PUL ELIYA RE-VISITED : A CASE STUDY OF AGRARIAN CHANGE

A.J. Weeramunda
M.K. Nadeeka Damayanthi

P.O. Box 1522
Colombo,
Sri Lanka.

Tel: 94112696981
94112696437
Fax: 94112692423.

E-mail:library@harti.lk

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FOREWORD

It is very rare that sociologists or anthropologists undertake re-visits to communities that have been studied either by themselves or by others. "Pul Eliya Re-visited" is the product of one such attempt launched by the Hector Kobbekaduwa Agrarian Research Institute in year 2008. The book is a landmark publication for several reasons. It traces the history of Pul Eliya, a village in Sri Lanka's North Central Province, from the time when it was first studied by late Professor Edmund Leach, a renowned British anthropologist, who chose it for his scholarly investigation of kinship and land tenure. Since then, far reaching changes have taken place in this village due to both natural increases of the population as well a technological changes introduced by the adoption of highland cash crops that have almost replaced the earlier agrarian economy characterized by rice cultivation using rainwater stored in the village tank.

The book examines the cumulative impact of agrarian changes of recent times on the residential patterns, social structure, and agricultural technology of a community that was once composed of a small group of kinsmen having cooperative labor and kinship patterns. Besides giving a historical analysis of rural society, it offers valuable insights into the social, economic and ecological processes underlying agrarian change in general. At the same time, it draws attention to continuities with the past that pertain mainly to the domain of folk ritual and symbolism that annually reiterate the important role of rice in the villager's worldview. In that sense, the book offers a comprehensive view of Pul Eliya as a community of people and therefore is interesting reading for students of agrarian society.

Lalith Kantha Jayasekera
Director

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- To all the residents of Pul Eliya for sharing their time and knowledge about themselves and their village with members of the research team.

A.J. Weeramunda
M.K. Nadeeka Damayanthi

EXECUTIVE SUMMARY

This monograph is the outcome of anthropological research conducted during 2008 in a dry zone, tank-based agricultural community known as Pul Eliya which is situated in Sri Lanka's North Central Province. The village was selected for two reasons. Firstly, it had been subjected to extensive social and economic changes resulting from the large scale adoption of commercial highland agriculture particularly during the last decade. Secondly, an earlier account of the village written by the anthropologist, late Professor Edmund Leach, provided an exhaustive and excellent account of social and economic conditions that prevailed half a century ago and thereby served as a convenient and reliable baseline for evaluating the agrarian transformation that had taken place since then.

The main incentives for adoption of commercial agriculture consisted of both push and pull factors. The former included dwindling supplies of water due to inadequate rainfall during the last two decades that led to low productivity in rice agriculture and increasing population that resulted in fragmentation of holdings. The pull factors included higher incomes for households through highland cultivation and off-farm employment contributing to improved standard of living represented by modern housing, amenities, and household assets. Thus, the drivers of agrarian change in Pul Eliya were similar to those found in other rural communities.

At the same time, a sort of feedback or cyclical rather than a unilineal process of development is evidenced, namely, that people not only earned extra money from commercial enterprises but also reinvested some of the earnings to purchase new agricultural technology in the form of agro wells, tractors, and water pumps that accelerated the change process further. However, the adoption of commercialized highland cultivation has certainly not resulted in diminishing the value and importance of rice farming which is the sole means of subsistence particularly for the less privileged sections of the community.

Without a doubt, the sum total of agrarian changes have led to a process of disintegration of the traditional social and economic order including the demise of the compact village settlement and its replacement by ribbon type housing developments as is found in semi urban areas. Similarly, the traditional unit of social organization known as the *variga* that had limited marriage to a number of identified rural communities in earlier times has broken down and has been replaced by extensions of the marriage network to include urban areas and even a few people of other ethnic groups.

However, some aspects of the kinship and land tenure system have been resistant to change and these include the physical layout of the *purana* paddy field and kinship affiliations based on membership in distinct residential groupings that Leach referred to as compound groups although the material base of such groupings has disintegrated. This finding is important from a theoretical standpoint since Professor Leach had advanced the view that the physical foundation of the community was the only lasting entity while he

saw kinship as merely a way of talking about arrangements on the ground in relation to land and water.

This study has also shown that although the material order has gone through radical changes, what has persisted instead is the normative order particularly in the realm of ideas about belonging to a single community of people. One such norm that Pul Eliya people have adhered to is that land should not be alienated in any way to people who do not belong to the community. It is also replicated in the ritual realm through annual ceremonies centering around the core symbol of rice that bind Pul Eliya people together despite social divisions accentuated by changes in the agrarian order.

Finally, the study has identified several areas in which state interventions are deemed necessary. The need to address key agrarian issues such as the possible loss of soil fertility and an increased salinity level due to over-irrigation, dangers to health and environment due to unregulated use of agro chemicals, and potential depletion of groundwater resources have been highlighted. A strategic planning process at the regional level needs to be undertaken in order to improve the supply of agricultural produce to local markets so as to avoid the problem of gluts and drastically low prices at the marketplace. Finally, since paddy cultivation represents the ultimate fallback position for the average farming household, the need for introducing new agricultural practices that would optimize water use and increase soil fertility is also given emphasis in the study.

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List of Abbreviations

Bot.	Botanical Term
CBO	Community Based Organization
CTB	Ceylon Transport Board
DS	Divisional Secretariat
FAS	Funeral Aid Society
GCE	General Certificate of Education
GN	Grama Nildhari
GND	Grama Niladhari Division
HARTI	Hector Kobbekaduwa Agrarian Research & Training Institute
INGO	International Non Governmental Organization
IT	Information Technology
LDO	Land Development Ordinance
LTTE	Liberation Tigers of Tamil Eelam
NGO	Non Governmental Organization

Notes to the Reader

1. On Kinship Charts:

The following conventions have been adopted in the presentation of kinship charts:

Triangle: to represent a male
Circle: to represent a female
Filled triangle or circle: to indicate that the person is alive
Unfilled triangle or circle to indicate that the person is dead
Vertical line: to represent descent
Horizontal line: to denote that the persons are siblings

1. On the Use of Personal Names:

While Leach had apparently not followed the normal anthropological practice of concealing the real names of people and sometimes even the name of the research location, this report has followed his example in order to establish some continuity with the material presented in his publication on Pul Eliya.

2. On the Rendition of Sinhalese Terms in English:

A strictly phonetic script has not been adopted in the presentation of Sinhalese terms. However, the letters **ae** have been used to denote the sound of the vowel **a** as in the English word "**bat**".

3. On the Presentation of Plates:

Illustrative photographs mentioned in each section are presented at the end of the section.

A Biographical Sketch of E.R. Leach

Edmund Ronald Leach was born on 7 November 1910 at Sidmouth, England. He attended Marlborough College, and won an Exhibition to Clare College, Cambridge, matriculating in 1929. He studied mathematics for the first year, then engineering, achieving a First in 1932.

After Cambridge, Leach worked initially as a commercial assistant for Butterfield and Swire in Shanghai, spending his holidays traveling around the country. He undertook anthropological field research in Botel Tobago, (Orchid Island, Taiwan) in 1938, before returning to England as a graduate student at the London School of Economics, where he studied under Malinowski. This was followed by further research in Kurdistan. From 1939-45, Leach was an army officer stationed in Burma, where he carried out more field work. He married Celia Joyce Buckmaster in 1940, and they had a daughter, Louisa.

After the war Leach returned to LSE to complete his PhD, and, after a brief spell in Borneo, became a lecturer, later a Reader, in Social Anthropology. In 1953 he moved to the Faculty of Archaeology and Anthropology at Cambridge University as a lecturer, then Reader, and was given his own chair in 1972. Leach's final piece of field work was undertaken in 1954-5 in Ceylon (now Sri Lanka), where he studied the village of Pul Eliya.

Leach was made a Fellow of King's College in 1960 and was elected Provost in 1966. Alongside his work within Cambridge University, Leach was a Fellow of the Center for Advanced Study in Behavioural Sciences at Stanford University (1961); a member of the Social Science Research Council (1968); Vice Chairman and then Chairman of the Royal Anthropological Institute (1964-6, 1968-70), and an Honorary Fellow of the School of Oriental and African Studies. He won the Curl Essay Prize in 1951 and 1957 and the Rivers Medal in 1958, and delivered a controversial series of Reith Lectures in 1968.

Leach retired from the Provostship in 1978 and moved to Barrington. He died on 6 January 1989.

His publications include: 'Social and Economic Organization of the Rowanduz Kurds' (1940), 'Social Science Research in Sarawak' (1950), 'Political Systems of Highland Burma' (1954), 'Pul Eliya: A Village in Ceylon' (1961), 'Rethinking Anthropology' (1961), 'A Runaway World?' (1968), 'Genesis as Myth' (1970), 'Levi-Strauss' (1970), 'Culture and Communication' (1976), 'Social Anthropology' (1982), and 'Structuralist Interpretations of Biblical Myth' (1983).

Courtesy: Janus Repositories

A Tribute to Professor Edmund Leach From the People of Pul Eliya

The authors have thought it appropriate to begin this report with a short tribute to the late Professor Edmund Leach for, without his pioneering efforts, the present work would not have been possible. This appreciation will differ from tradition by seeing Leach as the villagers saw him and continue to see him after the span of over half a century (see Plate No.1). The fact that he has left an indelible impression on the villagers is a tribute by itself to the good name he has earned among them in his capacity as a sensitive human being first and secondly as a dedicated anthropologist.

Whatever reasons prompted Leach to select Pul Eliya as a subject of research remains a mystery since very little is found in the book about the matter. One explanation is that he wished to study a relatively isolated rural community that had been in existence for at least a century.[1] It is very likely that, following the examples set by some of his anthropological predecessors (in the likes of Professors Bronislaw Malinowski and A. R. Radcliffe-Brown) the village with its tank, associated paddy fields, and human settlement of no more than 40 households occupying the quaint housing structures of the day made of mud walls and roofs of dried paddy straw would have assumed a pleasing prospect.

Nevertheless, his studied refusal to discuss the personal with particular respect to the likely impact his presence may have had on the villagers of that day gives us a clue to his remarkable character. In retrospect, he emerges as a particularly self-effacing individual who gave primacy to his scholarly pursuits and left to posterity the task of determining what impact his presence would have had on the community he had temporarily lived in.

It is important to note that, when Leach arrived in Pul Eliya in 1954, the country had won independence from its colonial rulers only six years earlier. And to the villagers who hosted him, Leach (whom they still refer to as "the white gentleman" or *sudu mahattaya*) would have seemed an anomaly as they would very likely have associated white people with authority, power and social distance that they saw as attributes of colonial masters and their civil servants. However, it is to Leach's credit that he has left a store of fond memories among all villagers who came to know him closely.

How he traveled to and from the village is also a mystery and it is very likely that he used the train that stopped at the nearest town of Medawachchiya to transport his belongings. He also used a Fiat car that he had probably purchased in Colombo and used it to visit the towns of Medawachchiya and Anuradhapura as occasion demanded.

Having come to know that some of his contacts in the village were still alive, one of the first tasks assigned to the small team of five research assistants was to search for

[1] In the selection of Pul Eliya for study, Leach was supported by Dr. Earnest Abeyratne, then Director of the Maha Illuppallma Research Station in Anuradhapura. Dr. C.R. Panabokke of the same institute in consultation with Mr. G.P. Ilangasinghe, the then Divisional Revenue Officer of Nuwaragampalatha (Revenue Division) who helped him to make the final decision. Mr. Ilangasinghe was greatly instrumental in introducing Leach to the villagers and settling him in Pul Eliya (Dr. M.U.A. Tennakoon: personal communication).

such people particularly since he has said very little about his personal experiences during his stay. Quite surprisingly, this undertaking was rewarding and gave the research team an intimate knowledge of how Leach had lived in Pul Eliya and what sort of impact his presence had on the people of that period.

One revealing aspect is that informants had different versions of how long he had stayed with them. The period ranged from a period as short as 4 months to 4 years. Informants who closely associated with him tend to lengthen his stay indicating in a sense the very poignant impact that he had on them. In actual fact, he had stayed in Pul Eliya from June to December 1954, and revisited the village two years later in August 1955, the total period being 8 months.

However, almost all villagers agree on one thing, namely, that he had stayed at the vacant government dispensary, which was situated on the margins of the main residential (*gamgoda*) area. It was one of two buildings in the village that was made of brick and cement at that time (the other being the government school built in 1921). After his departure, the dispensary was replaced by a set of newly built quarters for the teaching staff of the school (see Plate No.2). His own account of how the dispensary was selected is perhaps the only bit of personal information regarding his stay found in the entire book and recalls how the villagers arrived at that decision on their own after considering several possibilities.

His support staff had included a cook who had earlier worked in the town of Medawachchiya and as his translator. According to some, this man had served as a postman while others say he was a dispenser. Many refer to the man as a "spy" (*othhthukaraya*) suggesting that he may have offered Leach with choice bits of personal information about the villagers. While some Pul Eliyans affirm that Leach was conversant in Sinhala, most were of the view that he was not and relied on the translator. Villagers who had worked with him recall how he had photographed the details of daily life in the village including the making of *kurakkan pittu* and how farmers performed various agricultural activities. He had walked in the jungle and visited temples and participated in all public occasions.

Two people in the village have vivid recollections about Leach. One is Kirihamige Nanhamy, now 72 years of age (Plate No 3). When he met Leach he was 18 years of age and was one of the few villagers who, having the time and inclination to be with Leach, had come, in his words, "gradually close to him". He claims that his picture is in Leach's book[2]. He had accompanied Leach during jungle treks although he was emphatic about the fact that Leach did not hunt any wild animals (unlike other White visitors to the area who had a particular liking for water fowl hovering around the main tank). Nanhami also remembers how the villagers had reserved the spill area of the main tank for the white gentleman so he could take his bath in privacy. Apparently, he had not entered the tank as villagers normally do, but had taken water from a bucket and sponged his body with tank water.

The other person is Kiri Ethani, now 80 years of age (Plate No.4), who had married a villager by the name of Naidurala at the tender age of 16 years in order to take care of two children belonging to her older sister who had died shortly after giving birth to

[2] See picture showing a man stocking harvested paddy in a heap (see Leach, 1961, page 256)

the second child. She recalls how Leach had liked very much to visit and stay inside the thatched homes of villagers saying he preferred them as "they were cool" when compared to the brick structure that was the dispensary. She was also one of the villagers who had offered to make special meals for Leach on occasion, and recalled with great affection and joy how she had prepared a meal of *pittu* made of finger millet with a curry made of *elabatu* with sprats, a delicacy by village tastes. She was sad to recall that Leach was no longer living although she added with a sigh that she could "imagine him alive" (*aendila penava*).

People had everything good to say about Leach and spoke about him with great respect and admiration. Village children had much fun taking rides in his Fiat car. He had a very good relationship with every family and with the leaders of the community of that time. He had helped people by taking them in his car to the Anuradhapura hospital where "doctors knew of Leach's connection with the village of Pul Eliya and were quick to take care of anyone who came to the hospital for treatment". One informant recalled how, when he was only one and half years of age, his mother was having problems delivering her second baby despite the best efforts of village midwives. Leach had volunteered to take the mother in his car to Anuradhapura Hospital through village roads that were meant for bullock carts with the journey taking several hours during the night and braving the possibility of meeting with wild elephants that used to roam the jungles on both sides of the road during that period.

On one of his village rounds, Leach had seen a family repairing their thatch roof and given them a helping hand. According to the village *kapurala*, the priest of the Pul Eliya Vishnu temple, "the white gentleman is our relative" (*sudu mahattaya ape naedayek*) since he had great affection for the people of Pul Eliya. According to this informant, Leach had used his influence with officials in the Department of Irrigation to have the ancient wooden sluice of the main tank replaced by a concrete structure and at the place he had indicated (recalling the fact that Leach was first an engineer before he became a social scientist).

A memory that all adults in the village share even today is how he disposed of his personal belongings when the time came for him to leave Pul Eliya. According to them, he had made a list of all his belongings and got each family that had helped him to draw lots for one item. The fact that, even after half a century, some households still have held onto them is an indicator of how much they valued these objects. They include a large plate for serving rice and a bowl for washing fingers after meals (Plate No.5) suggesting that he had used his fingers when eating as is the custom among most Sri Lankans.

Another item of Leach that has passed down to posterity is the "iron bed" (*yakada aenda*, the term Pul Eliyans use) the base of which was actually of wood but had a metal structure on top probably for mosquito netting (see Plate No. 6). A metal water bucket[3] that Leach may have used for bathing[4] is still kept by one of the village

[3] Groups of undergraduate students from different universities in the country have frequently visited the village. During such visits villagers make it a point to show them these objects and are used to getting themselves photographed holding them. One such person (female in Plate No. 6) complained to the study team that none of the visitors had given her a copy of the photo. Our research team made it a point to remedy this lapse within a week of taking the photo.

families (Plate No. 7). His favored spot for ablutions[5] was the spillway of the Pul Eliya tank (Plate No.8). Other items that were also distributed such as a tent, cooking pots, and cups and saucers have not stood the test of time particularly due to the shifting nature of residential arrangements that had taken place in subsequent times.[6]

As a final gesture of appreciation for placing the village in the international picture, the principal of the Pul Eliya School, a Pul Eliya resident, has requested the Provincial Ministry of Education to re-name the school after Leach and all parents of the present day schoolchildren have signed a petition to that effect and forwarded it to the attention of the authorities concerned.

Plate No. 1: Leach, as he may have looked when he was in Pul Eliya
(Courtesy: Janus Repositories)
Source: antroposimetrica.blogspot.com [Downloaded dated -15.03.2011]

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[4] The man in charge of the Vishnu temple of Pul Eliya recalled one and perhaps the only one indiscretion Leach made and that was to bathe naked at the Pul Eliya tank. When the Village Headman came to know of this, he had pleaded with Leach not to do so and "the gentleman complied with the request without any hesitation" (in the words of the former).

[5] According to one informant, Leach preferred to sponge his body with tank water instead of immersing in it as villagers commonly do.

[6] Leach had invited someone to buy his car for a particular price (some say, 2000 rupees). Although some people had the money, no one bought the car as they did not feel the need and no one knew how to drive one then.

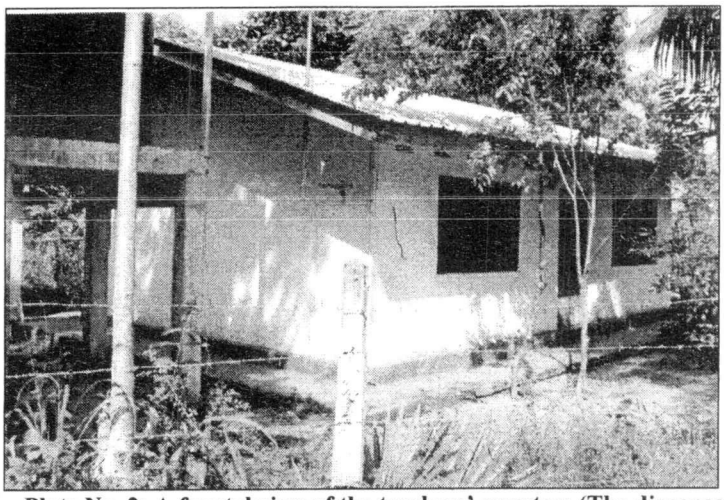

Plate No. 2: A frontal view of the teachers' quarters (The dispensary Where Leach had stayed was located on this site)

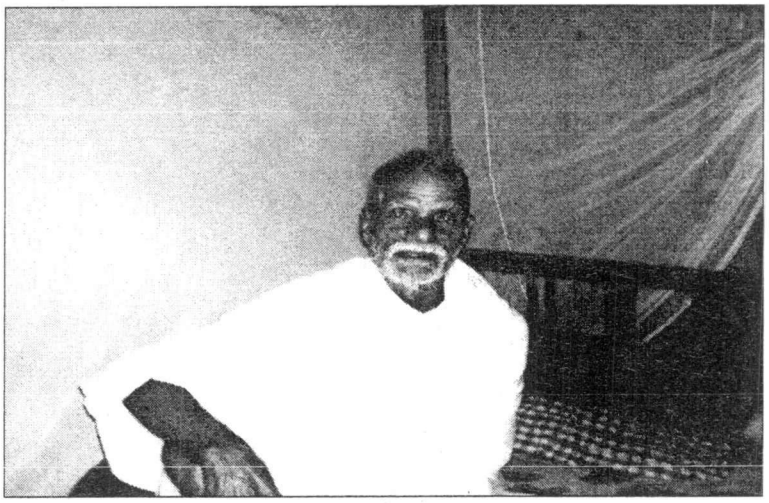

Plate No. 3: Kirihamige Nanhami, a key informant to Leach

Plate No. 4: Kiri Ethani, a key informant

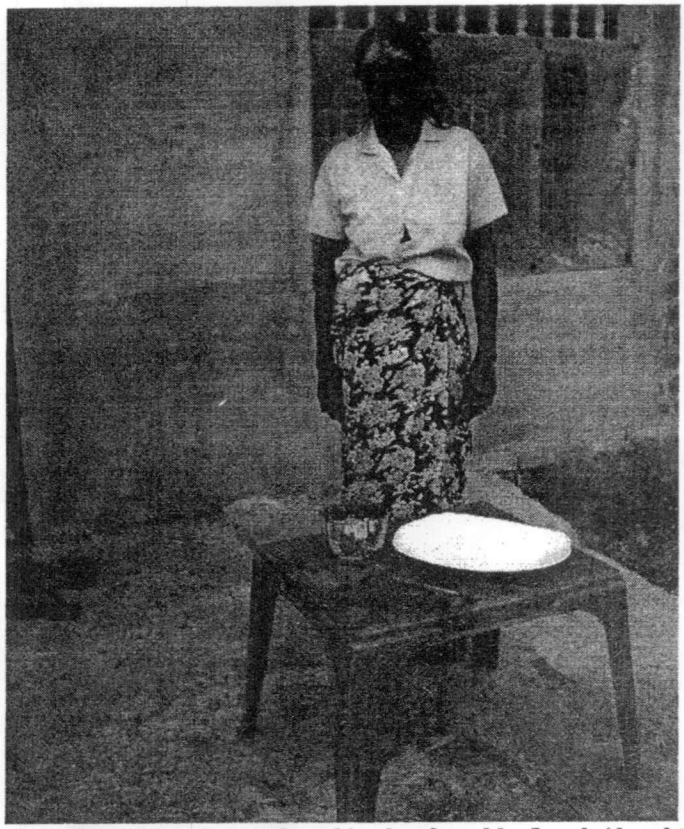

Plate No. 5: Rice plate and washing bowl used by Leach (daughter-in-law of the man who received the objects originally is looking on)

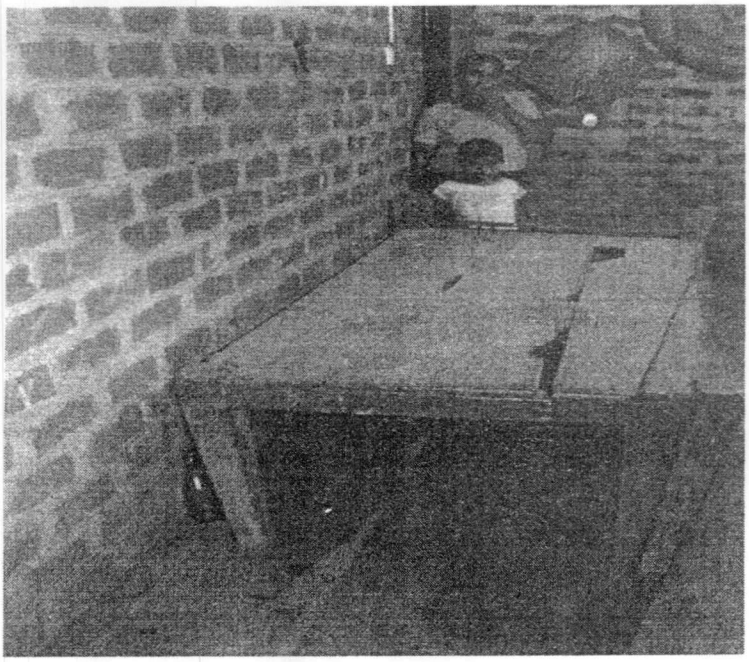

Plate No. 6: What remains of Leach's bed today (daughter and Granddaughter of the original recipient in background)

Plate 7: Metal Bucket with the Widow of the Recipient and Members of Two Descending Generations on her left

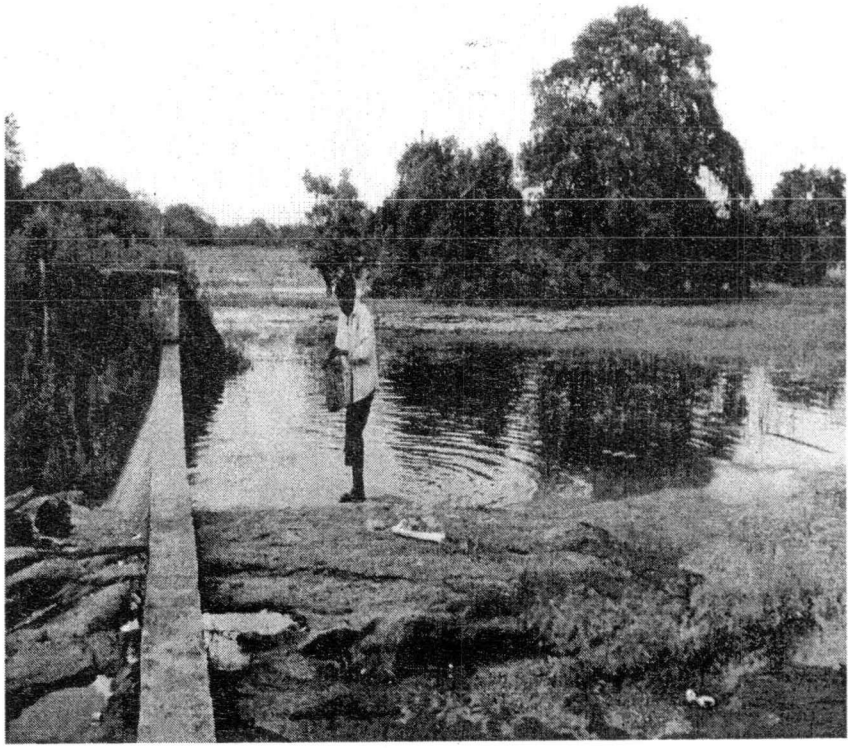

Plate 8: Spillway where Leach had taken his bath (Pul Eliya main tank is in the background)

CHAPTER ONE

Introduction to the Study

Over a half century has elapsed since the late Professor Edmund Leach conducted the study of Pul Eliya, a village in Anuradhapura District, in 1954 and published his findings in a monograph entitled "Pul Eliya, a Village in Ceylon: A Study of Land Tenure and Kinship", in 1961. This work constituted a benchmark in the history of social anthropology in general and studies of kinship and land tenure in particular for reasons described below. Re-studies of communities are generally rare in the social sciences and Pul Eliya is no exception.[7] It is logical to assume that, in the ensuing period, Pul Eliya, just as much as other village communities in the country, has not been spared the impact of far-reaching changes that have transformed, what, for purposes of convenience, may be referred as "traditional" agrarian society.

While Leach himself was quick to observe the arrival of new forms of land tenure such as freehold and lease in Pul Eliya society of his day, he also made note of how villagers incorporated these new types of land ownership into the discourse of traditional tenure such that they were regarded as just another form of ancestral land. While this fact reflects in part the continuity of traditional land tenure concepts in the changing setup of that time, this study is concerned with a number of factors that in combination have had the potential to transform traditional agrarian society in a more radical fashion.

1.1 Benefits of the Study

The study is expected to yield several tangible benefits. Firstly, it constitutes a landmark in the history of studies of the agrarian order in Sri Lanka since it will be the first re-study of a village community using a well-documented database covering many aspects of village society that will serve as a baseline for evaluating change and arriving at valid conclusions concerning directions of change and measurements of them. Secondly, the study will produce a comprehensive analysis of the dynamics and direction of agrarian change that will yield useful insights into how agrarian communities face up to the challenges of change and how they transform themselves and their society to adapt to change. Thirdly, the study will receive the attention of scholars worldwide given the international reputation that Pul Eliya, the book and the village, has enjoyed.

1.2 Study Objectives

The study objectives are both general and specific.

1.2.1 General Objectives

The general objectives of the study are to document, analyze and assess the impact of macro level changes on selected aspects of Pul Eliya society. In this regard, the study

[7] The only attempt at such an investigation of Pul Eliya was done by Mr. K.B. Bindusara , who submitted a research paper on the village for his undergraduate degree in Sociology to the Department of Sociology, University of Peradeniya in 1995.

will rely on detailed ethnographic observations submitted by Leach himself in such fields as land tenure, agricultural practices, organization of agricultural labor, kinship, caste and social organization, religious beliefs and practices, local level leadership and the role of village elites to mention a few. The study would thereby yield a comprehensive picture of the nature of change in rural society, the directions of such changes, and serve thereby to highlight how social change occurs especially in a context where planned agrarian development such as the creation of settlement schemes has not taken place.

1.2.2 Specific Objectives

The study will also focus on several key issues that have both theoretical and applied value. First, is the conclusion arrived at by Leach that economic relations or the arrangements that people have made with regard to the use of natural resources have primacy over jural rules or the rules governing kinship relations: "It is my thesis that jural rules and statistical norms should be treated as separate frames of reference, but that the former should always be considered secondary to the latter.....I want to insist that the constraints of economics are prior to the constraints of morality and law." (Leach 1961, p. 9)

While not discounting the importance of cultural values and beliefs held by Pul Eliya people, Leach reserves them to the background of economic relations, the former being considered as mere reflections of the latter. He has posited the importance of seeing man as primarily an economic animal due to the peculiar environment in which Pul Eliya people are placed: "But the Pul Eliya community does not only operate within an established framework of legal rules, it also exists within a particular man-made ecological environment. It is the inflexibility of topography – of water, land and climate – which most of all determine what people do" (Leach 1961, p. 9). If indeed Leach is correct, sweeping changes in the agrarian order in subsequent times could also have led to a fundamental re-structuring of norms and values defining kinship and land tenure. If that were the case, we need to ask what new systems of jural rules and norms governing land tenure, kinship and caste have emerged in the new social order. Have they completely replaced the old system? If no, what adaptations of the old system have evolved and under what conditions have such transformations taken place? What lessons can we learn from the new situation? Do they have serious implications for the stability and sustainability of the new agrarian order?

The second specific issue pertains to core characteristics of the traditional agrarian system itself. In Leach's portrayal of Pul Eliya of his day there is a delicate balance between socioeconomic and ecological factors that together produce a stable and continuing village community. The ideology of belonging to a *variga*, the jural institution known as the *variga* court that regulated marriage and post-marital residence, labor exchange patterns, the system of allocating paddy land holdings during periods of drought, the practice of slash-and-burn agriculture in areas owned by the Crown, and size of landholdings were inextricably interwoven with the hard ecological fact of limited water supply for cultivating the staple crop of rice. Therefore, it was more important for villagers to talk about land rights in terms of rights to a share of the water in the village tank. It is this state of affairs that in fact prompts Leach to conclude: "The continuing entity is not Pul Eliya society but Pul Eliya itself–the village tank, the *gamgoda* area, the Old Field with its complex

arrangement of *baga, pangu* and *elapatha*[8]. For purely technical reasons, connected with the procedures and efficiency of irrigated agriculture, the arrangements of the Pul Eliya ground are difficult to alter. They are not immutable, but it is much simpler for the human beings to adapt themselves to the layout of the territory than to adapt the territory to the private whims of individual human beings" (Leach 1961, pp.300-301).

It is a moot question whether the "ecological givens" have remained immutable or whether they have been subject to change such that the private whims of individual human beings take precedence over the former. This would be especially relevant if, in subsequent times, alternative water sources such as agro wells and water pumps would have reached the village and consequently whether they caused disruptions or re-organizations in the socioeconomic order. This study therefore addresses the broader issue of technological innovation and change in general and their social and economic repercussions in the context of a traditional village society.

The study also focused on changes in the social infrastructure through state initiated developments such as opening up of roads, introduction of mass communications, and improved transport systems (both public and private), and most importantly the setting up of market centers (as at Dambulla town) replacing the middlemen of former times. Have these new developments contributed to a positive change in the lives of Pul Eliya villagers? Who actually participates in or takes advantage of the new facilities? Have they led to the formation of new village elites replacing the old?

In addition to the "extraneous" drivers that would have prompted Pul Eliya society to change, the study focuses on the role of several, highly obvious "internal" drivers that could have contributed to the above process. These would include natural increase in the village population particularly due to improvements in health care services that are not limited of course to Pul Eliya. Thus, it would be important to examine what responses would have taken place within the village community to cope with demographic changes of that order and magnitude.

There is also the broader issue of the role of cultural beliefs and practices in the context of changes in the agrarian order. Central to the belief system of Pul Eliya villagers was the god known as Pulleyar[9], who, according to Leach, symbolizes the preeminent position of males over females, and the social patterning of relations between the sexes that are segregated from each other (Leach 1961, pp. 36-37). Thus, it would be important to ask what changes have taken place in the status of women particularly due to higher levels of education and greater access to income generating activities such as self-employment or work in large factories outside the village.

1.3 Research Questions

The main research questions to be addressed through this research study are:

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[8] Apparently, this is a characteristic feature of cascade type agricultural systems (Dr. M.U.A. Tennakoon, personal communication).

[9] According to one informant, Pulleyar is a composite Tamil word meaning "where is the child?" referring to the origin of the god (discussed in Section 10). The god has the same ancestry and body, which has the head of an elephant, placed on human torso, as that of the Hindu god, Ganesh.

1. What comprehensive picture can be constructed regarding the nature of change in rural society and the directions of such changes through this case study?
2. In what ways will the study serve to highlight how social change occurs especially in a context where rural society has been impacted upon by large-scale change in the socioeconomic order?
3. Have changes in the agrarian order in subsequent times led to a fundamental re-structuring of norms and values defining kinship and land tenure? If so, what new systems of jural rules and norms governing land tenure, kinship and caste have emerged? If no, what adaptations of the old system have evolved and under what conditions have such transformations taken place?
4. To what extent have "ecological givens" become mutable such that the private whims of individual human beings take precedence over the former? What new technological changes have occurred as a response to ecological givens such as limited water supplies for cultivation?
5. How have changes in social infrastructure induced through state initiated developments such as opening up of roads, introduction of mass communications, improved transport systems, and most importantly the setting up of market centers changed the economic and social standing of villagers? Who actually participates in or takes advantage of the new facilities? Have they led to the formation of new village elites?
6. What is the role of "internal" drivers such as demographic change through increase or decrease of population and increased inclination to move into roadside settlements from once highly cramped village compounds or *gamgoda* in creating changes in the agrarian order?
7. What changes have taken place in the status of women particularly due to higher levels of education, improved health, increased links with the outside world, and greater access to non-traditional income generating activities? What concomitant changes have occurred in the relations between the sexes and their portrayal in religion and belief systems?

1.4 Methodology

The research adopted a holistic, ethnographic approach to the re-study of Pul Eliya taking into account the social, economic, agricultural, and religious aspects of the community finally seeking to integrate them into one comprehensive whole. The study relied upon the traditional anthropological method of participant observation to develop rapport with villagers and to collect both quantitative and qualitative information. Five members of the research team (4 males and 1 female) worked as research assistants (Plate No. 9) for a period of 3 months commencing in December 2008 after taking up full time residence in Pul Eliya in the home of a villager. All were recent graduates from the universities of Sri Lanka with academic backgrounds in sociology, anthropology, economics, geography and agriculture. They used the first part of the period (about 2 weeks) to make casual visits to all households in the village. This was followed by formal data collection using a census form that solicited basic information from all households regarding location of the household, number of resident members and main occupation of the head of household. During the months that followed two research assistants focused on updating the elaborate kinship, marriage, residential and land tenure system and noting changes that have occurred after Leach left the village. Another assistant was given the responsibility of mapping

the present day topography and land use pattern comparing it with the situation that existed during the time of Leach's study. Toward the end of the study period, a socio-economic survey was conducted on all households in the village using a structured questionnaire covering the following aspects:

- Location of household
- House structure and facilities
- Household composition
- Present occupation of members
- Size and type of landholdings and type of tenure
- Crops cultivated
- Prices paid for agricultural produce and amounts earned
- Other sources of income and amounts earned
- Level of indebtedness and
- Membership in community based organizations

Data collection was regularly monitored by senior members of the research team who frequently undertook field visits to the village (Plate No. 10). In addition, they also conducted open-ended interviews with key informants from the village and surrounding villages covering a total period of about 20 days stretched out between the months of March to July of 2009 to cover:

- Changes that have taken place in the agrarian order
- Perceptions regarding such changes in Pul Eliya and surrounding villages
- Impact of the conflict or war situation on agrarian conditions
- Problems faced by farmers
- Gender relations and gender specific roles
- Changes in food technology and agriculture
- Changes in religious belief and practice

The senior members of the research team spent an additional week in the month of November this year to attend to data gaps in the draft final report and to finalize the making of a video on Pul Eliya.

1.5 Format of the Report

In keeping with the focus of the study, the report covers both changes as well as continuities with the past and examines factors that have contributed to change while not forgetting to provide sociologically valid answers to the question of continuity. The main theoretical premise of the report is that no society can or does sever links entirely with its past and our task will be to examine which structural elements persist and which undergo change while identifying the dynamics involved in both these processes.

Each section of the report will be devoted to the presentation of information as follows: Chapter One is an introduction to the study while Chapter Two presents a review of the relevant literature on agrarian change in general and on Sri Lanka in particular. Chapter Three describes the socio-economic background of Pul Eliya. Chapter Four is about the salient characteristics of the kinship and marriage system in the light of changes that have taken place within the last 50 years. Chapter Five

discusses the system of land use and land tenure with regard to paddy land giving special attention to changes in the water management system. This is followed by Chapter Six which discusses how agrarian change took place in Pul Eliya with particular reference to the role of villagers who have acted as change agents. Chapter Seven outlines the impact of agrarian change on diverse aspects of the community including its settlement pattern, labor utilization, mechanization, use of pesticide and weedicide, marketing channels, and access to credit. Contemporary issues facing farmers of today and having a bearing on the issue of the social and economic sustainability of new agricultural developments are also discussed here. Chapter Eight goes on to outline the system of social stratification and the emergence of a new class of elites that has resulted from the sum total of changes in the agrarian order. The section also presents a case study of social conflicts that are expressions of both class contradictions in the village as well as kinship differences. Chapter Nine focuses on changes in the domain of religion and ritual and the role of ritual as a socially integrative institution counterbalancing the fissiparous tendencies within the community. The report concludes with Chapter Ten which summarizes the main findings, discusses their theoretical and other implications for the study of agrarian change, and presents some recommendations in the light of agrarian change in Pul Eliya.

Plate No. 9: The five research assistants standing on the bund of the Pul Eliya main tank

Plate No. 10: Conducting a check of data collected from the household survey (Senior Statistical Officer of HARTI is on the extreme right)

CHAPTER TWO

Literature Review

The present study is essentially an examination of the processes involving the transition of agriculture from a subsistence mode to one characterized by some degree of commercialization, or in other words, a change in the status of the villager from peasant to that of a farmer. It has adopted a case study approach to examine agrarian change by focusing not only on the economic or technological but also the social and cultural dimensions of the change process. The words of Arnon are quite relevant to the present exercise: "The one lesson that has been learned is that, for those concerned with agricultural change – whatever their role or professional competence – an understanding of the complex of economic, social, and cultural factors involved in agricultural development is a prerequisite to fruitful endeavor in each field of professional activity" (Arnon 1981, p. xv).

When Pul Eliya was studied by Leach in 1954, it was essentially a relatively isolated, traditional village, one of countless other villages in the country, in which people had for generations practiced a subsistence form of agriculture. In such a system, the village reservoir (also called "tank") played the critical role of stocking water collected during rainy periods for the practice of irrigated rice agriculture, essentially for one cropping season, and if there was sufficient water left over, to cultivate rice for a second season. In addition to rice cultivation, the people had practiced the slash-and-burn (*chena*) method of farming in highland areas for the cultivation of other varieties of food grain including finger millet, *cowpea*, black gram, and vegetables all of which supplied the basic subsistence needs of families while what was left over was sold. The social, economic and cultural transformation of Pul Eliya along with its transition from its state of self-sufficiency to one increasingly dependent on outside markets and market influences is the special focus of this study.

2.1 An Analytic Model of Change

The evolution of agriculture from a subsistence to a commercialized mode has often been cited as a prerequisite for development of a country as a whole as commented upon by Arnon in the following terms: "Only recently has awareness grown that the preponderance of the agricultural sector in the economy of developing countries signifies that, without progress in agriculture, stagnation will continue, per capita income will remain low, and the vicious circle of poverty and low productivity will be perpetuated" (Arnon 1981, p. xv). To what extent this observation applies to the context of Pul Eliya will be examined in the succeeding sections of this report. Suffice it to say here that scholars such as Bettelheim (1972) and Meillasoux (1972) have pointed out that there is no simple or unilinear progression from a pre-capitalist to a capitalist mode of production in the peasant context whether it is in Sri Lanka or elsewhere. Instead, they have stressed that "when non-capitalist modes of production are subordinated to capital, they are typically subjected to simultaneous processes of conservation and dissolution" (see Brow 1992, p.58).

However, the takeoff from subsistence to commercial farming requires several ingredients that Mosher (1966) has classified under two main groups:

A: **The Essentials** or factors that must be present to enable a farmer to adopt an innovation including a market for farm products, constantly changing technology, local availability of supplies and equipment, incentives and transportation.

B: **The Accelerators** or drivers which may be important to get an innovation adopted but are not indispensable and which include education for development, credit, group action by farmers, improving and expanding agricultural land, and national planning.

According to Kulp (1970), the number of accelerators required, and the intensity and complexity of their application, depend on the following three factors:

a) The novelty and complexity of the innovation: The lesser the departure is from traditional practices, the smaller will be the importance of the accelerators.

b) Cost: Innovations that require substantial amounts of capital for their adoption increase the importance of the accelerators such as credit, planning etc

c) Profitability: The greater the proven returns from an innovation, the more inclined farmers will be to adopt the innovation, even without accelerators (quoted in Arnon 1981, p. 17).

2.2 Agrarian Transformations in Sri Lanka

Early attempts to arrive at a theoretical formulation of agrarian change in Sri Lanka are reflected in the work of Shanmugaratnam and Gunasinghe who applied Marxist theory on class formation and accumulation of capital to analyze agrarian change in the Asian context. Shanmugaratnam has investigated the principal reasons why capitalist transformation has not taken place in Sri Lankan peasant society and finds the root causes of economic and social stagnation as being (a) absence of consolidation of parcels into larger units of production (b) hegemony of same class interests that worked against the evolution of a sizeable category of independent petty producers and (c) the structural inability of agriculture to act as a source of capital (Shanmugaratnam 1995, pp.15-16).

Using Marxist theory again, Gunasinghe has proposed a typology of four agrarian systems based on the market factor, namely, those with a tendency towards disintegration, those with a strong potentiality for growth, those with internal inhibitions to growth and those that are transformed and frozen (Gunasinghe 1995). Interestingly enough, the case study for the first type of agrarian system is Kele Thirappane, a traditional village in the North Central province of Sri Lanka, having the same social and economic characteristics as Pul Eliya at the time it was studied by Leach. Whether contemporary Pul Eliya exemplifies an agrarian system that has undergone a process of disintegration is a question that will be addressed in the concluding section of this monograph.

The approach to agrarian change has also been investigated in terms of the evolution of capitalist forms of agricultural production from a pre-capitalist mode and has been investigated through case study material in the collection of essays edited by Brow and Weeramunda (1992). Several of these studies which have focused on commercial vegetable and tobacco cultivation in the highlands and large scale cash cropping in the Dry Zone have noted the emerging importance of the use of wage labor. Almost all

these studies have also shown rather conclusively that changes in the agrarian order have had a negative impact on the ideal type of the village community characterized by "self sufficiency, autonomy, social equality and cultural homogeneity" (Brow 1992, p. 54).

A closer look at some of the case studies presented in the above work offers some insights into the dynamics of change as it takes place at the local level. Tudor Silva's essay on the changes that took place in Weliwita, a Wet Zone village situated in the hill country, identifies some of the push factors that are similar to those operating in the Pul Eliya context. For example, low yields in paddy and non cultivation of land on higher elevations due to lack of water motivated some farmers to introduce cash crop cultivation in areas that had traditionally been reserved for paddy. In addition, the important role played by an "outsider" in introducing agricultural innovations is particularly relevant, as will be seen later, for the Pul Eliya situation: "This innovation was introduced into Welivita by an uxorilocal (*binna*) husband who originally came from Marassana where paddy land had long been used for seasonal vegetable cultivation" (Silva 1992, p.83). Another significant innovation of Welivita people was the introduction of a system of crop rotation between paddy and vegetables that were meant for the Kandy market. Silva also notes the role played by wholesalers in Kandy town who purchase the entire vegetable crop by advancing credit to local producers thereby seeing structural links between the village and the city. The role of other essentials (in the transformation model advanced by Mosher) such as the opening up of a main access road, improvement of the irrigation system, and tenurial changes introduced by the Paddy Lands Act of 1958 which gave more control of the means of production to low caste people of Welivita are seen as "structural prerequisites for the development of cash cropping in Welivita" (Silva 1992, p.83).

Jayantha Perera, in his essay, examines the structural and other changes that have taken place in Wewagama, a *purana* village situated in the Anuradhapura district and one which was radically changed due to the implementation of a government sponsored irrigation development and resettlement scheme known as the Accelerated Mahaweli Project. Pul Eliya has, of course, been spared the traumas of experiencing the type of cataclysmic change that people of Wewagama were exposed to. Perera goes on to add that: "Wewagama has now become a small unit in a large state-sponsored development scheme, and the villagers have had to discard their traditional identities and values to take on new ones within a regional context" (Perera 1992, p. 128). His conclusions are relevant to the Pul Eliya context since in a way, a type of structural change has occurred in it without government intervention although not traumatic since it has been brought about by the actions of Pul Eliyans themselves.

Newton Gunasinghe's article examines transformations in two distinct types of agrarian systems, namely, cash crop cultivation of big onions, chilies, potato and grapes by dry zone farmers in the Jaffna peninsula and tobacco cultivation by wet zone farmers in the Nuwara Eliya district. It focuses on the impact of external forces taking the form of the market system of Colombo in the case of the former and multi-national companies in the case of the latter. He argues that it is not possible to see agrarian transformations as taking a linear path but instead take "multiple trajectories". This according to him is particularly evidenced in the formation of social classes with the growth of an entrepreneurial class of tobacco barn operators while rural communities of Jaffna have not changed much in terms of their caste-

based social structure. Of particular note is his comment on the volatile nature of prices as dictated by the Colombo vegetable market that is not a far cry from what is happening for Pul Eliya farmers through the market recently established in the town of Dambulla: "The cultivation and sale of vegetables in Udawatta is subject to all the uncertainty and mercantile exploitation found in other regions of Sri Lanka. A hierarchy of small and big merchants intervenes in the marketing of vegetables, with each merchant carving out for himself a part of the surplus and thus often leaving the cultivator a price that is insufficient to cover his costs of production..... As vegetable crops tend to be seasonal many varieties flood the market simultaneously and create a glut, which then lowers the prices accruing to the cultivator" (Gunasinghe 1992, pp. 148-149).

Focusing on the changing nature of settlements in Monaragala district, Vitepsky has identified two types, namely, "bounded" and "unbounded systems", a distinction that has relevance for the analysis of changes that have taken place in Pul Eliya. The former refers to a village that is landlocked in that "its boundary is sharply restricted, either by the boundaries of other villages or by strictly protected reserved forest, mountains, and so on" (Vitepsky 1992, p. 179). He considers traditional villages of Monaragala as being of the latter kind for the following reasons: "Though the sites and identities of *purana* villages remain, population is increasingly moving up to their boundaries or moving outside the village altogether, either to some roadside ribbon development or to a new site elsewhere" (Vitepsky 1992, p. 179). While insufficiency of land has been the principal reason for this change in Monaragala communities, the exactly the same pattern of development has taken place in Pul Eliya, although for different reasons, namely, availability of land and the push to bring it under commercial cultivation and residence. However, contrasting the Monaragala situation with that of Pul Eliya in 1956, Vitepsky concludes: ".....Leach's model was not designed to accommodate a mass of people who are constantly on the move and seek survival by changing and multiplying their house sites and fields.....A central feature of Leach's account is the use and control of irrigation water. Houses are fixed in a nucleated cluster away from the fields, while in those fields 'land' is made permanent" (Vitepsky 1992, p. 179). Quoting Leach (1961), he refers to aspects of the model as follows: ".....kin groups 'endure because the estates endure, but the groups have no corporate existence, which could survive a dispersal of their property" (Vitepsky 1992, p. 179). This type of change is precisely what has happened with regard to the use of highland in Pul Eliya but without a total loss of corporate existence. The central paradox, which the present work will seek to address, is just how the continuity of Pul Eliya as a community of people occurs although the material base on which it exists has been radically changed.

James Brow's paper is on agrarian changes that have impacted Kukulewa, a traditional Veddha village of Anuradhapura district. Changes include the cultivation of crops for the market and use of hired labor that have been accentuated by party politics and the reconstruction of a model village on land belonging to Kukulewa people under a housing development program of the government. The sum total of these changes was that they threatened the identity and integrity of the village as a community of closely related kin. It is noteworthy that in this context, the people of Kukulewa relied not on social, structural or material bases for bringing their community together but on religion and ritual as Brow concludes: "Yet the village and the *variga* remained the principal and largely overlapping foci of the communal

ideal; both were continuously invoked in everyday life and occasionally celebrated in ritual performances" (Brow 1992, p. 290).

While there is no doubt that pervasive changes have taken place in the agrarian order all over Sri Lanka, there is no agreement among students of peasant communities as to the direction of these changes. The overall conclusion is that there are multiple trajectories of change, each funneled by the unique circumstances surrounding particular rural communities making generalization virtually impossible. However, this much is certain, that is, the critical role played by external market forces in deciding the course of social and economic evolution of a peasant community. This has in fact been highlighted in Silva *et al* (1999) where the authors have identified two types of market forces, namely, the labor market outside the community that provides off-farm employment opportunities and the market for agricultural produce, both having a decisive influence on the trajectory of social and economic change in the peasant sector. The authors point out that while policy and fiscal analysis of non-plantation agriculture limits it to paddy cultivation, this gives the impression of economic stagnation within the non-plantation sector. However, they argue that if the focus is shifted to non-paddy crops (also termed as 'other food crops"), an element of dynamism is seen in an otherwise stagnant agrarian economy, to quote: ".....a rapid shift from paddy to these high-value crops has been prevented by market imperfections and state policies favouring continued cultivation of less profitable paddy" (Silva *et al,* 1999, p. 9). They argue further that the cultivation of other food crops "signify a fairly strong undercurrent of dynamism within an overall sector characterized by stagnation" Silva *et al,* 1999, p. 10). Another significant finding is that the combination of paddy with non-paddy crops (in alternating seasons) represents a higher degree of commercialization and a lowered level of rural poverty (Silva *et al*, 1999, pp. 10-11).

The authors of the above study have also added another significant observation and one which addresses the problem of sustainability of new agricultural developments with the following statement: "..... policy-induced market imperfections, cultural attachment to paddy cultivation and increased fragmentation of land holdings at every successive generation, risk averseness, paddy bias in government support services and compatibility between sub-optimal paddy cultivation and demands of the increasingly more important off-farm employment ..... have led, even among the more dynamic groups, to a reversal from commercial effort back to subsistence farming, poorly-cash remunerative but safer paddy cultivation and a preference for off-farm employment" (Silva *et al*, 1999, p. 1).

The interplay of factors such as access to off-farm employment principally through jobs in the security forces and factories, commercialization of agriculture and the cultivation of paddy with non-paddy crops can also be seen in contemporary Pul Eliya. They point to the intrusion of the external job market as well as market for agricultural produce into village life. Just how these factors in combination decide the trajectory of social and economic change for Pul Eliya people will be the main concern of this study.

CHAPTER THREE

Community Background

This section of the monograph deals with physical, socio-economic and other background features of Pul Eliya as a place and as a community of people. Particular attention is given here to changes in the road network, rainfall patterns, population, extents of land cultivated under paddy and highland, transport, health, education and leadership structure due to the important role they have played in the evolution of Pul Eliya society from its traditional situation to that found today.

3.1 Location of Pul Eliya

The village of Pul Eliya is situated close to the northern boundary of Anuradhapura District, one of the two districts comprising the North Central Province. It lies about 18 km north of Anuradhapura town and is one of 3 villages forming the GN Division of Pul Eliya (GND No. 62), the other two being Kalawelpothana and Thulawelliya (see Map 1). The village is situated about 5 km from the Malwathu *Oya*, a perennial river that empties into the sea in Mannar district. The village is bounded on the north by the GND of Kudakumbukgollewa, south by Kanadara Oya flowing from Mahakanadarawa tank, east by the GND of Wiralmarippu and West by the GND of Yakawewa.

Villagers' links with main urban centers of the country begin with the town of Medawachchiya that has supplied such needs as household provisions, fertilizer, and agro chemicals. The town also has two public schools, a police station, offices of several government departments, and the office of the Divisional Secretariat, which is the government's main administrative arm at the local level. A principal constraint facing the villagers and in fact all who have to go through the town of Medawachchiya are the stringent security checks at the main checkpoint about half a km from the main town area requiring villagers of the area to carry special transit cards issued by the police. All travelers passing through the checkpoint are required to get down from their vehicles, and have their bags and baggages checked. Large shipments of vegetables or grain are subjected to intense checking sometimes at the point of bayonets. In addition, the town of Dambulla (about 70 km from Pul Eliya along the Anuradhapura/Kurunegala road) has key economic value for the people of Pul Eliya since, it serves as a main collection centre for agricultural produce from the village[10].

Pul Eliya is also a adjecent village from the viewpoint of the civil conflict that took place in the country for nearly three decades, a situation that was non-existent during Leach's study. Sinhala villages lying closer to the northeastern boundary of the village such as Mahakongaswewa and Tammanna Elawaka (3 km from Pul Eliya) were attacked by separatist Tamil guerillas known as the LTTE, the former in 1988 and the latter in 1990. The attackers had set fire to houses and killed several civilians (44 families in the former village and 21 in the case of the latter) among who were kinsmen of Pul Eliya people. Interestingly enough, acts of aggression by the militants

[10] With the end of the civil conflict, it is learnt that security checks are not as stringent as before.

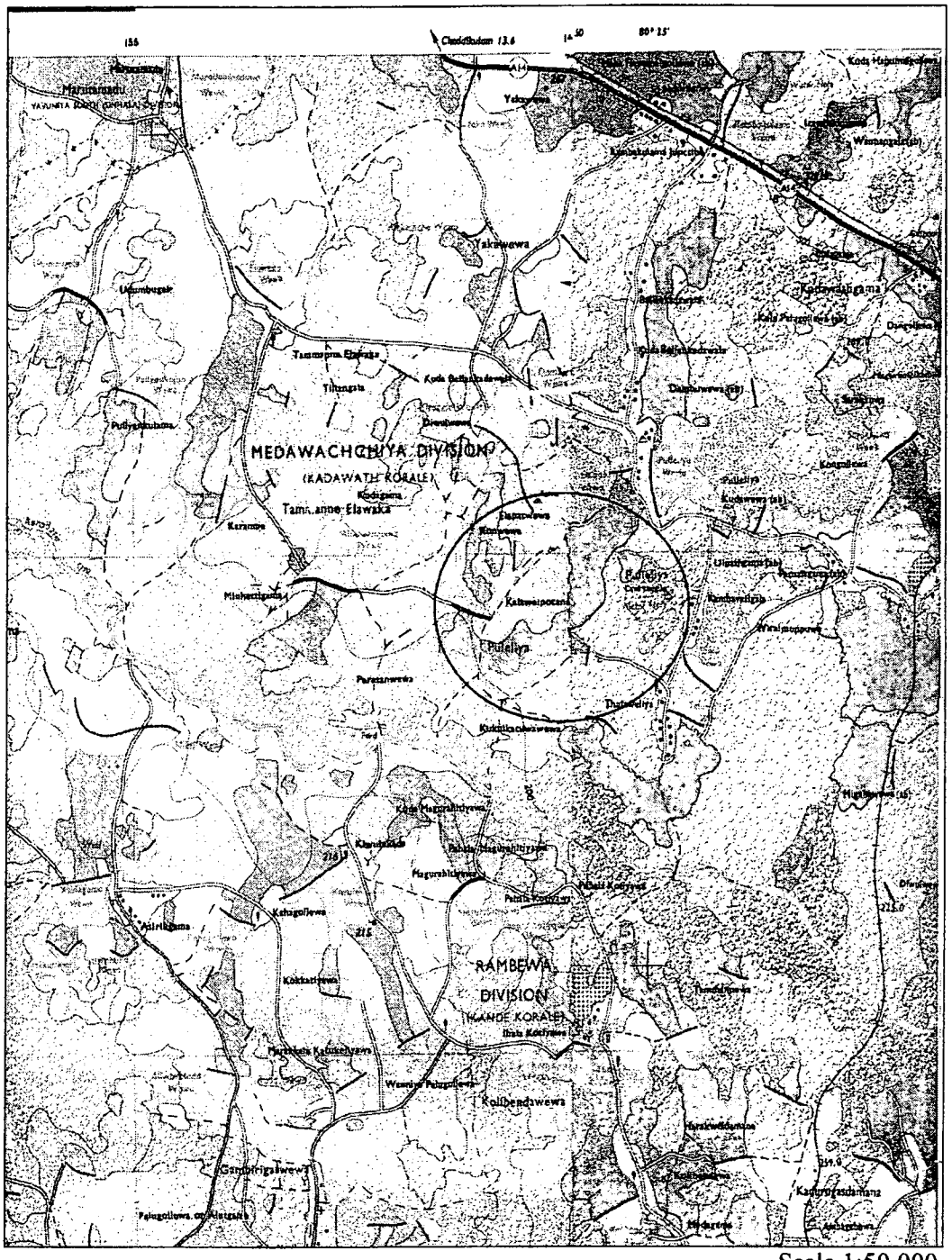
have not provoked retaliatory measures from villagers or created any animosity toward Tamil people in general or led to the formation of Sinhala nationalism at the village level. This could be because Pul Eliyans have always had Tamil people as their immediate neighbors and learned to live in a spirit of ethnic harmony. However, during the period of this study, concerns about the security of the village were reflected in the presence of a police outpost in Pul Eliya itself containing one officer and several home guards that patrolled the length and breadth of the village and its forest surroundings. The village also served as a training ground for battalions of home guards who were deployed to work in the countryside after training. These security arrangements have been discontinued due to the ending of the civil conflict in March 2009. In addition, there are many young men who work either in the armed forces or in the police as home guards.

3.2 Soil, Terrain & Climate

The area belongs to one of the great soil groups in Sri Lanka, namely, reddish brown earths that are suitable for both paddy and highland cultivation and whose characteristic features are as follows: " The surface soil structure is weak to moderate, coarse, subangular blocky. The soils are extremely hard when dry, friable to firm when moist, and sticky when wet. .....The soil moisture relationships are characterized by a low water-holding capacity with a rapid release of soil moisture at tensions lower than one atmosphere" (Panabokke 1996, p.37).

The terrain is flat and undulating interspersed with rocky outcrops that were used in the remote past as sites for Buddhist temples meant for public worship. The remains of older shrines are visible even now. Local lore abounds with accounts of royal treasures reportedly buried in pockets carved into the granite rocks and covered in such a way as to deceive prospective treasure hunters although some of them have been discovered and looted by villagers.

Map 1: Surroundings of Pul Eliya (encircled)



Scale 1:50,000

Source: Survey Department, Government of Sri Lanka

The mean annual temperature of the region is 22.5-27.5 degrees centigrade. While scarcity of water rather than land is a characteristic feature of villages in the Dry Zone, cultivation of rice had been subject to further adversity due to the prevalence of intermittent drought periods with sharp drops in rainfall in the seventies and

nineties[11]. This is to be expected as Pul Eliya is very close to the northwestern Arid Zone/Dry Zone boundary which oscillates between northwest and southeast depending on the volume of annual rainfall received.[12] Looked at from an annual perspective, it is seen that sharp drops in rainfall have occurred for the years 1968, 1974, 1988 and 1995, i.e. there has been a drought period every 6 or 7 years as could be seen from Table 1. Needless to say, these sharply fluctuating rainfall patterns have negatively affected agricultural productivity and brought farmers to the brink of poverty and starvation during periods of low or no rainfall.

Table 1: Distribution of Rainfall in Anuradhapura District from 1963-2005

Year	Rainfall (mm)	Year	Rainfall (mm)
1963	1947.4	1985	1273.3
1964	1239	1986	1114.5
1965	1828	1987	1176.9
1966	1264.7	1988	815.9
1967	1017.5	1989	1104.4
1968	871	1990	1298.5
1969	1494	1991	1456.8
1970	1369.6	1992	939.7
1971	1721.9	1993	1578.9
1972	1189.2	1994	1405.1
1973	1014.5	1995	849.4
1974	863.3	1996	1068.3
1975	1024.6	1997	1330.3
1976	1195.8	1998	1206.6
1977	1397.8	1999	1192.7
1978	1194.7	2000	1245.9
1979	1371.3	2001	1262.4
1980	1123.6	2002	1260.4
1981	1059.8	2003	1192.3
1982	1033.9	2004	1444.3
1983	1125.8	2005	1098.8
1984	1877.2		

Source: Meteorological Department, Government of Sri Lanka

[11] For the entire Sri Lanka, after the severe drought of 1935-1937, the other severe droughts of national significance occurred during the periods 1947-1949, 1953-1956, 1965, 1974-1977, 1981-1983, 1985 and in 1995-1996. Of all these major droughts, those that occurred during the periods 1953-1956, 1974-1977, 1981-1983 and 1995-1996 had caused major setbacks to the economy. Although droughts cannot be classified as sudden disasters, they do cause hardship and financial loss mostly to farmers. In the drought of 1996, 181,095 families in 17 districts, one of which was Anuradhapura, were badly affected (Sri Lanka Foundation Institute, in press).

[12] Dr. M.U.A. Tennakoon, personal communication

3.3 History

According to oral history the Pul-Eliya history dates back to about the second century B.C. Thus when King Bhatiya Tissa ruled the Kingdom of Anuradhapura around 232 B.C, Pul Eliya had supplied the King with lotus flowers that were used for religious rites associated with the Buddhist *stupa* called "Ruwanweliseya" situated in Anuradhapura city. The flowers were obtained from a large pond called "Tammannawila" which exists even today, and weighed at a place which is now referred to as "Thulawelliya" since the word '*thulawa*" means a "weighing scale". Remnants of the stone structure that had been used to hang the scales are still to be seen and at the entrance to the village of Thulawelliya. As the flowers were washed before transport, the place where washing was done was called "Punewa", which is now a village by the same name on the way to Pul Eliya. The King had a Buddhist *stupa* constructed at the site next to the pond that supplied lotuses. The ruins of this religious shrine are still visible today and the destruction caused to the site by treasure-hunters of subsequent periods can also be observed.

A second story and one which belongs to the realm of fantasy is that heavenly maidens had plucked lotuses from Pul Eliya tank and taken them to be offered at the Sacred Footprint of the Buddha at Adam's Peak and that people had followed the fallen flowers and thereby discovered the road to the peak. A third is that Pul Eliya had earlier been called "Upul Eliya" (meaning "open space with lotus"), which later became shortened to its present name. As is to be expected, versions vary according to informants most of who are older villagers.

Pul Eliya village had continued its economic and social life in a more or less stable manner with very little change taking place even in terms of population growth (as will be shown later). The village population had consisted of about 10 households that occupied a stretch of land known as the *gamgoda* (or village site) situated below the main tank that supplied water to its paddy fields. In addition to rice cultivation, villagers had engaged in the production of vegetables such as okra (also called "ladies fingers"), loofa (*vatakolu)*, ash pumpkin (*puhul*), gourd (*labu*), and varieties of cucumber (including *kekiri* and *thiyambara*), cassava, sweet potato, green chillies, varieties of food grain such as finger millet, black gram, and sorghum (*meneri*). The first grocery shop owned by a Tamil trader came up in the early sixties. Shops in other villages such as Rambakulama and Mankulama and those near the railway station had also been operated by Tamils. WhileTamil traders were the immediate sources of credit for villagers during Leach's day, in the late sixties they had left the area due to ethnic tensions that swept the country.

An institution that was to have a radical impact on village life was the government school built in 1920 on part of the land in which the village Buddhist temple was situated. The advent of the school opened the doors to the outside world and to new opportunities for village people. It was an elementary school during Leach's day but was upgraded to a secondary school in 1973. Other important events were the restoration of the tank bund in 1933 and renovation of the Buddhist temple (called "Tampita Vihare") and the temple for god Vishnu in 1938 (see Plates No. 11 and 12).

The period following the 1970s saw a closer interaction of villagers with urban centers due to the need to market agricultural surpluses such as paddy, black gram and coconuts making the village more dependent on the cash economy. With incomes from the sale of produce, a few villagers were able to purchase tractors, motorcycles and bicycles. During this period the shop operated by a Tamil trader was replaced by one operated by a Pul Eliya villager. Today, there are four small trading stalls in the village that are stocked with goods brought from the town of Medawachchiya or further as far away as the town of Dambulla. The first bakery was opened in 1993.

From 1980, along with the introduction of agricultural machinery, villagers began to sell off their cattle that had existed in large numbers and with the proceeds they had built houses and purchased household goods such as radios, furniture and vehicles. This trend was accelerated when they began to cultivate crops such as cowpea, green beans, black gram, and maize on a commercial basis. They stopped cultivating sorghum and finger millet which were older types of food grain due to the lack of a market for such produce. From 1990, the advent of big onion cultivation began and increased in scale. The village has been subject to 2 major floods during recent times, one in 1956 that broke the tank bund and devastated the village. The tank was restored for the second time in 1982, after a period of nearly 30 years, during which time people had insufficient water for rice and depended more on highland cultivation for their subsistence. There was a flood again in 1983 but without any drastic impacts as before.

3.4 Land

The total land area of Pul Eliya village consists of about 1262 acres, of which 612 acres or 48.5% are highland, 398 acres (31.5%) are lowland, 220 acres (17.4%) under water bodies or tanks while the remaining 32 acres are Crown land or land that is not cultivated due to its rocky nature as shown in Table 2.

Table 2: Distribution of Land Area of Pul Eliya According to Type of Land

Land Use	Number of Acres	%
Highland (cultivated extent)	612	48.5
Lowland (cultivated extent)	398	31.5
Water Bodies	220	17.4
Uncultivated	12	1.0
Reservation but cultivated	5	0.4
Not reservation and not cultivated	7	0.6
Crown	8	0.6
Total	1262	100.0

Source: Resource Profile, Medawachchiya DS Division, 2007/2008

Whereas there were no significant increases in the land area up to Leach's time, subsequent years have seen a dramatic change in extents under both paddy and highland. Thus, according to the Report on Land Settlement of 1905, the total extent under paddy at that time had been about 42 acres. However, by 1954 (i.e. after half a century and during Leach's study period), this area increased up to 64 acres due to opening up of land for paddy cultivation under two small abandoned tanks

(*olagama)*[13], encroachment of reservations, and alienation of Crown land through lease or outright sale. By 2008, Pul Eliya villagers had expanded the area under paddy up to 407.5 acres which represents a six fold increase. This increase has partly been due to the restoration of another abandoned tank, namely, Dambuwewa in 1998 and raising the bund of another *olgama* called Kudgamawewa tank in 2006 with the assistance of an INGO. An increase in paddy land area logically implies a decrease in highland area since villagers have to work within defined territorial limits. Thus, while there were about 660 acres identified as *chena* (swidden) and forest lands in the 1905 report mentioned above, this area has decreased to 612 acres today[14]

3.5 Infrastructure

From the viewpoint of agrarian changes in the country as a whole, Pul Eliya and other traditional or *purana* villages that are situated at the edge of the North Central Province have not come under the sweeping physical, social and cultural changes that have occurred in the Province due to the Mahaweli Development Project. However, quite unlike the time when Leach worked in Pul Eliya, the village has lost its relative isolation through the expansion of the road system supplementing the railway that had been one of the main links with Colombo city. Even during the fifties there was a motorable road connecting Pul Eliya and neighboring villages of Wiralmurippu and Kalawelpothana with the main Mannar road. As Leach observed, "A network of fine motor roads joins the main centres and, in good weather, many minor village roads are easily motorable. It is usually possible to reach Pul Eliya from Anuradhapura in less than an hour. .....In 1954, Pul Eliya villagers frequently visited Anuradhapura and some went ever further afield" (Leach 1961, p.30). It appears that in subsequent periods, infrastructure facilities have undergone further improvement, an observation applicable to both minor village roads as well as main roads of today. Around 1970, the cart road providing access to Pul Eliya was widened and tarred in 2008. Other by-roads linking all sections of the village came up between 1970 and the present day in different stages (see Map 2). The Mannar road was tarred in 1968. Similarly, a new trunk road (Route A-9) leading to the town Jaffna via Vavuniya also in the Northern Province has been a recent development. The second main trunk road (Route 14), which is one of two main roads going by Pul Eliya and leading in a northeasterly direction to the town of Mannar in the Northern Province, has been in existence for the past century.

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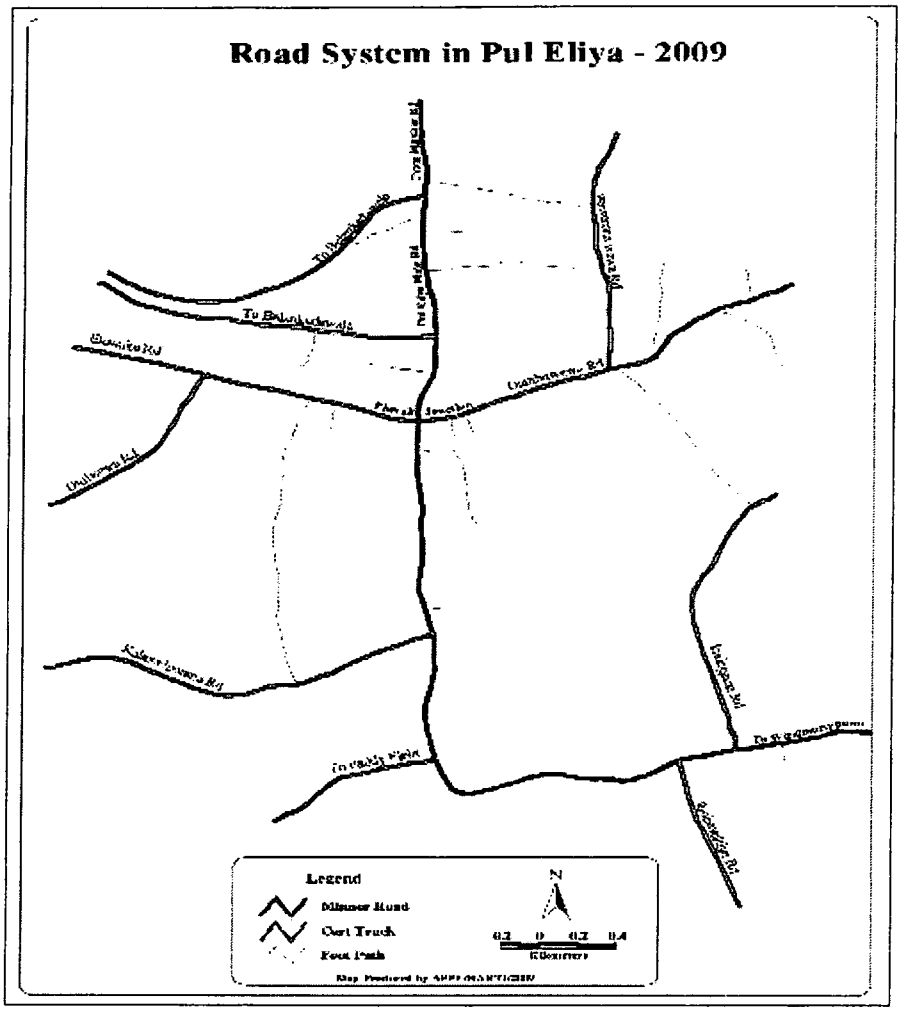
[13] The term, "*olagama*" (plural, *olagam*) refers to "any small tank capable of restoration.....it has long being the policy of the government to offer such tanks and their associated land freehold to any investor who is prepared to restore the tank and keep the land in cultivation" (Leach, *op cit,* page 236). While only the wealthier villagers could resort to this strategy of increasing their land holdings, by the turn of the 20th century, 2 such tanks had been restored, namely, Kudagamawewa and Ulpathgama and were in operation when Leach worked in the village.

[14] The area was distributed among named properties as follows: Puleliyahenyaya (405 acres, 2 roods and 14 perches), Puleliyatisbamba (64 acres and 13 perches), and Puleliyahena (4 acres, 1 rood and 25 perches) while areas reserved as forest were Galkandemukalana (3 sections comprised of 104 acres, 5 roods and 20 perches) and Godakirillagahamukalana (83 acres, 3 roods and 29 perches). The Report states that all areas regarded as "forest" were appropriated as Crown property under the Waste Lands Ordinance of 1840 and its amendment of 1896.

The road system at the village level has also seen remarkable changes[15]. The present main access road to Pul Eliya goes as far as the village of Tammanna Elawaka. The road to the village of Rambewa had been a footpath up to 1975 and people had to walk a circular route along the main tank to reach the village. In recent years, however, the road was widened so that it could be used by lorry to reach the town of Medawachchiya. Due to the spillover of Pul Eliya population into the Dambuwewa area, this road was developed for the use of motor vehicles in year 2005. The road has been extended to the area known as Wewaranawewa although this segment of the road had been a footpath about 10 years ago. In year 2000, the footpath was given a layer of gravel so that a lorry could travel on it. Although serving valuable social and economic functions, most sub-roads are in poor condition and full of potholes or cannot be used during rainy periods. The motivation has been to construct roads so that heavy vehicles such as lorries and tractors could reach homesteads and even take produce from highland farms. According to the household survey of 2009, a high proportion of respondents (86.1%) stated that they had access to the nearest motorable road, the average distance to such a road for those who have no access being about 1 km. Road widening and accessing public utilities such as electricity supply have also led to several instances of conflict among villagers since they invariably involve loss of land for one of the parties. These issues are usually settled through the intervention of the GN failing which they are taken up by the DS for settlement. In very rare instances do Pul Eliya people have recourse to a court of law to solve a dispute.

[15] All major and minor improvements in infrastructure are primarily an outcome of current government policy regarding adjacent villages to the conflict zone in order to discourage out-migration due the civil conflict of the past and also to facilitate movement of security services in the war context.

Map 2: Road System in Pul Eliya in 2009



3.6 Transport

According to Leach, the main method of travel during his day was by foot or bicycle while villagers had used bulls for transport of goods. This situation changed dramatically with the arrival of tractors during the 1970-80 period followed by motorcycles during later periods. The first government operated public bus service came to the village in 1971 and functioned for about a decade until a privately run bus service took over (see Plate No. 13). The bus travels along all motorable roads in the Pul Eliya area and goes to several other villages including Diwulwewa, Kalawelpothana, and Wiralmurippu before going back to Medawachchiya town. As some homes in the village have lorries and three wheelers, people use them also to go to the town. One of the main functions of the bus service is to take children to schools in town and is patronized more by people of other villages than people from Pul Eliya who complain, however, that charges for bus travel are too high.

3.7 Health

Half a century ago, villagers had to rely on health services offered by the district hospital situated at Anuradhapura even to obtain such basic services as vaccinations against infectious diseases. To supplement this service, the district hospital had operated a mobile medical service that came to the village once a week and attended to minor health needs of village people. Informants recall that one of the early preventive medical practices was to give villagers liberal doses of quinine as a standard treatment against malaria if the patient had the slightest sign of a fever. Subsequently, the government had set up a base hospital in Medawachchiya town in the sixties and a rural hospital at the town of Mankulam (about 3 km away) which villagers access for minor medical problems. In addition, there is a new government dispensary in the village of Poonewa about 4 km from Pul Eliya. Basic health needs of pregnant mothers and children including vaccinations are taken care of by the Family Health Services Officer[16] who conducts a weekly clinic at the office of the local Funeral Aid Society (see Plate No. 14). For receiving treatment for other ailments they resort to the hospital at Medawachchiya town or the district hospital at Anuradhapura or go further afield to obtain medical facilities in the city of Colombo. Although the provincial government has built a new dispensary closer to the center of the village, it has been languishing without any staff or medicines to provide the necessary basic health services to the villagers since its completion in year 2008. This probably reflects the fact that villagers can obtain needed services through alternative sources.

Improved health status of villagers is reflected in the survey findings. Of the total population in the village, only 112 persons (or 14.8%) have reported having an illness within the last 2 years. The primary illnesses were mumps (33.8%), blood pressure (27.9%), asthma (22.1%), chicken pox (16.2%), diabetes (13.2%), kidney trouble (11.8%) and malaria (5.9%). The incidence of illnesses such as diabetes and blood pressure would have been unheard of in traditional Pul Eliya society and nearly all persons suffering from the above illnesses are adults or people over the age of 30. However, the picture is slightly reversed in the case of kidney related ailments which afflict mostly people in the younger age group of 15 to 30 years. The popular belief is that such ailments are due to the unregulated use of chemical inputs for agriculture and the indiscriminate use of weedicide and insecticide. It is also noteworthy that nearly all people who suffer from illness resort primarily to Western or allopathic treatment whereas in earlier times they would have used native medicine or magical treatment.

3.8 Population

Improvements in healthcare services including vaccinations against major causes of mortality such as malaria were undoubtedly important medical factors contributing to population increase not only in Pul Eliya but also in the entire country. In the case of Pul Eliya, this trend appears to have been supported by improvements in physical infrastructure including roads that facilitated villagers' access to health care services available in the main towns of Medawachchiya and Anuradhapura. An additional

[16] Earlier referred to as "midwife" and later on as "Family Health Worker"

demographic factor has been in-migration of people from other villages to Pul Eliya after marrying Pul Eliya men or women (see Chapter Four).

With the exception of 2 females, one Muslim and the other Tamil, both of who have come to reside in the village after marrying Pul Eliya men who had worked in the armed forces in the North and East, all villagers share a common cultural tradition as Sinhalese Buddhists. Pul Eliya people also belong to the Goyigama or "farmer" caste, which is the highest caste in the Sinhalese caste hierarchy.

The village has a population of 766 persons comprising 194 households. Of the total population, 49% are males and the remaining 51% are females. Compared with the situation in 1954 when the total population was 146 individuals, a fivefold increase in population has taken place up to now. As Table 3 shows, numerical increases in population prior to that were either absent or insignificant.

Table 3: Population Changes in Pul Eliya from 1871 to 2009

Year	No. of Families	Male	Female	Total individuals	Numerical increase
1871	14	27	23	50	-
1881	13	22	18	40	None
1891	21	37	32	69	29
1901	19	36	33	69	0
1911	25	46	45	91	22
1921	24	66	49	115	24
1931	27	No information	No information	87	None
1941	20	No information	No information	82	None
1954	32	78	68	146	64
2009	194	375	391	766	620

Source: Leach 1961 for data from 1871 to 1954 and Field Survey for 2009

In sharp contrast to former times when, according to key informants, families were large, 90% of households have 5 members who include the two parents and three children, which is also the national average and which can be considered as an outcome of the government's family planning campaigns. Hardly are there the extended families found in Leach's day since the norm is the nuclear family. In the same plot of land or compound, however, some parents live with their children and their nuclear families but occupy separate dwellings.

3.9 Housing & Amenities

During the time when Leach was in Pul Eliya, practically all housing, with the exception of the government dispensary that Leach had occupied and the school, had been wattle-and -daub structures with roofs made from coconut thatch or paddy straw. Houses tended to be "damp, cramped and insanitary" (Leach 1961, p.60). The overall housing structure had back and front verandahs that allowed space for relaxation and interaction with members of adjacent households. The typical house of Leach' s day had a floor area of 600 square feet and consisted of a walled room with sleeping

accommodation for married couples and children and an un-walled room with sitting and sleeping accommodation for bachelors (see Leach 1961, p.60).

A noticeable difference today is the existence of permanent houses that are made of brick and tile that comprise nearly 80% of housing (Plate No. 15) with most houses situated on high ground and away from the main paddy cultivation area, a situation that was unwelcome during Leach's day despite moves by concerned government authorities to do so probably to ensure better health and living conditions for the villagers. However, houses made of wattle-and-daub (some with lime plaster) and roof made of paddy straw are still in vogue and used by the less fortunate households or occupied by older household members who prefer to live in them while their children occupy newly built houses of brick and tile (Plate No. 16). While today's houses for the most part have more than 3 rooms and some even more depending on the economic status of the owners, the average floor area is about 1000 square feet or more. Some degree of social differentiation is also seen in the type of lighting used by households. Most are equipped with solar power or electricity although about a fourth still depends on kerosene.

The modernization of the village is reflected in drinking water sources used by households. Whereas when Leach stayed in the village, most people had used tank water for drinking purposes, today less than 1 per cent does so and over half the households uses private wells. About a fourth of households harvest rainwater through large cement tanks built near the house to tap rainwater from the roof and use such water for drinking purposes.

The availability of toilets in the village is another important change. In Leach's day villagers had used the outdoors and in a section of forest land called *tisbamba* (which means "thirty furlongs" or about 60 acres[17]) situated below the tank and next to the residential area. Although this land had earlier been used for purposes of defecation[18], today it has been encroached and used for home gardens, housing and paddy cultivation.

3.10 Education

The village school (Plate No. 17) which started in 1925, has had a profound influence in changing village society by opening up resources outside the village to the villager thereby facilitating the agrarian changes that have taken place in recent years. Since its inception, the school is the only functioning service institution in the village. In the early years, it had depended on teachers from distant parts of the country such as Gampaha and Negombo in the Western Province. Older informants recall that the teachers had lived in their quarters and worked more than their usual number of hours by conducting extra classes for children without charging a fee. They still remember with affection the dedicated service the former had rendered and thereby earned the respect and honor of the villagers unlike most teachers of today who they say work only for money. Up till 1973, the village school only offered a primary education (up

[17] This acreage is mentioned in the 1905 Report on Land Settlement for the village of Pul Eliya cited earlier.

[18] According to some informants, even Leach did not use an enclosed toilet with a septic tank but had regularly used a set of logs kept under a large tree near the edge of the Old Field for purposes of defection creating an overpowering smell in the neighborhood.

to Grade 8) after which children who wished to continue had to enroll in the secondary school at the town of Medawachchiya. Although most students in the early years did not go on to have a secondary education, informants are of the view that the quality of education they received up to the primary was far better than what children get today.

The present school has a cadre of 10 teachers in charge of a total of 200 students who study from grades 1 to GCE Advanced Level. Lack of qualified teachers for English, maths and science subjects has been one of the chief drawbacks leading to early school leaving or children leaving the village school to schools in the main town of Medawachchiya despite the travails associated with traveling to and from the village. Unwillingness of teachers who are from distant locations to reside at the teachers' quarters during their period of duty is a complaint made by the school principal who is a member of the village community.

According to the household survey, most people of the village (67.1%) have a secondary education while the remainder have primary education (22%) or have a post secondary education. In the last category are 20 persons who have passed the GCE Ordinary Level, 7 persons who have passed the GCE Advanced Level, 3 undergraduates and 3 graduates from the country's universities. The survey reveals that only 9 persons are illiterate indicating the important role of the local school and the school system in general in upgrading people's lives. In addition to formal schooling, 32 persons (15 females and 17 males) most of who are under age 30 years have obtained vocational training from institutions outside the village in such areas as driving, masonry, welding and baking (all males) while females have specialized in such skills as sewing, use of computers, stenography, textile printing and nursing. Of the total that has received training, 13 have obtained employment relevant to their field of training.

People with an education and having access to regular monthly incomes through off-farm employment are in a more advantageous position vis-à-vis those depending on agriculture alone since the former are less likely to be affected by the vicissitudes of nature and the market that are the bane of the farmer. As will be seen later, the former are also holders of key positions in village society and form part of the new village since they have acquired connections with outside agencies and influential people especially if they are employed in government services.

3.11 Income Sources

Households that rely only on agriculture constitute a little over half (54.4%) the total households while the remainder relies on a variety of off-farm employment that supplements incomes from agriculture. This situation differs significantly from the economy of Pul Eliyans fifty years ago and reflects the high degree of penetration of the external economy into Pul Eliya life as well as the ways in which village people have benefited from education. Off-farm income sources include working as home guards (14.4%), in the armed forces and police (13%), business (3.2%), professions such as teaching and nursing (5%), as factory workers who are usually young girls employed in garment manufacturing firms (2.9%), in non-agricultural labor such as working as masons and technicians (5%) and the private sector (1.8%). The availability of non-agricultural income sources can be considered as a principal

contributory factor in the agrarian transformation that has taken place in Pul Eliya society. It is noteworthy that while it is mostly the males in the village who are employed in non agricultural work women undertake agricultural operations either on their own or by supplementing their own labor with hired labor.

3.12 CBOs & NGOs

Community level organizations play an important role in providing a variety of essential services for villagers. The Funeral Aid Society, of which two are found in the village and in which all households are represented, the Society for Welfare Recipients (*Samurdhi* Society) and the Ceylinco Grameen Society supply small loans on easy re-payment terms, an essential service that has replaced the traditional role of the local boutique keeper who used to be the main source of credit in Leach's day. There are also CBOs for school development and children which have about a third of households represented in them. It is noteworthy that at the time of the survey, only 57.2% of households were represented in the Farmers' Organization which serves as a forum for discussing matters relating to paddy cultivation such as deciding on the cultivation schedule and issue of water in addition to settling minor disputes among farmers. Subsequently, all households had to become members of the organization in order to qualify for the fertilizer subsidy under the agricultural policy of the present government.

In the recent past, the village had seen several community development interventions initiated by three external agencies including NGOs. Save the children Fund established children's societies a year ago, and conducted leadership training programs, supplied awards for the New Year festival, and cemented the floor of the community hall at the premises of the village Buddhist temple, supplied sports equipment for children, and constructed a solar powered pump and well for the village center (Plate No.18). FORUT another international NGO worked in the village from 1998 to 2006 implemented a latrine construction program, restored the bunds and constructed anicuts for two small tanks (Dambuwewa and Wewaranawewa), provided support to purchase milk cows and coconut saplings, and initiated a micro credit program for villagers. PLAN Sri Lanka, a country branch of an INGO, worked in Pul Eliya and the adjacent villages of Thulawelliya and Kalawelpothana, provided shoes for 150 school children, constructed 10 latrines, and conducted reproductive health programs for youth between 12 and 24 years. Another noteworthy development was the provision of rainwater harvesting tanks for 94 households at a cost of Rs 15,000 per unit with funding through the Asian Development Bank.

3.13 Leadership

The demise of traditional leadership consisting of village level officers of the pre-colonial and colonial eras including the *gamarala*[19], *vel vidane*[20], *mohottala*[21], *baedderala*[22] and *arachchi*[23] and their replacement by bureaucrats employed in the

[19] Traditional "village chief" who was in charge of a particular tract of paddy land and/or village.
[20] A village level officer in charge of paddy land in a particular village and succeeded the *gamarala* during the British colonial administration.
[21] Scribe, clerk or secretary to a feudal local chief or colonial administrator (Pieris 1956).
[22] Officer who collected taxes and fines on behalf of the British colonial government (Pieris 1956).
[23] Officer appointed over a village or group of villages during the British colonial period.

government service such as *Grama Niladhari*, the Agricultural Instructor, and the Family Health Services Officer constitutes a major departure from the past. Traditional leaders had made up the institution known as the *variga sabha* that enforced rules regarding marriage and residence in earlier times. Their demise has also signaled the decline of the institution. Of particular importance is the virtual absence of the Buddhist clergy from holding any position of importance in village affairs as will be discussed in Chapter 9. Instead, secular leaders who are mostly office bearers in community based organizations such as the Funeral Aid Society and the Farmers Society have come to the forefront.

Plate No.11: Entrance to the Pul Eliya Buddhist temple with Kovil of *Pulleyar* in the background

Plate No.12: Entrance to the Shrine Room (*Viharage*) of Pul Eliya Buddhist Temple with *Vishnu* temple on the left

Plate No.13: Privately run bus service in Pul Eliya

Plate No. 14: Family Health Service Officer (left) Weighing Infants at the Weekly clinic in Pul Eliya

Plate No. 15: A Modern Pul Eliya Home built on the site of the old Gamgoda

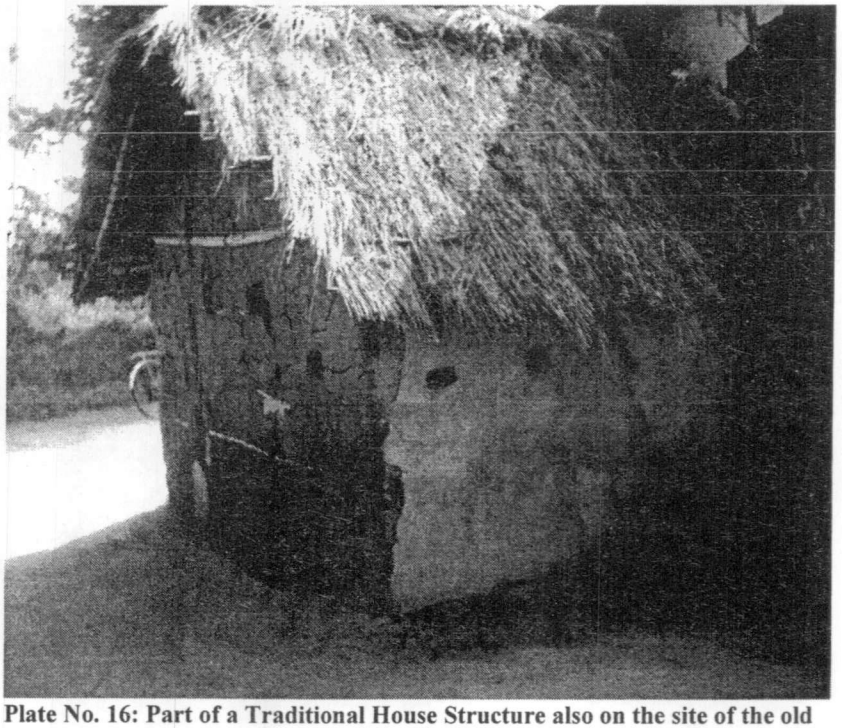


Plate No. 16: Part of a Traditional House Structure also on the site of the old Gamgoda

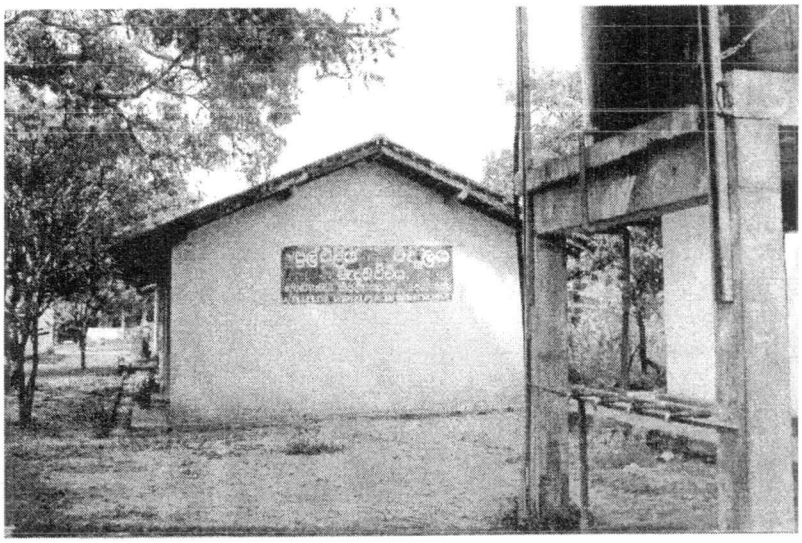


Plate No. 17: Section of Pul Eliya Government School

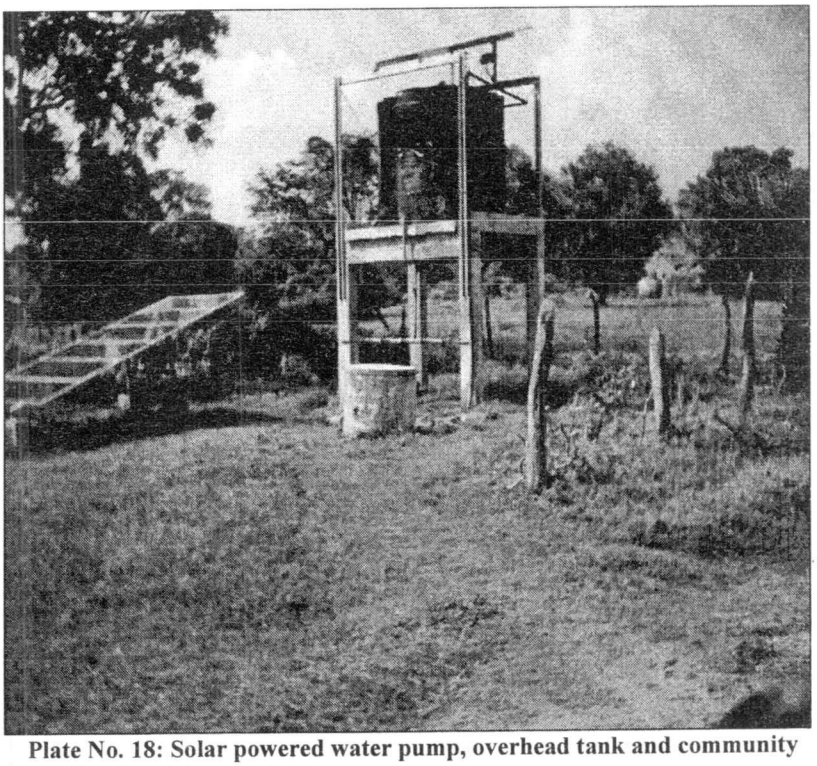


Plate No. 18: Solar powered water pump, overhead tank and community well

CHAPTER FOUR

Kinship and Marriage

The kinship and marriage system of Pul Eliya people forms one of the main foci of Leach's work and his conclusions regarding it constitute a major contribution to anthropological studies of the subject. This section examines the broad outlines of the kinship and marriage system of Pul Eliya as it exists today comparing, where possible, with the situation that prevailed in Leach's day.

4.1 Concept of *Variga*

Pull Eliya people regard themselves as members of a *variga,* a term that refers to an endogamous sub-caste or a subdivision of a caste, in this case, of the *Goyigama* or farmer caste), whose members live in a selected number of village communities and who intermarry. Genealogical relationships are traced either through descent or marriage with members of these named *variga* villages forming "a roughly contiguous grouping of all Goyigama villages in the extreme north-west corner of the Nuwaragam Palatha" (Leach 1961, p.80). Geographical proximity was not a factor promoting such exchanges since marriages were traditionally prohibited between the people of Pul Eliya and those living in the villages of Thulawelliya and Kalwelpothana, which encircle Pul Eliya (see Map No. 1). Pul Eliyans regard the inhabitants of these villages as inferior to them since the latter are thought to be of Veddha origin or descended from "the *variga* of Kuveni", the Yakka princess who married Vijaya, the founding ancestor of the Sinhalese race. Although Pul Eliyans regard themselves as being the descendants of Vijaya and therefore as members of the *Maha (or "great") Variga*[24], Thulawelliya people do not share the same view and, in fact, in the opinion of a key informant of Pul Eliya, consider themselves superior to the former as they were descendents of "people who came behind Vijaya" i.e. as his retinue (*Vijayage passeng apu minissu*). He added: "They refer to us as the "*Hingalaya*" in place of the dignified "*Sinhalayo*".

While the ideal marriage is with a member of one's own *variga*, violation of this norm would in earlier times have led to ostracism from Pul Eliya society (e.g. by placing thorns at the entrance to the homestead of the offender) with the cognizance of key village level leaders such as *badderala, mohottala, lekama or korala.* The offender could be admitted to society on the payment of a fine imposed by the *variga sabha* or council of the *variga,* a facility that was not allowed for people who had married outside the caste or race.

[24] Thulawelliya people are generally darker in complexion when compared with Pul Eliya people. In addition, they have a lack of interest in paddy cultivation but prefer the use of forest products such as bee honey and hunt for a livelihood, according to the Buddhist monk of Pul Eliya, now living in Thulawelliya.

4.2 Concept of Descent

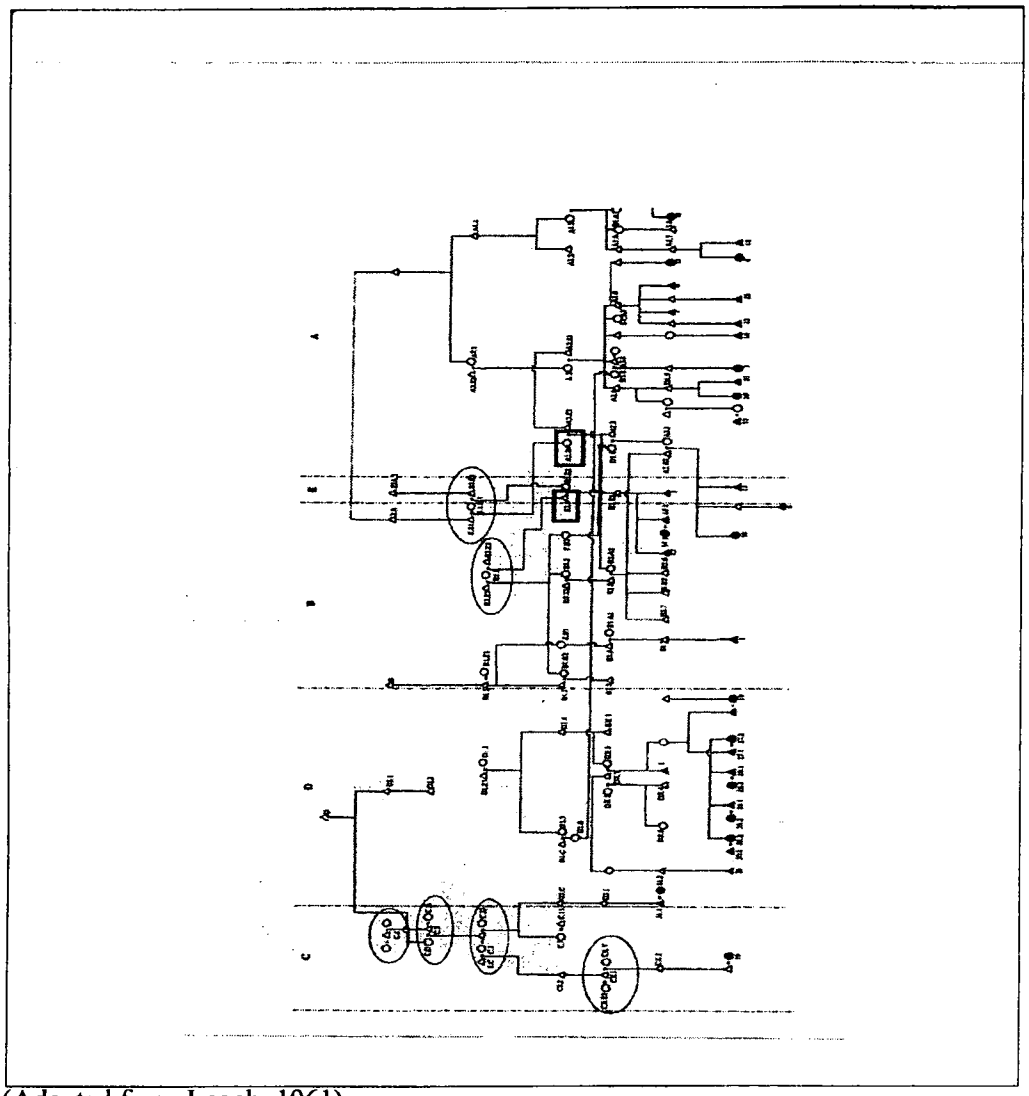
The concept of unilineal descent which traces one's ancestry through either male or female parents, is absent in the kinship system and, in its place, the emphasis is on bilateral descent through which kinsmen on both paternal and maternal sides ideally enjoy equal status[25] For purposes of genealogical reckoning, however, the ancestor known as Kadirathe *Gamarala* is considered the oldest resident of Pul Eliya, probably stemming from the fact that he also had held the key position of "village chief" (*gamarala*).

Subordinate to Kadirathe *Gamarala* and belonging to the next descending generation are four other ancestors all who have occupied village land at or about the same time after establishing marriage ties with women of Pul Eliya. Subsequently, their descendants had married people of Pul Eliya *variga* living in other villages. In fact, marriage was and still is one means by which a person in-migrating from another village gets accepted into the *variga* and to the village community. Chart 1 provides a skeleton genealogy adapted from Leach's rendition of kinship and marriage ties between the founding ancestor indicated by the letter D and the four subsequent ancestors falling into four different categories designated by the letters A, B, C and E. In Leach's book, each letter denotes a group of kin occupying a single compound or what he called "Compound Group". Noteworthy is the presence of marriages between members of Groups D and A (boxed in Chart 1) which indicate alliances between the two groups and the fact that Pul Eliya people certainly did not (and do not) consider themselves exogamous.[26]

[25] This contrasts with priority of status assigned to descendants of a single founding ancestor in the southern and western parts of the Island. See, for example, Obeyesekere (1967) and Selvadurai (1973)

[26] It will be noted that there have been 6 instances where a man has married twice (in Group C) and one instance where a woman has done the same (in Group E). In all such cases, the marriages have taken place serially and do not by any means indicate the existence of polygamous unions.

Chart 1: Genealogical Relationships among Members of Compound Groups

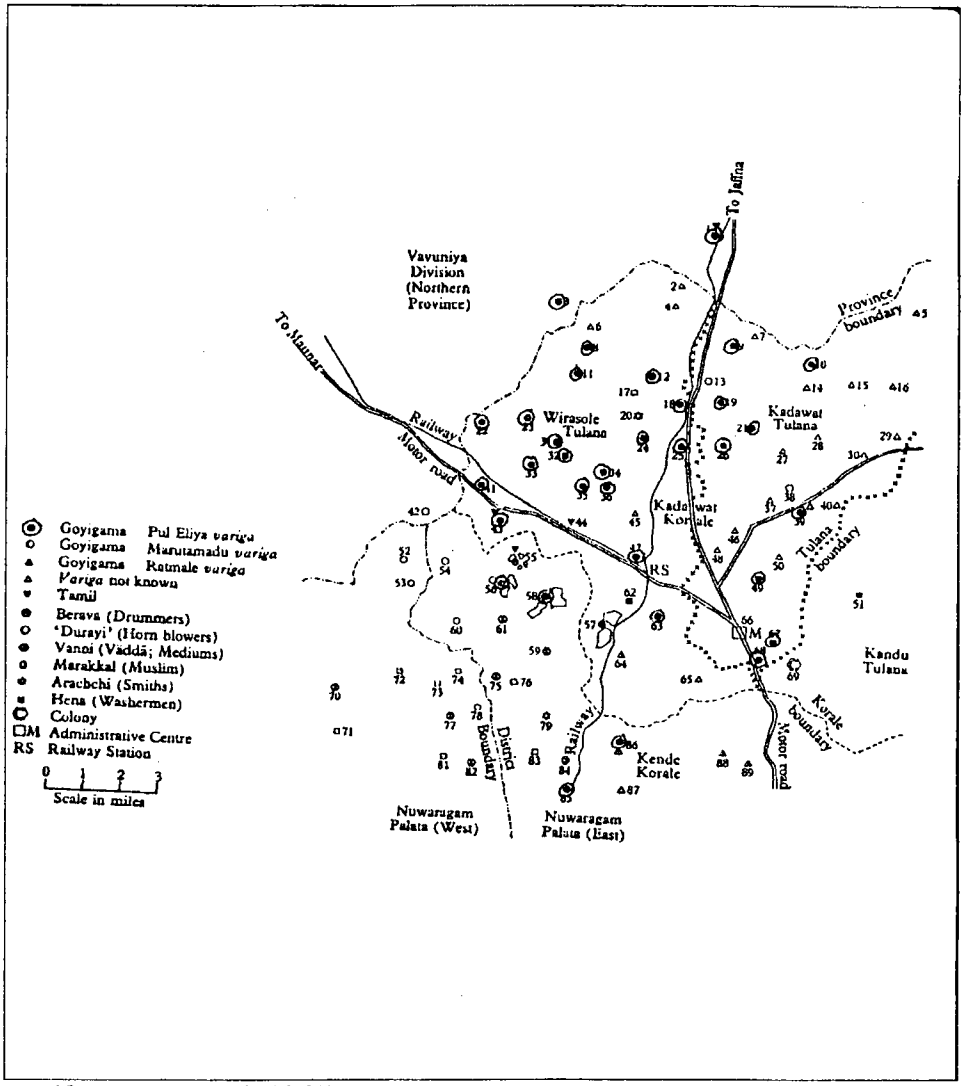


(Adapted from Leach, 1961)

4.3 Marriage Networks

A social change that can be considered important from the viewpoint of this study is the expansion of the marriage network of Pul Eliya people. In Leach's day, this network had been limited to about 35 villages where people of the Pul Eliya *variga* had lived along with people of two other *Goyigama variga* who had lived in neighboring villages (see Map 3). However, within the last 25 years, the number of villages or locations from which marriages have taken place has doubled. While most of these villages are situated in Anuradhapura district and include locations where people of Pul Eliya *variga* lived, 20 marriages had taken place with people living outside the *variga* network and outside the district as well and from locations as far away as Negombo, Colombo, Kandy, Matara, and Panadura (see Appendix 1).

Map 3: Location of Villages with Pul Eliya *Variga*



(Courtesy: Leach 1961)

Informants attribute the above development mainly to employment that Pul Eliyans have obtained outside the village especially in the armed forces and in factory work. When asked how these marriages outside the *variga* affect the village, older informants see them in both positive and negative terms. The positive side is that it has enabled Pul Eliyans to establish both kinship and social bonds with people outside and that this expanded network helps them to visit faraway places and be confident that there are some relatives out there who could be of assistance in an emergency. The downside is their observation that the outsider usually is unable, especially if it is a female, to adapt to local conditions such that the marriage either goes on the rocks or the couple leave Pul Eliya to live in the village of the wife, a development that already has taken place in the case of two recent marriages. It is noteworthy that, in both instances, the wives were from urban backgrounds and did not fit into the milieu of Pul Eliya. Informants are quick to note, however, that Muslim and Tamil wives who had married Pul Eliya men have adapted to village conditions and bring up the

children as Sinhalese Buddhists, a fact that they attribute to the former being from rural backgrounds.

Nevertheless, some core elements of the traditional marriage network have persisted as indicated by the fact that more marriages have taken place between people of Pul Eliya and those living in two nearby villages, namely, Wiralmurippu and Yakawewa (18 and 25 marriages respectively comprising 8.6% of total marriages) than with any other village or location. The above two villages are situated within an area of about 4 km from Pul Eliya. The marriages have involved more women who have in-married from Wiralmurippu and more males who have both in- married from and out-married into Yakawewa and appear to be founded on pre-existing kinship ties.

4.4 The Nature of Marriage: Then and Now

A noteworthy feature of marriages half a century ago is that they were mostly of an informal nature involving a man and a woman deciding to share food (comparable to the "living together" arrangement found among many young people of present day Western society). They were not strict bondages enforced by law and except in the case of a few formal marriages did not involve entire families. When found incompatible, a couple would simply split and the marriage would end there. Thus, it was not uncommon for a man or a woman in Pul Eliya to claim having "married" more than once in their life[27] as shown for some marriages in circled sections of Chart 1.

According to one of the oldest informants in the village, this was because women outnumbered men in traditional times, a fact which allowed a type of serial polygymy. Today's picture is at variance with the above situation for two reasons. One is the nearly equal ratios of men and women in the village population. The other is that almost all marriages are formalized and registered before a marriage registrar, a practice that commenced around the sixties and became widespread and nearly universal subsequently. This became necessary when Pul Eliya youth chose to obtain off-farm employment particularly in the armed forces and security services that insisted upon the applicant producing a birth certificate. About five years back, an INGO known as PLAN International had gone to the extent of registering a few marriages of couples with children and grandchildren. When asked what impact registration of marriages had on Pul Eliya society, older informants were of the view that legality also brought with it the difficulties and delays in obtaining a divorce in the event the marriage partners found themselves incompatible with each other. There have been three divorces in contemporary Pul Eliya which led to the wife going back to live with her parents and depending on alimony and child support payments granted by court.

4.5 Post-Marital Residence

In popular conception, the desired form of post-marital residence is for a woman to go out from the village and live in the village of her husband (referred to as *deega*) while it is considered demeaning for a male to come from another village and reside with his wife's kin, a system of post-marital residence known as *binna*. The statistical

[27] See Leach 1961, pp. 89-92

picture as given in Table 4 does not suggest in any way that the above norms have been or are followed in all instances. In fact, an analysis of the total of 241 marriages that have taken place in Pul Eliya during the past 25 years indicates a preference for *binna* marriages since some males (10.8%) have gone out while more (27.4%) have come to Pul Eliya from other villages comprising a total of 38.2% of all marriages. Statistically speaking, however, there has been a greater degree of conformity with the norm in the case of females.

Table 4: Type of Post Marital Residence During Last 25 years

Type of marriage	Number	%
In marrying male	66	27.4
Out marrying male	26	10.8
In marrying female	95	30.4
Out marrying female	54	22.4
Total	241	100

Source: Field Survey

The above situation nevertheless raises a more important issue with regard to the role and status of norms within a given social order. In Leach's view, such arrangements on the ground reflect the priority of economic and ecological realities pertaining to land over kinship ideology. In other words, it made better economic sense for a landless male to marry an heiress to property rather than be concerned over the question whether such an action would entail a violation of a norm. However, observations made during the field study have revealed that the normative order is not without meaning since "economic" decisions are also subject to some degree of social sanctioning. Typically, this has taken the form of according low priority to the claims to land made by an in-marrying male through a female or by according him a lower social status. A few *binna* males have overcome such constraints through the show of physical or psychic prowess, for example, as exemplary cultivators or by claiming to possess magical powers as shamans.

This does not, however, mean that women are unimportant since both men and women can transmit property rights. The importance of women vis-à-vis men is also reflected in the presence of a high proportion of households (49%) in which females declared themselves as the heads during the household survey. This is mainly attributable to the fact that many women of Pul Eliya have retained ownership of parental land by remaining in the village and marrying in-migrating males. If a female wishes to exercise an equal right to ancestral land, she could present her claim at the monthly cultivation meeting but, according to the dominant male ideology of the village, women do not attend cultivation meetings while the names of husbands have been entered in the register of paddy lands as the actual cultivators. It will be recalled that Leach stated quite emphatically that Pul Eliya is largely a "male-dominated society....it is the men who govern and who take the managerial decisions" (Leach 1961, p.36).

A man could also come into *binna* not as a complete outsider but by marrying his father's sister's daughter or his mother's brother's daughter, a type of marriage designated as "cross-cousin marriage" and thereby inherit the share of land belonging to a parent in his or her natal village. Of the total of 241 marriages within the last 25

years, 21 (or 8.7%) have been between cross cousins indicating that as a strategy for inheriting land left by an out marrying male or female it is not widespread and is subject to the same types of sanctions applied to in-marrying males who are complete outsiders.

4.6 Compound Groups

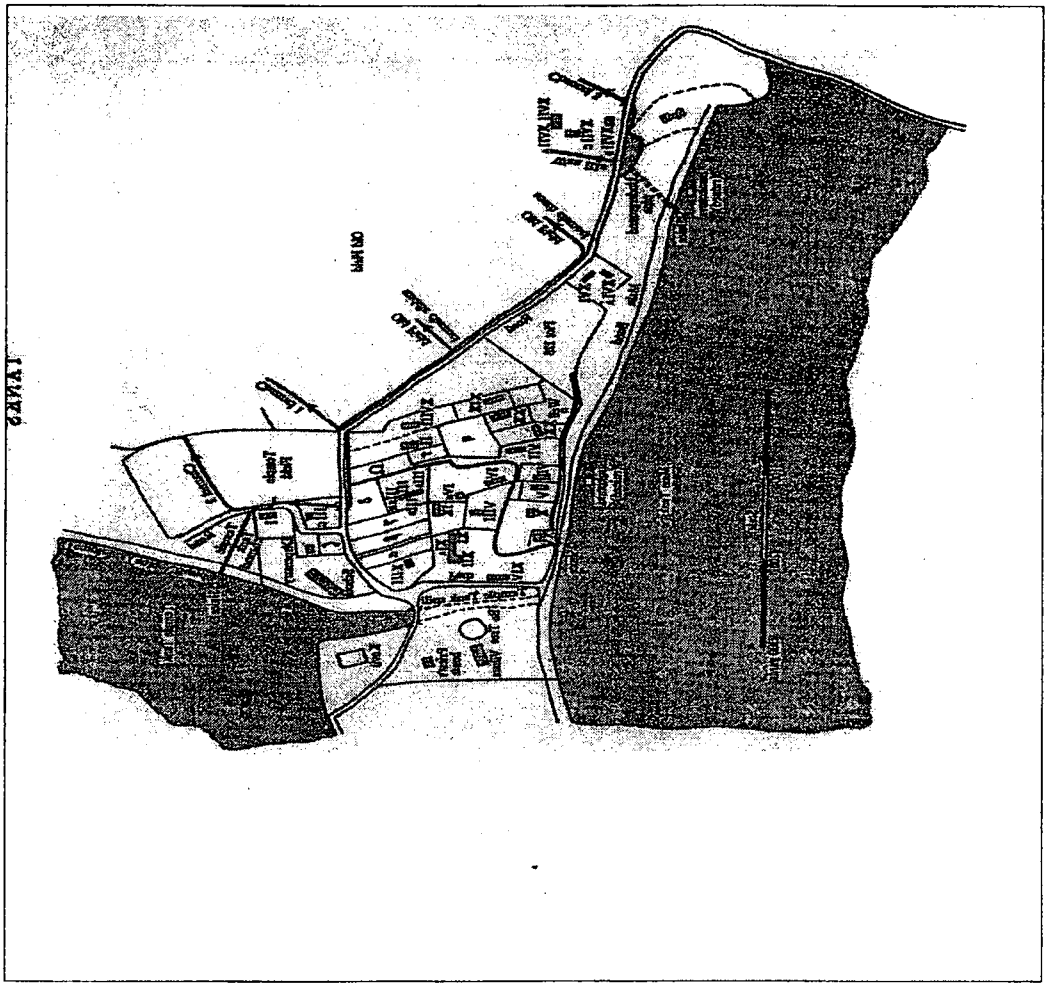
Residential arrangements among Pul Eliya people were according to two different classes of house sites: one, on land that was considered "ancestral" (*paraveni*) that was all clumped together near one end of the main tank bund, and the other, on land of more recent occupation located on ground that had been purchased or leased from the Crown. However, several households located away from the main settlement formed a separate group which, according to Leach, were accorded 'outsider' status vis-à-vis the rest of the community (Leach 1961, p. 54). Clearly, house sites of the ancestral (*paraveni*) kind bestowed on their occupants a higher social status.

The 39 families that comprised the village community during Leach's day occupied 13 different compounds or gardens (*watta*) that were at times separated by fences which "changed positions from time to time" (Leach 1961, p.97) and served as a barometer of social amity or dissension between members of different compound groups. The number of households or cooking hearths in such an arrangement would range between 3 and 10 and were made up of a similar number of nuclear families (Leach 1961, pp.321-331). According to key informants, the houses situated in a compound would tend to form a circle with a central and common public space shared by all residents including children. Subsequent social and economic developments, however, have led to the rapid disintegration of the old settlement pattern and to a dispersal of households according to a linear pattern as will be shown in the succeeding section on land use and land tenure.

At the same time, recollections of the former pattern have produced an idealistic, if not romantic, picture of Pul Eliya society of the past, especially among older informants. This was not the case even when Leach studied the village since there had been instances of schisms and conflicts between households that even led to bitter lawsuits and accusations of witchcraft over water rights in the village tank[28]. Such dissensions are not uncommon even today, and closer analysis reveals that the rifts appear to have been principally between members of different compound groups. Another noteworthy feature is that although the *gamgoda* and its compounds are no more at the present time, affiliations based on what appear to be on old compound group identities continue to exist and are replicated in conflicts between individuals of present day Pul Eliya society.

[28] Leach 1961, Appendix 1

Map 4: Location of Pul Eliya Compound Groups in 1954



(Courtesy: Leach 1961)

CHAPTER FIVE

Land Use and Land Tenure

This section deals with changes that have taken place in land tenure in Pul Eliya during the fifty-year period following Leach's study. Land tenure, particularly with regard to tenure of paddy land, occupies a central place not only in the worldview of Pul Eliya people but also in the theoretical arguments advanced by Leach, which is understandable considering the central role that paddy cultivation played in the traditional village economy of the day. The tank and the associated paddy fields were the center of sustenance and assured people of their staple of rice whereas shifting cultivation in *chenas* was a supplementary source of (cash) income.

5.1 Land Tenure Systems

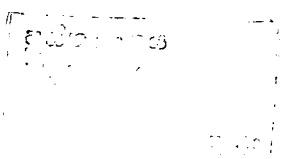
Three principal types of paddy land tenure are applicable to the Pul Eliya context, namely, (a) traditional (b) non-traditional and (c) land under renovated small tanks or o*lagam* which are elaborated as follows.

a) Traditional:

The traditional form of land tenure was subsumed under the term *paraveni,* which meant land transmitted to present heirs from ancestral times and pertaining to house-sites, gardens and land already brought under cultivation with paddy (also called *asweddumised*). Ancestral lands had no clear legal title although their ownership was recognized indirectly in government records such as production statistics collected by the Department of Agriculture in Leach's day and in the register of land compiled by Department of Agrarian Development today.

b) Non Traditional:

A fundamental change in land tenure conditions was already under way during Leach's time, namely, the advent of what Leach called "non-traditional land tenure" (Leach 1968, p. 217). While the entirety of the Old Field and the house sites (*gamgoda*) in Pul Eliya could be characterized as "ancestral", two new types of land tenure were already coming into existence when Leach worked in the village. One was freehold land referred to as "*sinnakkara*" (freehold acre land) or land that individuals purchased outright from the Crown or government. Land purchased in this manner was surveyed and formal title deeds were issued by the Government Land Office at Anuradhapura. House sites and gardens were also purchased in this manner. The policy of alienating government land had continued up to about 1935 by which date "most of the land in the immediate vicinity of the original Pul Eliya *paraveni* field had passed into private hands" (Leach 1961, pp.46-47). The other was Crown leasehold or "*badu idam*", which the government alienated to villagers under the Land Development Ordinance (LDO) of 1935 aimed at alleviating the problem of landlessness. Lands under this category could be alienated in two-acre plots upon payment of a nominal annual fee per acre although the government maintained ownership of the land. Map 6 which is derived from Leach (1961) gives the layout of the paddy area in Pul Eliya according to the three principal types of tenure. Invariably,



and as Leach pointed out, villagers who made use of the new opportunities to expand their land holdings were the local elite who were "privileged friends of the *Vel Vidane*.....This had the effect that nearly all the new land came into the hands of compound groups A and B" (Leach 1986, p. 240) and consequently led to polarization between the rich and the poor and loss of social solidarity within Pul Eliya.

c) Land Under Renovated Minor Tanks (*olagam*):

The term, "*olagama*" (plural: *olagam)* refers to "any small tank capable of restoration.....it has long being the policy of the government to offer such tanks and their associated land freehold to any investor who is prepared to restore the tank and keep the land in cultivation" (Leach, 1961, p. 236). While only the wealthier villagers could resort to this strategy of increasing their land holdings, by the turn of the 20th century, 2 such tanks had been restored, namely, Kudagamawewa and Ulpathgama and were in operation when Leach worked in the village. It is noteworthy that, 50 years later, villagers had restored one more *olagama*, namely, Dambuwewa and restored the bund of Kudgamawewa in 2006 with the assistance of an INGO.

Central to Leach's book is his conclusion regarding the unchanging nature of physical arrangements pertaining to cultivation of paddy under the main tract of paddy land referred to as the "Old Field"(or *Maha Wela*) which include the following basic structural elements:

(1) The field as a whole is divided into two sections, the Upper Field and the Lower Field, each of which is divided into three portions or *baga*[29] situated at right angles to the bund of the tank. The three *baga* (upper, middle and lower) are sections in each field.
(2) Each *baga* is subdivided into a certain specific number of traditionally established equal shares (*pangu*) so that a person would have a share in both Upper and Lower Fields: "For every strip in the *pangu* portion of the Upper Field, there is a corresponding strip of corresponding width in the Lower Field. This pairing is an essential feature of the system.....The 'fragmentation' that results is not an economic vice but a moral virtue!" (Leach 1961, p.158)
(3)The order of the strips in the Upper and Lower Fields is reversed in order to ensure that access to water is equalized for all shareholders.

5.2 Changes in Tenure of Paddy Land

Changes have taken place in tenure of paddy land with respect to layout of the paddy fields, of types of tenure, size of allotments, water management, and cultivation practices that put rice in the central position in the dietary system of the villager. These are elaborated as follows.

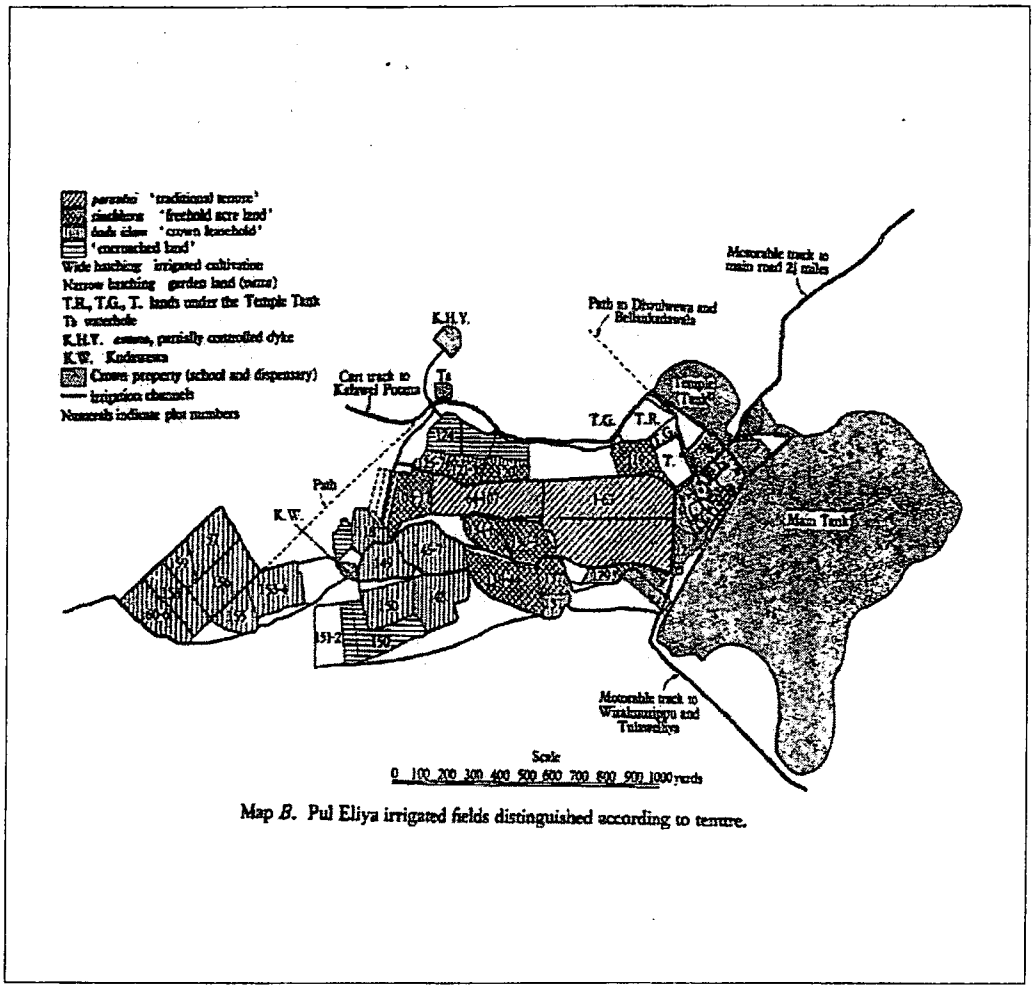
5.2.1 Layout of the Old Field

Upon comparing the outlines of the Old Field in 1954 and 2009 (see Maps 5 & 6 below), it is seen that the basic features of the layout of the Old Field have remained virtually intact including the extent of 30 acres that were present in the Upper Field in

[29] Literally "halves" (*bage* is singular)

1954 (see Plates 19 and 20). According to key informants, this bit of continuity with the past is also due to the geographical fact that the Old Field is surrounded and hemmed in on all sides by paddy lands that come under the non-traditional types of land tenure.

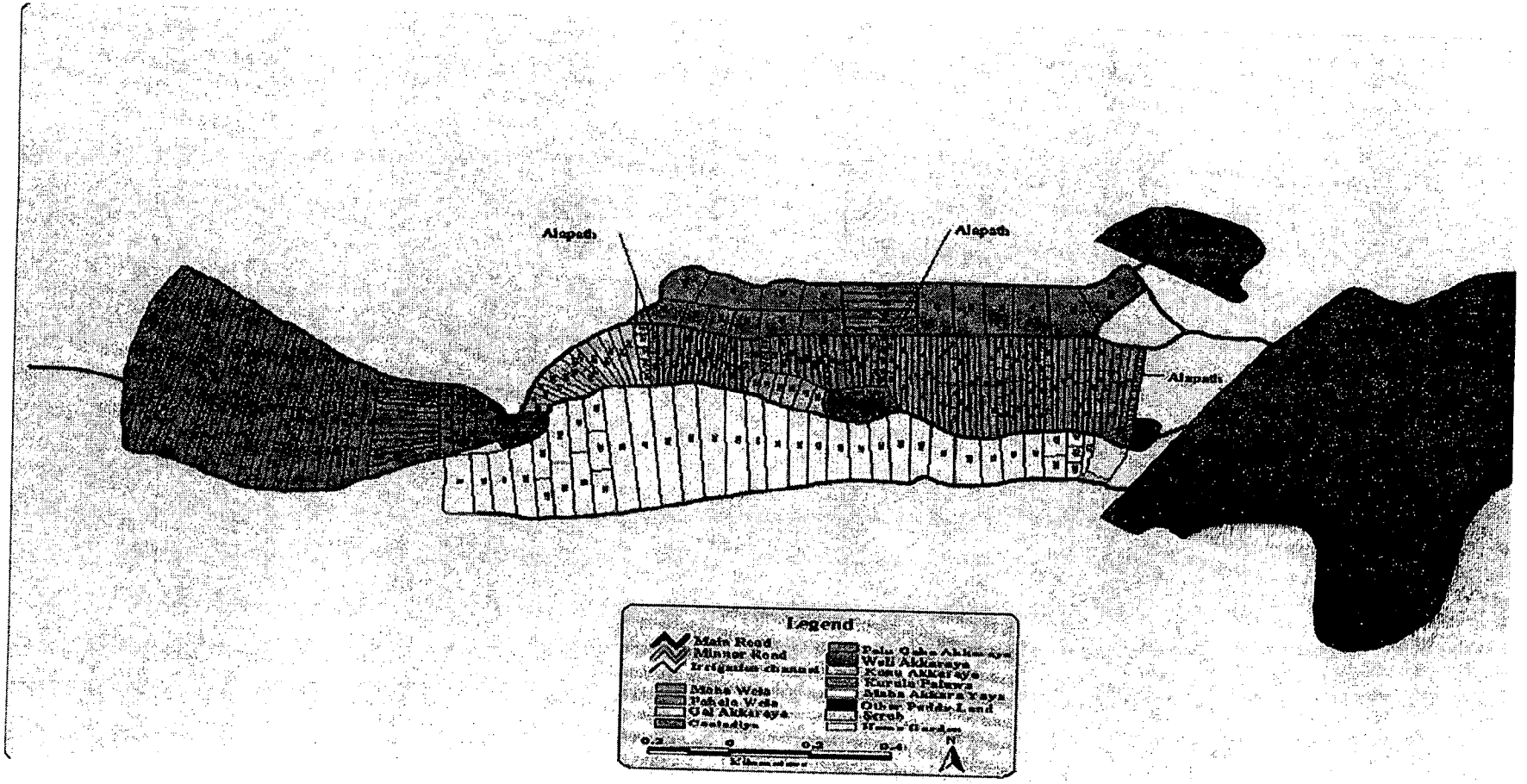
Map 5: Layout of the Paddy Fields According to Land Tenure Categories in 1954



Map *B*. Pul Eliya irrigated fields distinguished according to tenure.

(Courtesy: Leach 1961)

Map 6: Layout of Paddy Fields in 2009



5.2.2 Number of Shares in the Old Field

It is also noteworthy that the number of shares (*pangu*) in the Old Field has seen only a very slight increase from 65 in 1954 to 72 in the present. In some cases, excessive fragmentation of paddy land in the Old Field has been avoided by siblings who have pooled their shares and given or sold their shares to a single member of the family who is usually the youngest male[30]. This is possible only if the donors have land of their own under *olagam* or under non-traditional forms of tenure.

5.2.3 Acreage Under Paddy

While Leach does not provide us with acreages coming under non-traditional types of tenure in 1954, all informants submit the view that there has been a gradual and significant increase in the extents cultivated under the above category such that, by comparison, they outrank the extent that had been cultivated in the traditional manner. Thus, of the total extent of 314.5 acres cultivated under the main Pul Eliya tank, only 41 acres (13%) are in the Old Field (designated as Mahawela and Pahalawela) while the remainder come under non-traditional forms of tenure as shown in Table 5.

Table 5: Distribution of Paddy Lands Under Pul Eliya Main Tank

Name of Field	Acreage	%
Mahawela	30	9.5
Pahalawela	11	3.5
Mahaakkaraya	60	19.1
Akkarawela	56	17.8
Akkarawela (separate section)	2.5	0.8
Kanuakkaraya	5	1.6
Galakkaraya	18	5.7
Weliakkaraya	3	1.0
Kooladiya	125	39.7
Total	314.5	100.0

Source: Field Survey 2009

In addition, acreages cultivated under renovated abandoned tanks or *olagam* have also seen a significant increase when compared with the situation in 1954 although Leach does not provide the actual acreages cultivated under these tanks. Today, they make up a total of 93 acres cultivated under 5 *olagam,* of which the highest proportion (46 acres) is found under Wewaranawewa as indicated in Table 6.

While expansions of land area under paddy through non-traditional forms of land tenure and through restoration of abandoned tanks appear to have been legitimate responses to increasing pressure of population on land, it has also stretched the limits of the water available in the main tank for paddy cultivation. Even when Leach worked in the village the pressure on the water supply was reaching a critical point, a fact that led him to conclude that mere increase of the area under paddy did not result

[30] This principle (of ultimogeniture) is not uncommon among rural families of Sri Lanka

in increased productivity of paddy land (Leach 1961, p.52). Water scarcities have been experienced by villagers during both Maha and Yala seasons such that during last Yala virtually no paddy land was cultivated. The Maha season of 2009 which should have commenced in October has been delayed even at the time of writing due to the delay in the arrival of the Maha rains.

That the process of extending the paddy acreage has not ceased even at the present time is seen in several types of empirical developments. One is the cultivation of areas that had been traditionally kept as off limits to farmers, namely, the floor of the main tank and area kept as the reserve of birds (*kurulu paluwa*). Leach (1961, p.53) noted that cultivation of tank floor had been allowed in the past but was prohibited when he worked in the village. According to key informants, about 19 farmers have begun cultivating a total of 15 acres of the tank floor during Yala season when water levels are low. In addition, 4 farmers have completely taken over the cultivation of 4 acres that used to be the bird reserve. The negative impacts of such changes in tenure include the filling up of the tank floor leading to further reduction of tank capacity and increased damage to crops by birds as a result of being deprived of their safe havens. A third development is encroachment of reservations or stretches of land (theoretically 35 feet wide) occupying ecologically critical points such as the land lying between the bund and the main settlement area and strips of land along main canals. Use of these lands for cultivation and residence has deprived cattle of grazing areas and prevented easy access to the tank for both humans and animals.

Table 6: Distribution of Paddy Acreage Under *Olagam*

Name of Olagama	Number of Acres	%
Kudagama	16	17.2
Dambuwewa	20	21.5
Ulpathgama/Wewaranawewa	46	49.5
Akkarawewa	8	8.6
Elapathawewa	3	3.2
Total	93	100.0

Source: Field Survey 2009

5.2.4 Size of Holdings

A combination of tenure patterns are visible in contemporary Pul Eliya and these can be examined under six different categories, namely, households with holdings only in the Old Field, in the Old Field plus under non-traditional land tenure, under non-traditional tenure only, under *olagam* and in the Old Field, under *olagam* only and households without any paddy land. As Table 7 illustrates, those having allotments in the Old Field comprise the lowest proportion (8.8%) indicating that in most instances, the trend was to complement allotments in the Old Field with land under other tenurial categories in which the highest proportion falls within the second category, namely, having allotments in the Old Field plus under non-traditional land tenure.

Table 7: Distribution of Households According to Location of Paddy Holdings

	Location	Number	%
1	Only Old Field	15	7.7
2	Old Field and Non Traditional Tenure	52	26.8
3	Non Traditional Tenure only	36	18.6
4	Under *Olagam* and Old Field	46	23.7
5	*Olagam* only	28	14.4
6	No paddy land	17	8.8
	Total	194	100.0

Source: Register of Paddy Lands, Farmer Organization of Pul Eliya, 2008

As revealed by the household survey, the number of parcels owned by a household tends to vary with most (54.6%) having only 1 parcel while a little over a third (37.1%) has 2 parcels of paddy land. Thus, in only a minority of instances do households own more than 2 parcels, with only 3 of them having 4 parcels. Of the total of 382 parcels distributed among all 196 households in the village, most (345 or 90.3%) are irrigated by tanks while the remaining 9.7% is rain fed. However, shortage of water prevented 49 farmers from cultivating their parcels during last Maha[31] while a much higher number (194 farmers) could not do so in Yala[32] for the same reason.

The survey also reveals that nearly half (42.9%) of lowland parcels are up to or less than half an acre which indicates a high degree of fragmentation as a result of numerical increase in the number of shareholders as shown in Table 8. At the same time, there is a significant proportion (26.8%) of households that have 1 or more than 1 acre indicating a certain degree of social stratification based on landownership[33].

Table 8: Number, Extents and Average Size of Lowland Parcels (in acres)

Size of lowland parcel	Number of Parcels	%	Extent	%	Average Size of Parcel
0.00 <= 0.25	55	14.4	13.56	3.19	0.25
0.25 <= 0.50	109	28.5	54.50	12.81	0.50
0.50 <= 0.75	19	5.0	14.25	3.35	0.75
0.75 <= 1.00	97	25.4	97.00	22.79	1.00
1.00 <= 1.50	31	8.1	44.75	10.52	1.44
1.50 <= 2.00	30	7.9	59.75	14.04	1.99
2.00 <= 3.00	27	7.1	76.00	17.86	2.81
> 3.00	14	3.7	65.75	15.45	4.70
Total	382	100.0	425.56[33]	100.00	1.11

Source: Field Survey – 2009

[31] *Maha* – Main cultivation season of the agricultural year coinciding with the North-East monsoon from October to March.

[32] *Yala* – Minor cultivation season of the agricultural year extending formMay to September, the period of the Southwest monsoon when the rainfall is concentrate in the wet zone.

[33] This includes 18 acres cultivated outside Pul Eliya by a few individuals and hence the total acreage being higher than what was reported earlier.

It is noteworthy that the size of individual allotments tends to be larger in paddy fields under non-traditional tenure when compared with those in the Pul Eliya Old Field. Table 9 compares the current size of parcels held in the latter field with that found in Maha Akkaraya, a field coming under the category of freehold land tenure. It is seen that nearly all holdings in the Old Field are less than 1 acre and that a little over half are less than half an acre whereas the situation is reversed in the case of Maha Akkara Yaya, a field coming under the latter type of tenure. Thus, non-traditional tenure has continued to ease the pressure of population on land as it did half a century ago when Leach observed the phenomenon at its inception stage.

Table 9: Distribution and Extents of Lowland Parcels in Old Field and Maha Akkarayaya Field

Extent	Old Field				Maha Akkara Yaya	
	Mahawela		Pahalawela			
	#	%	#	%	#	%
30 Perch	4	5.8	0	0.0	0	0
1 Rood	33	47.8	18	69.2	5	10.6
2 Rood	28	40.6	4	15.4	18	38.3
3 Rood	6	8.7	4	15.4	0	0.0
1 Acre	2	2.9	0	0.0	11	23.4
1 acre 2 Roods	0	0.0	0	0.0	2	4.3
1 Acre 1 Roods	0	0.0	0	0.0	2	4.3
1 Acre 3 Roods	0	0.0	0	0.0	3	6.4
2 Acre	0	0.0	0	0.0	5	10.6
3 Acre	0	0.0	0	0.0	1	2.1
Total	69	100.0	26	100.0	47	100.0

Source: Field Survey 2009

5.2.5 Water Management

Efficient management of the scarce resource was a precondition for ensuring the survival of dry zone tank communities. In the traditional order, this was made possible through a complex division of labor among several water managers or *Gamarala*: "In any one village there are as many *Gamarala* offices as there are *baga,* though on occasion one individual may hold more than one such office at the same time. The number of *baga* in a village and hence the number of *Gamarala* offices is permanent and unalterable" (Leach 1961, p.153). The different *Gamarala* who control a single field are not close kinsmen. They are heads of different kinship groups (*pavula*) and essentially of equal status.

Duties of the *Gamarala* and subsequently of the *Vel Vidane* who was an officer appointed by the British colonial government included issue of water as and when required for cultivation activities and settlement of any disputes relating to water

issues[34]. An additional obligation of the *Gamarala* was to contribute grain to the annual village ritual known as the *mutti mangallaya* (Leach 1961, footnote on p.167). Privileges attached to the position of *Gamarala* of traditional times were entitlement to one *panguwa* or share known as *gamvasama*, the holder of which had to carry out his share of bund repair along with other shareholders.

The existence of *baga* and the allocation of *pangu* according to a system of fair shares for all allowed the practice of *bethma*, "an arrangement whereby the shareholders in a field which is short of water may agree to cultivate only a proportion of that field and then share out the proceeds among themselves.....If the villagers are to cultivate rice in the Old Field during Yala (April/September) season they will decide from the start either to cultivate the whole of the field or two-thirds of the field .....or just one third of the field.....This fragmentation of individual holdings is always directly associated with the local practices regarding *bethma*" (Leach 1961, p.171).

From the late sixties, however, the traditional water management system was to go through a process of decay. The functions of the *Vel Vidane* were taken over by a democratically constituted body known as the Farmers' Organization, which appoints one of its members to carry out the responsibilities of the former *Vel Vidane*. However, he is not entitled to a portion of paddy land but instead each farmer has to pay him in kind (half a bushel of paddy per acre) which is referred to as *salaris*, a corruption of the English word 'salary'. However, not all farmers regularly pay their dues to the *Vel Vidane* at the end of the cultivation season unlike in former times when farmers delivered their dues to the *Vel Vidane* at his doorstep.

Coercive power that was an inherent characteristic attached to the earlier position of *Vel Vidane* is notably absent in the case of the modern counterpart. In place of sending a summons to an errant farmer to attend the Village Tribunal of former times and pay a fine, the modern *Vel Vidane* has to resort to subterfuge such as not certifying the application for a fertilizer subsidy until his dues are paid or sue the farmer at his own expense in a court of law. So much for grassroots democracy touted by government agencies promoting farmer organizations!

This situation has adversely affected the maintenance of the bund and irrigation canals and fencing of outer boundary of the paddy field since this is not done systematically anymore. Furthermore, the duty of maintaining the bund has devolved on the Provincial Councils. However, Department of Agrarian Services (renamed, Department of Agrarian Development around 2004) also invlve in this matter. Farmers and office bearers of the FO both complain that these entities do not do a thorough clean up of the bund on a regular basis. The last time it did so was about 5 years ago and the work was also not thorough. The tank itself is overgrown with lotus plants and a water weed known as "salvinia" that is a foot deep in some places, covers part of its surface. Silting of the tank has been intensified by several farmers who cultivate paddy on the tank floor as was noted earlier.

The *bethma* system of re-distributing paddy land as a coping strategy against reduced water supply in any given season has been in abeyance for the last eight years due to

[34] According to Leach, "In Pul Eliya, down to 1926, the office of the Vel Vidane was always held by someone who was simultaneously entitled to call himself Gamarala" (Leach 1961, p.153)

the inability of the FO to get all shareholders to agree on the subdivision and also more importantly as it did not prove to be a viable solution to the problem of water scarcity. When it was last practiced eight years ago, even the system did not work as expected as there was virtually no water in the tank and two farmers as a last resort had pumped water from the tank bottom to save their fields.

Finally, the use of wells instead of the tank for bathing and drinking water purposes has resulted in less attention being given to proper maintenance of the tank since such activities usually result in some cleanup of invasive plants. Informants stated that, in former times, the entire tank was surrounded by a number of entry points to the tank (*mankadaval*) where villagers had bathed and collected water for domestic purposes while during Leach's time, there were only 3 wells in the village.

5.2.6 Norms Pertaining to Sharecropping and Leasing of Land

While most owners of paddy land cultivated the land themselves, a few did give their land out on rent or even mortgaged it. Under the traditional order, the norms that applied to the latter type of situation were as follows. Landlords and tenants were close kin and the economic implications of the landlord/tenant relationship were clearly quite different from what they would have been if they were different sets of people: "In Pul Eliya, the effect of *ukas, ande* and labour-sharing institutions was simply to distribute, among a wide group of kinsmen, the economic product of land which is 'owned' by a single individual" (Leach 1961, p. 243). Similarly, in respect of a mortgage, generally it was expected to give the land back to the mortgager to cultivate on a sharecropping basis. Even where lands were mortgaged to traders having roots outside Pul Eliya the mortgagers expected to cultivate those lands till the mortgage was redeemed. Any attempt to engage outside labourers and cultivate those lands by an outsider were resented by Pul Eliyans so much so that the outsider was compelled to re-mortgage such lands back to prospective mortgagees resident in Pul Eliya (Leach 1961, pp.244-247).

The normative order with respect to sharecropping and leasing arrangements has persisted up to now with no change in the basic understanding among all parties that land should be rented or leased out only to kinsmen living in Pul Eliya. The sale of land to non-kinsmen or people living outside Pul Eliya is virtually absent and looked down upon. It is noteworthy that this norm has been applied to the tenure of both paddy land and highland although, in the course of fieldwork, one instance was noted where highland had been mortgaged out to a non-resident kinsmen of the mortgager but leading to bitter dissension and acrimony among both parties.

5.2.7 Cultivation Practices and Diet

Although not noted in Leach's account, villagers had resorted to several strategies to both ensure maximum utilization of available water and reduce total dependence on paddy cultivation. Traditionally, people had access to a number of other food sources which included cultivation of grains, vegetables, yams and maize, hunting, fishing in the tanks and collection of bee honey that were important sources of protein. Older informants state that, in the traditional order, finger millet had an equal place with rice so that all *chenas* were cultivated with that crop during the *Maha* season to fulfill subsistence needs of the household. The harvest was kept in storage bins (which

villagers refer to as *kurahan atuwa*) that were either constructed inside the house or adjacent to it, the size of the bin dependent on the total harvested[35]. Families also took care to keep the harvest for the rest of the year and sold any portion only after they reaped the next millet crop, i.e. after a year.

A variegated cuisine and food preservation technologies (see Appendix 2) were also practiced in earlier periods to ensure food security. A noteworthy fact is that earlier rice consumption was limited to only the night meal while other starchy foods including grains and yams were cooked for morning and midday meals. The consumption of bread, which most urban families practice for breakfast and evening meals, has not gained any ground in Pul Eliya. Although there is a newly opened bakery in the village producing bread and wheat flour based products, hardly anything produced is sold in Pul Eliya and is instead marketed in small urban centers around the village. The current Pul Eliya practice of having three square meals of rice has increased the dependency of Pul Eliyans on paddy cultivation and the limited supply of water in the village tank.

5.3 Conclusions Regarding Changes in Paddy Land Tenure

Leach was correct when he submitted the following assessment of the agrarian situation in the Dry Zone: "In this economy the basic valuable is scarce water rather than scarce land; it is the total water supply available to a community which sets a limit to the area of land that may be cultivated and hence to the size of the population which may survive through subsistence agriculture. In 1954 additional sources of irrigation water were becoming very scarce and expensive to control and this suggests that, by 1954, the population of this district was rapidly approaching the maximum that could be supported from local resources alone" (Leach 1961, p.7).

The ecological limitations identified by Leach are hard and harder to ignore and this may explain why the population of Pul Eliya was virtually stagnant for nearly a century although it doubled by 1954 when Leach worked in the village. This population increase could have been a response to the introduction of non-traditional land tenure systems. The dramatic six fold increase in the village population from that period to the present day can be interpreted as a sign of favorable economic conditions that have enabled Pul Eliyans to overcome the ecological crisis posed by limited water resources. The transition from a population at risk of disappearing from the face of the earth to a vibrant village economy found today can be attributed to a technological innovation, namely, the advent of the agro well and the cultivation of highland crops using human labor first and later machinery. Alternative water sources also came in the form of rainwater harvesting methods and domestic dug wells as alternative sources of potable water which we shall discuss in the next chapter.

[35] The corollary of the storage bin for paddy was called "*vi bissa*" although none of these old structures that were present in Leach's day are to be found in the village any longer.

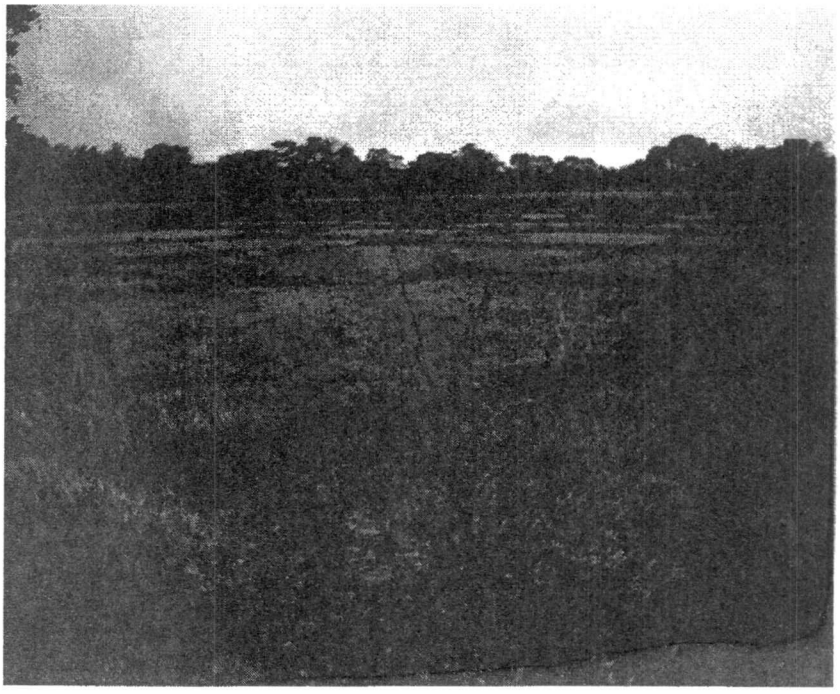


Plate No. 19: Part of the Old Field of Pul Eliya after the last harvest (seen from the main access road to the village)

Plate No.20: Part of the main sluice providing water from the main tank to the Old Field

CHAPTER SIX

Agrarian Change

It needs to be stated at the outset that two types of agrarian change have taken place in Pul Eliya. One was the Green Revolution of the sixties that introduced high-yielding varieties of rice along with inputs that were a part and parcel of the new technological package. The other was commercial cultivation of highland crops starting from the eighties that brought to an end the traditional method of highland cultivation called *chena*. Of the two changes, the focus of this study is on the latter.

6.1 Background to Agrarian Change

In the traditional scheme of things, *chena* lands were only an appurtenance that had grudging acceptance by government as shifting cultivation was done on government owned land. According to Leach, the government policy of the time regarding shifting cultivation was guided by the attitude "that shifting cultivation is unnecessary and should be prohibited" (Leach 1961, p. 289). However, it allowed a small minority of villagers who were usually unable to survive with the paddy land they owned to cultivate *chena* on a limited scale (usually up to one acre) for one season only. This was allowed for the specific purpose of growing dry-land food crops such as finger millet after obtaining a license. The *tulana* Headman supposedly had to make sure that this one-acre limit was not exceeded. However, the actual situation was somewhat different since more than half the *chenas* in actual use had not received any license from the government and only a very small number of these clearings were of the one-acre regulation size but were between four and fifteen acres in area (Leach 1961, p. 289).

Leach advances several pragmatic reasons for this difference. One was that the work of erecting fences and loss of crops due to wild animals was much greater if the plots were smaller. Second was the inability of the Headman to monitor the shape and size of cultivations from the ground. Third was that the villagers saw *chena* cultivation as a means of raising cash crops although the government saw it as an emergency measure of raising additional foodstuffs. Furthermore, when the government stopped issuing licenses for 1954, many villagers had re-cultivated old *chenas* or cultivated new *chenas* in an illicit manner (Leach 1961, p.290).

Thus, even during Leach's study period there was increasing pressure to bring existing forest areas under highland cultivation and that too not for subsistence alone but with the market in mind. Another significant development in *chena*-related agricultural activities was that, whereas *chena* is theoretically cultivation of a shifting nature, there was a tendency among some farmers to convert *chena* land into paddy land first by undertaking highland rice cultivation which they referred to as "rice *chena*" (*vi hena*).

Finally, the contrasts that Leach draws between the social structure governing paddy and *chena* cultivation are significant for the present study. According to him, in the *chena* situation "There is no overall systematic pattern such as can be observed in the distribution of *paraveni* holdings in the Old Field or in the organization of *kayiya*

teams at threshing time..... the territorial context, though nicely patterned, is quite impermanent and ad hoc" (Leach 1961, p. 295). However, there are some distinct differences between the old practices associated with *chena* cultivation and the current method of cultivating highland crops in Pul Eliya.

6.2 Drivers of Change

Factors that could be considered as "drivers" of commercial cultivation are principally of an economic nature and pertain to the importance villagers gave to the production of highland crops and marketing of agricultural surpluses at collection centers outside the village particularly during the last decade. A number of supporting factors have also played a critical role in changing the production mode to a commercialized operation chiefly in the form of climatic changes that have led to reduced water supply for rice cultivation, high costs of agro chemicals, and the availability of diesel or kerosene driven pumps for tapping ground water sources through the construction of agro wells.

Low returns from paddy cultivation were another push factor. The average per acre production of paddy in Pul Eliya varies between 80 and 100 bushels with lower yields in fields that are infertile or have salinity content (*kivula*). However, according to one informant, average returns from paddy were much higher before the Green Revolution since farmers used traditional varieties of rice[36] and did not have to use fertilizer or weedicide or other chemical inputs although yield per acre was much lower (about 65 or 70 bushels per acre). In recent times, returns from paddy were also much lower due to the absence of a guaranteed price scheme from 1977. With the declaration of the open market policy of government in the late seventies, the old guaranteed price scheme was abolished such that farmers had to sell their paddy at relatively lower prices (about Rs 10 or 12 per kg)[37] .

It needs to be noted that the trend in the direction of commercial cultivation is not only present in Pul Eliya but also in other villages in the general area as well. As Table 10 illustrates, the highest proportion of the total acreage in Medawachchiya DS Division has been devoted to cultivation of black gram while that under maize has seen a slight increase during the previous decade.

[36] Varieties such as *kaluwilankaliya, murungakaya, kokveli*, and *muththusamba* were used in traditional times.

[37] This situation has changed favorably when the present government reintroduced the guaranteed price scheme and gave subsidized fertilizer to farmers.

Table 10: Extents Cultivated Under Highland Crops in Medawachchiya DS Division Area from 1995-1999 (in acres)

Crop	1995		1996		1997		1998		1999	
	#	%	#	%	#	%	#	%	#	%
Black gram	2100	45.9	2000	46.2	1800	40.8	2000	42.5	1250	34.7
Maize	950	20.7	1050	24.2	1250	28.3	1050	22.3	1050	29.1
Chilies	425	9.3	475	11.0	625	14.2	425	9.0	425	11.8
Big Onion	0	0.0	0	0.0	0	0.0	400	8.5	400	11.1
Sesame	350	7.6	250	5.8	200	4.5	350	7.4	0	0.0
Finger Millet	575	12.6	375	8.7	350	7.9	300	6.4	300	8.3
Mung Bean	55	1.2	55	1.3	55	1.2	50	1.1	50	1.4
Cowpea	80	1.7	80	1.8	85	1.9	87	1.8	87	2.4
Groundnut	45	1.0	45	1.0	45	1.0	45	1.0	45	1.2
Total	4580	100.0	4330	100.0	4410	100.0	4707	100.0	3607	100.0

Source: Resource Profile, Planning Division, Medawachchiya Divisional Secretariat, 2001

6.3 Change Agents

While social change is the sum total result of individual actions, it is brought about by and through a few individuals who may be regarded as change agents. In the case of Pul Eliya, the remarkable transition from a predominantly rice growing community into one that has adopted highland cultivation as a parallel economic activity although on a commercial basis was brought about by the example quite ironically set by "an outsider"[38], specifically by a man who had married a Pul Eliya woman and come to live uxorilocally[39].

[38] Insiders tend to avoid mentioning that an outsider was in fact responsible for the change and instead portray it as a move launched by several individuals at the same time.

[39] See Selvadurai (1976) for a case study in which social change was initiated by village elites.

Box 1: Case Study of Change Agent, Kiri Banda

Now 82 years of age and short in stature, Kiri Banda is still very much an active cultivator (Plate No. 21). He was 26 years of age when he came to the village upon marrying Kadirathe Gamarala's daughter's daughter in 1952. He has one daughter and four sons. He began by cultivating a half acre of paddy that was his wife's share in the parental property and another 1 and half acres of paddy (both in the Old Field) that he had taken on lease. Later on, he had brought under cultivation 80 acres of highland situated between the main village road and the main access road from Medawachchiya (in Cluster 2 of Map 9). He had planted manioc, coconut and teak trees using water from an agro well which he constructed in 1974. The next year he had purchased a water pump operated by kerosene. About 70 acres of this land was planted with manioc. He had 6 men working under him from 6.00 a.m. till 9 .00 p.m. Four were wage laborers who worked in the fields and another man had to weigh the manioc, all working under a manager. They were paid 12 rupees per day and were fed with manioc and a broth (*hodda*) every day. He had given Rs 30 per day to his wife to save. Income per day was between 350 and 400 rupees. He also transported manioc to Mannar by bus taking 10-15 bags per trip. He had built his first house using the income from manioc which Pul Eliya people had derogatorily referred to as the "manioc house". From 1975, his son began to help him.

In 1976, Kiribanda cultivated tobacco under the subsidy out- grower program of the Ceylon Tobacco Company. 20 villagers followed suit and cultivated tobacco in the village; there were about 250 farmers outside Pul Eliya who did the same. From 1975, he cultivated brinjal and green chilies again taking them by bus to Mannar for sale. He purchased a two-wheel tractor first and later a large tractor in 1975. He cultivated black gram in 12 acres and soya in 35 aces in 1981, 82 acres again with soya in 1982, and 63 acres of the same in 1983. The last crop was a failure due to floods. From 1983, due to the civil conflict, he began sending produce to the main vegetable market known as the Manning Market in Colombo. First he used the train and later he hired a lorry. In 1984, he cultivated black gram again in 40 acres and it too was a loss due to drought. This made him increase the number of agro wells and space them strategically in the large highland extent he operated. Due to the closed economic policy of the government of the day rice and flour were in short supply. Villagers who had no food supply had come to his doorstep to purchase manioc. When the Dambulla market opened in year 2000, he had purchased a lorry to take his produce and those of other villagers for a fee while his son worked as the driver. Today, he has 10 agro wells on his land and owns a well built house in addition to the "manioc house" of yesteryear, a bookshop, and a grocery he built in Medawachchiya town which he has gifted to his grandson. Two of his children are university graduates, and one of them, the daughter, is a school teacher. One son is an agricultural research and production assistant working for the Department of Agrarian Development. Kiri Banda says he would like to try out any new idea. He hopes to start cultivating "dragon fruit" that he says has good market value. All this did not, however, change the villagers' attitude towards him since he was a *binna* husband. In fact, he says his prosperity had increased the animosity that they had toward him since, as a *binna* husband, he refused to be a submissive individual.

6.4 Emulation of Change Agents

Agrarian change like all other social changes need more than change agents. They require emulation of change agents by lesser fellows the sum total of whose actions leads to a qualitative change in the social order. According to the chairman of the Farmers' Organization, the emulation process commenced from late seventies. The push factors for imitators came in the form of the food scarcity of the period noted earlier. The situation was further aggravated for both farmers and consumers by a drought in the year 1977.

About 40 farmers in Pul Eliya had begun experimenting with commercial cultivation of highland crops by planting sorghum along with manioc in 1977; the total extent cultivated being about 65 acres. As this move proved to be profitable, they realized the need for a reliable supply of water to irrigate such crops and began investing in agro wells from 1978. This was followed by planting brinjal and snake beans (*maekaral*). From about 1993, they began cultivating big onion, cabbage, beetroot, and capsicum on a large scale. It is noteworthy that commercial cultivation of traditional *chena* types of food grain such as finger millet and *cowpea* were not contemplated as the market for other crops was much better.

Field observations indicate that farming practices associated with highland cultivation are much more systematic and planned than in a traditional *chena* which had a mix of crop types growing together in gay abandon. Today, practically all Pul Eliya farmers do mono cropping of relatively small extents of land ranging between an eighth of an acre and half an acre within a single holding (see Plate No. 22). A few farmers also cultivate the same crop serially (relay cropping) in order to avoid the production of a glut and the reduced price levels for certain crops in the external market.

6.5 Construction of Wells

The advent of agro wells and water pumps operated by diesel or kerosene was a revolutionizing factor since it ensured farmers with a steady and reliable supply of water for highland crops instead of depending solely on rainfall. Most wells have been constructed by the use of family finances and a few with assistance given by the Department of Agrarian Development and even by non-governmental organizations with costs ranging between Rs. 15,000 and Rs. 30,000.

Construction of agro wells on a large scale (see Plate No. 23) commenced about 8 years ago in Pul Eliya and the phenomenon is certainly not limited to this village. Today, there are a total of 96 agro wells in the village (which means one agro well per every two families). The average agro well is about 22 feet in diameter and has a variable depth between 8 and 15 feet after which the diggers reportedly meet up with a layer of granite. Dynamiting this layer is not effective and unless water is reached before meeting up with the layer, the farmer could lose his investment. Today constuction of average agro well costs about Rs.50,000. A villager who wishes to construct such a well invariably consults a water diviner who would indicate the exact spot where water would most likely be found.

On average, an acre of highland can be irrigated using an agro well. Practically all such wells lie on the section of land situated at a lower elevation than the Pul Eliya main tank indicating how the tank performs a valuable ecological function of raising the groundwater table. Earlier all farmers had used kerosene operated pumps which consume 3 liters to irrigate an acre. Now farmers use their own diesel powered hand tractor engines after modifying them to run a water motor for less than half the cost of running it with kerosene.

While Pul Eliya had only 3 dug wells during Leach's day, today over half the households (54.6%) have dug wells that are mostly covered with brick and plaster and provide water for drinking and other household uses such as bathing and washing while another fourth (26.8%) use tube wells, two of which are situated in the village.

This has greatly reduced their dependence on the tank for their water needs. Conversely, it has resulted in less attention being given to proper maintenance of the tank since such activities usually resulted in some cleanup of invasive plants. Informants stated that, in earlier times, the entire tank was surrounded by a number of entry points (*mankadaval*) where villagers had bathed and collected water for domestic purposes.

However, it is not possible to exaggerate the availability of alternative water sources since agro wells supply water to 391 out of the total of 725 acres (or 53.9%) of highland while the remainder (46.1%) is rain fed. In terms of the total number of highland parcels which is 301, the respective proportions under agro wells and rain fed conditions are 43.2% and 56.8%.

6.6 Past and Present Uses of Highland

In Leach's day, while the main settlement was a cluster of homes built close to the tank bund, Pul Eliya people had practiced shifting cultivation using slash-and-burn method in the surrounding forest with paddy fields and tanks dominating the rural landscape as shown in the aerial photo of Pul Eliya (see Leach 1961).

Today's picture is quite different since dwellings are no longer confined to one small place but spread out in such a way that they virtually cover the entire landscape. The total highland extent covers an area of about 725 acres containing a total of 301 land parcels where Pul Eliya families have built their homes and/or undertake highland cultivation. While most highland plots are located along village roads, 86 plots (28.6%) are located along the main access road to Pul Eliya, while only 5.3% of them are situated within the old village site or *gamgoda* (see Table 11).

Table 11: Distribution Highland Parcels by Location

Location	**No. of Parcels**	**%**
Within the village		
Gamgoda	16	5.3
Kudagama	42	14.0
Elawaka Road	30	10.0
Dambuwewa Road	58	19.3
Wewarana Road	21	7.0
Kalawelpothana Road	28	9.3
Pul Eliya Main Road	86	28.6
Wewa-udaha	5	1.7
Millagaha junction Road	4	1.3
Tammenawila	1	0.3
Kooladiya	1	0.3
Outside the Village	9	3.0
Total	301	100.0

Source: Field Survey-2009

For purposes of analysis, the present settlement area can be broken down into five clusters using local designations which are usually based on the road leading to such and such a tank or village (see Map 7) as follows:

Cluster 1:
This is situated on a north to south axis lying on both sides of the main access road at Rambakulama Junction leading to the eastern end of the Pul Eliya main tank and including the remnants of the original *gamgoda.* This cluster, which can be regarded as the backbone of the settlement structure as a whole, consists of two sub-clusters and contains about a third of the total highland parcels in the village.

The first sub-cluster (IA) consists of the remnants of the original *gamgoda* and is made up of about 16 houses. About 12 households in this sub-cluster have ¼ -1 acres of highland while 4 households have ¼th of an acre each.

The next sub-cluster (IB) begins from the centre of the village and extends in a linear fashion to the northern end of the village and along the road leading in a westerly direction to Elawaka village. It consists of about 38 dwellings each using about 3 acres minimum.

Cluster 2:
This cluster is situated on the eastern side of Dambuwewa tank (an *olagama*) and concentrated around the western side of the second intersection between the road to Elawaka and road passing *Weweranawewa* (Wewerana tank) that leads to the main access road from Medawachchiya.

There are about 25 dwellings of which 6 have about 3 acres of highland each, another 3 owning between 3 and 6 acres, 8 owning between 6 and 10 acres, 7 owning between 10 and 15 acres, 4 owning 15 acres each, and 5 owning 80 acres which belonged to E.K, Kiri Banda and now has been subdivided among 4 sons and 1 daughter. This cluster could thus be considered as the one with the largest extent of highland under cultivation.

Cluster 3:
This is situated east of the southern end of Pul Eliya and is situated north of *Akkarawewa* and on both sides of the main village road going around the southern end of the Pul Eliya main tank leading to Wiralmurippu village. The cluster consists of 25 dwellings, each using 3 acres on average.

Cluster 4:
This is a relatively small cluster separated from the remnant of the old *gamgoda* which is situated below the tank. The cluster consists of 16 dwellings, 4 of which use a ¼ acre each of highland and 12 households have between ¼ th and 1 acre in extent.

Cluster 5:
This is situated on the western side of the intersection of the main access road leading from Rambakulama and the road leading to Elawaka. The cluster consists of about 30 dwellings, each using ½ acre of highland in the traditional *chena* area north of the cluster.

As the foregoing description suggests, currently there are two main types of areas where highland cultivation is being done. The first is the *chena* area where there are practically no dwellings except two (marked *chena* area in Map 7). This is made up of about 15 acres and could be the last in the line of traditional *chena* areas where about 4 families living next to it and 25 other families living in other parts of Pul Eliya posses *chena* plots. Usually, crops such as sesame and black gram that are least likely to be damaged by wild animals are cultivated if the farmers live some distance from them. However, some farmers have built watch huts which they occupy in the night only to ward off any attacks by animals. As Plate No.24 shows, many are equipped with modern amenities such as transistor radios that have eliminated the need to sing "watch hut poems" (*pal kavi*) in older times. The second type of highland cultivation area is the settled or stabilized *chena* where families have for the last two generations cultivated *chena,* first guarding them by using watch huts and later replacing them with houses made of brick and tile. Although the owners have these dwellings along the main access or subsidiary roads, the actual cultivated area of each household is situated behind the dwelling. These plots are neither fenced nor their boundaries marked in any way due to the large extent of lands and the virtual absence of stray cattle. However, since about two small herds still roam the village roads day and night, most homeowners have constructed barbed wire fences some using concrete posts on the boundary facing village roads.

Although 88% of respondents stated that they owned the highland parcels, the use of the term "own" does not signify clear legal title by any means since allotments are situated on undivided land, an observation that applies to most of the paddy land area in Pul Eliya as well. Some households have obtained deeds under a government program called "*Swarnabhoomi*" which grants title to land up to 2 acres in extent. This limit also applies to LDO permits that are renewable every year after the payment of a per acre fee of Rs. 20. In most instances, claims to the remaining land are based on rights of usufruct that are recognized by village custom[40]. In only one instance has land been leased in suggesting that there is still sufficient highland to go around. As Table 12 demonstrates, nearly two third (64.7%) of parcels and 648.5 acres or 89.3% of the total highland area are over one acre in extent and indicates that many villagers have sufficient amounts of highland to undertake crop cultivation if necessary on a com

[40] Regularization takes place after holding a meeting, officially called "land kachcheri" involving officers of the Department of Lands, the Divisional Secretary and the GN or GNs concerned.

Map 7: Location of Settlements in 2009

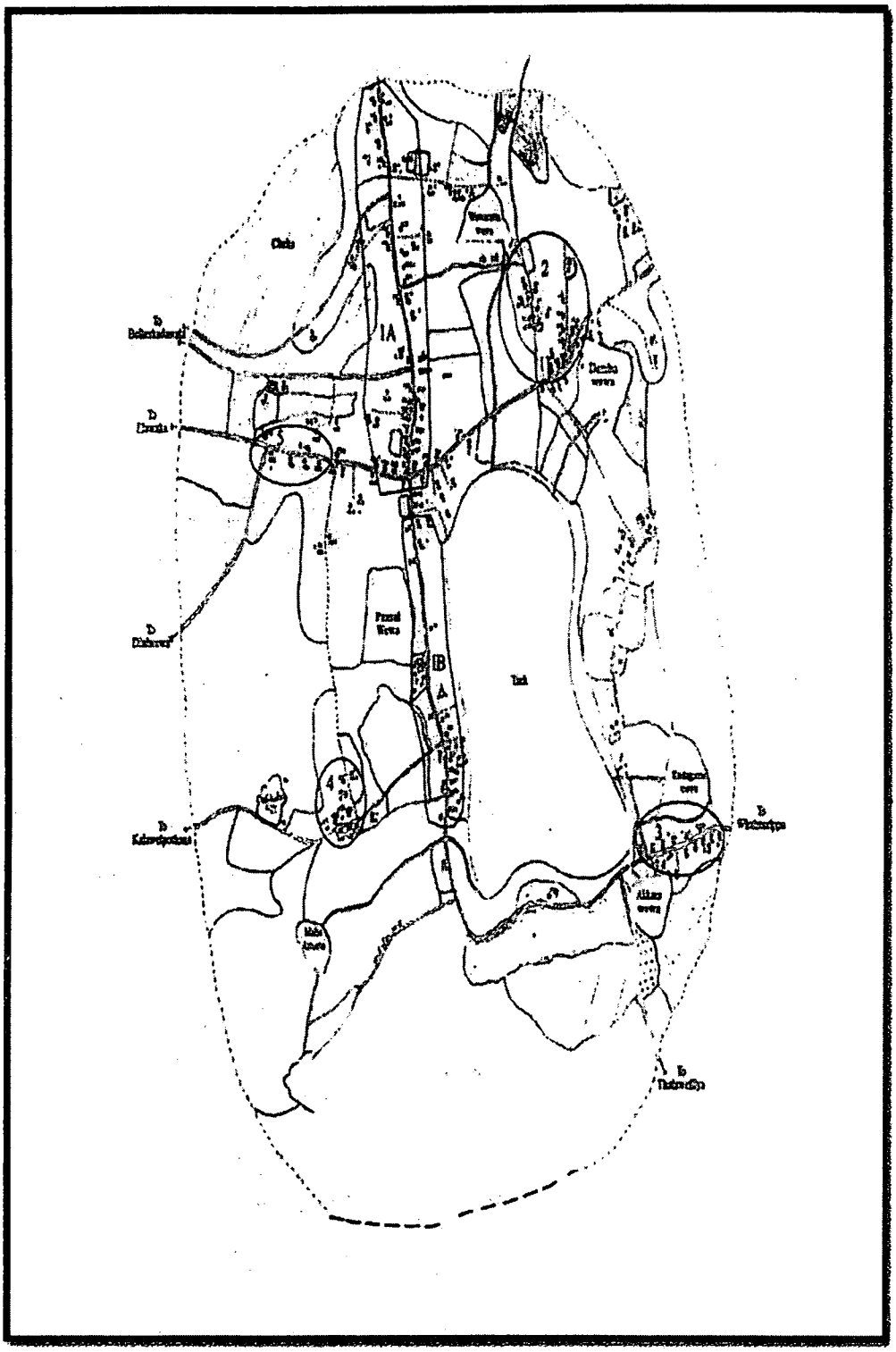


Table 12: Number and Extents of Highland Parcels (in acres)

Size of highland parcel	No. of parcels	%	Extent	%	Average size
0.00 <= 0.25	19	6.3	4.60	0.63	0.24
0.25 <= 0.50	29	9.6	14.50	2.00	0.50
0.50 <= 1.00	58	19.3	57.50	7.93	0.99
1.00 <= 2.00	87	28.9	160.25	22.10	1.84
2.00 <= 3.00	53	17.6	150.50	20.76	2.84
3.00 <= 5.00	35	11.6	150.75	20.79	4.31
> 5.00	20	6.6	187.00	25.79	9.35
Total	301	100.0	725.10	100.00	2.41

Source: Field Survey 2009

Usually, there are more farmers cultivating highland crops in *Maha* than in *Yala* due to the availability of water in the former season. For example, according to the household survey, of the total households, 124 (63.2%) had cultivated some type of highland crop in *Maha* of 2007/2008 while this number had dropped to a little less than half (79 or 40.3%) in *Yala.* While not every household engages in highland cultivation, among those who do so, the favored crops are green chilies, maize, black gram and snake bean in *Maha* and big onions and capsicum in *Yala.* A variety of other highland crops are also cultivated during both seasons but the extents cultivated under these are much less. They include ground nut, *cowpea* and an assortment of Low Country vegetable varieties such as tomatoes, ladies fingers, loofa, bitter gourd, brinjal and pumpkin. It is noteworthy that finger millet that shared equal status with rice in traditional times is virtually in abeyance; according to key informants this is due to the absence of a good market price for the crop. Farmers who do cultivate it do so only for domestic consumption. Hence, for *Maha* 2007/2008 and *Yala* 2008, the number of farmers was respectively 12 and 1, the respective acreages being 4 and ¼ acre.

It is noteworthy that although extents cultivated in *Yala* are less than those for *Maha*, the total output is higher in *Yala.* When questioned about this apparent discrepancy in crop outputs, the chairman of the Farmers' Organization offered the view that the general tendency among farmers when cultivating during *Maha* is to let the crops "grow on their own" (*ibeta haedenava*) due to abundance of rain while during *Yala* they are more systematic and give more attention to the crop. Larger outputs are also possible for the more resourceful villagers particularly those who have agro wells and water pumps or are able to hire them.

The cultivation of finger millet in *Maha* is also a significant feature as is the fact that 50% of the total production of millet is only sold while the remainder is kept for consumption or as a form of food security for the *Yala* season. This shows that some farmers are still more concerned with meeting the demands of subsistence rather than the market and is a continuation of past agricultural practices in which finger millet occupied a central place as the principal source of food and a substitute for rice. The non-cultivation of tomatoes in *Maha* and ground nuts and cowpea in *Yala* is also an

important feature. According to key informants, tomatoes are susceptible to fungal attack when there is too much rain in *Maha* while ground nuts and *cowpea* are crops that are traditionally suitable for the *Maha* season.

Of the reasons given for cultivating cash crops, the highest proportion of farmers (76.9%) have stated that it is a better source of income than paddy while for 16.1% it is due to lack of permanent employment with 6.3% stating it is because they do not have any paddy land. At the same time, paddy cultivation undoubtedly provides the staple of rice and provides some form of food security for families with paddy land which is why Pul Eliya farmers rarely sell their paddy and instead keep it to last till the end of the next season. If there is no water for Yala and no cultivation takes place as it happened during last Yala, then the family has to purchase rice from the stores. This is where, in their opinion, highland cultivation as a supplementary source of cash income becomes crucially important for survival.

The important economic role played by permanent types of cultivation such as coconut, teak, arecanut, and cashew for a total of 87 (44.3%) of farmers in contemporary Pul Eliya cannot be disregarded as they also provide a stable and regular source of additional farm income for 87 or nearly half of households.

6.7 Returns from Cultivation

A separate, small scale study undertaken with the help of key informants on per acre cost of production for three crops, namely, paddy, maize and big onions showed that per acre costs were highest for big onions and least for paddy with maize in between (see Table 13). The study reveals that the average highland crop cultivator has to marshal enough capital and machinery to undertake the venture unlike the paddy cultivator whose costs are relatively less.

Table 13: Cost of Production Per Acre for Paddy, Maize and Big Onions (in Rupees)

Expenditure	Paddy	Maize	Big Onions
Seed	2400	2500	6000
Land preparation	9800	4000	20,000
Planting	3000	3500	15,000
Fertilizer	1400	8000	5800
Weedicide (one liter)	1400	7000	5000
Weeding	-	7200	48,000
Pesticide/Fungicide	1200	1500	-
Pumping water	-	24,000	2400
Harvesting	300	5600	5000
Bundling	2800	-	-
Storage	-	-	3000
Bagging	-	-	4000
Transport	1000	-	22,500
Commissions	-	-	42,000
Total Cost	**26,000**	**57,100**	**178,000**

Source: Field Survey 2009

Explanatory Notes:

Seed Paddy:
Farmers stated that prices for seed paddy can vary between Rs. 40 to Rs. 70 (per kg.) since they are available for Pul Eliya farmers only through the private sector indicating the poor performance of governmental agencies charged with dispensing seed paddy. Hence, an average of Rs. 50 per kg is given as the requirement for an acre of paddy. Although the Department of Agrarian Development supplies seed for Rs. 38 per kg, they have to be purchased in bulk through the Farmers' Organization which has to order seed before hand. In traditional times, farmers used to make their own seed, which was preserved by using a special method of arranging the harvested grain in stacks referred to as *vatamalu* where it was safe from the elements for more than 2 months. According to farmers, it is not possible to keep seed from the previous harvest anymore since they tend to be crushed as a result of using machinery for harvesting in contrast to former times when buffaloes were used.

Fertilizer:
Since the government's fertilizer subsidy is only for paddy cultivation, farmers in Pul Eliya tend not to use chemical fertilizer for maize unless they are using land that has been cultivated continuously for 2 or 3 years for which they use a part of the fertilizer that they had obtained for paddy. An estimated 70% of farmers cultivating maize do use chemical fertilizer especially if they use hybrid varieties of seed that are imported. The amount given is an average calculated at Rs 7000 per kg of chemical fertilizer for 150 kg.

Weeding:
Weeding is done by hand requiring about 10 days of labor calculated at Rs 700 per person day

Fungicide:
Fungicide has to be used depending on need and some farmers report having this problem for which they have to spend additional Rs 1500 per acre.

Hired Labor:
If a farmer uses hired labor, the cost can increase up to Rs 5000 per acre requiring 10 person days at the rate of Rs. 500 per day.

Harvesting:
If done by a combine harvester, locally referred to as a "Tsunami", the cost can go up to Rs 4000 although the work is done faster.

Transporting:
This cost is for transporting from village to Colombo market since farmers wish to avoid the fluctuating price situation that prevails at Dambulla market.

General:
Costs do not include the number of days the family members have to spend to protect the crops from foraging wildlife and construct fences around the fields.

However, farmers invest higher amounts of capital on highland crops since higher rates of return could be expected. Thus, as Table 14 demonstrates, in terms of profit level, big onions yield the highest profit followed by maize and paddy.

The profits from maize can be increased and costs reduced if the farmer does not use chemical fertilizer but this is only possible if new land is available for cultivation and evidently such land increasingly becoming scarce today.

Table 14: Yield Per Acre, Unit Price, and Gross and Net Incomes for Paddy, Big Onions and Maize

	Paddy	Maize	Big Onions
Yield per acre (kg)	2,500	12,000 kg	10,000
Unit price per kg	33	20	45
Gross income (Rupees)	82,000	240,000	450,000
Less Cost Production	26,000	57,000	178,000
Net Profit	**56,000**	**183,000**	**272,000**

Source: Field Survey 2009

Explanatory Notes:

Yield Per Acre:
An average is given for paddy since some farmers can produce more than 100 and sometimes 150 bushels an acre (1 bushel is equal to 100 kg). Output for big onions can vary between 2500 and 3500 kg per acre if hybrid varieties are used and can be lower (1500 to 2000 kg) if local varieties are used.

Unit Price:
The price given is for the paddy variety known as "*samba*" grown by most Pul Eliya farmers.
Price for maize can vary between Rs 40 and Rs 60 per kg and for big onions between Rs 20 to Rs 40 per kg depending on market conditions.

Plate No. 21: E.K. Kiribanda at his home in Pul Eliya

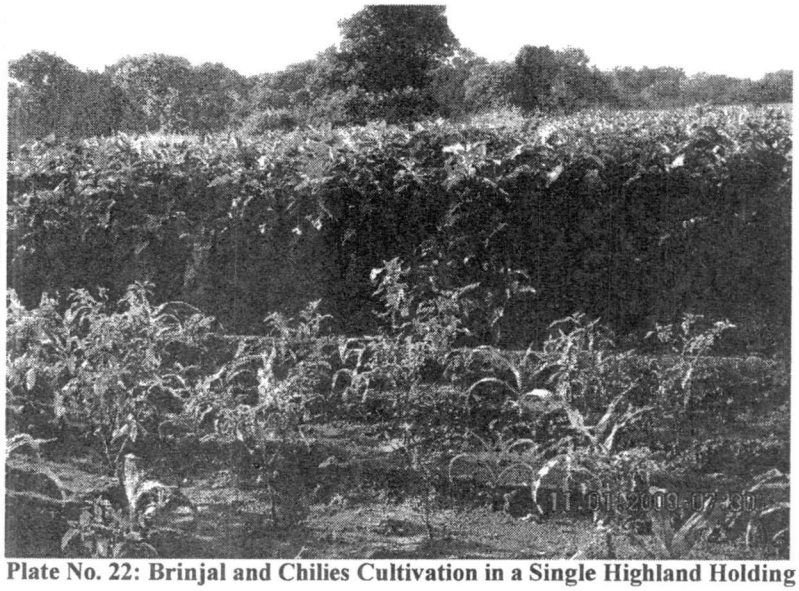


Plate No. 22: Brinjal and Chilies Cultivation in a Single Highland Holding

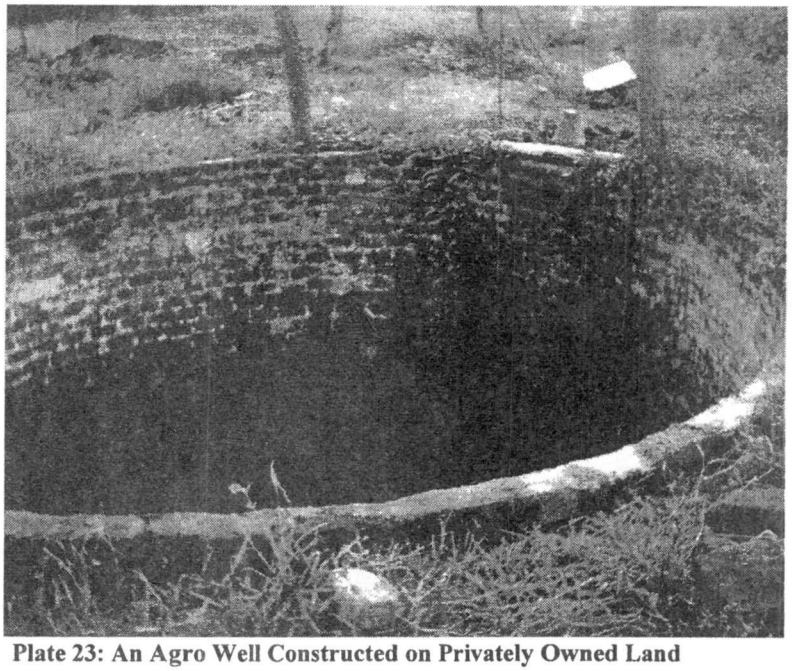


Plate 23: An Agro Well Constructed on Privately Owned Land

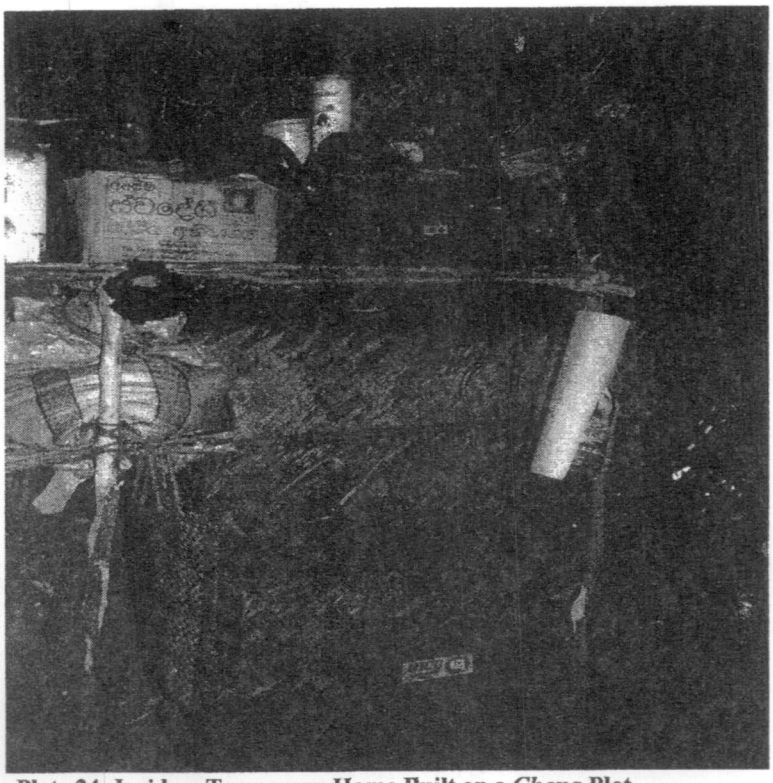


Plate 24: Inside a Temporary Home Built on a *Chena* Plot

CHAPTER SEVEN

Impacts of Agrarian Change

This section focuses on social and economic impacts of the agrarian changes that have taken place in Pul Eliya in such areas as use of labor, mechanization, use of pesticide, access to credit and marketing methods. It concludes with a discussion of the factors that act as constraints faced by farmers when they engage in commercial cultivation.

7.1 Nuclear Family as the Unit of Production

The old practice of wheel *chena* consisted of a small number of families (usually no more than 30) that got together to clear a selected extent of jungle and mark out their individual plots so as to radiate from a centre with each cultivating unit responsible for fencing the extent they chose in order to keep out foraging wild animals. While the nuclear family was the unit of production, it did not operate alone but in conjunction and coordination with other families making the total enterprise agriculturally and ecologically sustainable (Leach 1961, pp.291-295).

By contrast, the new trend placed emphasis on the individual household as the **only** unit of production with each household determining how much they wished to cultivate without resorting to a unified and integrated cultivation system. This meant that families had to live on their own *chena* land to protect their crops as the land they cultivated was situated far from their homes (at least a km or more). Initially they built makeshift homes of mud and dried straw or coconut thatch and eventually converted them into permanent ones made of brick and tile. A parallel agricultural development was the cultivation of commercially valuable permanent crops such as of coconut and teak, first alongside temporary crops such as vegetables and maize, later replacing the latter entirely in some instances. .

7.2 Use of Labor

Most Pul Eliya households tend to use a combination of hired and family labor to cultivate all types of crops including paddy while the use of exchange labor, which was the norm in traditional times has virtually disappeared. This means that all members of the household including children have to pitch in their mite to make an agricultural venture a success (see Plate No 25). Teachers at the Pul Eliya School have been quick to comment on the adverse impact of the involvement of children in agricultural activities on their education due to quick financial returns that are possible especially from the cultivation of highland crops.

7.3 Mechanization

One of the outcomes of the use of machinery for agricultural activities has been the sharp decline in the number of buffaloes and neat cattle which had earlier been used as a means of traction and for the production of ghee and curd for domestic consumption. Whereas there had been between 300 and 400 buffaloes prior to the late 1970s, this number has dropped to about 50 animals today. There are currently 54 two-wheel tractors, 7 four-wheel tractors, 95 sprayers and 119 water pumps to tap

water from agro wells in the community (see Plate No.26 for a sample of agricultural machinery owned by a household). The depletion of forest land which had been used for pasture due to the expansion of highland cultivation has also contributed to the replacement of animal power with machinery. Although harvesting of paddy and highland crops is still done by hand, most farmers use machinery for tilling of both paddy land and highland and for threshing harvested paddy. Farmers owning large extents of paddy also hire combine harvesters (referred to locally as "tsunami") from operators in the area. According to the household survey, over two third of farmers cultivating highland crops such as vegetables and big onions have used their own machinery.

7.4 Pest Control

Use of chemical pesticides is virtually universal among farmers for both paddy and highland crops although it has been observed by key informants that pesticides are not used in a controlled fashion. The highest proportion of pesticide and weedicide per acre is used for cultivation of big onions followed by vegetables, paddy and other field crops. Field observations and key informant interviews suggest that there is a general lack of care exercised by farmers when they work in the field and when using chemicals. For example, machines used for spraying are washed in the irrigation canals and water from these canals is used to quench their thirst. Nose covers are generally not used during spraying of chemicals. Some farmers open insecticide bottles with their mouths. Chemicals are said to be used over the specified limit and even as a way of preserving produce before marketing.

It is noteworthy, however, that some households have adopted environment and people friendly agricultural practices. According to the household survey, 58 or 29.9% cultivate vegetables such as snake beans, tomato, gourd, pumpkin, bitter gourd, cucumber, spinach and green leaf for household consumption without using agro chemicals in small homestead plots less than quarter acre in extent while 24 (or 12.4%) have begun producing compost fertilizer.[41] As will be discussed later, this also represents a trend that counters the development process that has taken place within the last two or three decades in Pul Eliya.

7.5 Marketing Channels

Commercial agriculture would not have been possible without proper access to marketing facilities and channels. During the early period (before year 2000), the marketing options were either to sell produce to traders who came to the farm gate or transport the produce by bus or lorry to distant towns such as Vavuniya and the city of Colombo. Most farmers chose the former option as it involved less cost but reduced their overall profit margins. Large scale marketing of produce began from year 2000 when farmers had taken vegetables and maize to the Colombo market. Experience showed them that marketing those at Dambulla Dedicated Economic Centre was a better option since they lost two days for travel to and from Colombo although profit margins were higher when they sold in Colombo. This too was overcome when a Pul Eliya resident purchased a lorry and took on the job of transporting vegetables and

[41] The farmer animator from Pul Eliya has begun to hold competitions for composting among farmers; this is in accord with the present government's agricultural policy.

maize to the market in Dambulla Dedicated Economic Centre. The charges were between Rs 40 to 60 for each bag during the start but with costs of fuel escalating in recent times, they have increased to Rs 120 or Rs 130 per bag. The transporter from the village sells the produce to middlemen who are shopkeepers in Dedicated Economic Centre and not to wholesale buyers directly and pays back the farmers after their produce is sold. A few villagers turn into part time traders when they go to Dambulla. After selling what they have taken, they survey the market and, if there is produce that is not being sold due to low prices, they buy it from other farmers who have come with the produce, wait till the end of the day and re-sell them when prices are higher at day's end.

In recent times, some farmers have begun to transport big onions directly to the Colombo market. They get together and hire a lorry to transport the produce. Some farmer leaders have long-standing social contacts with a trader or two in the Colombo (Manning) market. The latter buys the produce and takes care of all their travel arrangements when it is time for them to return after making a sale. The trader also visits Pul Eliya once a year during festival times and socializes with villagers who are his regular clients. Except in an emergency, Pul Eliya farmers are not indebted to traders as is the case with commercial farmers in other parts of the country, a practice that virtually transforms the latter into bonded laborers.

7.6 Access to Credit

Given the capital intensive nature of commercial farming, another important development has been the greater dependency of farmers on credit for agricultural needs unlike the situation that probably prevailed during Leach's time. According to the household survey, two third of farmers have taken a total of 104 loans during the last 2 years. Nearly half the total number of loans taken (46.9%) has been for cultivation purposes.

It is also noteworthy that, while most borrowers (44.1%) have resorted to banks such as state and private banks including *Samurdhi* Bank and Rajarata Development Bank, the remainder has relied on the Funeral Aid Societies in the village to obtain money. Dependency on formal channels of credit has also outdistanced such informal channels as traders unlike in previous times. There is also a tendency for those in higher income groups to take larger loans for purchasing machinery. A positive aspect of taking credit is that nearly all cultivation loans have been utilized for the stated purpose.

7.7 Agrarian Change in Retrospect

The above discussion shows that the overall impacts of agrarian change, specifically, the advent of commercial cultivation of highland crops has had a beneficial impact on the community by freeing it from the problem of water scarcity that resulted in low yields from paddy and consequently reduced household incomes in the past. While drawing the villager out of the peasant context and enabling him to assume a new economic role as a farmer, the agrarian revolution as far as Pul Eliya is concerned bestowed many economic and social benefits for the average agricultural producer and enhanced his material status in terms of new household assets and interaction with the external market system.

But this is not the end of the story since there is also a downside to the changes discussed. These include inability of some farmers to realize the full economic benefits from commercial agriculture due to unfavorable market conditions and high cost of inputs. In addition, there are ecological limits such as the difficulty of acquiring new land for cultivation due to impoverishment of the soil through over cultivation and continuous irrigation[42].

7.7.1 Limits on Physical Resources

The trend toward expansion of the land area for highland crops is fast reaching its natural limits as can be seen from the decline in both the number of persons who apply for regularization of encroachments as well as in the total acreage alienated to them by the government particularly from 1994 when compared with the present (2008) as shown in Table 15.

Table 15: Alienation of Highland and Lowland Area to Applicants from Pul Eliya

Year	Highland		Lowland	
	Number of Allottees	Acreage	Number of Allottees	Acreage
1993	48	104.5	20	100
1994	106	105	40	73.5
1996	61	105.5	30	17
2008	78	94	Unknown	27

Source: Divisional Secretariat, Medawachchiya.

Land shortage is also reflected in some families cultivating areas on the margins of the village presumably by activating use rights of their ancestors but expose their cultivation to the risk of being attacked by foraging wild animals such as wild boars.

7.7.2 Unfavorable Market Conditions

It is noteworthy that after a decade of fast paced agricultural development, Pul Eliya farmers have begun to experience the adverse effects of competitive market conditions. This situation is particularly evident at the Dambulla market complex that has begun to receive agricultural surpluses not only from the immediate area but from locations as far away as Nuwara Eliya in the hill country. Since all farmers start agricultural activities at the same time, a glut is inevitable[43]. Farmers state that low prices for produce will remain so sometimes for a week leaving them with no option but allow their produce to stagnate or rot in the fields. It is often the case that the transporter has either to sell the produce at a price lower than expected or bring it back, the latter option involving further losses to him. In some instances, produce that

[42] According to a local transporter of agricultural produce, the output from Pul Eliya has begun to diminish in the recent past. While about 5 years ago he used to transport produce daily to Dambulla market, now it takes place twice a week. That too, he says, he transports in order to retain his clientele and not to make a profit as he did earlier.

[43] Pul Eliya farmers state that this situation will worsen when produce from Jaffna start coming to markets with the restoration of normalcy following the end of the civil conflict in 2009.

goes bad easily, such as brinjal and snake bean, is dumped at the market site and cleaned up by the market management. Farmers producing items such as big onions that can be stored for a longer duration have a better control over fluctuating prices by withholding the sale of the produce. This may be one reason why production of big onions has become more popular in Pul Eliya.

The following case study of Kusumawathie, a female agricultural entrepreneur, illustrates some of the difficulties Pul Eliya people face when undertaking commercial highland cultivation.

Box 2: Case Study of a Female Highland Farmer

Kusumawathie, age 40 years, is from the village of Mahakongaswewa which is close to Pul Eliya. She studied up to Grade 10 at the school in Punewa village and married into Pul Eliya although the couple is childless up to now. After marriage her husband developed a kidney related ailment and epileptic fits that require treatment from two hospitals. Even with these disabilities, the couple decided in 2008 to undertake highland cultivation on a 6 acre plot which had been used by his ancestors sometime ago and had been abandoned. Since the land had not been used for more than a generation, large trees had to be felled and burned following the traditional *chena* method referred to as "*navadeli hena*" or "newly burnt *chena* " (Plate No. 28). As the plot is situated nearly 3 km from their place of residence in Pul Eliya, they built a temporary shelter on the land to overcome the problem of travel and also to protect the crop from wild animals. The main cultivation was maize along with vegetables and groundnut in about 2 acres. Most of the seed for maize had to be bought from the open market and they depended heavily on hired labor.

Her total cost of production was for cultivating maize was Rs 200,000 the breakdown of which is as follows:

- Clearing the jungle (using hired labor for 30 days at Rs 500 for women and Rs 600 for men for 30 days) Rs 75,000
- Seed (purchased twice: once at Rs 3600 per kg for 10 kg and later at Rs 5000 per kg for 5 kg) Rs 28,600
- Fertilizer : at Rs 5800 per cwt: Rs 46,000
- Weedicide at Rs 1200 per liter x 6 liters: Rs 7200
- Harvesting (using hired plus family labor): Rs 12,000
- Hire of "tsunami" tractor for threshing: Rs 16,000
- Transport and other expenses: Rs 16,000

On the first field visit to the farm, we were invited to come inside their temporary shelter, made of cadjan and straw; the only item of modernity is a transistor radio. Kusumawathie is worried as she had borrowed about Rs. 40,000 from banks (Ceylinco and Samurdhi) partly by pawning her jewelry. The balance she had borrowed from private individuals in the village at high interest. On the second visit, the couple was cultivating a second plot of 2 acres closer to home as work on the maize farm was over. But we were given a tale of woe. After planting seed, wild pigs had come into the farm's edges and uprooted the seedlings and eaten them (they could eat as many as 100 plants in one night and fencing of the land is virtually impossible due to the large extent under cultivation.). As the maize grew up there was insufficient rainfall and just before harvest, rain ruined a part of the crop. Added to these vagaries was the volatile market situation. They harvested the first crop of 9000 kg and before taking it to Dambulla market, they went in the morning to check the price situation. They were told that it was Rs 28 per kg. They returned to the village and when they took the produce to market that afternoon the price had dropped to Rs 18 per kg. Since they had already taken it there they had no other option but sell it at that price. Kusumawathie settled most of her debts, but she still has to pay some private parties Rs 42,000 more. She says she will eventually settle it but it will take some time to do so. Her husband has to continue treatment for his kidney problem and fits. They have started cultivating onion, chillies and brinjal on the new plot and used some of the cash earned to settle a portion of the debt. They had built a temporary shelter here too; the only visible item of modernity this time was a cordless telephone. Compared to the previous plot, this one, they say, is less fertile as it has been used several times for cultivation so that control of weeds (particularly the growth of a weed called *kalanduru*) is a problem. This plot has a well from which they pump water: facilities they did not have in the previous one. They still have to visit it frequently as one adjacent landholder has begun to encroach it.

7.7.3 High Cost of Inputs

A major constraint experienced by all farmers is the high cost of inputs, particularly, seed and fertilizer used for highland cultivations. Since they depend on seed varieties that are imported, farmers have to face up to the problem of escalating costs of seed due to tariffs levied on imports. In the case of fertilizer, the problem is different. Since there is no government subsidy for fertilizer for highland crops, farmers have to purchase it at open market prices that are unbearable. The option is to use compost fertilizer and in fact it is considered as being better than using artificially produced fertilizer according to the chairman of the Pul Eliya Farmers' Organization. The constraint experienced in regard to this option is that farmers of Pul Eliya have already disposed of the main agent required for producing compost, namely, their livestock.

7.7.4 Health Costs of Commercial Farming

Already there are indications that the extensive and unregulated use of chemical inputs in the form of insecticide and weedicide for commercial farming of crops such as big onions and vegetables are taking their toll on human health as evidenced in the growing number of persons from Pul Eliya who are affected by kidney problems. The non-use of protective measures such as gas masks (see Plate No. 29) during spraying chemicals and the use of chemicals to protect crops or extend their life during storage are factors that further contribute to ill health both for the producers as well as consumers.

7.7.5 Social Costs of Commercial Farming

A direct outcome of the nucleation of households that has resulted from the particular type of highland agriculture in Pul Eliya has been a decline of unity and solidarity within the community. This results from the fact that each household has to take total responsibility for earning a livelihood without any support from others. The deterioration of social relations is summed up in the following quote from a key informant: "In the past, villagers exchanged everything among one another. If they killed a wild animal they would share the meat. Today, everything is done for money. Even if a household obtains a lemon, it has to pay for it in cash". About six years ago, the ancient margosa tree that stood on the bund of the Pul Eliya main tank and on which sacred pots were hung during the annual post-harvest ceremony (see Chapter Nine) was struck down by lightning (see Plate No.30 for its present state). Some informants see this event as a warning from the powers above of the sour condition of the agrarian situation in Pul Eliya.

7.7.6 Other Constraints

Shortage of water continues to be a constraint for most highland cultivators, who have for one reason or another been unable to overcome the principal ecological limitation of the area since they cannot afford to construct an agro well or since they live on higher ground where such a well cannot be constructed. The second important constraint is shortage of labor that is a common problem facing all farmers including those cultivating paddy as was noted earlier.

7.7.7 Responses to Constraints

At the same time, during fieldwork the authors have come across one farmer who has developed special strategies to cope with fluctuating prices by combining serial cropping with developing a niche market for his main produce, namely, maize. This special category of buyers includes vendors who sell boiled maize to bus travelers passing the Medawachchiya town. The vendors buy his maize at the farm gate at a much higher price than what is offered at the main market in Dambulla. Although this farmer's gross returns are lower, he is assured of a better price and a higher level of profit than he would have if he had harvested on a large scale. Another significant development, as noted earlier, is the presence of households that have adopted environmentally friendly and people friendly agricultural practices promoted by the Agriculture Research and Production Assistant (*govi niyamaka*) appointed for the Pul Eliya GND who holds annual competitions in composting in keeping with the present government's agricultural policy.

7.8 Conclusions Regarding Agrarian Change

Pul Eliya society has without any doubt undergone a fundamental shift in its social and economic status from an isolated but self-sufficient agrarian system to one that is intimately connected with the external world due principally to changes in agrarian technology and the availability of off-farm employment. This trend is virtually irreversible for most households that have got used to a higher standard of living and more material comforts than was available fifty years ago such that even older informants believe that there has been a great deal of " social progress" (*diunuwa*). At the same time, there are indications of a reversal to earlier times by the re-adoption of practices such as use of natural fertilizer and lowered the scale of agricultural operations to first satisfy household needs rather than the demands of the external market system. This type of counter development recalls the findings of the study undertaken by Silva *et al* (1999) as noted in Chapter 3.

Plate No. 25: Mother and children grading highland crop for the market

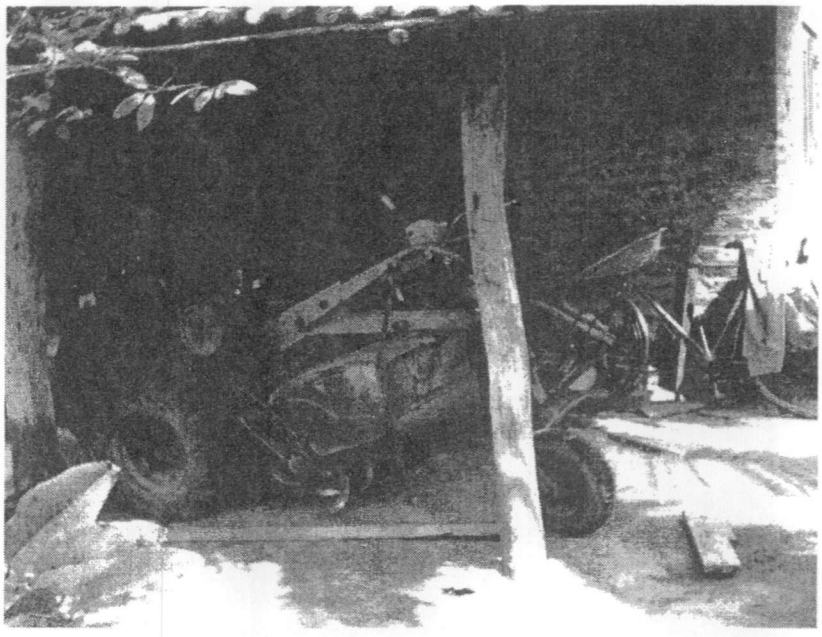


Plate No.26: An array of agricultural machinery owned by one household

Plate No. 27: A Family in Pul Eliya weeding their Highland Cultivation of Vegetables

Plate No. 28: Maize field Designed for Serial Cropping

Plate No. 29: Spraying chemicals without the use of protective gear

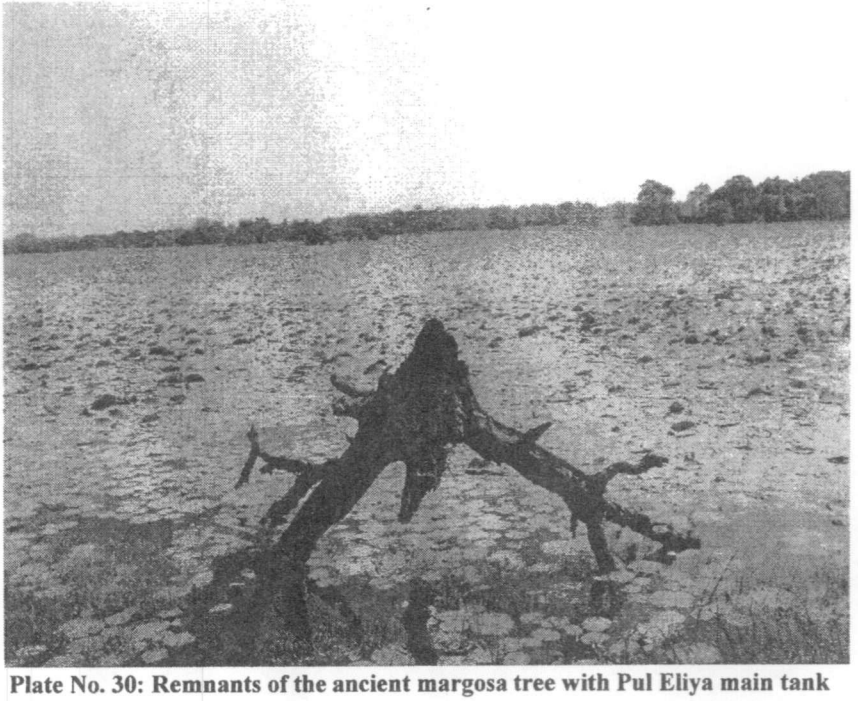


Plate No. 30: Remnants of the ancient margosa tree with Pul Eliya main tank in the background

CHAPTER EIGHT

Social Stratification & New Village Elites

This section of the report draws attention to key social changes partly attributable to the spread of commercialized agriculture and seen in patterns of income and expenditure, type of household assets, and housing conditions that contrast sharply with those found when Leach studied the village. The section also focuses upon the evolution of a system of social and economic stratification within the village community and the rise of a new class of village elites. A related phenomenon is the presence of social conflicts that are ostensibly over water rights but are deep down expressions of class and to some extent kinship conflicts.

8.1 Household Income & Expenditure

Although there is a tendency for most respondents to underreport incomes (which is not unique to Pul Eliyans), the household survey shows that three economic strata can be differentiated in Pul Eliya society according to monthly income ranges. At the bottom of the economic hierarchy are 14.9% of households at or below the poverty level (i.e. having an income less than Rs 10,000) that depend on hired labor, government welfare benefits and subsistence agriculture. The next higher level is comprised of 25% of households with incomes between Rs 10,001 and Rs 20,000 that are mostly from the ranks of those with off-farm employment and middle level farmers. The remaining fourth of households (25.3%) have very high incomes some as high as Rs. 40,000 and above that can be regarded as the rich. This layer consists of households that include successful commercial farmers and businessmen. It is noteworthy that in the new economic order created by mechanization, there are about 10 households that derive extra incomes by renting of agricultural machinery

Information collected from the household survey also indicates that, although Pul Eliya is an agricultural community, a little over a third (36.8%) of the average monthly household expenditure (of Rs. 17,000) goes for the purchase of food whereas in earlier times almost all food was obtained through locally available resources. Villagers attribute the dependence on the external market system for food purchases to commercialized agriculture which is time consuming as well as to the decline of traditional methods of food conservation that were practiced 50 years ago (see Appendix 4). Of the balance expenditure another Rs. 5800 (33.2%) is spent on agricultural activities, Rs. 1042 (5.9%) on transport, Rs. 1061 on repayment of loans (6.1%) and the remainder for expenses connected with the education of children, health, electricity and telecommunications. Thus, higher incomes from agriculture and off-farm employments are also accompanied by higher expenditure patterns covering a wide range of activities that are symptomatic of the extent of modernization of the village.

8.2 Housing & Common Amenities

Social differentiation is also present in terms of housing and common amenities such as drinking water, toilets, and lighting sources. According to the household survey, while 28.9% of houses owned by Pul Eliya people are permanent houses built of brick

and tile, about half are permanent houses that are in process of completion. The owners of both types of housing tend to be people who have off-farm incomes through salaried employment or people who are successful commercial highland cultivators. At the bottom of the scale are the remaining 21.2% of households who have temporary houses made of mud and plaster or wattle-and-daub covered with roofs of paddy straw or coconut thatch. Similarly, people with good and stable forms of income have electricity (37.1%) or solar power (40.2%), but the poorer households depend on kerosene for lighting (22.7%). while most people with no electricity have no TVs, a few use car batteries to operate their TV sets.

Stratification is also seen in sources of drinking water. A little over half the households (54.6%) have their own wells while another fourth (25.8%) uses agro wells or have rainwater harvesting tanks. The remaining 19.6% use other sources of potable water such as common tube wells or the tanks for those who cannot afford to have private water sources. There is also a very small number (about 5 households). who can afford bottled water since they consider that ground water is unhygienic.

While a high proportion of households (69.1%) have toilets of the water sealed type, it is noteworthy that, among those who do not have sanitation facilities and who comprise 30.9% of households are 40% of higher income levels (i.e. more than Rs. 20,000 per month). When asked about this apparent discrepancy, key informants submitted the opinion that the use of outdoors for latrine purposes was a habit that is resistant to change and one that needs more education about sanitation.

8.3 Household Assets

Another pattern of social differentiation is found in the ownership of vehicles. Of the total households a high proportion owns bicycles and motorcycles (61.9%) that, along with another 6.7% that owns 3 wheelers, could be considered as middle class by village standards. At the other extreme are 28.9% of those with bicycles only that comprise the rural poor while the upper crust of the rural rich (2.5%) owns vans and lorries.

Pul Eliya has come a long way in terms of telecom facilities at the household level with nearly two third (70.6%) having some form of facility although the remaining 35.1% do not and could be considered as the poor. Practically every household has a TV while nearly two third has radios, cassette players, VCD/DVD players, refrigerators, irons, fans, heaters and rice cookers, which are usually possessed by people with higher incomes both through agriculture and/or off-farm or salaried employment. The conspicuous display of new utensils and electrical equipment is a characteristic feature of the new rich of Pul Eliya (see Plate No. 31).

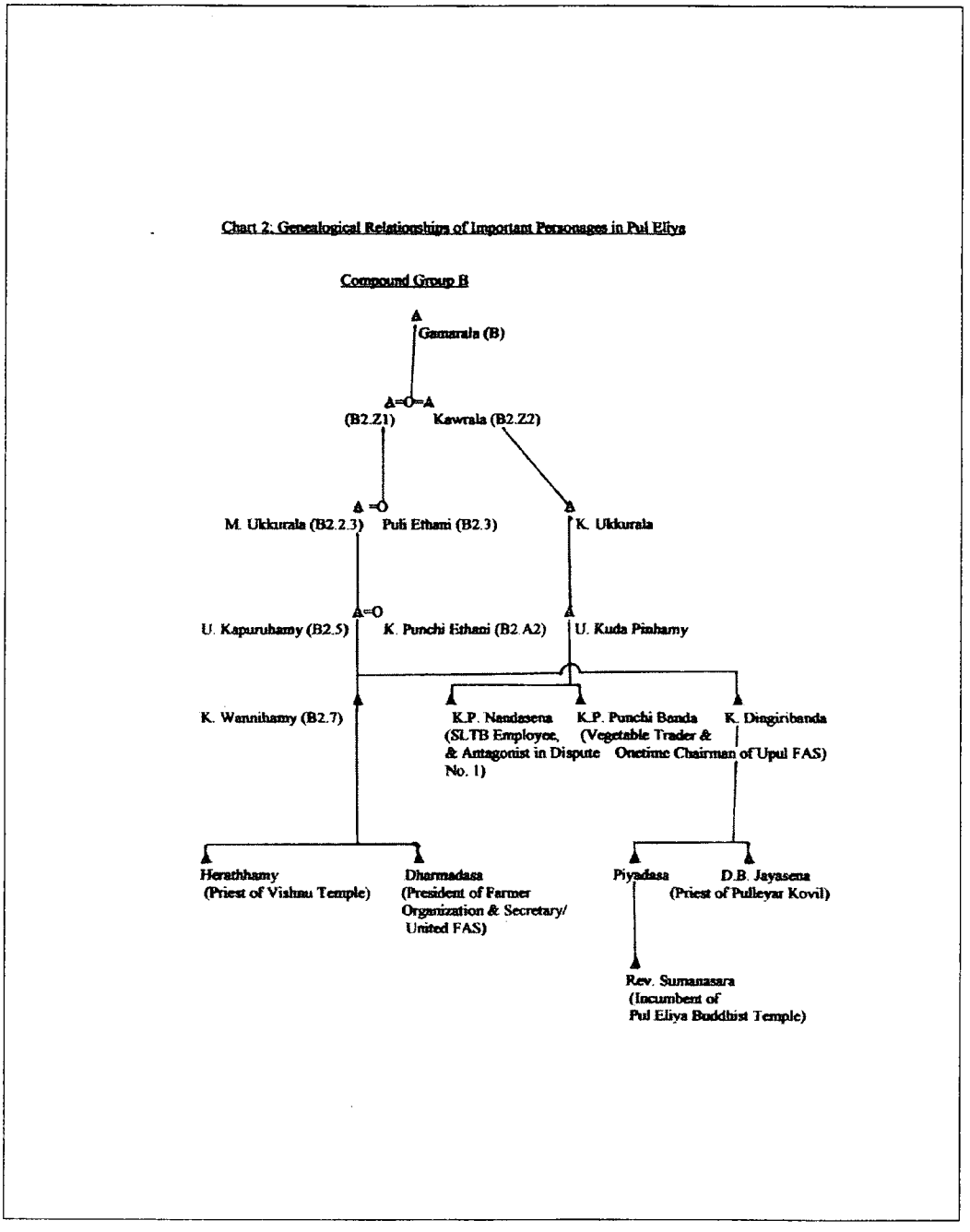
8.4 Rise of New Village Elites

An important change that has taken place in Pul Eliya is the emergence of a new set of village elites, the prominent leaders being those who are engaged in commercial agriculture or in activities related to it such as hire of machinery and transport of produce. A visible form of evidence of their status in village affairs was the opening of the new electricity supply by a prominent businessman from Medawachchiya town.

Social stratification of a sort was there in Leach's day that being principally based on status distinctions among members of compound groups. Such distinctions appear to have arisen when individuals held key administrative positions in the village such as *gamarala* and *Vel Vidane*, which also gave them and their families a greater degree of access to the primary form of wealth in the community, namely, land. Thus of the total of 10 such groups, members of groups A and B rose to a dominant position through (a) ownership of paddy land in the *Ihala Baga*, which was closest to the tank and was therefore assured of a regular water supply (b) establishing marriage ties with wealthy families of Wiralmurippu and Yakawewa villages and (c) tenure of local level leadership positions of *Badderala* and *Vel Vidane* by two members of B and of *Vel Vidane* and *Tulana* Headman by one member of B in 1870.[44] It is important to note that, in course of the half century after Leach, the concentration of wealth and political influence among the two compound groups has not completely disappeared in Pul Eliya. For example, the priest of the Vishnu temple, the *Vel Vidane* and the chairman of the Farmers' Organization and leaders of the two Funeral Aid Societies (FAS) of Pul Eliya are all members of compound group B as illustrated in Chart 2.

[44] Leach concludes as follows: "At the present time (1954), compounds A1, A2 and B1 between them control most of the wealth and political influence in the village" *op cit*, page 200

Chart 2: Genealogical Relationships Among Important Personages of Pul Eliya



A closer look at their backgrounds shows, however, that the two CBOs appeared at different times in the history of the village. While the older FAS, known as United *Maranadara Samithiya* is led by traditional elites such as the chairman of the Farmers' Organization and the priest of the *Vishnu* temple, the FAS that appeared later is led by people with new resources such as education, employment in government service and new wealth acquired through commercial enterprises as the following case study in Box 3 demonstrates.

Box 3: Role of Village Elites in CBOs of Pul Eliya

Eksath (or "united") *Maranadara Samithiya* was established in 1975 with 35 members and was not well organized or financially capable at the inception. It did not even have the funds to pay for a coffin. Gradually it expanded its activities and funds and was able to increase its donation for a death from Rs. 300 to Rs. 10,000 which it pays now. The membership fee also increased from Rs 1 to Rs 10 per month. It increased its fund by conducting a *bana* ceremony with a drama that took place for 5 consecutive days and collected money from participants. With this money it began to give out small loans starting with Rs 500 each for 5 members selecting them on a lottery basis although some members had opposed this activity saying that office bearers were making money. Now it gives credit up to Rs 5000 at Rs 250 per month as interest and has increased its membership to 250. In 1987, the society built its own office using zinc sheets.

In 1964, a section of members separated from the United FAS and formed the *Upul Maranadara Samithiya* under the leadership of U. Kuda Pinhamige Punchi Banda, the son of U. Kuda Pinhami .He had left the village to become a monk and had received an education in a religious school. He returned in 1974 when he was 22 years of age upon hearing that his father had problems from an adopted son who had begun stealing from the latter. Upon his return, Punchi Banda opened a shop to buy jaggery from villagers and transport it to the town. Eventually, he started working for the National Housing Development Authority as a watcher and later worked in the Department of Textile Industries as a watcher too but eventually got promoted to the status of a machine operator. Gradually, he took to active social service (*samaja sevaya*) and became the head of the Village Development Council *(Gramodaya Mandalaya*).

He retired from the Department after the privatization of the factory, and in 1993, began to take vegetables from the village to the market in Dambulla town having obtained a loan from The Central Finance Company to purchase a van for this purpose. The vegetables were brinjal, loofa, and capsicum. Farmers would inform him that their crop was ready and he charged between Rs. 100 and Rs. 150 per bag for transporting it depending on the price of diesel. Traders would come from everywhere to purchase vegetables on bulk so what he took there was sold.

The ostensible reason for starting the Upul FAS was that the mother Society was not functioning properly. "When we asked for accounts of the Society, the old office bearers refused to do so", said the chairman. He collected about 27 persons from the village for the first meeting, which number increased to 67 by the time the people met for the second time. According to the chairman of the United FAS, the Upul FAS had begun to "prohibit their members from attending funerals of our members. But this did not succeed since all are related by ties of kinship".

The two Societies have managed to work out an amicable solution to their differences although they have separate offices both located in two buildings situated adjoining each other opposite the village temple (see Plate No. 32). Another interesting bit of information is that each FAS takes the responsibility for conducting every other year the annual 'pot turning ceremony' held to propitiate the village deities, *Ayiyanayaka* and *Pulleyar*. This year, it was United FAS's turn to do so.

The ostensible and stated function of FAS is to provide financial and other forms of assistance such as providing tents, dry rations and chairs, making arrangements at the cemetery, and decorations in front of the house, for a member when coping with a death in the household. However, and in addition to this primary function, the FAS of

Pul Eliya also function as easy and quick sources of credit for villagers who for one reason or another cannot access this service from a formal financial institution such as a bank. While FAS in most parts of the country do not perform this function, an activity that is not undertaken by similar organizations in other parts of the country. It also demonstrates the increasing monetization of the village economy as a consequence of commercial agricultural activities. This situation is also exploited by village leaders to exercise their influence within the community.

8.5 Class Conflicts

A social development running parallel with the emergence of village elites is the creation of a bottom rung of poor households (about 15%) that do not have paddy land and depend on hired labor, government welfare benefits or subsistence agriculture. They are also the target of victimization by some elite families as is dramatized by an ongoing dispute that is ostensibly over rights to water but deep down are reflections of both class contradictions as well as social divisions based upon compound group or kinship affiliations.

Box 4: Dispute Concerning Land and Water

Currently, this dispute principally involves 3 parties. The first is KPN who is the owner of a large extent of paddy land and is employed as a storekeeper at the office of the local transport board in Medawachchiya town. He is also the *Vel Vidane* of the *olagama* known as Kudagama situated next to the Pul Eliya Old Field. KPN is the son of U. Kuda Pinhamy who is son of K. Ukkurala, a grandson of an unnamed ancestor of compound group B but who served as a *Gamarala* in his day (see Chart 3 in Appendix 1). Opposed to him is TBK (Plate No. 33) who is a small farmer whose father's father (M. Tikirihami) had married a woman of Pul Eliya and had come to live in Pul Eliya in *binna*. M. Tikirihamy is a grandson of Kirihamy, the ancestor of compound group C (see Chart 3). TBK has no land in the Old Field as his father's mother had given her share of paddy land (a little less than $1/4^{th}$ acre) in the Old Field to his father's brother with life interest. There was another ½ acre that had belonged to his father's father (Kirihamy) who had gifted it to TBK's younger brother. TBK has paddy land in the form of a regularized encroachment (extent of 3 and half acres) plus half an acre of paddy he has obtained on lease from the government in a stretch of paddy known as "*Kooladiya*". The land he uses for residence is one acre in extent and had transferred to him through his mother who had written it in freehold (*sinnakkara*) to him.

The dispute is ostensibly concerning water rights to paddy land under the *Kudagama Wewa*. At one time, the tank had no proper sluice and its bund was in bad shape when land under it was first cultivated. On applications submitted by several farmers in the 1930s, 15 acres of land under the tank were alienated by government in two sections (9 plus 6). A hundred meter wide stretch was kept separate as a reservation (traditionally reserved for housing); no people came to live in it and the land was empty. However, TBK's grandfather, Kapuruhami, had been occupying about a quarter of an acre (situated in one end of that stretch) for some time and before the alienation had taken place. "This gave him the right to cultivate the empty land" says TBK, the length and breadth being 150 meters x 300 meters. Four other farmers subsequently came to cultivate that land, these being, Mudalihami, U. Sirala, A.V. Sirala (father of Subasinghe, who served as Leach's interpreter), and Punchi Etani. Two others, U. Kadirathe and U. Kuda Pinhami, who had not enough paddy land, also wished to cultivate portions of the land and three shareholders had objected. Due to infighting the land was not cultivated for nearly 45 years except half an acre cultivated by TBK's wife's father, K. Dingiri

Banda. The rest of the land was covered with large forest trees. After TBK's marriage to Dingiri Banda's daughter in 1961, he cultivated 1 acre of the original land and no one had objected. In 1972, he cultivated another one and half acres and from 1973, the total extent he cultivated being therefore 2 and half acres. .

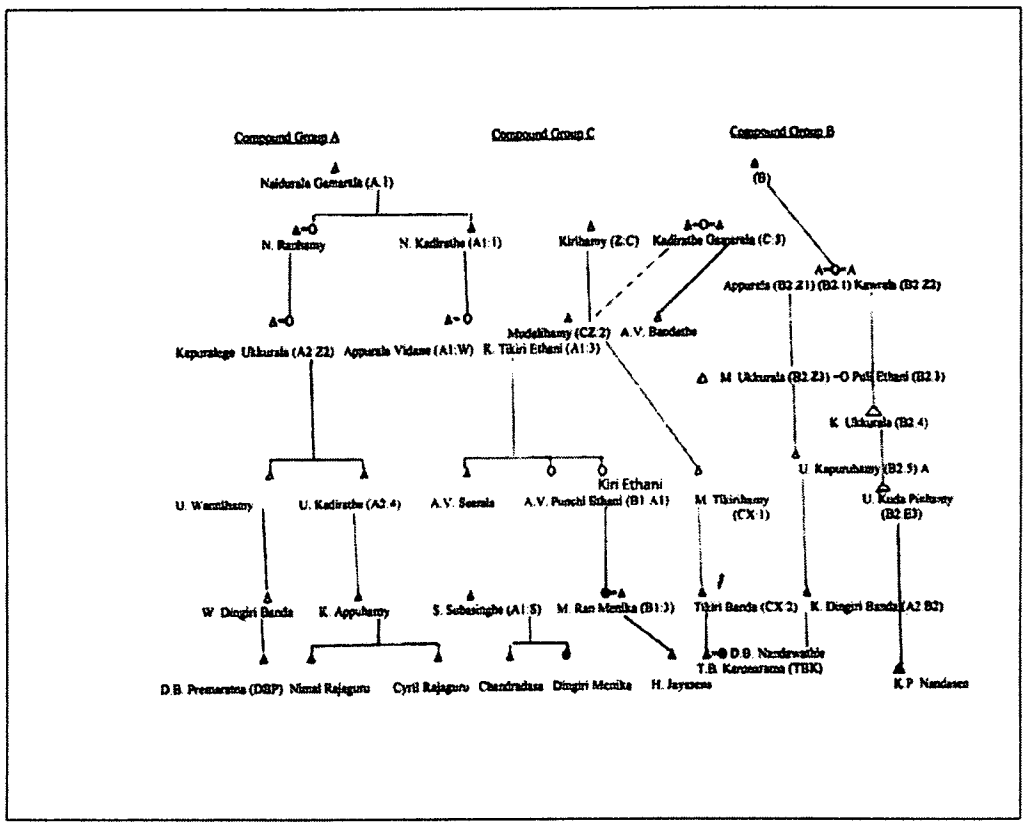
In 1970, the disagreements reached a new high when Subasinghage Chandradasa, who had by now become the chairman of the Upul FAS, had discredited TBK, who was a member of the FAS, because the latter had not participated in the annual pot turning ceremony held in the village, and as all were expected to do so, had moved that TBK pay a fine for his offence. TBK took the issue with the Divisional Secretary of Medawachchiya who had investigated the matter and declared that the imposition of a fine was not a legitimate move. So, apparently, TBK had won another round in his struggle with his opponents in Pul Eliya.

But the matter did not rest there and the location of the allotments of the different parties involved in the dispute became a prominent issue. While TBK's plot is closest to the tank bund, other parties had their lands situated further down. In addition, when they began cultivating the land, there was no proper irrigation method except obtain water to the fields but cutting the bund as and where it was needed. Subsequently, the bund was restored in 2005 and a permanent channel about 4 feet in width had been constructed by those cultivating the land to allow water to the latter fields; this channel went around the boundary of TBK's plot thereby reducing the smooth flow of water. The above arrangement was used for 4 years until his opponents demanded that another drain be opened through TBK's land. He complained to the Divisional Secretary in 2007, and, as the first complaint was blocked by his opponents, he complained again in 2008. Responsibility of Settling the issue was given to the Additional Divisional Secretary who had come that year, called together all the parties and got them to agree to continue to use the present arrangement. This too has not been accepted subsequently since some of the shareholders insist that the channel go through TBK's land in order to reach their fields which are situated on higher ground. So, the issue remains unsettled and TBK says that the hidden agenda behind the agitation is to cause him damage, and that, if his opponents continue to aggrieve him, he will take legal action and also claim damages for the mental agony they have caused him (*matath nithiyata yanda venava*). His antagonists however claim that he has no rights to the paddy land in *Kudagama Yaya* (field) as his grandfather was a *binna* male, a position that is not tenable if one argues on the basis of the principle of bilateral descent according to which no discrimination is made regarding the shares derived through females.

The third party to the dispute is Kiri Ethani, a woman of about 70 years whose father had also lived in *binna* after marrying K. Tikiri Ethani, a daughter's daughter of Naidurala *Gamarala*, ancestor of compound group A (see Chart 3 in Appendix 1). Kiri Ethani (Plate No. 34) is widowed and has two sons and two daughters. She came one day to the house where the Research Assistants assigned to the study were staying and hurled abuse at D.B. Premaratne (DBP), the household head, who is employed as the postal peon for the Pul Eliya area. She had alleged that the latter had blocked the flow of water to her paddy field which is in *Kudagama Yaya*. She is relatively poor and has an elder son working as a home guard. On one occasion, KPN, the first party to the dispute, and *Vel Vidane* of *Kudagama Yaya,* had physically attacked her younger son when he tried to take water by force as the crop was dying. Kiri Ethani's mother's sister had a child named Ran Banda (RB). This sister had passed away when RB was still a child. The child was adopted by his mother's mother and was cared for by Kiri Ethani. RB's father who was living in Yakawewa had a second marriage with a woman from that village and from this marriage he had several children. When RB grew up to some age, the father had come and taken him away to Yakawewa saying that RB had property to inherit in that village. The latter did not like the change, and his mother's sister and grandmother brought him back to Pul Eliya with the objective of keeping the property in Pul Eliya intact. The grandmother's brothers including one, U. Seerala, and the grandmother had a legal battle

over the inheritance since the former were saying that RB's mother was not legally married to his father. In court, the decision was that all the property belonging to RB's mother should go to Kiri Ethani. There are two conflicting versions of what had happened subsequently with each version determined by the person who is stating it. Kiri Ethani says that she had written all of what the court had given her in trust to RB while the latter's children allege that the court had given RB the property now being used by Kiri Ethani. Now, the conflict is between RB's children and M. Kiri Ethani. RB's daughter, who is married to DBP, inherits that land which is cultivated by DBP. (The land in Kudagama *Yaya* was cultivated earlier by S. Subasinghe who had served one time as the *Vel Vidane* and some of it had been distributed by a land officer to landless people of Pul Eliya. KPN's ancestors also got some of this land). Now, the *Vel Vidane* and DBP are on one side and the economically less privileged group is on the other. One of M. Kiri Ethani's daughters is married to a man from Thulawelliya which is one more reason why the opposition should be against them since the Thulawelliya people are not of the same *variga* as Pul Eliya people. The opposition led by the KPN claims that Kiri Ethani has no rights to the water since she did not participate in the common effort to restore the bund. The latter counters by saying that she was not informed of the event. When her paddy was dying she had complained to the police in Medawachchiya and they had taken the side of her opponents. So, she had to take the law into her own hands and this is why she asked her son to tap the water without the consent of those having land above her. Kiri Ethani's daughter who lives behind DBP's house suspects that the latter is doing sorcery on her family to destroy it. Her 5 year old daughter had been suffering from an undiagnosed illness and they had to spend Rs 45,000 to cure it at a shrine (*devale*). Recently, DBP's wife had sent her a box containing fresh tomatoes but the latter, suspecting that some evil was being planned, had kept them for a while and thrown them out.

Chart 3: Genealogical Relationships of Parties in Dispute Over Water Rights



The accusations regarding sorcery is nothing new in Pul Eliya history but seeking the intervention of the local police is a relatively recent sociologically significant development since it implies that the gaps between the parties have become irreparable. At the same time, the lack of unity and solidarity among practically all households and the emergence in its stead of an ethos of competition and self aggrandizement is a social reality that almost all informants agree upon despite the advances they have made in the material sphere.

8.5 Status of Women

Already, some indication has been made in this monograph on the impact of agrarian change on the status of women due to the greater reliance on family labor for agricultural operations in both paddy and highland. This could also be attributed to the fact that many of those who have off-farm employment are male household heads who invariably leave agricultural tasks to be managed by women. Observational data from the field also indicate that unlike in the case of paddy cultivation, there is a fairly high degree of collaboration between spouses in activities connected with highland cultivation such as watering of crops, weeding, spraying, fertilizing, harvesting, and in

some instances even in marketing produce. When processing harvested paddy, most women still are not allowed to enter the threshing floor due probably to the association of women with ritual impurity as their presence is believed to cause a drop in paddy output. However, such taboos do not apply to the highland cultivation context and therefore have given women a greater degree of freedom and assertiveness.

Nevertheless, as was pointed out by Leach, Pul Eliya remains a male dominated society and traditional norms governing gender have virtually remained unchanged. For example, no women are allowed to enter the inner sanctum of the local *Vishnu* temple. There are virtually no women in the village who have taken up leadership positions in the CBOs found in Pul Eliya, and those who try to do so have a short career as the case study of Swarnalatha in Box 4 demonstrates.

Box 5: Case Study of Swarnalatha, the Diviner

Swarnalatha, is a resident of Pul Eliya and had come from Mamaduwa village in Anuradhapura district upon marrying a Pul Eliya man by an arranged marriage. She is a complete outsider and does not belong to the Pul Eliya *variga*. She is about 50 years of age and had her education up to GCE Advanced Level in the village school. Before her marriage, her husband had had an informal marriage with a woman from Pul Eliya but was separated from her. Swarnalatha did not know about her husband's previous affair when she married him. They lived for about 6 months with the husband's mother but she wanted to return to her original home as she was not comfortable living with the mother-in-law. The husband had 7 other siblings who did not treat Swarnalatha well. Her husband, being the eldest male, had responsibilities toward his natal family and the sisters were unmarried. Swarnalatha and her husband decided to change residence. They moved to a new location which is next to the Rambakulama railway junction on the boundary of the village. They built their own house and had a daughter (oldest) and two sons. Although the daughter got married, she separated from her husband and works in a private firm producing ballpoint pens. Her separated husband troubles her and as a result she had to change jobs. He also calls Swarnalatha and scolds her. Around 1997, she joined the community development activities initiated by a local NGO, known as the *Rajarata Sahabagithwa Sanvardana Padanama* (Rajarata Foundation for Participatory Development) that had received funds from an INGO called FORUT. She formed a women's association and under her leadership, the Society was instrumental in obtaining rainwater harvesting tanks and latrines to some Pul Eliya households. It also renovated the bunds of two *olagam*, namely, *Dambuwewa* and *Wewaranawewa*. The Society also mobilized community labor to renovate an access road going through a section of paddy fields. Some villagers[45] were opposed to this activity and abused her in public saying that she was misappropriating funds of the Society. She called a meeting of the members and gave an account of the income and expenditure of the Society not taking into consideration, she says, the money she had to spend for tea and rice she had given for visiting officials of the INGO which she had done without her husband's knowledge. After presenting the accounts, she had got the Society to reimburse her (Rs. 3000) and kept away from its activities. From 2006, the Society is no more and this, she says, was due to her absence. She was happy over the time she did public service.

She resumed fulltime work as a housewife. About 4 years ago, she started to have visions

[45] They included two male relatives of her husband who were from Pul Eliya. One was her husband's mother's sister's son while the other was her husband's father's brother's son, both being therefore his classificatory brothers .

which she says were her "inheritance" (*athalaa muthala siyala ge paramparaveng labuna deyak*). Her mother's mother's brother was the first to work in a shrine in the village of Mamaduwa as a diviner while other relatives, all males, succeeded him. She is the first female to receive the "gift" of prophecy (*varama*) with the aid of supernatural agents. She began to fall sick and to pass blood with her urine. She got western medical treatment at Medawachiya hospital, where it was diagnosed as a kidney problem. (Now, she does not to think so and calls it a result of "demonic possession" (*yaksha avesa*). Doctors had performed surgery to remove kidney stones. She had fallen sick several times and alleged that this was due to "sorcery" (*gurukan*) performed on her by her husband's father's younger brother due to jealousy as the family was successful in farming. Subsequently, she had seen in a dream a child who told her to go to the shrine at bund of Kalawewa tank which is in Anuradhapura. When she went there, a 13 year old boy was functioning as the diviner with help from his father. The child had told her in trance that her condition was due to the beneficial influence of her dead relative, namely, her mother's mother's brother. This was about year 2000. She had visited Kataragma and Munneswaram temples to have the gift confirmed. Her husband had given her money to do so. She visits the Kalawewa temple every year to participate in the milk overflowing ceremony held there. She says that although she bathes using the hot milk she does not get burned.

Her key patron is *Vishnu* along with other divine agents such as *Pattini, Saman, Kalu Kambili* and *Kali.* She says that *Vishnu* visits her during the day while others do so at odd times. Her specialty is curing disease and finding lost objects. Now she charges a fee of Rs 100 for each work undertaken. She does not know what happens to her and sometimes she does so without her knowledge. She has no helper. She has built a shrine (Plate No. 34) next to her house where she goes into trances. Now she wants to increase the fee. She does not have any interest in social work anymore. All her clients are from outside the village. She says her spirit mediums were instrumental in getting her son-in-law's vehicle having two accidents (as a punishment for pestering her daughter and her).

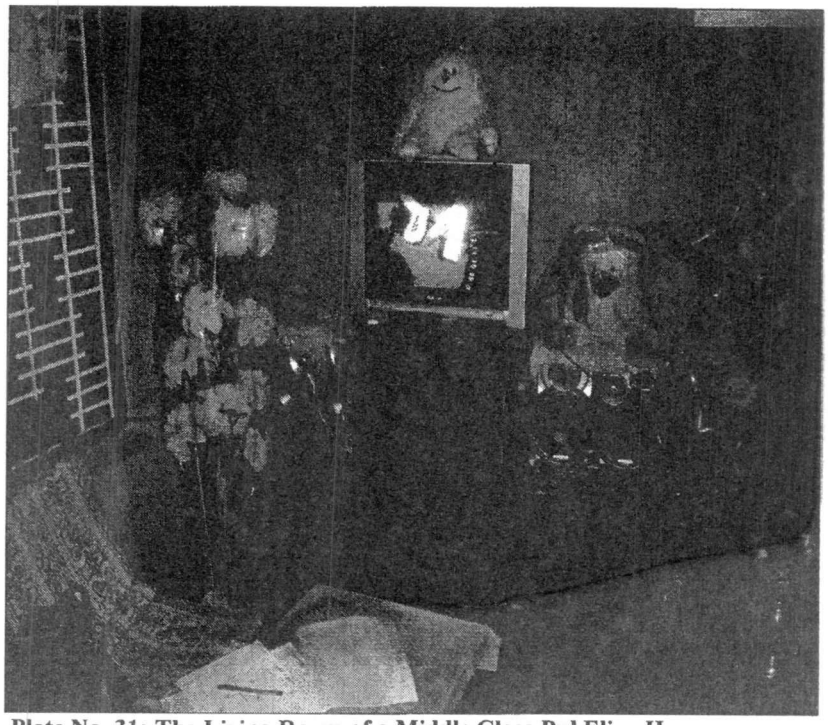


Plate No. 31: The Living Room of a Middle Class Pul Eliya Home

Plate No.32: Offices of the two FAS of Pul Eliya (United FAS office is on the left)

Plate No. 33: TBK and his wife in front of their home in Pul Eliya

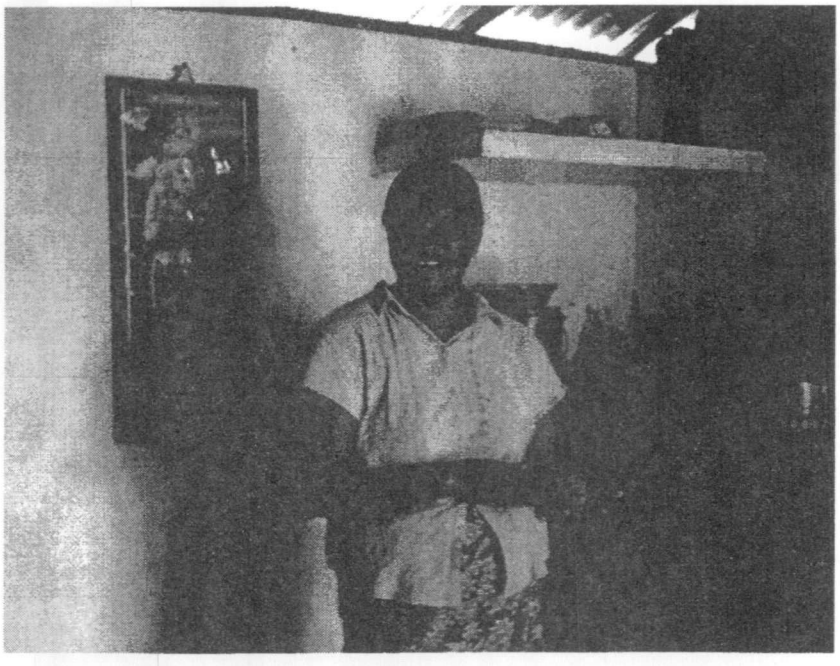


Plate No. 34: Swarnalatha in the company of her gods and goddesses

CHAPTER NINE

Role of Religion & Ritual

This section of the monograph discusses the changes that have taken place in the domain of religion and ritual in Pul Eliya and examines the possible role that ritual could play in counteracting divisive forces outlined in the previous section by focusing on a post harvest festival known as the *mutti mangallaya*[46]. A detailed account of a performance of this ceremony witnessed during fieldwork is given in this report particularly since information on it is virtually non-existent in the anthropological literature and therefore has some ethnographic value. The description concludes with an analysis of the core symbol of rice in the ritual context and the system of meanings and values which it represents and which has important implications for understanding the changing agrarian order in Pul Eliya.

9.1 Changes in Religion & Ritual

Pul Eliya people firmly state that they are good Buddhists with a long tradition of Buddhism that has come down to them from ancient times, a fact that did not escape the attention of Leach as well. However, observations conducted during the time of the study revealed that the local temple was virtually unused largely because the prelate in charge who has kinship connections with Pul Eliya people had left the temple. This was due to a dispute he had with members of the "council of benefactors" (*dayaka sabha*) who have refused to provide him with sustenance as they have reason to believe that his private behavior is not appropriate for a monk. From about last year, the monk decided to live in a cave temple located at a Buddhist shrine close to the village of Thulawelliya that provides him the daily food donation. He has given out on lease the paddy land belonging to the temple in the Old Field to one of his kinsmen in Pul Eliya and only visits the village to collect the income from coconut trees.

The general complaint of elites in the village including the local school principal and her husband who is an inspector working for the Department of Cooperative Development, both of who are related to Pul Eliya villagers is that there is no monk in the village. As a consequence, they have to bring a monk or monks from outside the village to attend to essential ceremonies such as officiating at the death rites of an individual (see Plate No. 35) or preach a *bana* or conduct a *pirith* ceremony, whereas every other village in the vicinity has a resident monk.

However, devout laymen (*upasaka*) have been quick to fill the gap and undertake activities such as chanting of *pirith* and conducting religious education for village children. Among such secular leaders is K.P. Punchi Banda, who had served as a Buddhist monk in his youth, then returned to the village after leaving his robes, taken to social service including the founding of the second FAS and gone on to become a successful marketer of agricultural produce. In his later years, he also built a small stupa (see Plate No. 36) among the ruins of an ancient *vihara* and conducts religious education for a few Pul Eliya children.

[46] Also referred to as *mutti naemima* (literally" pot turning")

However, in sharp contrast to the unfortunate lot that has befallen the Buddhist temple, and its virtual inability to heal social and economic tensions within Pul Eliya, this function has been taken over by ritual practices surrounding *Pulleyar*, who is also called the "god in charge of the village" (*gambara deviyo*) whose task is to protect the village and its people (Plate No. 37). While the main place of worship for *Pulleyar* is situated opposite the Pul Eliya Buddhist temple, several lesser shrines are to be seen along byroads especially when they traverse the bunds of the main tank or small tanks (Plate No. 38). For example, the shrine situated along the bund of *Dambuwewa* had come up around 1960 under the patronage of one, Wannihamy, who had taken the initiative to restore the *olagama* known as *Dambuwewa* when Leach studied the village. At these shrines, individuals or families will bring offerings of flowers or food with the expectation of receiving the god's help to face problems in illness, in the construction of a house or in agriculture. Coconuts are broken in front of the shrine to obtain a lost object[47]. Further, quite unlike the formalized recitations in Pali held by the monk, people's interactions with *Pulleyar* are marked by a sense of informality if not comradeship. During the period of fieldwork, the study team met one individual who makes an offering (*dane*) of cooked milk rice served with bananas in honour of *Pulleyar* on his own plot of highland (see Plate No.39) and serves the remaining food afterwards to his neighbours and close kin.

While rites associated with *Pulleyar*[48] have continued particularly to ensure good harvests, a new entrant to the ritual arena is the Virgin Mary of *Madhu* church (about 40 km from Medawachchiya) who is worshiped along with local male deities such as *Pulleiyar*, *Ayianayaka*[49] *Kadawara*[50] and *Ilandari Deviyo*[51] and to whom villagers make vows to ensure safe delivery of a baby and to ward off illnesses afflicting children or serpents entering homes. This is a unique development since the Virgin Mary of Madhu belongs to the Catholic pantheon whereas Pul Eliyans remain staunch Buddhists and reflects in a way the expansion of their cultural horizons.

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[47] One key informant, the Chairman of Upul FAS, says he believes that although people have faith in the efficacy of these rites, he "does not worship" Pulleyar (*vandinne nae*) or pray to him although he stated later on that he had prayed at the shrine of god *Dedimunda* at Seenigama when his daughter wished to have a child about 7 year ago.

[48] According to local mythology, *Pulleyar* is one of several autochthonous deities (*opapathika devivaru*) whose birth is different from that of normal human children. The deity is supposed to have been created by goddess *Uma*, the wife of *Ishvara* or *Shiva*, out of a lock of her hair since she wanted someone to accompany her when she went to a pond to take a bath when her husband was away. Upon his return, the husband had seen the second person and inflamed with jealousy had cut off his head which fell into the pond and disappeared. When its "mother" saw the tragedy she wailed saying "*Pulleyar*" which means "where is my son?". Upon relenting what he had done, *Ishvara* is said to have cut off the head of an elephant and planted it on the headless body of the son which is why *Pulleyar* is shown with an elephant head, an apt image for the Dry Zone due to the presence of elephants. There is also the belief that out of the head which fell into the pond lotus plants (*olu*) arose and out the blood were born leaches. Pulleyar's brother is the popular deity *Kataragama* who was also created in an autochthonous manner.

[49] *Aiyanayake* is considered the god of the Dry Zone tanks and apparently has no connections with Indian gods unlike *Pulleyar*.

[50] *Kadawara* is also a Dry Zone deity with both beneficent and maleficent qualities. Closely associated with him in the belief system of Dry Zone villagers is *Kambili Devathava* (see Weeramunda 1984).

[51] According to an informant from Tulawelliya village, *Ilandari Deviyo* is called by that name because he likes play and entertainment (*keli sellang vinodeta asai)*; the god's teacher is *Mangara Deviyo* who is connected with the rite of the milk overflowing ceremony which celebrates his death by a bull and his resurrection through the intervention of goddess *Pattini* (see Weeramunda 1982 for a discussion of the integrative role of the milk overflowing ceremony and its associations with god *Mangara.*)

9.2 The Integrative Functions of Ritual

The anthropological literature on the subject of conflict points to many ethnographic instances (see Turner 1969 for example) where the potential for schism and conflict has been mediated if not temporarily nullified by the cleansing functions of religion and ritual. Attention is specifically drawn here to a ritual that is performed in Pul Eliya, namely, the "Pot Festival" (*mutti mangallaya*).

According to some villagers, performance of the ritual every year is obligatory in order to obtain the blessings of gods for the entire village and more specifically to ensure good harvests in the forthcoming year. It usually takes place in the month of August (*Aesala*) which is also the month when a number of ritual events of national importance such as the festival of the Tooth Relic in Kandy and that connected with god *Kataragama* in the south also take place. By this time, all agricultural activities would have been completed, the harvests reaped and people would be awaiting the arrival of rains to commence the next season toward the end of the year. According to tradition, a portion of the last harvest, i.e. from *Yala* season, is kept as the household's contribution to the central event in the ritual, which is the preparation of milk rice to be given to both the divine and human communities.

Although the ritual is a characteristic feature of some dry zone villages of Anuradhapura district, important differences can exist with respect to how it is conducted in different communities. At the same time, important changes have also taken place in the ritual itself in the course of the last century[52] Its changing fortunes are reflected in the fact that while it has gone into abeyance in some villages around Pul Eliya, in others it is practiced in a simplified form and only as an annual almsgiving with food shared among members of the village community. Due to the apparent importance that the ritual has in terms of building social solidarity, this monograph will provide an account of its history, the method of management by Pul Eliyans and the details of the ritual process based on an actual performance witnessed in August of 2009.

The presence of mechanisms or ways through which social inequalities are minimized in peasant communities has been noted in most studies of peasant society. Traditional Pul Eliya society was no exception since there was the social expectation that the wealthy families also engage in conspicuous consumption. As Leach observed, "This is a society which gives prestige to the man of property. But in return, any high-status individual is expected to indulge in lavish expenditure.... Consequently, it is the 'wealthy' rather than the 'poor' who need cash loans, just as it is the wealthy rather than the poor who have credit to raise them.....without some such equalizing mechanism the community would quickly cease to be homogeneous in terms of economic class, and would probably disintegrate altogether" (Leach 1961, pp. 175-176). Rites of passage are one such leveling mechanism if they involve much expenditure usually forcing the wealthy to take the road leading to financial disaster: "The rich man took his first step on the downward path toward bankruptcy by mortgaging part of his land to a trader at an impossible rate of interest" (Leach 1961, p.175).

[52] Dalupotha (2003) gives an outline of the ritual as it was practiced in *purana* villages of the district of Anuradhapura about a century ago.

9.2.1 History of the Ritual

The leadership for conducting the ritual and financing its expenditure had been taken in earlier times by those owning large extents of paddy (*kumburukarayo*, the term used by one informant) in the village while the conduct of the ceremony was the responsibility of the *Vel Vidane*. As the village population increased, so did the costs incurred by those conducting the ceremony especially to cook food for the entire community whose members would sit and enjoy a meal of rice. Consequently, a consensus was arrived at to share the costs according to the paddy acreage that a particular family possessed. The cost per acre was determined by dividing the total estimated cost of the ritual by the total paddy acreage. This method of sharing the cost continued till about 20 years ago until the leaders decided that a standard contribution be made by every household in the village in place of the per acre method. The contribution was 10 betel leaves, 10 betel nuts, one cup (*chundu*) of paddy, 1 measure of rice, 10 large oil cakes, 5 small oil cakes and 10 rupees. The responsibility for managing the ceremony had, however, shifted from the *Vel Vidane* to the FAS about 6 years ago. When a second FAS came up, it was decided that each society take the responsibility every other year. The financial contribution has gradually increased over the years to Rs 35 in 2009.

9.2.2 Management of the Ritual

Some degree of formality exists in the conduct of the ceremony. After deciding on a date, the *Vel Vidane* (in earlier times) or the President of the FAS (in modern times) invites the locally resident priest of the *Vishnu* temple to officiate at the ceremony by offering the latter a handful of betel leaves. During the intervening period of about a week, people in the village abstain from holding any social functions or celebrations such as marriage or make oil cakes that require frying, or undertake any visits to relatives in distant villages. Stories abound of divine retribution for those who violate such taboos.[53]

Once the resident priest accepts the invitation, he visits the drummer (*hewisikaraya*) who lives in a distant village in the district of Anuradhapura and invites him to participate. The latter's presence is thought to be absolutely necessary since at a particular time of the proceedings, the drummer beats a particular rhythm (referred to as an "*abhinaya*") which makes the priest go into a trance during which he divines, an event that is critically important both for the village leadership as well as the people in general[54].

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[53] One such story is that, after returning from a visit to a distant relative, a sister of the informant, a man of about 60 years of age, had seen in dream someone following her with a large cup trying to place it on her. She was treated with charmed threads and was alright. A few days later, the informant saw the same dream, and the family attributed this to the violation of the taboo. The dreams stopped after the household tied a vow to *Pulleyar* as an act of contrition.

[54] In earlier times, such a visit was also made by the priest to the *dhobi* or washerman who was required to provide the white cloths used during the ritual. People of the washer caste no longer perform their ascribed caste functions for Pul Eliya people so that the ritual function is now performed by the latter. Obtaining the services of the drummers has also become a problem for Pul Eliyans since their numbers have declined while the demand for their ritual services has not diminished. There was much heated talk among them as to what should be done should such an eventuality arise. One suggestion was to train Pul Eliya youth to take over the functions of the drummer, a dim prospect considering the stigma attached to such activities even among today's Pul Eliyans.

9.2.3 The Ritual Process

The ritual process takes place during two consecutive days starting on a Friday and includes both secular and sacred activities that can be described in terms of 6 main stages as follows.

Stage 1: Preparations at the Domestic Level

On the first day, ritual activities begin in the kitchen of every household in the village where the housewife has to boil the rice, pound and sift it and make flour for frying the required number of oil cakes (see Plate No.40). The process, while requiring some effort on the part of women, cannot be replaced by purchasing either flour or oil cakes from elsewhere. In the afternoon of the same day, a household member takes its contribution to the preaching hall (*bana maduwa*) situated in the temple premises where they are collected by two office bearers of the FAS, one of whom is a female and functions as its Treasurer (see Plate No. 41).

Stage 2: Signaling the Start of Ritual Activities

By 6.30 p.m. the priest has dressed for the occasion in a white cloth tied around his waist and wears three stripes each made of burnt resin (*dummala*) on the upper and lower portions of his arms and his forehead. He enters the shrine of *Vishnu* whose image is separated from society by a white cloth and offers a sheaf of betel after which he kneels down and bows three times before the image. The drum is beaten continuously throughout this event. The priest goes to the preaching hall and the drummer follows him stopping to beat the drum before a statue of the Buddha which is on one side of the sacred *Boo Tree* that is in the temple premises. The drummer then goes to the main temple for *Pulleyar* which is in front of the Buddhist temple and on the other side of the road going through the village. There, a different priest who only officiates for rites connected with *Pulleyar* goes through the same motions of offering betel and worshipping the god to the accompaniment of drums. A coconut is broken and its pieces are placed inside the altar of the god and the drumming ends. Two gunshots are fired signaling to the village that the ritual proceedings have officially commenced.

Stage 3: The Turning of the Pots

The next set of ritual activities commence during early morning of the second day (Saturday). Those responsible for conducting them including the two priests and office bearers of the FAS all of who are adult males (about 10 in number) spend the night guarding the contributions and spending time playing cards and exchanging stories. For a while, they are joined by younger men and boys who listen to the tales related by elders.

At about 4.00 a.m. all those who are present get ready for the day's activities. Drums begin to beat as the priest of the *Vishnu* temple stands in front of the two, newly made, empty clay pots[55] that are the chief ritual objects used for the ceremony. He

[55] Why empty pots are used could not be ascertained through interviews with key informants. They probably symbolize the empty future that has to be filled through divine intervention.

genuflects before them worshipping them three times. Next, a part of the offerings including oil cakes, fruit, betel leaves, betel nuts and coins are placed inside a cardboard box along with the two clay pots. A canopy made of white plastic is held by four persons, all being office bearers of the FAS while the priest holds the box on his head. White cloth is laid for the priest to walk on till he leaves the preaching hall. Drums continue to beat as a small procession led by the priest reaches the bund of the main Pul Eliya tank where a small altar decorated with young coconut leaves (*gokkola*) has been erected. A twin forked branch of a tree has been planted on the opposite side of the bund to hold the two pots. The priest enters a side of the tank and immerses himself in the water. He then robes himself once more placing the three strips of resin on his arms and forehead. He genuflects before the altar worshipping it thrice by placing his torso fully on the ground. He then places the offerings in two separate places placing them after first laying betel leaves in a cross-like fashion facing the four directions. On these he places the fruit and betel nut with others present helping him. One of the offerings is for *Pulleyar* and it contains a coconut while the other is for *Aiyanayaka* which only has fruits and other offerings but without a coconut. He then takes a lighted lamp and waves it before the altar while adding resin some of which he places on the offerings also. Next, he goes before the branch of the tree meant to host the two pots and repeats the motions of genuflecting and making offerings. He then turns around and reaches for the two pots holding each in one hand. He presses one on each thigh while the drumming reaches a higher pitch as he waves the pots from one side to another in a slow dance motion. The motions induce a trance-like state during which he places each pot on the fork of the tree branch (see Plate No.42). At the conclusion of this act he falls unconscious while a member of the FAS holds him. It is noteworthy that no recitations or chanting takes place during the entire event[56]. Although not officially responsible for conducting the event, some members and office bearers of the second FAS are also present during the latter part of the event. By this time, the crowd, all males, includes Menikrala, 90 years of age and regarded as the oldest man of the village, has come with the aid of a walking stick. They all head back to the preaching hall concluding the third stage of the ritual by about 5.00 a.m.

Stage 4: Preparation of the Royal Pot

This is a much more elaborate and lengthy process that begins at about 6.00 a.m. inside the shrine of *Vishnu*. The priest of the *Vishnu* temple assisted by the office bearers of the FAS first arranges all the offerings meant for gods and subordinate supernaturals that are also invoked during the ceremony. The offerings are first placed on a layer of betel leaves placed on the altar facing the image of *Vishnu* with the screen separating the god and people now having been removed. The leaves are first laid to form a set of three lines that are next heaped with several layers of betel leaves placed on top of the three lines. Red flowers are added in some places. Then, on either side of the offering table, two sets of offerings are prepared. One on the left has a pile of rice placed at the start before betel leaves are neatly arranged around it and a lighted clay lamp is in front with a coconut placed on top. This is called "*Pulleyar madey*" or "heap for *Pulleyar*" consisting of 21 betel leaves (see Plate No. 43), while the one on the right has a much larger heap of 500 betel leaves arranged in a circular fashion which is called "*Vishnu madey*" or "heap for god *Vishnu*". Placing the

[56] This is quite unlike the rituals one sees in the Southern Province of Sri Lanka

offerings takes about one hour and is followed by the priest holding a mirror with his back turned toward the image of *Vishnu* so that the god's eyes can be seen in the mirror. Next he takes a wick dipped in oil and anoints the eyes of the god while looking at the god's image as reflected in the mirror[57]. This is referred to as "purifying the eyes of the god" and needs to be done once a year and referred to as "*nanumura karanava*". All these actions are performed to the beat of the drum. Next, a variety of fruits including jak of two varieties known as *varaka* and *kos*, pieces of sugar cane, 42 bananas, 42 oil cakes and Rs. 2.50 each are placed on both offerings.

Preparations for cooking the royal pot begin by placing a sheet of white polythene (4'x 4') on the ground opposite the *Vishnu* temple and by erecting a canopy of the same material by tying the end of the sheet to branches of neighboring trees. Next, about 4 measures of paddy are poured onto the sheet and betel leaves placed around it to form a circle. The pile is flattened on top to form a base with betel leaves to indicate the four corners of the earth and the four guardian deities of the four corners (see Plate No. 44).

By now, it is about 7.00 a.m. and the priest with the help of others makes smaller sets of offerings made of betel leaves and fruit, two each on either side of the entrance to the *Vishnu* temple and two each at the foot of either side of a frame built about 10 feet away from the temple. The frame and the offerings are meant for two important subordinate supernaturals in the local pantheon, namely, *Kadawara* and *Bhahirava* (see Plate No. 45).

The royal pot is a large metal container covered with a white cloth. The pot is placed on the base of paddy and the priest puts uncooked rice and a variety of fruits mentioned earlier for other offerings along with ash plantains, jaggery, pumpkin, ash pumpkin, and coconut milk; a recent addition to the divine fare are dates. Next, a fire is made on three large granite pieces and the pot is placed on the fire and cooked.

In the meantime, another kind of cooking is taking place in the open space next to the preaching hall. This is the preparation of "food donation of the gods" (*deviyange dane*) which is undertaken by women with some assistance by men who tend the cooking fires. This contrasts with the making of the royal pot which is the exclusive domain of men. The food donation is strictly vegetarian and includes cooked rice and two vegetables, namely, brinjal and pumpkin, all cooked separately.

A separate event takes place simultaneously at the shrine for Pulleyar where milk rice is being cooked for the gods as well as for the people. The priest of that temple offers the milk rice along with betel leaves, betel nuts and fruits; this is done while the drum is being beaten. He falls unconscious and the drum beat stops. At the temple of *Vishnu*, the contents of the royal pot have been cooked and the priest places small servings on 45 pieces of banana leaf spread on the altar of god *Vishnu* after all the previous offerings of fruit have been cleared. The milk rice that has also been cooked separately at the shrine of *Pulleyar* is distributed along with sweetmeats among the villagers who have gathered in front of his shrine (see Plate No. 46).

[57] This custom is also followed when painting the eyes of a freshly made statue of a supernatural since it is considered inappropriate or even dangerous to do so by looking at the image directly.

Stage 5: Divination

The drumming begins and leads the event to its climax in which the priest goes into a trance while dancing in front of the statue of Vishnu. The trance state is induced by the chanting of a particular Buddhist *gatha* known as *Karaniya Mettha Sutta*, to the accompaniment of drums. The organizers had invited a young Buddhist monk from the town of Eppawala to conduct the chanting as the Pul Eliya monk was absent. There is much curiosity about what the priest will say in trance and people (excepting women who cannot enter the temple) begin crowding in to hear the revelations. The priest, now taking the guise or spirit of god *Vishnu* addresses the Buddhist monk on what could be the community's central spiritual issue, namely, the lack of a resident Buddhist monk at the village temple. The monk confirms the exegesis adding that the people want to protect the temple and its precincts that they had constructed using their efforts and wealth. The god says that "The divine community has done everything possible and that it is now up to the responsible person to do his part", a veiled reference to the resident monk who has left the Pul Eliya temple. At this juncture, some wise guy barges in and tells the god to say all this outside so that everybody could hear. This puts a wet blanket on the entire proceedings. The priest begins a retreat backwards towards the entrance to the temple, turns around and arrives at the decorated frame outside. He takes the two offerings (*gotu*) made to the two subordinate supernaturals placed on either side of the decorated awning opposite the temple and starts walking out of the shrine premises. When he does so, a number of children lie down in his path and he walks over them "in order to remove bad planetary influences" says one informant. He takes the two offerings to a large *aehaetu* tree standing next to the temple of *Pulleyar* and places them at its foot, utters a chant and ends the trance.

Stage 6: The Commensal Meal

The final scene shifts to the premises of the Buddhist temple. Food cooked in honour of the gods is distributed among all who are present and eaten with all seated on mats laid on the ground regardless of gender, status or other differences such as caste. Even people of other villages can attend the ceremony and partake of the commensal meal and as one informant stated: "What belongs to the god must be given to the people who come" (*ena ayata deviyange dey dennama ona*). A few individuals were even seen carrying the food in packets for family members who could not attend the ceremony.

9.3 An Analysis of Ritual Symbolism

The core symbol featured in almost all stages of the ritual is rice that signifies both sustenance as well as prosperity. The tank and the physical infrastructure connected with irrigation and rice cultivation become important not only as a means of physical

survival but also the survival of Pul Eliya as a moral community[58]. Thus, while the overt function of the ritual is to propitiate the divinities that ensure the economic and social good of the community, its latent function is to integrate the diverse and sometimes discordant elements in the social structure and to present it as a coherent system of thought through the manipulation of the key symbol or rice. It is quite evident that a system of meanings and values that approximate to what could be called an egalitarian worldview underlie the very nature of the ritual. Leach himself admits to the existence of a "moral virtue" behind the pairing of holdings in both Upper and Lower Fields. In the ritual context, it can be seen as a system of reciprocity between supernaturals and humans as sketched out in Chat 4.

In the final sense, therefore, the ritual affirms the key role that rice and paddy cultivation plays in the mental landscape of Pul Eliya people, despite the fact that the latter have taken to highland cultivation which they see today as being indispensable to their economic survival. Conversely, rice cultivation is also essential since it supplies the staple of rice for domestic consumption throughout the year, especially if there is enough water for cultivation during the lean season of *Yala*. The fact that they have conducted the ritual particularly after the last *Yala* when there was little or no paddy cultivation in the village due to lack of rain points to the tenacity of the belief that the gods do have the power to deliver the desired rain and good harvests. Part of this tenacity could also reflect the economic as well as climatic uncertainties that are attached to highland cultivation. We have already commented, among other things, on the adverse impacts of agricultural surpluses in the Dambulla and the diminishing soil fertility resulting from over-cultivation of the same plots due to the increasing scarcity of highland. At the end of the day, therefore, despite the economic and material advances people have made through highland cultivation, paddy and rice remains and will probably continue to occupy the fallback position it has enjoyed from the inception of the community. In other words, therefore, continuing to perform the ritual makes good economic and cultural sense.

[58] It is in this light that the refusal of TBK to participate in the event some years ago could be viewed by villagers, especially its leadership, as a moral failure on his part and one which deserved condemnation if not an imposition of a penalty (see Section 8 above). When I met him after the ceremony, he was critical of it and questioned its morality since according to him "people had taken what they had contributed without thinking of the poor or the disabled in the community". However, he was quick to add, somewhat apologetically, that his daughter who was visiting the family on that day had had a pregnancy craving (*dola duka*) to eat from the commensal meal and that he had allowed her to do so. He added that he was going to allow his wife to participate in the ceremony from next year although he himself would maintain his current stand and that his son had been a regular participant.

Chart 4: Rice in the Sacred and Secular Domains (arrows indicate patterns of reciprocity between gods and humans)

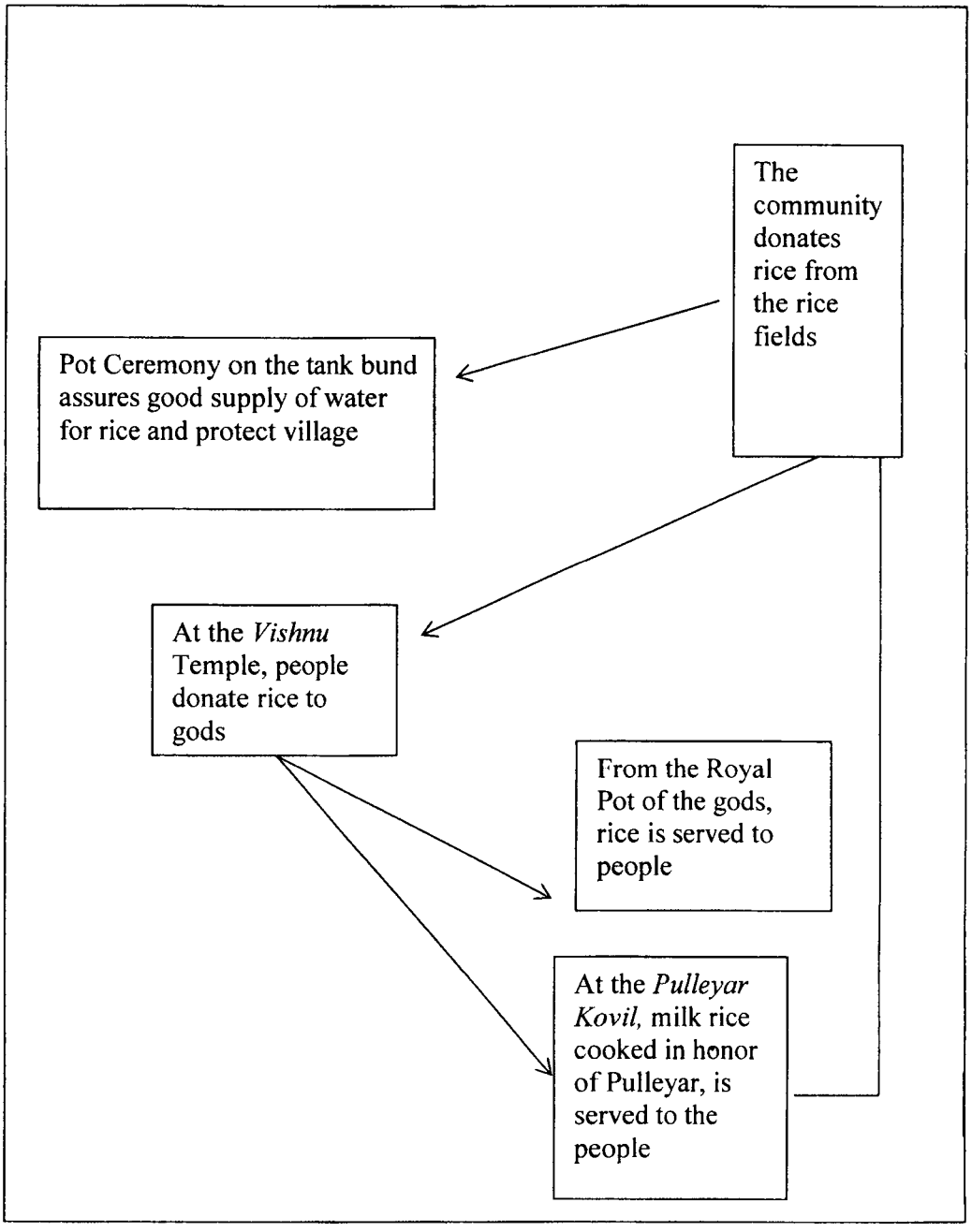

Plate No. 35: Buddhist monks invited from outside the village to officiate at a funeral

Plate No. 36: K.P. Punchi Banda in front of the Stupa he has Built

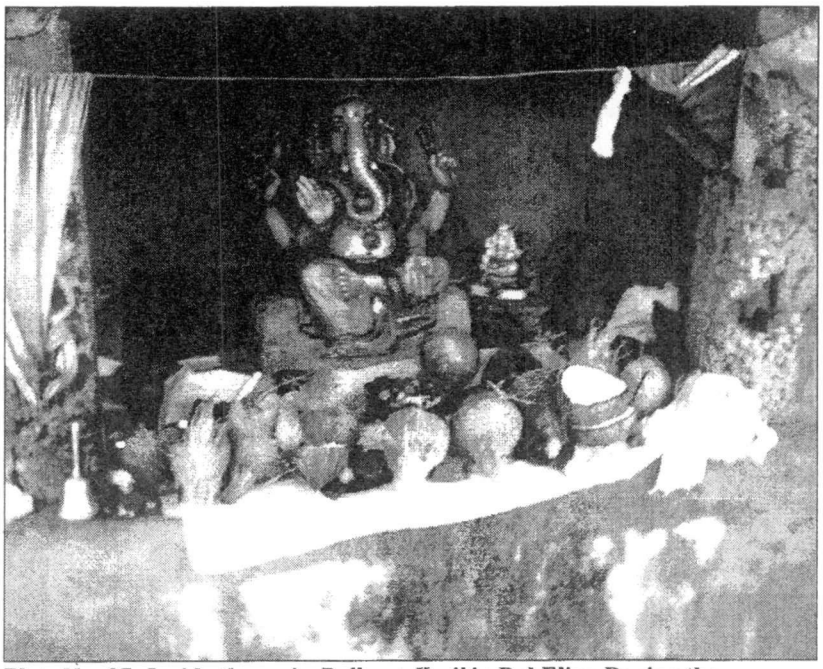

Plate No. 37: Inside the main *Pulleyar Kovil* in Pul Eliya During the Pot Turning Ceremony

Plate No.38: *Pulleyar* Shrine below the bund of Dambuwewa Tank

Plate No. 39: A Pul Eliya Farmer Preparing for the Milk Overflowing Ceremony in Honour of *Pulleyar*

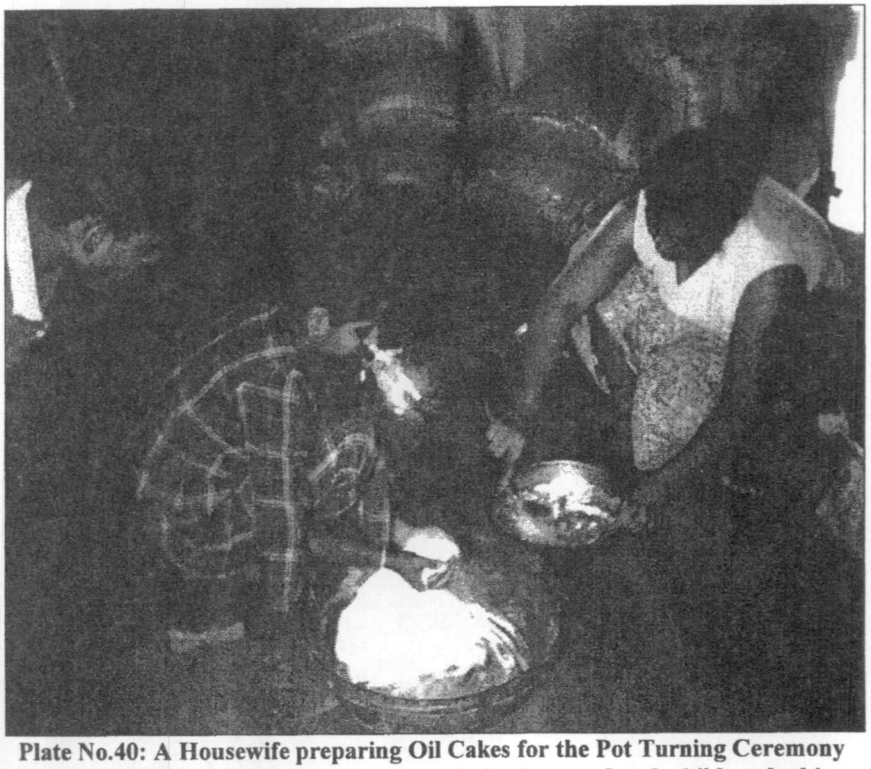

Plate No.40: A Housewife preparing Oil Cakes for the Pot Turning Ceremony in a Family Kitchen (Note: paddy stored in background and children looking on from each side)

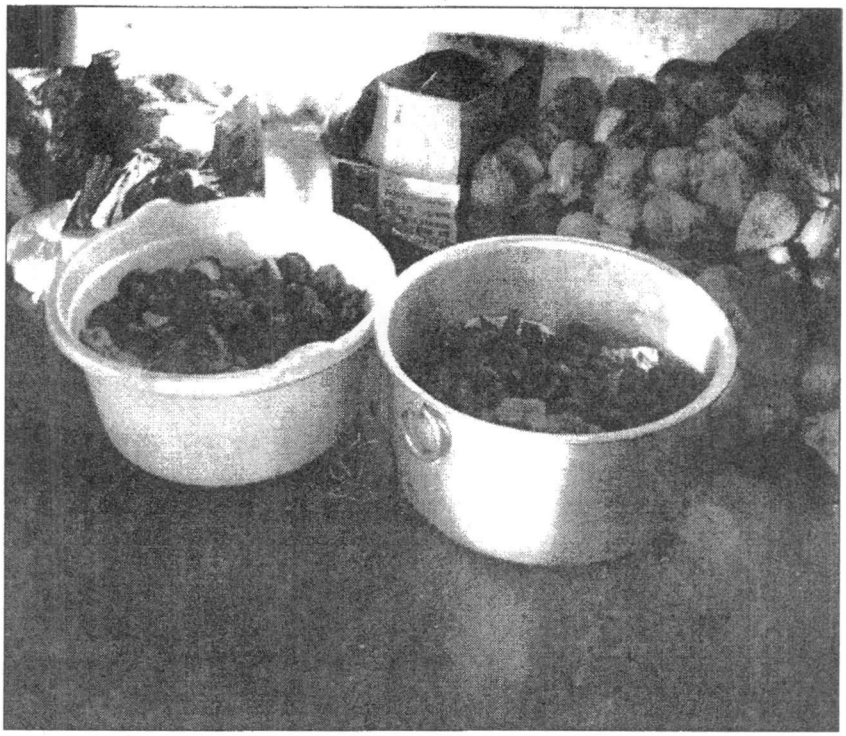

Plate No. 41: Contributions of lay people for the pot turning ceremony

Plate No. 42: Priest dancing with the Two Pots before placing them on the Forked Branch

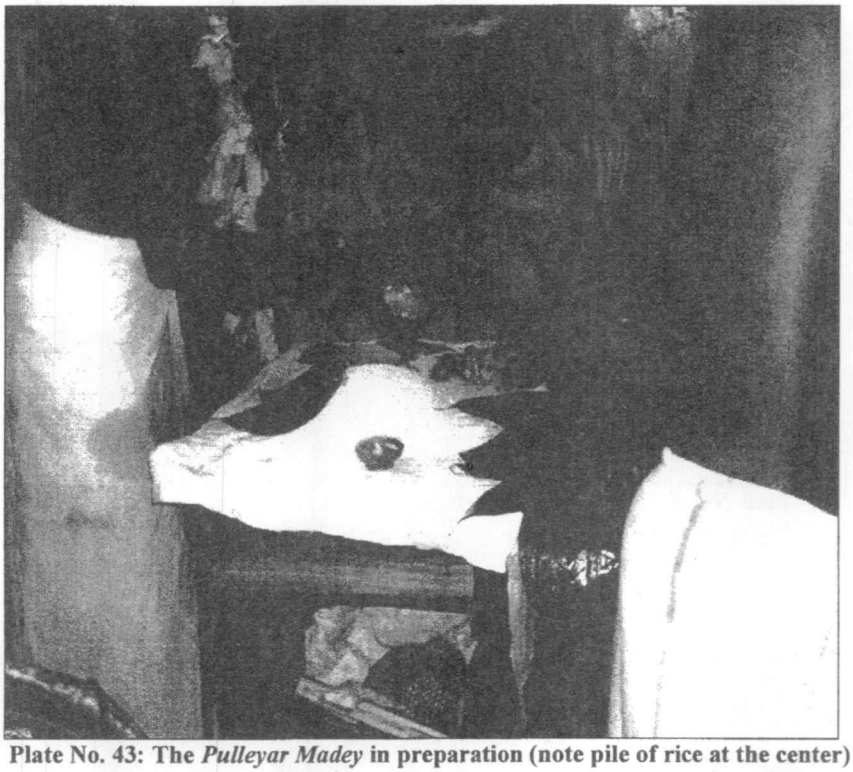

Plate No. 43: The *Pulleyar Madey* in preparation (note pile of rice at the center)

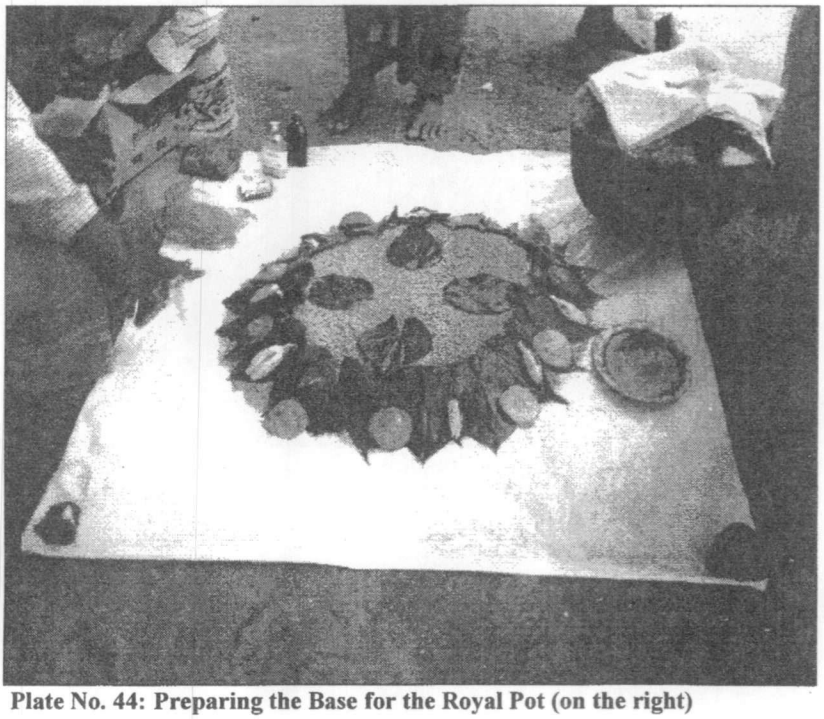

Plate No. 44: Preparing the Base for the Royal Pot (on the right)

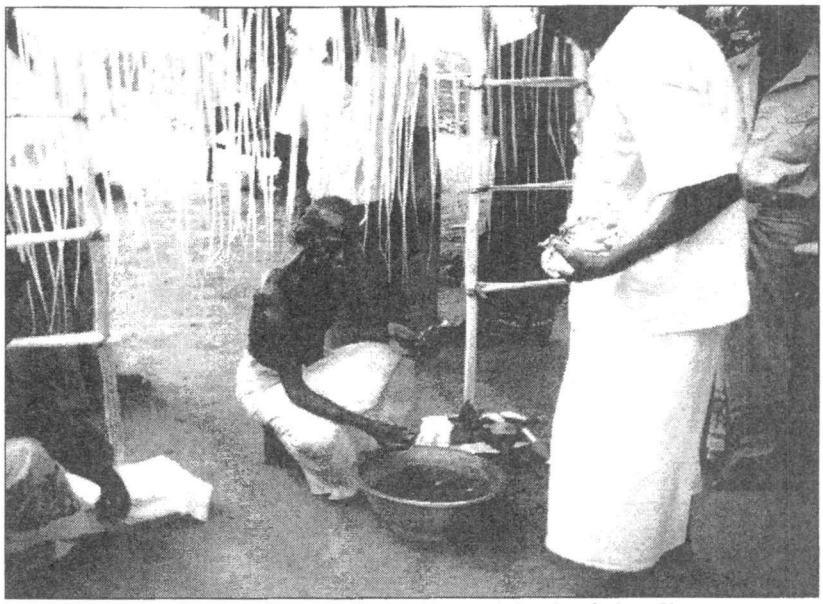

Plate No. 45: Priest Placing Offerings of Milk Rice for Subordinate Supernaturals

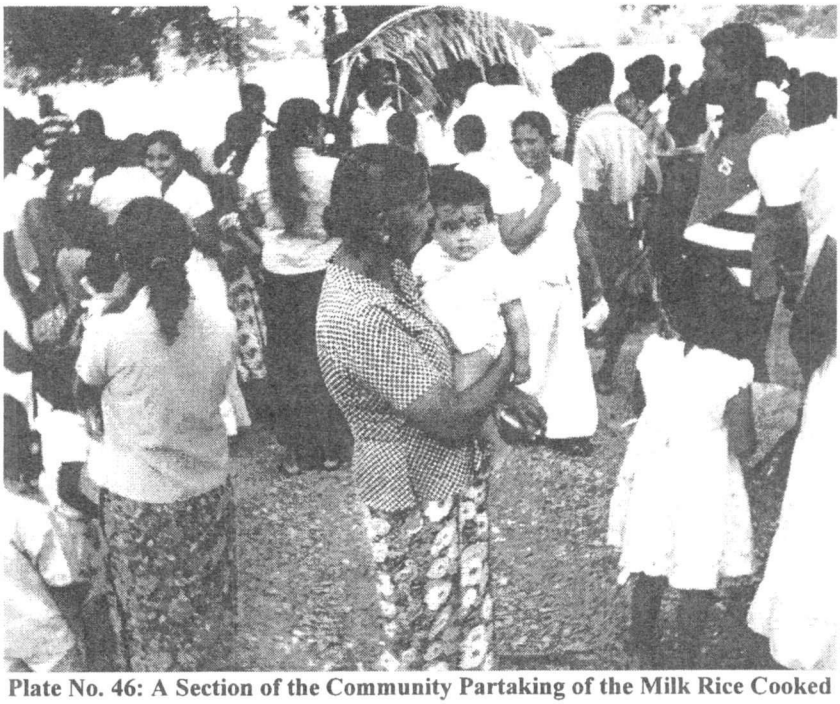

Plate No. 46: A Section of the Community Partaking of the Milk Rice Cooked at the Main Shrine for Pulleyar

CHAPTER TEN

Summary, Conclusions & Recommendations

The concluding section of this monograph summarizes the main changes that have taken place in Pul Eliya in the course of the past half a century and examines their implications for the study of agrarian change. Particular attention is paid to how these changes relate to conclusions arrived at by Leach regarding the relationship between kinship and land tenure. This section concludes with recommendations on the possible role of governmental agencies in dealing with agrarian issues with the particular focus on the Dry Zone agricultural context.

10.1 Summary of Changes

Changes that have taken place in Pul Eliya relate in the main to village infrastructure, population, health services, marriage, land tenure, water management, leadership and the emergence of commercial highland cultivation and social impacts stemming from it. Along with such discontinuities some aspects of Pul Eliya have remained relatively unchanged as the following description will illustrate.

10.1.1 Infrastructure

The restoration of the tank bund in 1982 due to damages caused by the flood of 1956 was an important event although during the intervening period, Pul Eliyans were more or less totally dependent on highland cultivation. This was an experience setting the stage for agricultural innovations that were to take place subsequently.

Changes in physical infrastructure, particularly with reference to roads, had commenced even during Leach's day but have accelerated since then mostly due to recent government policy regarding the upliftment of socio-economic conditions of villages located close to the perimeter of conflict zones. These improvements have provided villagers with greater access to the outside world particularly to obtain necessary goods and services such as agricultural inputs and to market their agricultural produce.

Other important infrastructural changes were the introduction of internal bus transport from the village to the nearby main town and the upgrading of the village school from a primary to a secondary school. Expansion of educational facilities enabled younger people obtain off-farm employment especially in the armed forces and to receive vocational training outside the village in a variety of technical skills including IT. New employment opportunities have also placed such people in a socially and economically more advantageous position vis-à-vis those depending on agriculture alone.

10.1.2 Population

Pul Eliya has seen a fivefold increase in population during the past half a century, a fact that contrasts with the virtual stagnation of its population during previous periods. This dramatic change in demographics serves as an indicator of an expanded resource

base that was both internal and external. While the land area under paddy and highland has expanded significantly, the introduction of high-yielding varieties of rice in the seventies increased paddy harvests when compared with yields from the cultivation of traditional rice varieties. In addition, it also introduced people to a new technological package that included the use of chemical fertilizer, pesticide, weedicide and machinery for most agricultural operations particularly ploughing. These developments in agricultural technology were an important precursor to the agrarian changes that were to come subsequently.

10.1.3 Housing and Public Amenities

Noteworthy changes have also occurred in housing conditions and amenities during the past half a century. The village settlement that had been confined to a small and closely knit cluster of households and compound groups has disintegrated and has been replaced by a linear settlement pattern situated along both sides of rural roads. The structure of houses has also undergone change replacing the wattle-and-daub type of traditional days with those built from brick and tile. Similarly, the number of rooms and floor area of houses has increased replacing the unsanitary and dark interior of traditional houses. Sources of domestic lighting have changed from kerosene to electricity and solar power for most households today. People use drinking water from private wells instead of using the tank. Improved sanitation has replaced the old practice of using the commons or forest for purposes of defecation although the latter practice is still being adhered to by some who include even the rural well-to-do.

10.1.4 Health and Health Services

Increase of the village population could not have been possible if the people had no access to health services. During Leach's day, access to hospitals run by the government was limited to most villagers as is indicated by the fact that Leach had to personally undertake the task of transporting sick villagers in his private car. It is likely that under normal circumstances, the people would have resorted to native medicines and ritual treatments unlike today when their first course of action is to access allopathic treatment provided by a number of government clinics, dispensaries and hospitals situated outside the village. On the downside is the incidence of illnesses such as diabetes and blood pressure that were unheard of in traditional Pul Eliya society but reflect the changing lifestyle of Pul Eliya people.

10.1.5 Marriage

An important dimension of social change has been the expansion of the marriage network and by implication, the network of kinship, from the limited circle of villages with which people of the Pul Eliya *variga* had married to a wider social network that includes distant locations situated even outside the district. This change which is attributable to employment of young people in the security services and in factories has also resulted in several marriages that would have been considered unacceptable in traditional times but are virtually ignored today. The practice of registering marriages, which is a legal requirement for obtaining birth certificates needed when people apply for jobs, is also widespread today when compared with the informal arrangements between individuals and/or families fifty years ago.

10.1.6 Land Tenure

Viewed from a contemporary standpoint, it appears that the basic features of the layout of paddy land under the Old Field in the manner described by Leach have remained virtually intact including the extent cultivated under it. While this partly corroborates Leach's conclusion that the continuing entity is not Pul Eliya as a society but Pul Eliya as a place, a contributory factor is the location of the Old Field in such a manner that it cannot be changed due to being surrounded on every side by land under non-traditional forms of tenure.

The number of shares in the Old Field has seen only a very slight increase from 1954 to the present day due to a strategy of consolidating the shares of siblings and handing them over to a single heir who is usually the youngest male child in the family. The availability of additional paddy land through purchase or lease from the government has made the above strategy possible whilst contributing to a significant increase in the extent of paddy in the village.

However, Leach's conclusion with regard to the continuity of the physical layout of Pul Eliya has not been validated in the case of the *gamgoda* which has disintegrated from its pristine state as a compact cluster of houses and compound groups occupying the area between the tank and the paddy fields to a ribbon development occupying the borders of village roads. This radical change in settlement structure was a prime outcome of the clearing of village land for highland crops under relatively large allotments, a process that also led to some degree of social disintegration as well.

10.1.7 Water Management

A significant organizational change during the late sixties was the transition of water management responsibilities from the Irrigation Headman or *Vel Vidane* to a democratically constituted body known as the Farmers' Organization. While this move replaced the authoritarian method of managing farmers with one based on people participation, it also brought with it the demise of traditional roles and responsibilities of farmers for efficiently managing the water supply and its associated network of canals. Neglect of the tank, its bund and channels has also been reinforced by the inability of the Department of Agrarian Services (renamed, Department of Agrarian Development around 2004) to perform this task on a regular basis.

10.1.8 Chena Cultivation

The receding fortunes of paddy cultivation aided and abetted by lack of rainfall, relatively low prices for paddy and high cost of inputs have been intensified in recent times by the transition of the village economy from one based on subsistence cultivation to one tied up with the external market for commercial cultivation of highland crops. In the traditional scheme of things, *chena* lands were only an appurtenance that had grudging acceptance by government as shifting cultivation was done on government owned land. This practice was allowed so that economically marginal village families could find a way out of starvation but only after obtaining a license. While even during Leach's study period there was increasing pressure to bring existing forest areas under highland cultivation and that too not for subsistence

alone but with the market in mind, this trend was intensified during the last decade due to the prospect of making short term profits from the cultivation of maize, vegetables and onions when compared with the low returns from paddy. While the drivers of commercial cultivation were principally of an economic nature, the availability of diesel or kerosene driven pumps for tapping ground water sources through the construction of agro wells have also played a critical role in changing the production mode into a commercialized operation.

These technological changes have had a domino effect on a variety of socio-cultural parameters chief among which have been the emergence of the nuclear family as the unit of production and consumption, higher living standards due to increased household incomes, greater degree of social stratification, a reduced level of social integration, and erosion of cultural values and beliefs.

10.1.9 Leadership

The demise of traditional leadership consisting of village level officers of the colonial era and their replacement by bureaucrats employed in the government service such as *Grama Niladhari*, Agriculture Research and Production Assistant and the Family Health Services Officer constitutes a major departure from the past. Traditional leaders had made up the institution known as the *variga sabha* that enforced rules regarding marriage and residence in earlier times. Their demise has also signaled the decline of that institution. Of particular importance is the virtual absence of the village Buddhist temple in dealing with village affairs. Instead, secular leaders who are mostly office bearers in community based organizations such as the Funeral Aid Society and the Farmers Society have come to the forefront. These community level organizations also play an important role in providing a variety of essential services for villagers such as credit for both agricultural and other needs.

10.2 Conclusions

The evolution of agriculture from a subsistence to a commercialized mode has often been cited as a prerequisite for development of a country as a whole. While this process has taken place to a considerable extent in Pul Eliya, both **essentials** that are conducive to agricultural innovation as well **drivers** (or accelerators) that enable an innovation to be adopted and accepted by a wide segment of the community played a critical role. A market for farm products, constantly changing technology, local availability of supplies and equipment, and transportation were available but combined in different ways to produce the desired change. It is seen, for example, that the markets were not easily accessible to most of the farmers at the start and only one or two individuals had the boldness to use public transport to market agricultural surpluses in a remote town. Subsequently, contacts with market operators in larger towns and the capital city became possible through the use of rail and road transport for a wider section of farmers. Similarly, local availability of supplies and equipment in the form of seed, fertilizer, and agro chemicals such as weedicide and insecticide was possible due to the relative proximity of a market town.

The main incentives for adoption of commercial agriculture consisted of both push and pull factors. Push factors consisted of dwindling supplies of water due to inadequate rainfall during the last two decades that led to low productivity in paddy

cultivation and increasing population that led to fragmentation of holdings and smaller paddy allotments. In this regard, the availability of highland areas was an essential from the viewpoint of Pul Eliya although it is not mentioned in Mosher's model. The pull factors included higher incomes for households and the ability to improve their standard of living represented by modern housing, amenities, and household assets. Thus, the drivers of agrarian change in Pul Eliya are certainly not atypical but conform to the findings of other scholars. People not only earned extra money from commercial enterprises but also reinvested some of the earnings to purchase new agricultural technology such as agro wells, tractors, lorries, and water pumps that accelerated the change process further. It also took it to a qualitatively different stage of evolution since it reduced dependency on vagaries of weather and traditional methods of irrigation.

It is also not possible to exaggerate by any means the scale of commercial cultivation of highland crops or its positive impacts. On the one hand, not all households engage in it, and on the other, less than a twentieth of the total acreage available for such activity is actually used during any one season. This is due to a number of factors including (a) the prospect of reduced yields if land is over-cultivated (b) limited water supply and (c) absence of subsidies for fertilizer for highland crops. Of those who successfully engage in commercial cultivation, there are a sizeable proportion of farmers who do make significant levels of profit despite high prices of chemical fertilizer in the open market and changing price levels offered by wholesale buyers at the marketplace. Profit margins are also higher and highland cultivation more feasible and sustainable when there is less dependence on credit or hiring of machinery or labor. Thus, farmers who already have accumulated sufficient capital either through agriculture and/or other means and have their own machinery tend to be the more successful ones.

Nonetheless, Pul Eliya has seen an upgrading of living standards as reflected in such areas as housing, household amenities and assets including telecom facilities that are a far cry from the more or less homogeneous and stable social environment that prevailed half a century ago. It has also meant a more variegated socio-economic structure in place of one where wealth and power had been concentrated in the hands of a few traditional elites but has now been dispersed among a larger proportion of villagers. This is not gainsaying the fact that Pul Eliya society is devoid of social differentiation and even social conflicts which are present today as they did so in the past. Highland cultivation has also not resulted in diminishing the value and importance of rice farming which is the sole means of subsistence particularly for the less privileged sections of the community. This is also reflected in on-going disputes which are almost always about paddy land.

Without a doubt, the sum total of changes in the agrarian order have led to a process of disintegration, to use a term put forward in Newton Gunasinghe's analysis of agrarian change. However, some aspects of Pul Eliya have remained more or less intact, and they belong to the realm of ideas and values or to the cultural system of Pul Eliya people. These include, firstly, the idea that Pul Eliya land should remain with the Pul Eliya community. Secondly, there are the continuing ties of kinship based on old compound group identities that have remained active and are demonstrated through the structure of leadership positions in the community and through conflicts over land and water rights. Thirdly is the system of understandings that pertained to

the sale, mortgage or renting of land according to which the transactions should ideally involve Pul Eliya residents to the exclusion of outsiders or people who had no kinship ties with the village.

The persistence of these values raises some doubts about Leach's main theoretical conclusions regarding the priority of status that should be given to kinship and to the non-material dimension. Leach had concluded on the one hand that the non-material elements were mere reflections of arrangements on the material plane, and on the other hand, that the latter, as embodied in the layout of the *gamgoda* and the Old Field, were the only lasting elements. This study, however, has shown that while the material order has gone through radical changes or through a process of physical disintegration, what has persisted instead is the normative or non-material order.

In addition, the overarching sense of community that has emerged during the past half a century perhaps serves as a counter to changes in the material and even social domains. The sense of belonging to a community of people has persisted and is recreated through the manipulation of ritual symbols. These symbols are closely connected with the performance of the ritual known as the "pot turning ceremony" held annually in honor of three main deities, namely, *Vishnu* (the guardian of Buddhism), *Aiyanayaka* (the guardian of the village tank) and *Pulleyar* (the guardian of the Pul Eliya community). The symbolic role played by paddy and cooked rice which forms the basic item of offering to the gods and of commensality both between gods and humans as well as among humans has been highlighted. Ritual also serves to transcend all social and economic differences that have emerged among Pul Eliyans as a consequence of changes in the economic realm and bring them under one umbrella as a moral community in the Weberian sense.

10.3 Recommendations

Several recommendations that are of importance for agricultural policy makers and planners can be derived from the study. Firstly, while the transition from subsistence to commercial mode is desirable from the viewpoint of agricultural development and the development of the national economy as a whole, the process needs to be given guidance and direction from its inception particularly through the active participation of relevant officers of the Departments of Agriculture and Agrarian Development. For example, Pul Eliya people have relied upon their own resources and ingenuity to achieve the present level of agricultural development but without taking into account the issue of sustainability. The possible costs of the transition both in terms of the economic stability of the family as well its negative impacts such as loss of soil fertility and increased salinity level due to regular irrigation, dangers to health and environment due to unregulated use of agro chemicals, potential depletion of groundwater resources and social harmony have been highlighted in the study and need to be addressed by the concerned authorities.

Secondly, research studies need to be undertaken to estimate and forecast the impact of new agricultural practices on the quality of soil, water, and public health. Monitoring systems need to be placed at village level to measure changes in the above parameters so that farmers could make informed decisions regarding what inputs to use, in what amounts, what crops to cultivate and what areas are suitable for cultivation of certain crops.

Thirdly, a strategic planning process at the regional level needs to be undertaken in order to improve the supply of agricultural produce to the local markets since farmers in the whole region tend to cultivate the same types of crops thereby causing a glut and lowering price levels resulting in poor prices for agricultural produce. Such a planning process could include zoning of agricultural areas according to crop type which is an idea currently being circulated at the Provincial Council level and also has support from Pul Eliya farmers.

Fourthly, there is a need to set up a mechanism at the village level, probably through the Farmers' Organizations, (a) to regularly inform farmers about market conditions (b) conduct intensive farmer training programs on proper use of fertilizer, chemical inputs, packaging to avoid post harvest wastage and marketing methods and (c) provide facilities and information to develop sustainable methods of farming through use of organic fertilizer and new crop intensification methods for both paddy and highland cultivation.

Finally, since paddy cultivation still occupies a central place in the household economy, steps need to be taken to enhance its development. For all intents and purposes it constitutes the ultimate fallback position for the average farming household. Among the interventions required to make this happen a crucial event should be the cleanup of the main tank of the village, an activity that Pul Eliya people cannot do by their own efforts but requires State assistance. Other measures include installing a management system to ensure economic uses of irrigation water, promotion of new methods of rice cultivation that economize water use (such as the SRI method) and adoption of organic manure to supplement chemical fertilizer.

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Appendix 1: Distribution of Total Marriages During the Last 25 years

Serial No.	Village	*Binna*		*Deega*		
		Number of males who have come to Pul Eliya	Number of males who went out from Pul Eliya	Number of females who came to Pul Eliya	Number of females who went out from Pul Eliya	Total number
1.	Alagalla	01				01
2.	Ambagaswewa	01			01	02
3.	Anuradhapura			02	02	04
4.	Aralaganwila			01		01
5.	Bahondawewa			02		02
6.	Bandarawela	01				01
7.	Bellankadawala			03	01	04
8.	Colombo			02	01	03
9.	Divulwewa	03	03	01	01	08
10.	Dumindegama	04				04
11.	Etaweeragollawa	01				01
12.	Galenbidunuwewa		01			01
13.	Galpoththegama		01	01	01	03
14.	Ganegoda	02				02
15.	Halmbagaswewa	01		01		02
16.	Hirallugama			01		01
17.	Kabithigollawa	01		01	01	03
18.	Kadawathrambewa	01			01	02
19.	Kadawaththgama	02		05	02	09
20.	Kaluthara	01				01
21.	Kandy	03		01		04
22.	Karapikkada	02		01		03
23.	Kidagalegama	01		01	02	04
24.	Kidarankulama			01		01
25.	Kirigalwewa				01	01
26.	Kudahalmillewa			01		01
27.	Kulikkada				03	03
28.	Lindawewa		01	01	01	03
29.	Madawachchiya	02		02	06	10
30.	Mahaambagahawewa			01		01
31.	Mahakoongaskada			03		03
32.	Mahakumbukgollewa			01		01
33.	Mamaduwa			02		02
34.	Maradanmanduwa			01		01
35.	Maradankadawala					
36.	Matara			01		01
37.	Mathugama			01		01
38.	Minhettigama			05	01	06
39.	Nagadaranawewa			01	01	02
40.	Negombo				01	01
41.	Palagola	01	01			02
42.	Palugollewa	01		03	02	06
43.	Panadura	01				01
44.	Pawakkulama				01	01
45.	Periya Ulukkulama	01		02		03
46.	Periyakulama	01		01	01	03
47.	Pihimbiyagollewa			01	01	02
48.	Poonewa	01		03		04
49.	Rambakulama	01			02	03

50.	Rambawa	03		01		04
51.	Ranawarawa			01		01
52.	Rathmalgahawewa				01	01
53.	Relapanawa	02				02
54.	Rolawa				01	01
55.	Sangilikanadarawa	01			01	02
56.	Seeppawa	02		01		03
57.	Siyablagaskada	01		04		05
58.	Tarangollewa			01	01	02
59.	Thammenna Elawaka	01		02	04	07
60.	Thammennakulama				01	01
61.	Thanthirimale		01	01	02	04
62.	Thulawelliya	01				01
63.	Ulukkulama		02	03	02	07
64.	Vavuniya			02		02
65.	Viralmurippuwa	02	02	10	04	18
66.	Walpola	01	01	02	01	05
67.	Warakkewa	03	02	02		07
68.	Wattala				01	01
69.	Welikanda	01				01
70.	Yakawewa	11	11	02	01	25
71.	**Unknown**	03		09		12
72.	**Total**	66	26	95	54	241
	Percentage of total	27.4	10.8	39.4	22.4	100

Source: Field Survey 2009

Appendix 2: Some Traditional Practices That Are No More

Information obtained from older key informants from Pul Eliya indicates the importance of traditional food preservation technologies that assured people of a food supply and nutrition even during periods of drought and reduced their dependence on rice cultivation to a great extent. Similarly, *kem* or protection methods used in agriculture reduced costs of cultivation and increased profit margins although harvests were lower than new varieties.

Food Preservation Technology

Types of food that were preserved for future use included meat, fish, pumpkin, *kekiri*, bitter gourd, brinjal, and grains such as sesame, finger millet, *cowpea*, green beans, and paddy. Well dried paddy was mixed with lime leaves and put into reed baskets or gunny bags and tied securely. Other food grains were also put into containers and placed on top of a rack constructed above the fireplace (called a *dum maessa*) to prevent attacks by pests. Pumpkins grown in *chena* were harvested by turning their stems around (instead of cutting them with a knife) and dried in the sun before put in storage. The skins of *kekiri* which was commonly grown in *chena* were peeled off and cut in round slices. Then they were soaked in salt water and after a few hours were squeezed to remove the water and kept inside a reed basket (*pan malla*) or a dried gourd (*labba*, an item known for its cooling properties), and placed on the rack above the fireplace or hung from the roof. They could be kept in storage for even a year and when needed, they were immersed in water and cooked with coconut milk. The same method was used to conserve other vegetables such as bitter gourd and brinjal which were cooked in a mixture of chillies, salt, onions and dried river fish (a small variety known as *"thiththayo"*). The preparation was eaten with flat cakes (*roti*) made of unleavened bread or *pittu* which were made of a steamed flour and grated coconut mixture. Villagers had preserved *puhul*, a variety of cucumber (also called "ash pumpkin") in two ways. One was cutting it in slices and drying them as with other types of vegetables. The other was to keep the ash pumpkin in its vine till the vine dried up and died, and hung it in such a way as to allow the free movement of air around it. The fruit of the tamarind tree was also preserved for future use. The fruit was collected when it fell from forest trees, its skin was peeled off, and boiled in a clay pot till it turned black in color. The mouth of the pot was well tied with cloth and care was taken not to allow any contact with water by using a separate spoon when removing any part of it for household use. Limes were also preserved by boiling them partly in a clay pot and drying them in the sun before packing them in the above manner. Dried lime was used when cooking fish caught from the tank (*wewmalu*) and as a substitute for *goraka*, another sour tasting fruit found in villages. Tank fish or meat of animals killed in the jungle was also preserved by cutting into pieces before drying in the sun after which they were stored in the rack or in a dried gourd. Apart from preserved food, villagers also were at liberty to glean fresh vegetables or green leaf (*pala*) from abandoned *chena* (a practice referred to as "going through the land" (*lande yaema*). Kitchens in today's Pul Eliya lack a rack above the fireplace and reflect the demise of the traditional forms of food technology. In addition, the intrusion of packaged food stuffs from outside the village has virtually rendered the old forms of food preservation unnecessary especially since they require much labor.

Kem or Protection Methods for Combating Pests:

Before the advent of the Green Revolution in the sixties, farmers had used a variety of methods including those of a magical nature (*kem*) to prevent attacks by insects. For example, to prevent the spread of the "white disease" (*sudu rogaya* or "*kok panu rogaya*"), they would take the branches of a tree species called *daluk* and place them at the point where water enters the field from a channel (*vakkada*). It takes about 4 days for the treatment to take effect. To prevent attacks by insects during the ripening stage, the method was to take a piece of a discarded robe used by a Buddhist monk, make wicks with the pieces of the robe after chanting over them verses recounting the virtues of the Buddha (*buduguna*), place them in halved and cleaned section of a papaya, put oil inside it and light the wicks. The farmer has to leave the field from a side opposite to the one he used to enter. It is taboo for women or any person bearing a metal utensil such as a knife to enter the field for three consecutive days after performing the above rite. If the taboo is violated, the harm can be neutralized by other magical means. One is to take a brass plate and draw a *yantra* on it using charcoal. The Buddhist word "*ithipiso*" is written on sections of the *yantra* and the entire verse (*gathava*) is chanted 108 times over it. The farmer then takes the plate around the field beating it loudly and leaves it from a side he did not use to enter. Taboos are followed for this procedure as well. Another method for ridding the field of insect pests is to take water from a tank or well into a fresh earthen pot during the evening and before the night meal on a Saturday, which is considered one of two days of the week reserved for the gods (*kemmura*)[59]. Then a box is taken and lined with 4 betel leaves one for each side, and 4 betel nuts and white flowers are placed on them. The pot containing the water is placed inside the box. A *mantra* is chanted 108 times over the object during the night and the next morning the water is strewn on the four sides of the field. After that, the empty pot is kept at the *vakkada* upside down. The desired effect of all these methods would take place after three days. All types of *kem* have to be done by the farmer in secret, which is one main ingredient for its success.

[59] Notice the recurrence of the term *kem* (for magic) in this term also. The term *mura* means "a watch" or period spent on a special activity.

GLOSSARY

aelapatha	Strip of lowland lying on one or both sides of a stretch of paddy land
arachchi	Officer appointed over a village or group of villages during British colonial rule
mohottala,	Scribe, clerk or secretary to a local chief or colonial administrator
pangu	(Sing. *panguwa*) shares
abhinaya	A movement in a dance
baedderala	Officer who collected taxes on behalf of the British colonial government
baga	Half or halves
bana maduwa	Preaching hall
binna	Uxorilocal residence (for male)
buduguna	Virtues of the Buddha
daluk	A forest tree species the branches which were used as an insecticide
deega	Virilocal residence (for female)
dum maessa	Construction over a fireplace to store and dry uncooked food
dummala	Resin
elabatu	Local eggplant
gamarala	Traditional village chief in charge of a tract of paddy land and/or village
gamgoda	Village settlement
gatha	Religious verses
gokkola	Tender leaves of a coconut tree
Goraka	(Bot. *Garcinia Quaesita*)
gotu	Offering made of leaves containing rice for a spirit
Goyigama	Farmer
Grama Niladhari	Village level officer
gurukan	Sorcery
hewisikaraya	Drummer
ithipiso	Chant invoking the power of Buddha's virtues
kapurala	Priest of a temple
kekiri	(Bot. *cucumis pubescens*) A species of cucumber
kem	Magical methods
kemmura	Day reserved for the gods
kos	(Bot. artocarpus integrifolia) Jak
kovil	Shrine of a deity
kurakkan	(Bot. *Eleusine coracana*) Finger millet
kurakkan pittu	Preparation made of powdered finger millet
labba	Dried gourd
labu	(Bot. *Lagenaria vulgaris*) Bottle gourd
lande yaema	(Literally, "going through the land") Gleaning
madey	A mound of rice prepared as an offering
maekaral	String beans
maha	Big, also refers to a cultivation season with high rainfall
mahattaya	Gentleman

mantra	Magical chant
meneri	(Bot. *panicum miliaceum*), a species of millet
naedayek	Relative
nanumura	Washing ceremony
nuga	(Bot. *ficus bengalensis)* Species of banyan tree,
olagama	(Plural: *olagam*), abandoned small tank
othhthukaraya	Spy, informant
oya	Stream
pala	Green leaf
purana	Old, traditional
roti	Flat cake of unleavened bread
sudu	White
sudu mahattaya	White gentleman
sudu rogaya	A pest attacking rice plants also called *kokpanu rogaya*
thiththayo	A species of river fish
thulawa	Weighing scale
thiyambara	(Bot. *cucumis sativis*) A local variety of cucumber
vakkada	A point at which water enters a paddy field
varaka	Species of jak
varama	Spiritual gift
variga	Kind, category of kinsmen who intermarry
variga sabha	Traditional council for settling issues relating to a *variga*
vatakolu:	(Bot. *Luffa aegyptiaca)* Loofa
vel vidane,	Officer in charge of paddy land of a village during British colonial rule
viharage	Shrine room
vihare	Buddhist shrine
wewmalu	Fish caught from tanks
yaksha avesa	Demonic possession
yala	Season with reduced or low rainfall
yantra	Magical drawing