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Architecture of societies in transition — the case of the Maasai of Kenya

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Abstract

Historically, it has been observed that people's settlements tend to change with their changing cultural values. Societies in early and rapid transition offer rich laboratories for the testing of this observation. The Maasai of Kenya are such a group that in a relatively short period have undergone revolutionary transformation as a casual observation may reveal. This paper investigates whether there is any relationship between their new built forms and their current cultural values. Using a number of identified culture – change variables including land tenure, education, religion, occupation, and rite of passage, the paper analyses what impact changes in these variables has on the Maasai settlements. It clearly reveals that as these variables change due to contacts with western-based modernity, the settlements have undergone noticeable transformation. For example, change of land tenure from communal to individual leads to permanent settlements. While exposure through education, religion and occupation leads to a change in the spatial organisation of the dwelling and the use of new building materials. These insights are a useful background to any policy matters regarding housing that respects the cultures of the people. They are indications of what can be considered as a transitional architecture as communities struggle to modernise. © 2001 Elsevier Science Ltd. All rights reserved.

Keywords: Culture change; Built forms; Maasai; Kenya

1. Introduction

The Maasai form a section of a group of people known as the Plain Nilotes. Some historians claim that they originated from Canaan and came along the River Nile through North Africa to their present location astride the Kenya–Tanzania boundary (Someren, 1926, p. 172; Wanjala

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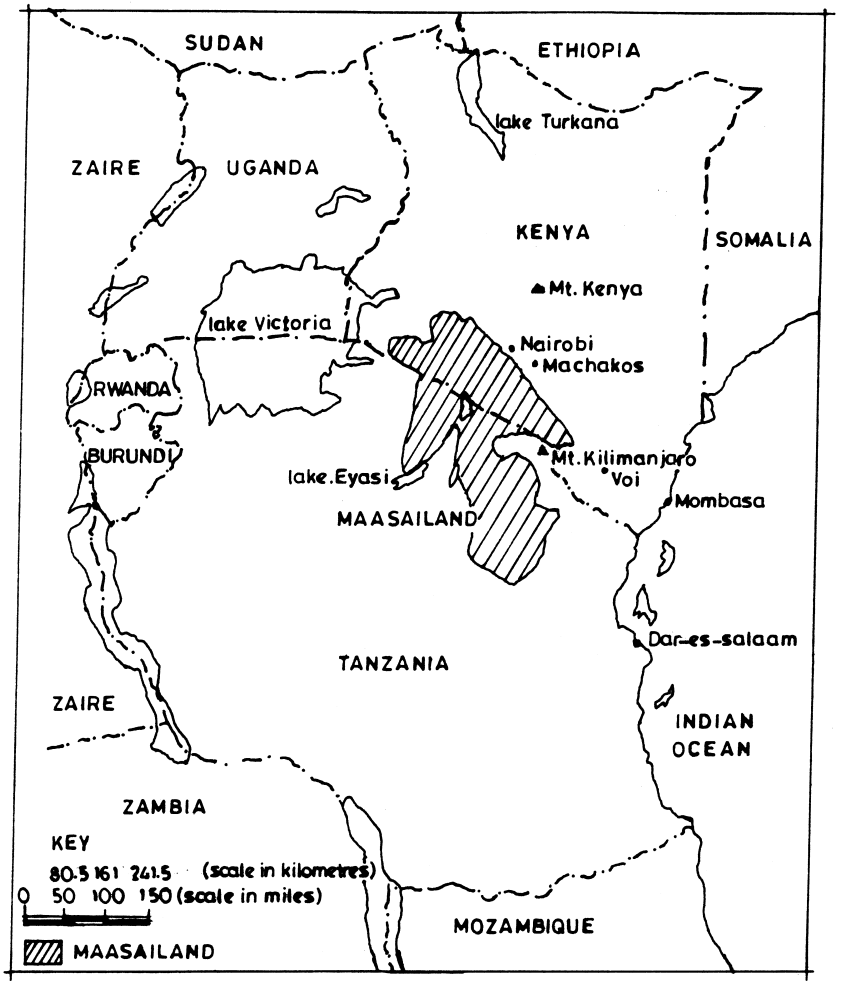

Fig. 1. Maasai Territory in Tanzania and Kenya. Source: Adapted from Klum (1987, p. 191).

& Were 1987, p. 8; Sutton, 1990; Fig. 1). In Kenya they occupy the Transmara, Narok and Kajiado districts with an area of 39,134 km^2 (Fig. 2). This is 6.7 per cent of the 582,646 km^2 total area of Kenya. Their population as per 1989 census was 377,089 which was 1.7 per cent of the Kenyan population (Central Bureau of Statistics, 1994).

The area occupied by the Maasai is generally arid and semi-arid and they have adopted a nomadic lifestyle. During the wet seasons they scatter all over the plains and plateau while during the dry period they migrate uphill (Denyer, 1982; Wanjala & Were, 1987). Economically, they kept cattle and sometimes planted a few crops near water sources (Kituyi, 1990).

Prior to their contact with the Europeans around 1900, their settlements, as most other pre-historical societies, was a true reflection of their cultural practices (Rigby, 1985). From 1900 to 1963 when Kenya was a British colony, the British considered Maasai land a closed district and contact with them was limited (Wanjohi, Kabagambe, Odada, & Jambiya, 1990, p. 240). Due to this,

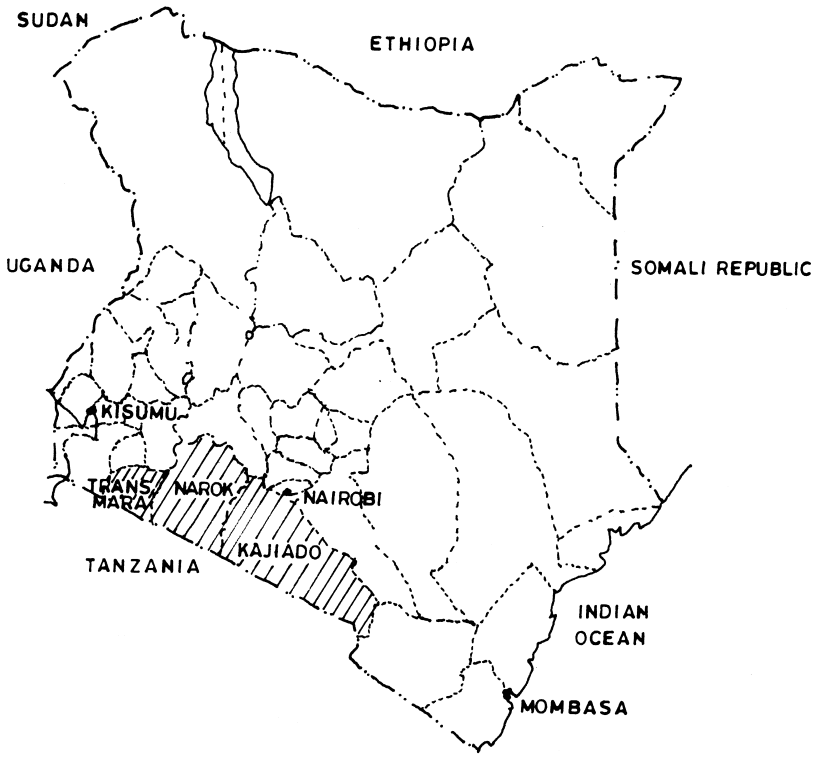

Fig. 2. Maasai territory in Kenya.

their settlements underwent only very gradual transformation retaining more or less their traditional forms (Saitoti, 1987).

After Kenya's independence in 1963, this closed district status was removed and their contact with other communities was increased. This led to more rapid transformation of their way of life and their settlements. The pace of transformation has become even more rapid over the last 15–20 years as the land tenure system has changed in almost a revolutionary way (Kituyi, 1990; Munei, 1991).

2. Methodology

This paper is based on a field study carried out between 1992 and 1993 during the Ph.D. study by Rukwaro (1997) for a period of four months. In the field, sampled homesteads were visited and detailed measured drawings were done. There were also held interviews with residents and focussed group discussions. This enabled the researchers to describe and explain various aspects of the current Maasai culture, settlement, and changes that have taken place.

Among the three Maasai districts of Transmara, Narok and Kajiado, Kajiado was chosen because it had a higher population, it is more representative of the spectrum of buildings to be

Table 1
Number of homesteads, cluster ratio and sample size in each division[a]

Division	No. of homesteads	Cluster ratio	Size of sample (ratio × 5)
Mashuru	3827	1.2	6
Ngong	19619	6.3	32
Loitokitok	15506	5.0	25
Magadi	3129	1.0	5
Central	14896	4.8	24
Total	56977		92

[a]Source: Rukwaro (1997, p. 47).

Table 2
Number of locations in each division; Number of sampled locations in each division and the number of sampled homesteads in each location[a]

Division	No. of locations	No. of sampled locations	No. of sampled homesteads
Mashuru	4	2	6
Ngong	3	2	32
Loitokitok	3	2	25
Magadi	2	1	5
Central	8	4	24
Total	20	11	92

[a]Source: Rukwaro (1997, p. 48).

studied, finally, its ecological conditions have in a way allowed the Maasai to continue practising their historically established traditional lifestyle.

Cluster sampling was used in the study because of the costs, accessibility and limitations of time. Two-stage sampling was used to establish the sample location and their homesteads as in Tables 1–3. The cluster ratios shown in the Table 1 are based on the division with the smallest number of the homesteads. The sample size was then arrived at by multiplying the ratio with a factor 5. The factor was derived out of the viable number of the case studies envisaged. A total of 92 homesteads were selected from the 11 locations. This number was decided on the basis of finances available. Eleven locations out of 20 were sampled within Kajiado district (Fig. 3).

The second stage of the sampling entailed the selection of homesteads within the locations. The homesteads on the ground were treated as composing the sample of homesteads. When sampling the number of homesteads for each location, the population of the homesteads in that location was considered to obtain a more representative sample.

Each location was sub-divided into several survey areas depending on the homesteads sample sizes, on the basis of information obtained from the local administration, and from district cartographic maps showing roads, tracks, rivers, valleys and ridges. These latter were the main boundary lines dividing one survey area from the other.

Table 3
The randomly sampled locations and their number of homesteads, together with the population of homesteads in each location sampled as per divisions[a]

Division	Sampled locations	Population of homesteads	No. of homesteads
Central	1. Lorng'osua	1990	6
	2. North Kaputiei	1958	6
	3. Ildaalalekutuk	1864	6
	4. Ildamat	2185	6
Mashuru	1. Central Kaputiei	1468	3
	2. Nkama	1401	3
Ngong	1. Ngong	14310	26
	2. South Keekonyokie	3048	6
Loitokitok	1. Orok-Kiteng	3347	7
	2. Odo-mong'i	9038	18
Magadi	1. Olkiramatian	1233	5
	Total		92

[a]Source: Rukwaro (1997, p. 48).

All survey areas identified had both traditional and non-traditional types of homesteads. To select any of the two in each area, random sampling by use of tossing of a coin was used. Four research assistants investigated each survey area (Rukwaro, 1997, pp. 46–50). The chi-square method was used to analyse the data.

A homestead is here defined as the composition of enclosures where occupants co-operate and undertake their dwelling activities. The people living in a homestead and who are usually related by blood were taken as constituting a household. Only one adult in any homestead was interviewed defined as any person over 18 years. Older people were preferred though all adults were given an equal chance of being interviewed. A total of 92 respondents were interviewed.

3. Maasai traditional built form

The Maasai traditional settlement reflected their social life with kinship, mythology and social ties playing important roles. First, the global settlement was generally divided according to clan lineage with clan members occupying a clear region called *Olosho* in their language (Fig. 4; Rigby, 1985; Kituyi, 1990).

Within the clan region were organized homesteads occupied by the different households. A man would compose a household with a wife, or wives and children. The homestead would be dependent on the size of the household. A man with a wife, sons and daughters would for example have a homestead composed of a cattle kraal, a dwelling unit for the sons, another for the daughters, another one for the wife and one for himself (Fig. 5). To accommodate growth in the family, new units would be added onto the layout following a culturally laid down order (Rukwaro, 1997, p. 159; Saitoti, 1987).

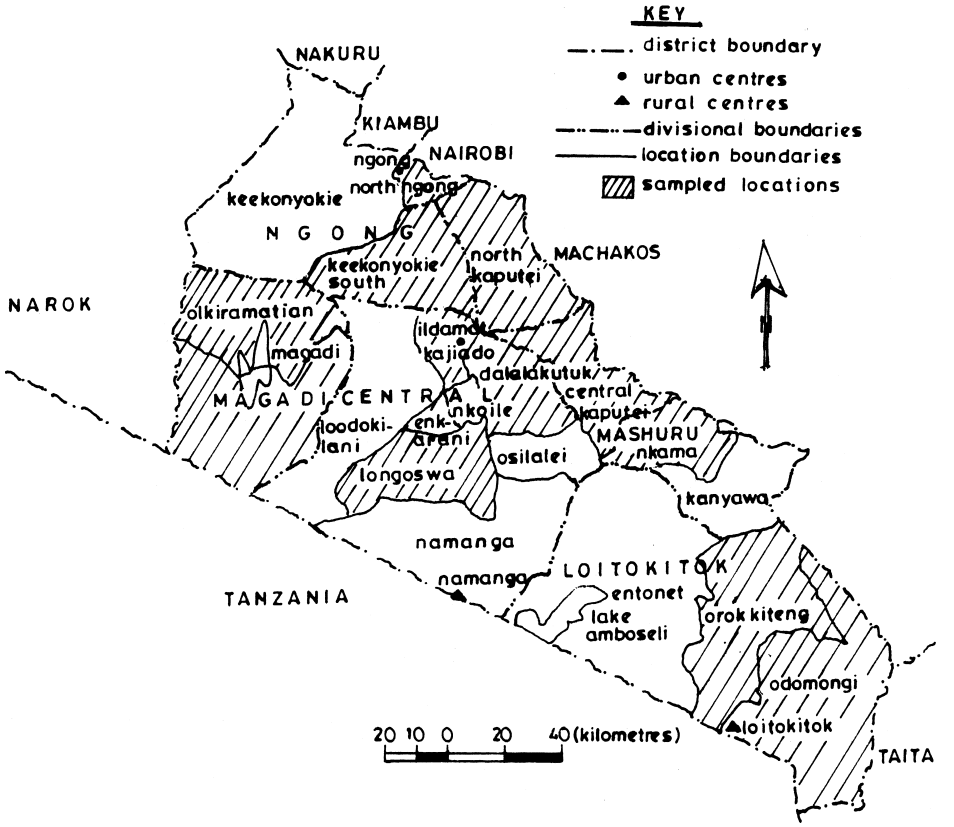

Fig. 3. Kajiado district: adminstrative boundaries and sampled locations. Source: Rukwaro (1997, p. 40).

The dwelling units were organized in an ordered circular form with the cattle kraal occupying the central space (Fig. 5). The order of arrangements of the wives' houses were laid following a dualistic concept with the wives married in odd positions building their units to the right of the main entrance of the homestead and those married in even positions building to the left (Rigby, 1985, p. 143). Sons units are located next to the main entrance and near the cattle kraal to act as guards for the homestead while daughters had their units near their mothers house (Rukwaro, 1997, p. 159).

The central location of the kraal expressed architecturally the importance both physical and symbolic of cattle in their life (Denyer, 1982, p. 106). Cattle were the quintessential expression of a man's wealth. This was the principal form of homestead that structured the Maasai settlement. However, there were other more temporal layouts that were used for specialized activities. During the dry season for example, elders and young men would migrate with the cattle in search of pasture and would erect a layout such as the one indicated in Fig. 6. During the celebrations for the rites of passage on the other hand, the layouts seen in Figs. 7 and 8 would be used.

Spatially, the different units had varying layouts to reflect the different activities (Figs. 9–11). These various layouts allowed the different users to have unique spaces within a coherent order.

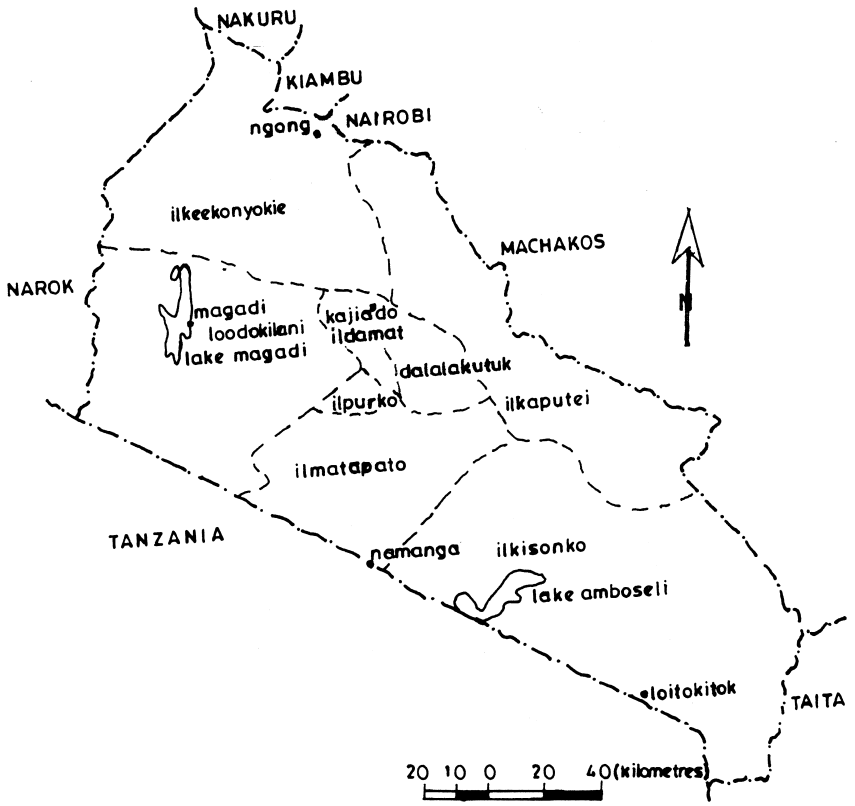

Fig. 4. Kajiado district: traditional settlement of Maasai. Source: Rukwaro (1997, p. 80).

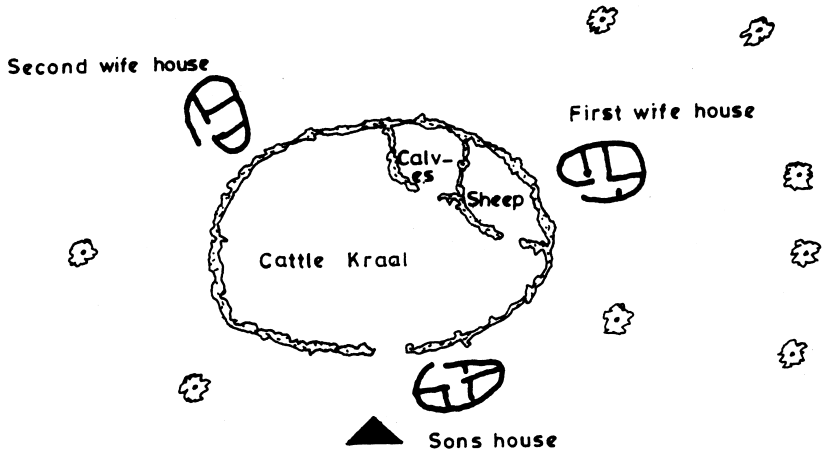

Fig. 5. Maasai homestead layout. Source: Rukwaro (1997, p. 132).

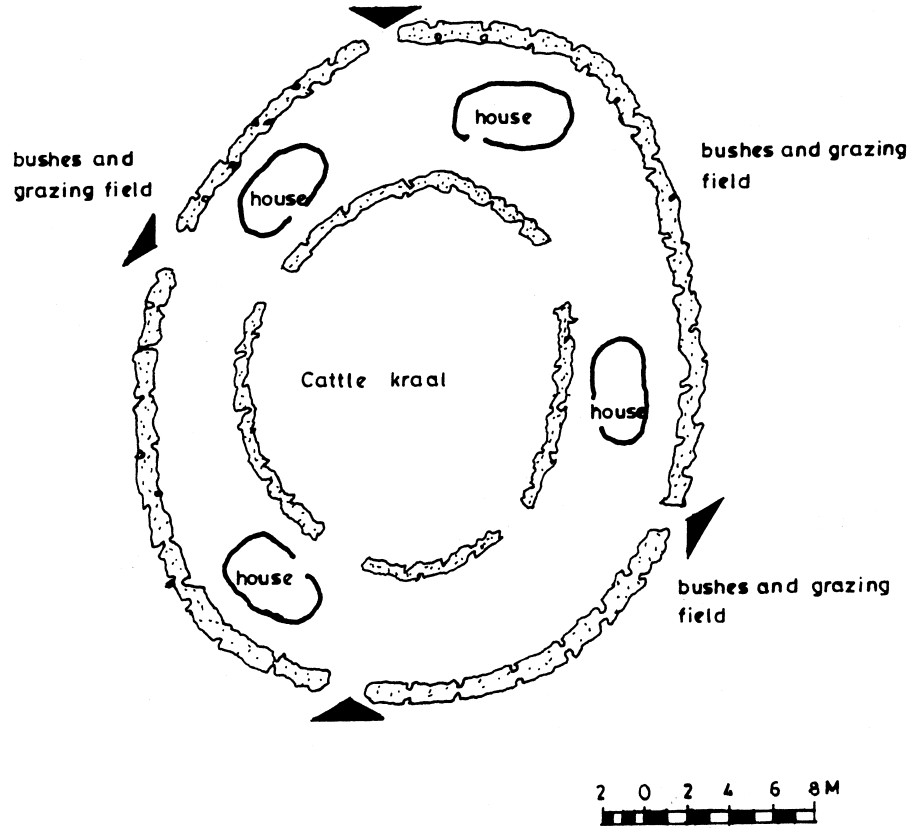

Fig. 6. Elatia plan. Source: Rukwaro (1997, p. 137).

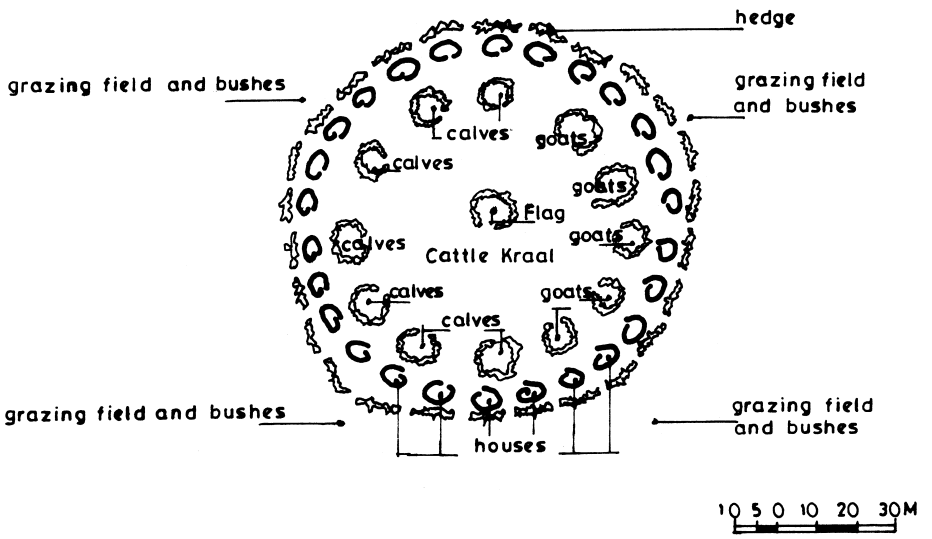

Fig. 7. Emanyatta plan. Source: Rukwaro (1997, p. 145).

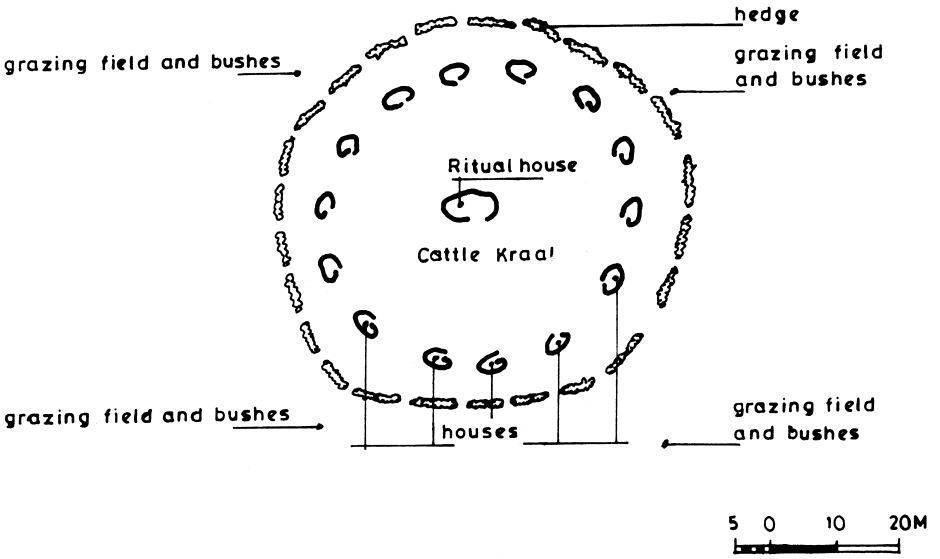

Fig. 8. Enkang' Eunoto plan. Source: Rukwaro (1997, p. 149).

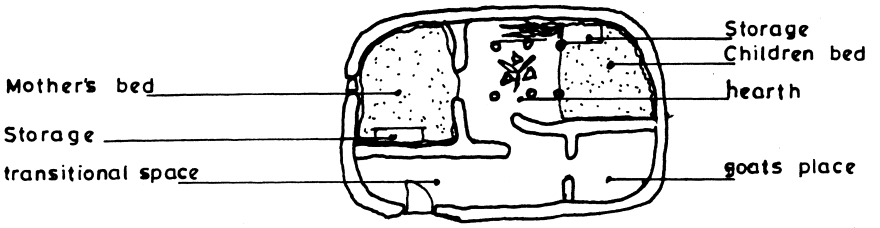

Fig. 9. Wife's house. Source: Rukwaro (1997, p. 99).

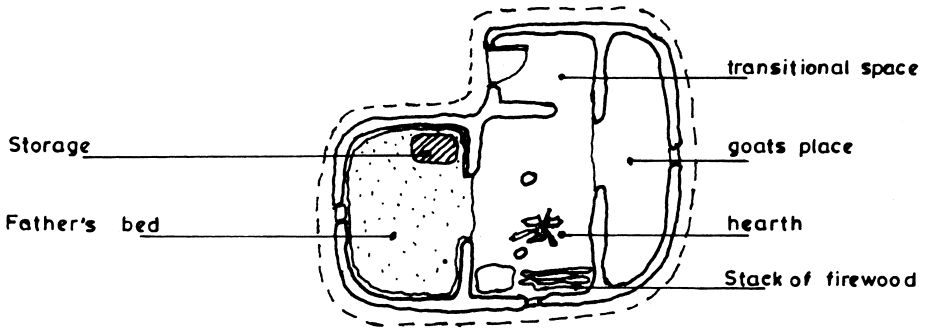

Fig. 10. Man's house. Source: Rukwaro (1997, p. 100).

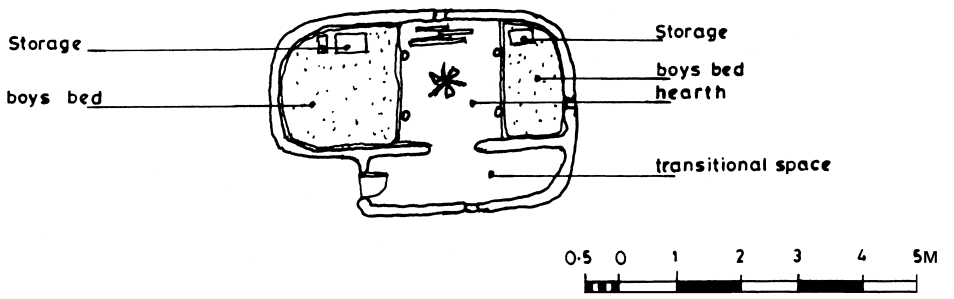

Fig. 11. Son's or daughter's house. Source: Rukwaro (1997, p. 99).

From the technological angle, the Maasai used found materials such as twigs, mud, cowdung and sometimes cow-hides with the latter used as a partitioning material and as mattresses. Whenever they migrated, they would normally carry only the artifacts and leave the rest of the structure to decay. The construction details are seen in Figs. 12 and 13.

4. Modern built forms

The coming of modernity among the Maasai can be said to have been in 1963 when Kenya became independent. It is then that certain aspects of their culture appear to have undergone almost revolutionary transformation. At the global settlement level, they have maintained their clan lineages with the clans still occupying the *oloshon* as indicated under the traditional setting.

Within these clan regions, homesteads occupied by the different households are still organised. However, the different households now own the particular piece of land within which their homesteads fall. This leads to permanent homesteads. Within the homesteads were found the traditional dwelling units which include the houses and the cattle kraals. In addition, the modern homestead have new and varied dwelling units including external stores, chicken houses, external cooking spaces, enclosures for treating animals, hay stores, built up spaces for young animals and kennels, and sometimes garages. Different homesteads would have different combinations of the units organised in many varied ways with the cattle kraal no longer occupying the centre and often a distance away or even missing. This alters the homesteads typology and spatial organisation fundamentally (Fig. 14).

The independent living houses for the different family members found in traditional setting are combined to generate the modern single dwelling house for the whole family. The modern house would have a bedroom for the girls, one for the boys, another for the parents and perhaps one for visitors in addition to other normal amenities as seen in Fig. 15.

The modern houses are built of varied materials in different combinations even within the same homesteads. Roofs may be made of thatch, galvanised corrugated iron sheets or clay tiles. While walls may be made of mud, timber, galvanised corrugated iron sheets or masonry. Floors may be of rammed earth or concrete floor slabs. While foundations may be wooden posts or shallow concrete raft or strip foundations as seen in Fig. 16.

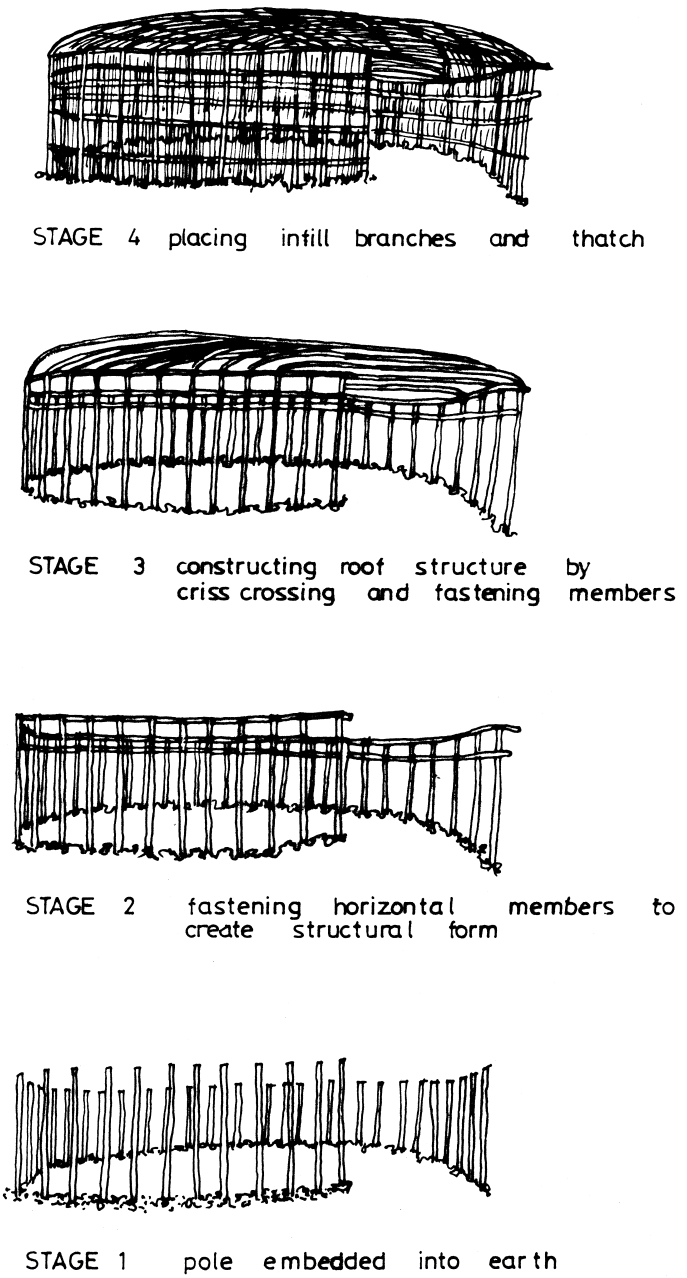

Fig. 12. Construction process of Maasai house. Source: Rukwaro (1997, p. 109).

5. Data analysis

Having discussed the traditional and modern settlements, the analysis below presents the linkage between the culture change variables and the noted changes in the settlements. These

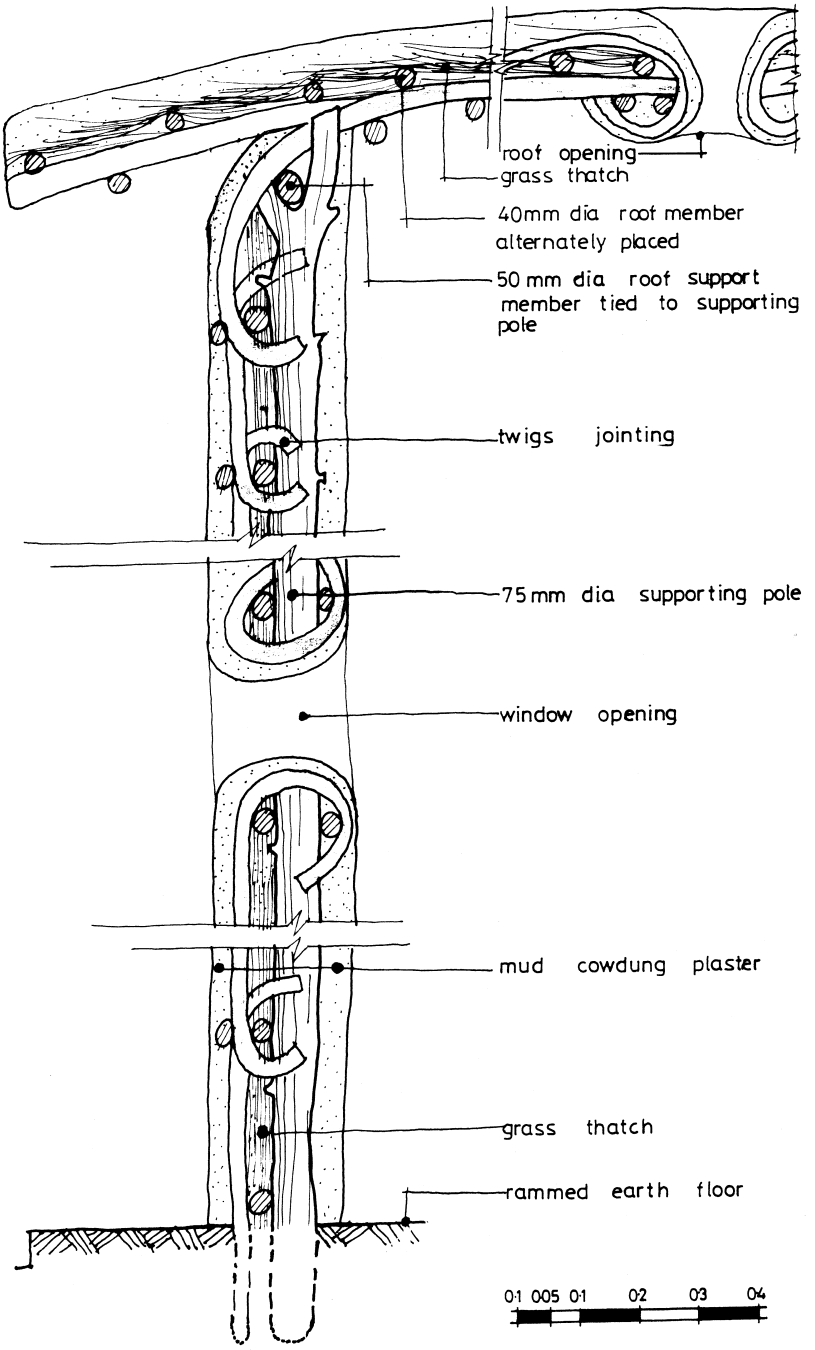

Fig. 13. Typical sectional detail of a Maasai house. Source: Rukwaro (1997, p. 111).

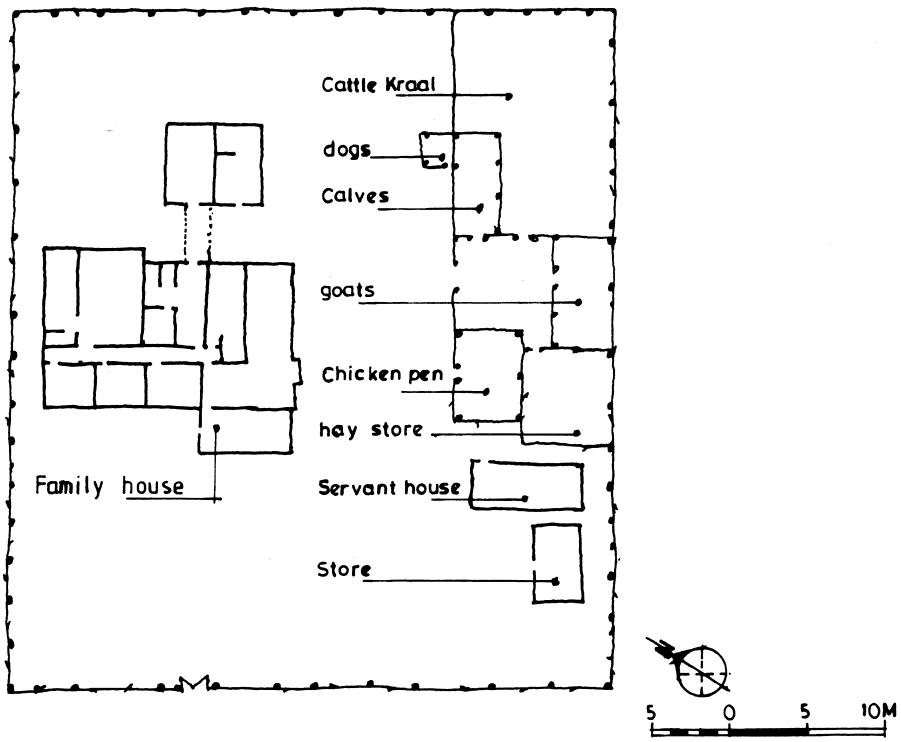

Fig. 14. Modern homestead plan. Source: Rukwaro (1997, p. 294).

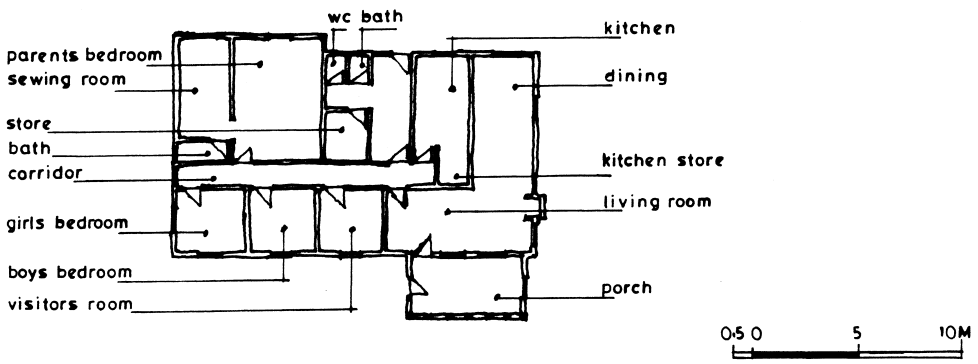

Fig. 15. Modern house plan. Source: Rukwaro (1997, p. 294).

culture-change variables include land tenure, education, occupation, religion and rites of passage which were identified as critical in any settlement formation.

At the settlement level, communal land ownership was gradually replaced with individual land tenure (Munei, 1991). This immediately reduces the ability to migrate and introduces a more sedentary way of life (Kituyi, 1990). This way of life on the other hand influences their built forms which begin to become more permanent (Figs. 14–16, Table 4). As Table 4 indicates the calculated

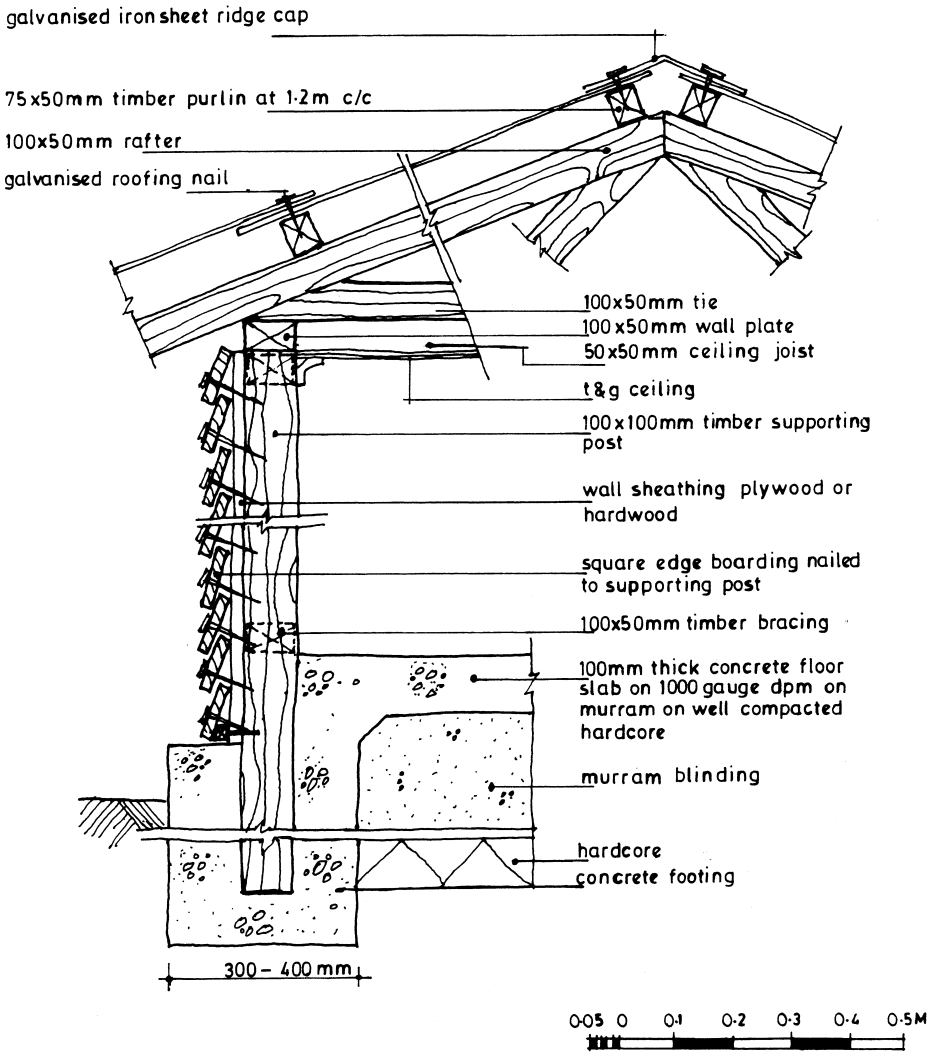

Fig. 16. Wall/foundation section of modern house. Source: Rukwaro (1997, p. 182).

chi-square value exceeds the tabulated one. With an assumed one degree of freedom the data is accepted at significance level of 0.01 which clearly confirms that a change in the land tenure directly influences their homestead types. The table further reveals that 84 per cent of the respondents having individual titles to land had permanent homesteads.

At the same time, the government rapidly increased the number of schools available, which led to more people going to school (Wanjala & Were, 1987). Schooling allowed the Maasai to interact with different people and modify their values and expectations. As shown in Table 5, the calculated chi-square value exceeds the tabulated one. With one degree of freedom the data is accepted at significance level of 0.01 which reveals that acquiring formal western education by the dwellers

Table 4
Distribution of homestead types by possession of title deed[a,b]

	Possession of title deed		
Type of homesteads	No. of title deed	Has title deed	Total
Traditional	12 (5)	5 (12)	17
Non-traditional	17 (24)	58 (51)	75
Total	29	63	92

[a]Source: Rukwaro (1997, p. 227).
[b]Calculated chi-square value = 16.90, d.f. = (1). Tabulated chi-square value = 6.64, s.f. = 0.01.

Table 5
Distribution of type of homestead by education[a,b]

	Educational level		
Homestead type	No. of formal education	Has formal education	Total
Traditional	14 (7)	3 (10)	17
Non-traditional	26 (33)	49 (42)	75
Total	40	52	92

[a]Source: Rukwaro (1997, p. 291).
[b]Calculated chi-square value = 14.55, d.f. = (1). Tabulated chi-square value = 6.64, s.f. = 0.01.

leads to a transformation of the homesteads. The table also indicates that 94 per cent of the respondents with formal education had new types of homesteads.

Having attained formal education, the Maasai have opted to change their traditional occupation from herdsmen to more varied occupations such as businessmen, police officers, pastors, teachers and others (Rukwaro, 1997; Kituyi, 1990). These occupations exposed them to different built environments and also improved their economic status allowing them to afford new dwelling types. As indicated in Table 6, the calculated chi-square value is greater than the tabulated one. With one degree of freedom, the data is accepted at significance level of 0.05 which confirms that having a formal occupation leads to change of the homestead types. The table also shows that 92 per cent of the house occupants having other jobs other than herdsmen had modern dwellings.

Education came hand in hand with the Christian religion. Christianity advocates for nuclear families and discourages polygamous marriages. This has an immediate and noticeable effect on the homesteads planning because the number of wives and children are drastically reduced which leads to a reduction of the number of dwelling units in a compound. This research indicated that the average number of dwelling units reduces from 2.4 in a traditional homestead to 1.7 in a Christian-based family homestead (Rukwaro, 1997, p. 265) . Additionally, Table 7 indicates that the calculated chi-square value is greater than the tabulated one.

Table 6
Distribution of homestead type by occupation[a,b]

	Occupation		
Type of homesteads	Herdsmen	Other occupations	Total
Traditional	14 (10)	3 (7)	17
Non-traditional	41 (45)	34 (30)	75
Total	55	37	92

[a]Source: Rukwaro (1997, p. 291).
[b]Calculated chi-square value = 4.78, d.f. = (1). Tabulated chi-square value = 3.84, s.f. = 0.05.

Table 7
Distribution of types of homestead by religious affiliation[a,b]

	Religion affiliations		
Type of homestead	Traditional	Christain	Total
Traditional	10 (5)	7 (12)	17
Non-traditional	17 (22)	58 (53)	75
Total	27	65	92

[a]Source: Rukwaro (1997, p. 265).
[b]Calculated chi-square value = 8.68, d.f. = (1). Tabulated chi-square value = 6.64, s.f. = 0.01.

Table 8
Distribution of type of homestead by attendance of rites of passage[a,b]

	Attendance to rites of passages		
Type of homestead	Preferred	Not preferred	Total
Traditional	11 (7)	6 (11)	17
Non-traditional	28 (32)	47 (43)	75
Total	39	53	92

[a]Source: Rukwaro (1997, p. 271).
[b]Calculated chi-square value = 4.76, d.f. = (1). Tabulated chi-square value = 3.84, s.f. = 0.05.

The degree of freedom being one, the data is accepted at significance level of 0.01 which reveals that a change from the traditional religion to other religions such as Christianity leads to change in the type of homesteads. The table moreover indicates that 89 per cent of the dwellers practising Christianity had new types of homesteads.

Rites of passage are the concentrated moments when a culture's values are clearly expressed and dramatized. It is expected that any community that practices these rites would have settlement forms that facilitate their practice. It was indeed noted that those who continued to practice these rites in their pure form had the tendency to continue dwelling in the traditional homesteads (Table 8).

As Table 8 indicates, the calculated chi-square value exceeds the tabulated one. With one degree of freedom the data is accepted at significance level of 0.05 which clearly confirms that a change in performing rites of passage leads to transformation of the homesteads. The table also indicates that 89 per cent of the respondents who did not practice the pure rites had non-traditional homesteads.

6. Conclusion

The paper has clearly indicated that the cultural variables of the Maasai have changed. They have acquired formal education, which has led to new occupations; they have adopted a new religion, which alternatively has led to new family types, and a watering down of the role of traditional rituals in their lives. Ownership of land has changed from communal to individual, which has manifest settlement implications.

These variables have led to new cultural values such as independence of individuals and families, sedentary lifestyle, privacy and social status. These values appear to have generated specific design concepts such as nuclear family houses, permanence and linearity (Rukwaro, 1997, p. 300).

This contrasts with the traditional cultural values, which were human-functionality, kinship, mythology and social ties, which were the generators of the architectural concepts such as centrality, privacy, dualism and communalism (Rukwaro, 1997, p. 150).

The modern design concepts generated many varied built forms reflecting independence of individuals. The new building plans are characterized by all family functions grouped together with rigid usage and specific functional spaces reflecting the modern nuclear families.

Technologically, modern houses are using varied new durable building materials, skills and processes which alternatively has led to adoption of the linear form in contrast with the traditional curvilinear forms.

The varied house forms in a way reflect a struggle to find an appropriate modern architecture that embodies their current values as opposed to traditional house forms with their very consistent architecture. The challenge now is to seek for an architecture of transition that facilitates their entry into modernity while respecting at every stage their present culture.

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