women (see Table 2), while the Abaluyia women scored much lower, regardless of residence. When mean scores for the stress measure were examined, however, a different alignment emerged; this time the Abaluyia women regardless of residence, and the urban Kikuyu women, were all similarly low scorers, while the rural Kikuyu women scored relatively much higher.⁵ These patterns tended to support positions somewhat at variance with those adopted by Inkeles and Smith (1974). First, Inkeles and his co-workers would expect the urban women, particularly the urban Kikuyu

Table 2
Comparisons of Three Samples for Modernity and Stress Scores

	RURAL KIKUYU WOMEN	URBAN KIKUYU MARKET WOMEN	ABALUYIA WOMEN SAMPLE TOTAL		Total
			Urban Resident Women	Rural Resident Women	
TOTAL MODERNITY SCORE (mean per S)	14.28	15.28	10.32	9.42	9.88
s.d.	2.65	6.31	4.21	2.69	3.45
TOTAL PSYCHOPHYSIOLOGICAL (STRESS SCORE) (mean per S)	6.78	4.37	3.97	4.48	4.22
s.d.	1.28	2.86	1.98	2.60	2.28

market women, to score high on modern institutions. They did score higher than the others, but the rural Kikuyu women were similarly high scorers. This fact tends to support Weisner and Abbott's extension (1977) of Inkeles' position that modernizing influences for women may be indirect and not limited to specific institutional settings that provide a particular, bureaucratic kind of organizational framework. Second, the patterning of the stress measure complicates Inkeles and Smith's general finding of no direct association between high modernity and high stress, as well as undermining the assumption made by some others (not Inkeles and Smith) that urban residence per se is stressful.

The findings reported by Weisner and Abbott make some points we wish to emphasize here: 1) that the relationship of single background variables such as age, education and residence have some, but often very modest influences on modernity and stress scores, 2) that they are inconsistently associated across samples, 3) when they are taken in isolation and out of context, interpretation is very difficult and fruitless for understanding process, and 4) even when closer attention is paid to context, the determination of the meaning of each of these variables within a particular context is not a simple matter. What does age mean besides the fact that a certain person, or group of persons, were born X number of years ago? We have every reason to believe that the social meaning is going to vary from socio-cultural group to sociocultural group (Guttman 1969, 1973), just as the implications of inclusion in the world economic system are different for female horticulturalists, who feed their families from their own garden's produce, than they are for women in areas of the world that operate on a male farmer model (Boserup 1970, Abbott 1975). Just as limiting one's attention to bounded institutions occupied predominately by males may be an inappropriate way to learn about the causes and effects of modernization among women, limiting one's attention to "packaged" variables, assuming they must mean the same thing everywhere, can lead to misunderstanding of contextual effects.

A Descriptive Contextual Analysis

To illustrate these points further, let us return to a more detailed discussion of the context in which each group of women find themselves. To briefly reiterate, the rural Kikuyu women scored unusually high on the stress measure, while both the Abaluyia women and the urban Kikuyu women had similar and lower scores. Perhaps the best explanation for the patterning of the urban-rural

Abaluyia women and urban Kikuyu women is that they face stressors of similar strength though the stressors are different in kind. The independence and autonomy of the Kikuyu market women frees them from many obligations to husbands, husbands' kin, and rural work; thus balancing out economic and cultural pressures originating in their commitment to urban life. The Abaluyia women are not committed to urban living and so do not have to deal with many of the stressors affecting the Kikuyu market women, but their embeddedness in husbands' kin groups leads to a different set of stressors.

This does not explain why the rural Kikuyu women, or for that matter the urban Kikuyu woman, should score so much higher than their Abaluyia sisters in Western Province. It is our contention that an economic factor compounded by typical Kikuyu sociocultural arrangements is responsible for this pattern. Rural Kikuyu women are as much active participants in the international economic system as are their husbands working for wages at Firestone or the Hotel Intercontinental, or their urban sisters running shops in the market. Their participation is in the form of cash cropping. But unlike their urban Kikuyu sisters, they do not have equivalent autonomy, for they are locked into a Kikuyu socio-cultural system of perpetual dependence on their husbands and their husbands' lineages, which control the land. Further, many men have turned responsibility over to their wives for even the few horticultural chores men formerly did, while women's work loads have increased several fold through the further addition of cash cropping and loss of child labor to the formal school classrooms. The Abaluyia women do not yet face these problems to as great a degree since few have cash crops and fewer of their children attend school. The rural Kikuyu women are given all the work and ultimate responsibility for its successful completion, but without autonomy in other spheres and often without adequate material and labor support. Increasingly they view their situation as one of unbalanced reciprocity.

The Rural Kikuyu Sample

To further illustrate the rich complexity of factors potentially operating in any context, we shall examine the situation of the rural Kikuyu women even more closely by moving away from attempting to account for inter-group differences to accounting for intra-group variability among the rural Kikuyu women. To accomplish this, we shall draw a composite portrait of rural Kikuyu women who reported relatively high or low psychophysiological symptomatology.

The low symptom woman is between 35 and 55 years old and is living alone on a homestead with her five or more as yet unmarried children. She lives alone because her husband's relatives are either dead or live on different homesteads, leaving only her husband with whom to contend (and he may or may not be co-resident depending on whether he works for wages elsewhere). If he is co-resident, he participates actively in homestead decision making, fulfilling his expected duties. If he is not co-resident, he has delegated a great deal of immediate decision making authority to his wife. Limited contact with relatives extends to the woman's own family of origin as well, for her surviving kin (mother, father, sisters, and so forth) live five or more miles away, effectively limiting reciprocal visits to less than monthly intervals in an area where foot power is still a major form of transportation. In addition she has a relatively high income from cash crops largely produced through her own efforts. Further she belongs to a formal women's organization, probably one of the two Christian groups who see themselves as modern and progressive, but possibly the Harambee Women, a traditionally-oriented political organization. Finally, her school-aged children all tend to be in school.

High symptom women are a striking contrast. They are either young and newly married and thus dependent on their mother-in-law and husband, or quite old and dependent on their sons and daughters-in-law. They have four or fewer children. In the case of the childless young woman, this can mean potential divorce or a co-wife because she has not yet adequately demonstrated her fertility. In the case of an older woman, it means reduced old age social security and power. Only one or very few lives buffer such a woman from abject poverty and possible starvation (Cox and Mberia 1977).

The high symptom women live on extended or stem homesteads and are either mothers-in-law or daughters-in-law/sisters-in-law; greatly complicating daily interactions with increased formality, increased emphasis on authority and obedience, and the potential for destructive competition for scarce resources. Husbands who work and live in the local area often refuse to participate in the day to day decision making. Those who work elsewhere refuse to relinquish their control by delegating it to their wives so that the women can get on about their families' business more easily. If widowed, these women must face their husband's often demanding relatives unsupported; and if divorced, they must once more deal with their own patrilineal relatives at great economic disadvantage, since they have no rights to

land. Unlike the low symptom women, these women either have no surviving relatives at all (which means no ultimate line of defense, however unpleasant, in the face of marital disaster) or they live so near (less than 5 miles) than kin are constantly visiting.

High symptom women, in contrast to low symptom women, have relatively low cash crop income. If their husbands have no wage employment, these women might engage in non-traditional, capitalist entrepreneurial activities themselves, sometimes on quite a large scale. This earns them substantial income, but at the additional price of negative local gossip, perhaps even accusations of sorcery, frequently motivated by the jealousy of those less willing to jeopardize themselves. Further, these women may belong to no formal organization for women, cutting themselves off from potential support. Or if they do, they belong to the traditionally-oriented Harambee organization in a situation where traditionalism is rapidly becoming synonymous with poverty and the lowest level of what appears to be an emerging system of economic stratification. Lastly, the high symptom woman's school-aged children tend not to be in school, greatly limiting their potential to earn wages in any capacity but that of casual laborer.

The potential effects of sex-role ideologies mentioned earlier in this paper appear in this close examination of the correlates of stress among the rural Kikuyu women. Actual patterns of decision making within a household are strongly responsive to such situational factors as husband's residence, and may or may not be isomorphic with cultural expectations for male and female roles (Abbott 1976). However, when it is possible to conform to cultural expectations regarding role behavior, when there is fairly good consensus regarding what that behavior should be, and when women are not conforming, stress can be the result. Those women who reported themselves to be high on decision making even though their husbands were co-resident were also high on the stress measure. The generally shared cultural expectation is that the male head of the household will be the primary decision maker (Abbott and Arcury 1977).⁶

Another finding that points toward the effects of prevailing sex-role expectations is the consistent high stress scores for all women in the rural Kikuyu sample who engage in large-scale entrepreneurial activity. Business activity on a level that removes the woman from her husband's homestead for long periods of time is not thought proper behavior for a woman, even though in all these cases the decision to begin engaging

in such entrepreneurship was made in the face of extreme economic hardship in the family's past, often while a husband was in prison during the Emergency. These women are the target of other women's as well as men's gossip. It must be added that this gossip is also motivated by jealousy if the female entrepreneur has been successful in her business efforts, which leads us into consideration of the role of desire for power and security.

In the past, power through control of others, and increasingly in the contemporary scene, power through control of money and property is identified by Bledsoe (1976) to be a major motivation among Kpelle women as well as men. She suggests that this pattern is typical for much of Sub-Saharan Africa. The stress patterns we have just reported among rural Kikuyu women offer some further support for this suggestion. High stress is associated with few children; the role of daughter-in-law regardless of age (so long as she is co-resident with her affines); extreme old age; living too near one's consanguines; overall low ranking in terms of all kinds of wealth; absence of, or little, cash crop income; having few children of school age in school; and with low decision making even though the husband lives elsewhere. All these are low power conditions relative to others within the Kikuyu local community, and they are all associated with high scores on our stress measure. These women talk about problems revolving around control of others in a frank, open way. Mothers-in-law are concerned about maintaining control over sons, hopefully by controlling the sons' wives who live on the same homestead, if not through the emotional bonds carefully constructed while these sons were growing up. Women frequently mention that independence from kin, which is represented by establishment of one's own domestic unit and through generation of one's own subsistence crops and income, is a valued goal. The limits are imposed by the fact that these women can only gain access to land through marriage, and so marriage is desirable. Once in the marriage the problem becomes one of gaining power and its attendant freedom of movement within that context. Very few Kenyan women have the level of formal education that makes rejection of marriage and its entailments a realistic possibility. Proportionally few women have chosen an alternate route to independence and power represented by the rural entrepreneurs or the full-time urban resident Kikuyu market women.

Concluding Remarks

This paper interprets a series of findings and contexts.

This kind of analysis is not possible if research remains tied to the easily collected and manipulated "packaged" variables, removed from their context. Such practice can block interpretation of findings in terms of their meaning for each group of people studied.

Through comparison of these different groups of women, and through a much more detailed look at variation within one of the groups, we have tried to document some of our earlier extensions of Inkeles and Smith's approach (1974) to identifying factors leading to modern attitudes in individuals, and to define some of the ways in which modernization can be stressful to women going through the process. Inkeles and Smith's male factory workers were not highly stressed and had relatively modern attitudes. On the other hand, what were the conditions of the wives of these men in the six different national settings they examined?

Finally, let us turn our attention more directly to the broad topic of the symposium, "Sexual Politics in Colonialism and Culture Change," which led to this collection of papers. The women in our samples are faced with adaptive tasks of considerable magnitude, but they do not face those tasks as isolates. They are members of family organizations, and those organizations are articulated with national governmental and educational organizations and a world economic system. The power of the capitalist world economic system is in being able to produce changes not only in family and community organization and thus sex-roles, but even in individual attitudes. These changes, however, proceed at uneven rates for different institutions and for their attendant values and attitudes within any particular sociocultural system. The rate of change also varies between particular sociocultural systems in the process of inclusion within an emerging political economy like that of modern Kenya, as these data amply demonstrate.

NOTES

1. Major support for the field research on which this paper is based was provided for both Abbott and Weisner by the Carnegie Corporation through the Child Development Research Unit at Harvard University and the University of Nairobi. We thank John and Beatrice Whiting and Dr. Albert Maleche of the Bureau of Educational Research, University of Nairobi, for their support. Abbott has also received support for this study from the University of Kentucky Research Committee Grants, and from the Department of Anthropology, University of Kentucky. Weisner has also received support from NIMH Fellowships 3F01-MH32936-02A1S1 and 5F01-MH32936-03, and from the Department of Psychiatry, UCLA. We wish to thank the *Journal of Anthropological Research* for permission to use some portions of our paper (Weisner and Abbott 1977) published there.

2. The Overall Modernity Scale was developed by Inkeles and Smith (Smith and Inkeles 1966; Inkeles and Smith 1974) through cooperation with a number of colleagues in six developing countries. Based on their review of the research literature on modernization they compiled a list of effects they feel are typically found whenever economic development occurs. These effects on individuals include such things as openness to new experience and new ways to do things, readiness for change, a change in time orientation from the past to the present and future, greater orientation toward the world beyond one's local community, and so on. They have concluded that these effects constitute a single dimension that can be measured by the scale they have constructed. The scale has several versions, one being the Short Form, used with all samples in this study. The rural Kikuyu women were given the Health Opinion Survey (Macmillan 1957) which consists of 20 items. Eleven of these items overlap with the Psychosomatic Symptoms Tests utilized by Smith and Inkeles to measure adjustment to modernizing experiences. The comparisons between the three samples in this study utilize only the comparable 11 items for assessments of psychophysiological symptom reports. There were no refusals to participate because rapport was good in all the communities, a result of combining data gathering with eighteen months to two and a half years of ethnographic research in the same communities by the same investigators.

3. Using a linear model, age, stress, and education (in order of importance) had a multiple r of .37, accounting for about 24 percent of the variance in modernity scores

for urban Kikuyu. Education, age, and stress scores accounted for 19 percent of the variance in modernity, with a multiple r of .46 for rural Kikuyu. Abaluyia rural-urban sample women had a multiple r of .58 with modernity (education, age, and stress), accounting for about 34 percent of the variance in modernity scores. Urban or rural residence did not affect the scores.

4. The multiple r correlation between age, education, and modernity together and reported stress scores is .365, with about 13 percent of the variance in stress being accounted for by these three factors for urban Kikuyu women. The contribution to reported stress variance on a linear model basis for rural Kikuyu women on the same three variables (multiple r) is .235, with only some 5.3 percent of the variance in stress accounted for by the three factors. Abaluyia women had a multiple r of .46, accounting for some 21 percent of the variance in stress reports on a linear basis, with age, education, and modernity as predictors. Urban-rural residence again did not influence these results.

5. Between-group t -tests were not statistically significant at the .05 level or better for the Abaluyia-Kikuyu modernity differences, or for the rural Kikuyu-Abaluyia/urban Kikuyu psychophysiological stress score differences. The relative magnitude of the percentage differences, and the consistent cultural patterns of contrasting adjustment to change in each group are of greater interest for this analysis. There are also difficulties inherent in such direct cross-cultural comparisons, making it more advisable to compare patterns within one cultural setting to patterns within another cultural setting.

6. A full description of Kikuyu sex-role expectations and values surrounding male and female behavior can be found in Abbott and Arcury (1977).

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