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Network Mediation of Exchange Structures: Ambilateral Sidedness and Property Flows in Pul Eliya (Sri Lanka)

Michael Houseman and Douglas R. White

(Chapter 4, pp. 58-88 in **Kinship, Networks and Exchange**, edited by Thomas Schweizer and Douglas R. White)

Our aim, by means of the richly documented example of Pul Eliya (Leach 1961 [1968]), is to examine the relationship between certain kinship phenomenon (pertaining to the circulation of persons) and certain aspects of economic exchange (pertaining to the circulation of things) from a network analysis perspective. In doing so, we hope to demonstrate the relevance of a particular approach to alliance relations -- one very much in keeping with Leach's work -- in which primary emphasis is given to actual marriage ties and structure is conceived above all as an emergent patterning of the marriage network as a whole.

From 1935 through the 1950s, British social anthropology, most notably in the works of Radcliffe-Brown, Evans-Pritchard, and Fortes, exhibited a strong bias toward exclusive emphasis on inheritance and descent in defining corporate kinship groups and toward defining such groups as the basis for human kinship systems. Leach's study of Pul Eliya was notable for showing how to correct for the bias of descent theory by examining locality and cooperative links among families as an economic basis for kinship groups and patterns of kinship behavior. He was concerned with the use of a kinship idiom as a means of organizing cooperative labor, and with demonstrating empirically that kinship is structured by the organization of property rights linked to land and water in irrigation agriculture, and by the procedures by which they are inherited.

"My overall thesis", wrote Leach in his provocative and closely packed book on Sinhalese village organization, "is that Pul Eliyan Society is not governed by any general structural principles such as have been claimed to prevail in various types of society possessing unilineal descent systems. Pul Eliyan Society is an ordered society, but the order is of a statistical not a legal kind" (1961:146). In the present article, we will try to show how the ongoing relationship between the devolution of landholdings and the continuity of localized kinship identities is mediated by certain systematic features of the Pul Eliya marriage network. It is this heretofore unrecognized aspect of Pul Eliyan social organization that we wish to demonstrate: The marriage network

itself, as a structured totality, plays a fundamental role in the emergence of the statistical order characteristic of this society.

THE INDETERMINACY OF COGNATIC DESCENT

One of the principal themes in Leach's work is the idea that in Pul Eliyan society, collective kinship identities are subordinate to economic relations concerned with land. Generally speaking, a person is recognized as belonging to a particular village and as coming from a particular compound within the village. These compounds, identified by patronymic house-names or *gedara*, are associated with certain "ancestral" land and water rights. Residence is determined by a *gedara* claim, either through one's parents, through a spouse, or by the purchasing of a compound. However, residence and compound rights do not necessarily go together; thus, for example, in residing with a spouse's group, one does not give up rights acquired through one's own compound-of-origin. Land and water rights are transmitted cognatically: "Order of birth or sex does not affect the inheritance potential of a child and *other things being equal* every member of a group of full siblings will inherit equally from both parents" (Leach 1961:137, emphasis in the original). Thus, following a period of several generations, we find that the cognatic descendants of an initial couple and the set of individuals holding rights to the land owned by this couple will, in the absence of other considerations, be the same.

However, as Leach is quick to point out, "In practice it seldom works out quite like that" (1961:137) and, as we shall see, other principles as well as contingent factors come into play. To claim an inheritance of land in Pul Eliya carries heavy obligations regarding the maintenance of the irrigation system. The degree to which individuals actually claim their inheritance rights as well as the degree to which such claims are honored are impinged upon by a variety of other circumstantial considerations: demographic fluctuations, changing power relations within and between communities, residential choices, contractual arrangements (e.g., sales), and so on. Thus, in some cases, inheritance claims may be renounced in favor of other people; or if not acted upon, as for example in the case of absentee owners, they may eventually lapse and be taken over by other community members. In other cases, inversely, claims submitted by highly respected new community residents, although not strictly legitimate, may eventually be recognized as valid, and consequently genealogical pedigrees and/or subcaste membership of those concerned will be adjusted accordingly. Effective group membership is thus revealed to be the aggregate result of particular contextually determined choices. In other words, corporate grouping (such as compound groups having land claims) is founded not upon the application of a synchronic "rule" such as of descent but upon an ongoing stochastic process relating to the devolution of land. This, of course, is the main theoretical thrust of Leach's analysis: "It is my thesis that jural rules and statistical norms should be treated as separate frames of reference, but that the former should be considered secondary to the latter" (1961:9).

The principal factor undermining the straightforward character of the compound group is, of course, the dispersal of persons and of land rights through marriage. "Of any group of siblings," Leach writes, "some are likely to move, at marriage, to villages other than that in which they were born and in which they are most likely to inherit land" (1961:137), and this in turn affects the types of inheritance claims their respective children will be most likely or able to make. In this way, Leach remarks, cognatic descent and marriage together act to fragment landholdings of individuals. Similarly, the landholdings of a compound group at one generation will tend to be dispersed at the next. As this process continues, such holdings invariably pass -- through spouses -- into the hands of persons who are not related to this initial group and/or who live in other compound groups or villages. In short, in a situation of cognatic descent, direct inheritance is, in itself, insufficient to assure continuity in landholdings within the compound group.

The key to the continuity of compound groups lies in the cross-cutting family groups or kindreds, *pavula*, that link them by marriage. *Pavula* is often used in reference to a distinctive common ancestry: In the broadest sense, members of the same subcaste or *variga* are *pavula* because they are purported to share ancestry; in the narrowest sense, half-siblings by different mothers are said not to share the same *pavula* in spite of the common father. However, affines may be included as well. Thus, for example, what Leach calls the "effective *pavula*" (1961:116) usually includes a number of brothers-in-law. Indeed, in this irrigation society, brothers are in competition over the splitting of inheritance, whereas brothers-in-law and step-brothers, who are able to pool inheritances from different sources, as well as husband and wife (since both sons and daughters inherit) form the basic social links of cooperation (1961:126-7). Thus, brothers-in-law are almost always included within the *pavula* if they reside in the same community (1961:106, 120). Even the co-parents to a marriage cooperate in the same manner as brothers-in-law, and they all use the same kin term: *massina* (1961:116). Moreover, the perpetuation of such "aggregate corporations," (1961:101) lacking representative leadership, is largely determined by appropriate marriage choices. Indeed, much of Leach's analysis is directed at how effective alliances are formed in which influence and property are pooled and/or transferred from one generation to the next within the landholding compound group. In short, both the actual structure of landowning groups and the existence of such groups over time derive not from the application of a descent "rule" but from the undertaking of particular matrimonial strategies.

MARRIAGE AS A STRATEGIC DOMAIN

A major feature of marriage strategies in Pul Eliya relates to Kandyan Sinhalese customary law. Kandyan rules of intestate inheritance (Leach 1961:46-8, 54, 173-4; see also Obeyesekere 1967) uphold equality of males and females as heirs. However, they also recognize that:

1. ancestral (*paraveni*) land should not leave the agnatic line associated with a compound on a permanent basis.
2. if no male heir is available, a female heir residing with her spouse in the compound may serve equally well to continue its agnatic line.

Given the agnatic orientation of Kandyan customary law, because it is the men who are the farmers and managers of land, and because "every man aims to live off the produce of his own land rather than to exist simply as a manager for his wife" (Leach 1961:83), most marriages (about 65%) -- especially those of more prosperous men -- are virilocal. Consequently, although there is no patrilineal descent principle at work, compound groups within the village, like the village itself as a whole, have a definite agnatic orientation. When females leave their natal compounds to reside virilocally according to the *diga* or normal marriage pattern, their inheritance typically takes the form of a quitclaim dowry (Leach 1961:135-6; Obeyesekere 1967:41-3). Women who marry out may also be given usufruct rights in land that revert to their natal compounds at death, thus satisfying criterion (1) above. Sometimes, however, an out-marrying daughter is given permanent gifts of land or water rights by her father. This creates a problem: i.e., land leaves the agnatic house-line, and this situation entails the expectation that somehow, this permanent dispersal of land will be reversed in the next generation or two by a marriage between the heir of this land and a representative of the original house-line from which it was dispersed.

While virilocal or *diga* marriages are the norm for intravillage unions, corresponding to 75% of marriages between Pul Eliyan residents, uxorilocal or *binna* marriages are almost equally common when one spouse comes from outside the village (1961:84). If the village a man marries into contains the compound-of-origin of his mother, however, he is in a position to make usufruct claims to her brother's land (1961:83-4). If his *binna* wife comes from a different compound than that of his mother, the agnatic continuity of claims in his mother's compound-line is thereby reduced. If, on the other hand, he marries back into his mother's (now the mother's brother's) compound, land claims in her compound-line are reconsolidated through the *binna* marriage. Indeed, in an intervillage marriage with a mother's brother's daughter (MBD: henceforth we will use kinship abbreviations), the husband effectively repudiates agnatic connections in his home village and attaches himself to his MB's compound in his wife's (and mother's original) village. In most other cases of intervillage *binna* marriage, the husband's family is poor and of low status relative to the wife and her group. A man is unlikely to marry back into his FZ's (father's sister's) compound in another village because in this case his father most probably out-married in *binna* fashion himself; the poverty of his father's natal family having occasioned the latter's out-marriage, so that his FZD, being of the same family, is hardly a good match (1961:86).

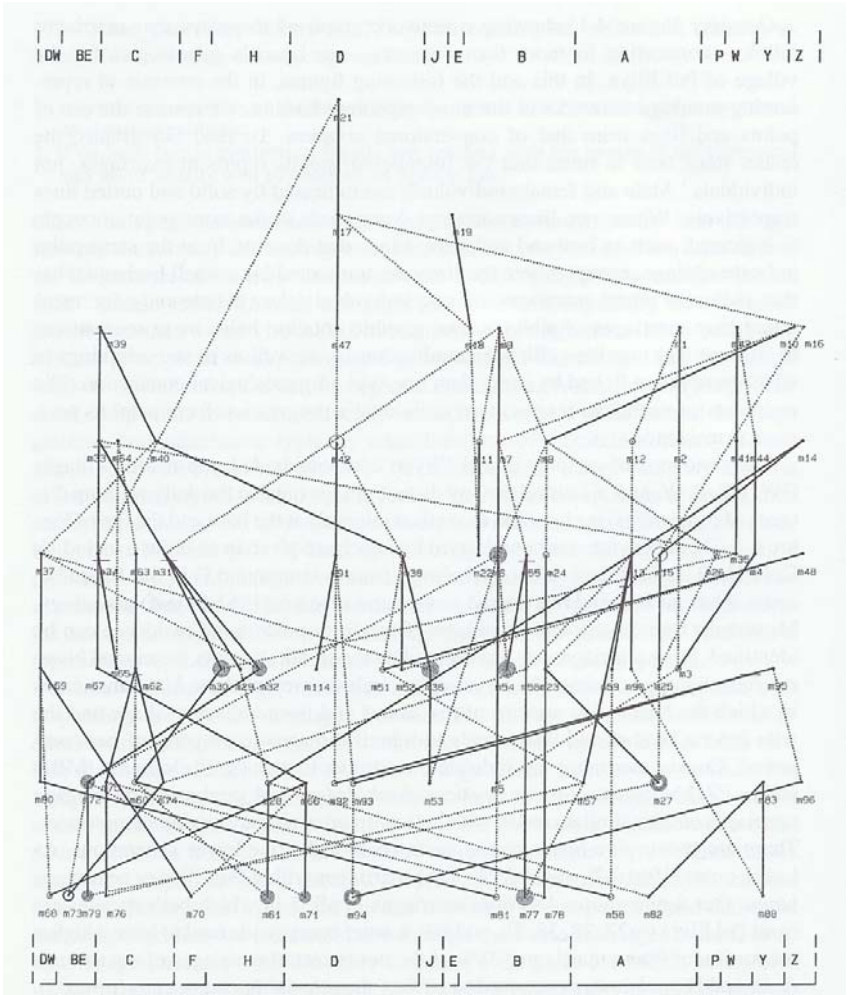
Consider Figure 4.1 showing a network graph of the ways that marriages relink -- connecting in more than one way -- in Leach's genealogies for the village of Pul Eliya. In this and the following figures, in the interests of representing marriage networks in

the most expedient fashion, we reverse the use of points and lines from that of conventional notation. To read our graphs, the reader must bear in mind that the (numbered) points represent marriages, not individuals.[1] Male and female individuals are indicated by solid and dotted lines respectively. Where two lines converge downwards to the same point a couple is indicated, such as husband and wife. Lines that descend from the same point indicate siblings, except where the lines are transected by a small horizontal bar that indicates plural marriages of one individual (shown here only for men) rather than marriages of siblings. Our graphic notation helps us to see patterns of descent and marriage alliance simultaneously, as well as relinkings among individuals or marriages, wherein people are linked by more than one type of genealogical connection. The end points of each line represent an individual's progression from natal to postmarital residence.

The residence of couples in Pul Eliyan compounds A-J and nearby villages DW, BE, P, W, and Y (with Z for any distant village outside the daily walking distance of 3 miles), is classified in vertical intervals at the base of Figure 4.1. The letters for compounds used by Leach are given in comparable order -- including C, F, H, D, J, E, B, and A but excluding I (minus compound G in our figure because it has no relinked marriages) -- to his (1961:flyleaf) genealogy. Movement from compound or village of origin to postmarital residence can be identified. *Diga* marriages are represented by the smallest points, uxorilocal *binna* marriage by open circles. The larger open circles are those *binna* marriages where the husband is poor or of low status and from a distant village and the wife has no brother and thus stands to inherit the agnatic property of her compound. Cousin marriages are indicated according to a scale of closeness (MBD and/or FZD being the closest) by successively larger dark circles if they are *diga* marriages and by similar circles with hollow interiors if they are *binna* marriages. There are two to five *binna* marriages in each of the five lower generations. As Leach notes (1961:83) about 25% of the marriages within Pul Eliya or nearby are *binna*. Our figure shows 18 *binna* marriages in all, five where both spouses are from Pul Eliya (m27, 28, 38, 58, and 60). Larger compounds tend to have a higher proportion of *binna* marriages: 38% of the nonancestral marriages of compounds A, B, and D are *binna*, as opposed to 10% of the remaining compounds ($p < .03$). The greater wealth of compounds A1, A2, B1, B2, and Dx (Leach 1961:233-4) attracts *binna* marriages.

Close cousin marriages, identified in Figure 4.1, are a means of property consolidation. In those cases where the *pavula* is lacking in resources, cousin marriages may be a way to conserve assets in that neither men nor dowries are lost to the family (1961:86). The same holds true for the consolidation of position and wealth in the case

[1]Cf. White and Jorion (1992) for discussion of this formalism; cf. also Héran (1993) for a comparable system of notation.



of the families of headmen. On the other hand, close kin marriages entail a reduction of the number of distinct inheritance lines converging on the couple; by limiting claim options, close marriages may prove a disadvantageous strategy.[2] The high ratio of MBD

[2] Leach argued (1961:88) that true cross-cousin marriage per se was unimportant to marriage alliances, even to the point of mistakenly arguing it was avoided in Pul Eliya; there is no statistical support for this in the case of MBD marriage. Leach reported only two first cousin marriages (m30 and 94) among the living village members. His statement ignored marriages m6, 27, 36, 54, and 77. There is clearly no avoidance of first cousin marriage for marriages within the village, particularly given concerns of status homogamy and wide possibilities of marriage outside. By our reckoning, 10% of the men with available female cross-cousins actually married them.

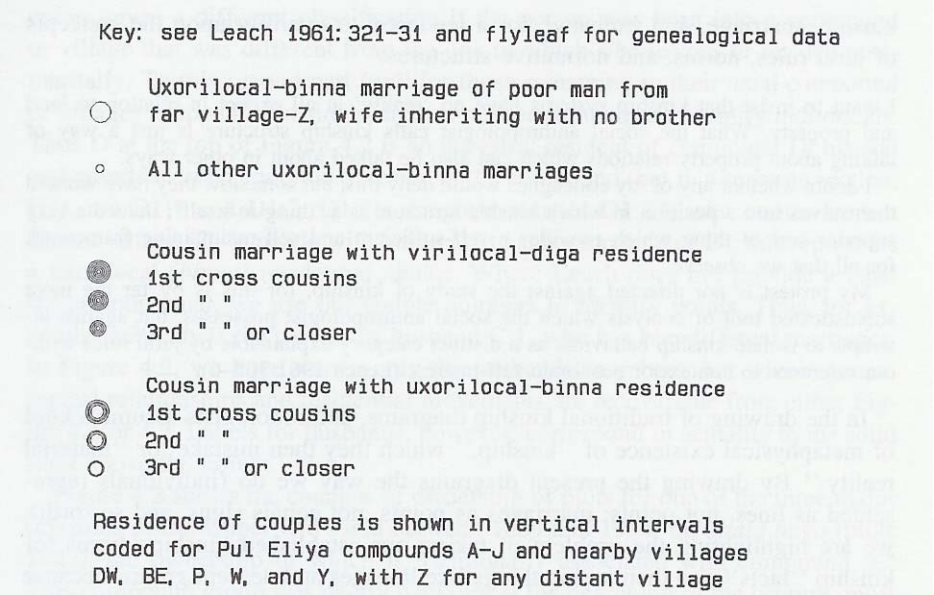


Figure 4.1 (*above and opposite*) Network Graph of Marriage and Residence in Pul Eliya

marriages (m27, 54, 77, 94, and 6, which is also a FZD marriage) to purely FZD marriages (m30 and 36), five to two, is partly in keeping with the property considerations outlined earlier. However, most of these marriages (five out of seven, including all three FZD marriages) are *diga* rather than intervillage *binna* unions, and the latter are associated not with poor families but with property consolidation in the families of village headmen. The two *binna* cousin marriages are with MBD, one from outside the village (m94), the other from within (m27). Only about 10% of the marriages in Figure 4.1 are with true cousins. In contrast, classificatory cross-cousin marriages are quite abundant. This may be associated with an overall patterning of marriages that facilitates the reconsolidation of dispersed claims to property.

THE METAPHYSICS OF KINSHIP

Pul Eliya was one of the first ethnographies to substitute in a fully principled manner a detailed analysis and theory of practice in the domains of land tenure,

kinship, marriage, and exchange for overreliance upon the concepts of jural rules, norms, and normative structures:[3]

> I want to insist that kinship systems have no 'reality' at all except in relation to land and property. What the social anthropologist calls kinship structure is just a way of talking about property relations which can also be talked about in other ways.
>
> I doubt whether any of my colleagues would deny this, but somehow they have worked themselves into a position in which kinship structure is a 'thing in itself'; indeed a very superior sort of thing which provides a self-sufficient and self-maintaining framework for all that we observe.
>
> My protest is not directed against the study of kinship, for this is by far the most sophisticated tool of analysis which the social anthropologist possesses, but against attempts to isolate kinship behaviors as a distinct category explainable by jural rules without reference to context or economic self-interest (1961:305-6).

In the drawing of traditional kinship diagrams, anthropologists assume a kind of metaphysical existence of "kinship," which they then mistake for "material reality." By drawing the present diagrams the way we do (individuals represented as lines, not points; marriages as points, not equals signs, and so forth we are highlighting the problem of taking our established kinship idioms kinship "facts" and then seeing things like lineages and descent groups because our kinship diagrams lead us to see them that way. Schneider (1964) made some of these points in his *Critique of the Study of Kinship*, even if his objective was to convince anthropologists to abandon kinship. But if he meant for us to abandon our particular metaphysics of kinship – the kind that leads us to think the traditional kinship diagrams automatically tell us something about social structure – then he is in agreement with Leach and much of contemporary anthropology. It is not the existence of kinship ties but their activation or inactivation that is significant.

THE NETWORK OF LAND TRANSACTIONS

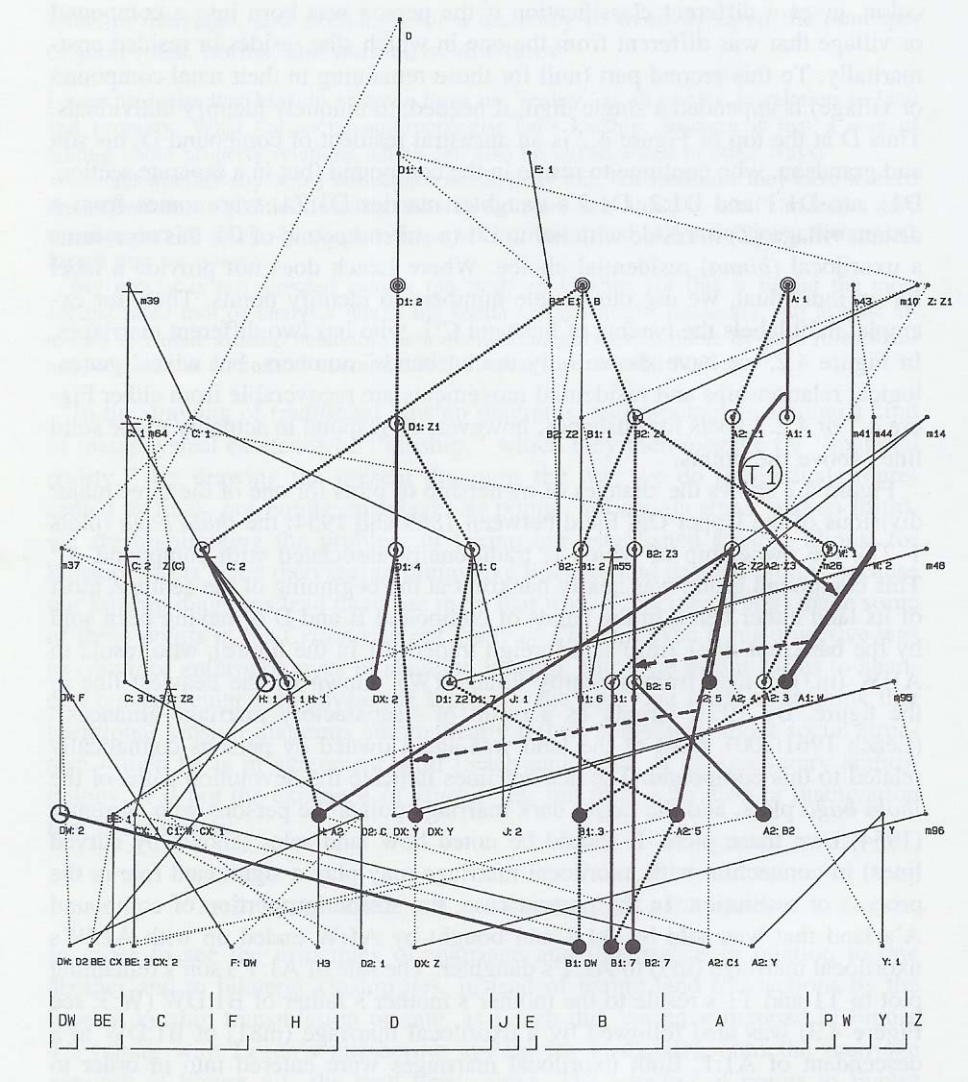
In order to see the principles of marriage and inheritance in relation to one another, instead of listing land transactions by the type of kinship transmission or sale, as did Leach, we have mapped in Figure 4.1 (along with Leach's numbering system for husbands), onto the marriage network, the land transactions. The labeling of points in the next figure (4.2) provides a correspondence between Leach's (1961:321-31) labels for individuals and the numbers we assigned (arbitrarily) to marriages. The first part of his label classifies individuals by current residence in compounds -- such as A, A1, A2, B, B1, B2. . ., or J -- or nearby and distant villages (BE, DW, P, W, Y, and Z for Bellankadawala, Diwulwewa, Periyakkulam, Wiralmurippu, Yakawewa, and distant villages, respectively). The second part, following a colon, gives a different classification if the person was born into a different compound or village than the one

[3] There are, of course, precursors to Leach's approach in British social anthropology, ranging from Raymond Firth's early work to Turner (1958); with Mitchell (1969) and network analysis a response, and Fox (1978) a worthy successor.

in which s/he resides or resided postmaritally. To this second part (null for those remaining in their natal compound or village) is appended a single digit if needed to uniquely identify individuals. Thus D at the top of Figure 4.2 is an ancestral resident of compound D; his son and grandson who continue to reside in the compound (but in a separate section, D1) are D1:1 and D1:2. D1:2's daughter marries D1:Z1, who comes from a distant village (Z) to reside with her in D1 (a subcompound of D), a uxorilocal (*binna*) residential choice. Where Leach does not provide a label for an individual, we use our couple numbers to identify points. Thus, for example, m39 labels the parents of husband C:1, who has two different marriages. On Figure 4.2, we have shown only the husbands' numbers, but wives' genealogical relationships and residential movements are recoverable from either Figure 4.1 or 4.2. Labels for husbands, however, correspond in actuality to the solid lines above the points.

Figure 4.2 shows the changes of ownership of plots for one of the three major divisions of the Upper Old Field between 1889 and 1954: the *Ihala baga* (plots 1-27), the ownership of which is traditionally associated with compound A.[4] This compound group was nearly bankrupt at the beginning of the century, most of its land either being in the hands of compound B and D or having been sold by the bankrupt A1:1 (m2) to a foreign trader (T1 in the figure), who resold to A1:W (m3), a man from a nearby village (W), shown by the heaviest line in the figure. By 1954, largely as a result of "satisfactory marriage alliances" (1961:200), most of the land was again owned by persons cognatically related to this compound. The heavier lines indicate the devolution paths of the *Ihala baga* plots, and the larger dark marriage points the persons who currently (1954) own these plots. It should be noted how land sales (shown by curved lines) in connection with uxorilocal marriage may play a significant role in the process of restitution. In the present case, the sizable proportion of compound A's land sold by A1:1 that was bought by A1:W ended up with A1:W's uxorilocal marriage (m3) to A1:1's daughter. Sale of A1:1's son's remaining plot to T1 and T1's resale to the mother's mother's father of B1:DW (W:3, see Figure 4.3) was also followed by a uxorilocal marriage (m81) of B1:DW to a descendant of A1:1. Both uxorilocal marriages were made to return land, alienated through sale, to the "agnatic estate" as a means of validating land claims according to Kandyan legal precepts and the Pul Eliyan belief that title is always by right of inheritance (1961:193). A1:W (m3) gave a part of his purchased holdings (validated through his marriage) to a classificatory brother (MZS), B2:5 (m23), of his son-in-law, thereby securing his own descendant's claims to this land within compound B, since B2:5 was also a descendant of A:1.

[4] The possession of a plot in the Upper Old Field (holdings in the Lower Old Field merely reflect those of the Upper, Leach 1961:181) is necessary in order to be a full member of the Pul Eliya community. "Thus, those who reside in the village but do not own land there are *not* Pul Eliya *minissu* [a person of Pul Eliya]" (1961:193). Such landholding also gives "some kind of latent claim" (*ibid.*) in a traditional living compound.



Whereas “the individual facts are chaotic,” according to Leach's overall perspective (1961:146), “*en masse* they have a pattern.” What is it, then, that mediates this overall integration? For him, the answer is clear: It is the man-made environmental context -- the topographical realities of land and water and climate to which people must continually adapt -- that most of all determines the systematic quality of their behavior (1961:9). Without denying the importance of such material constraints, we

would suggest that there are others that relate to higher-order regularities of the social context

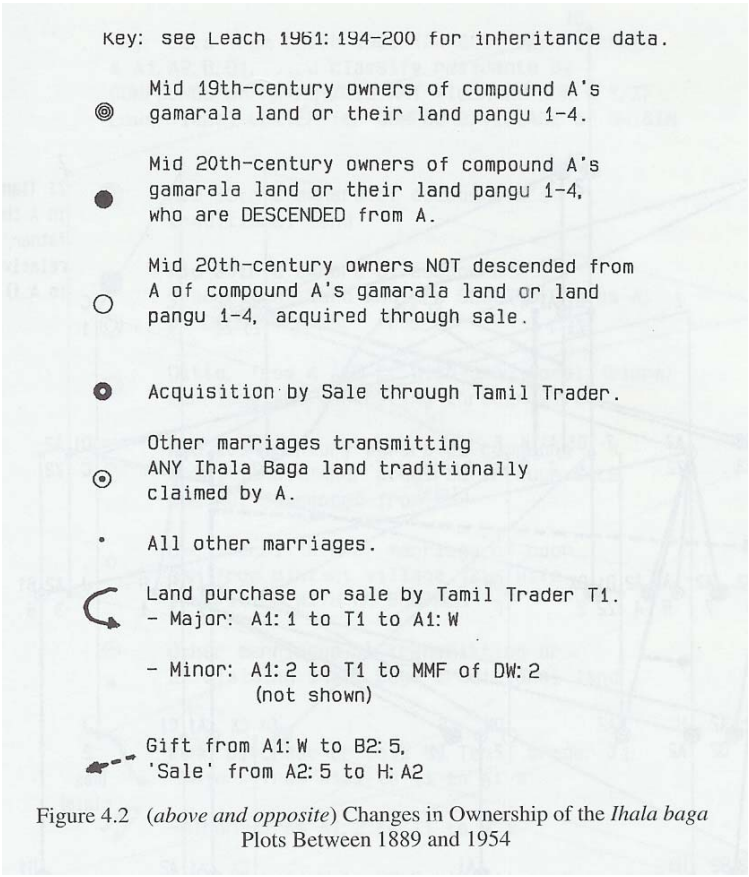
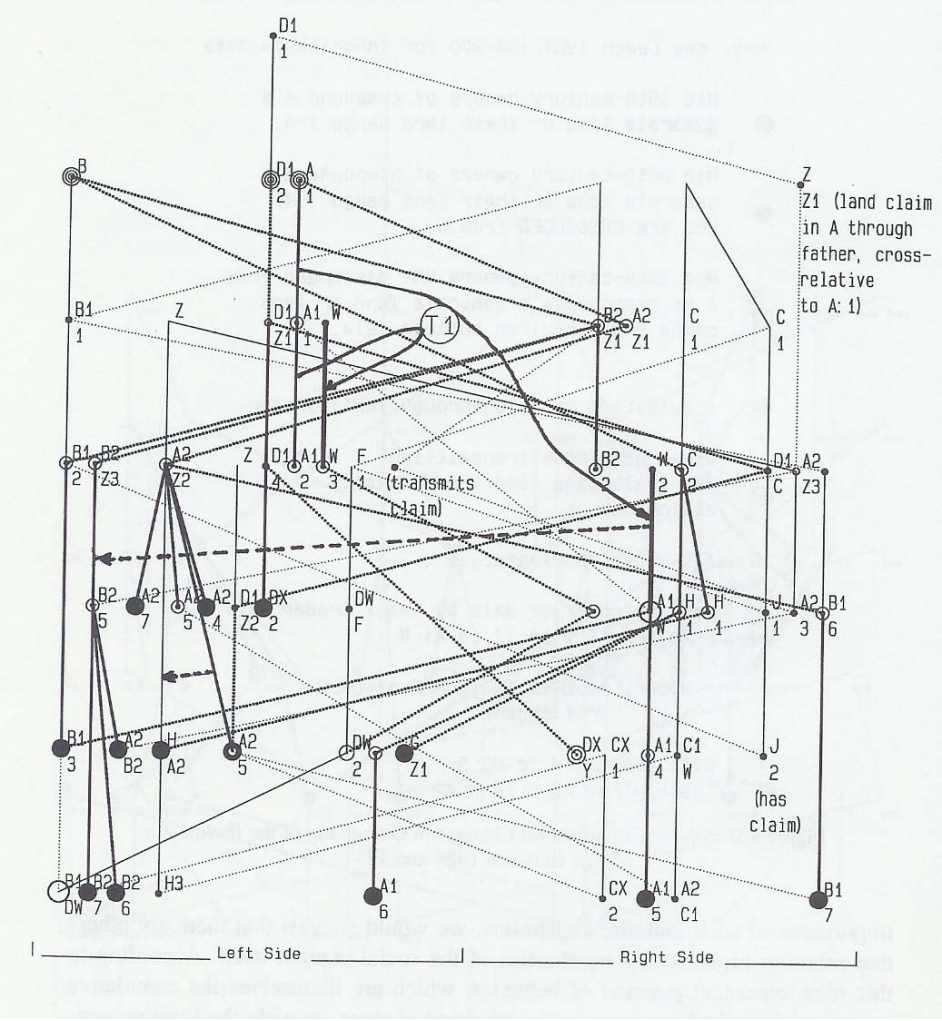


Figure 4.2 (*above and opposite*) Changes in Ownership of the *Ihala baga* Plots Between 1889 and 1954

itself. According to this idea, emergent patterns of behavior, which are themselves the cumulative outcome of particular, strategically informed choices, provide the limiting conditions for the systematic aggregation of subsequent actions. Insofar as the linkage between the devolution of lands and the continuity of localized kinship identities is concerned, such overall relational constraints, we suggest, pertain above all to the organization of the Pul Eliya marriage network itself.

Leach rejects the idea of "marriage alliance" as an idealist category (1961:112), seeing marriage as a strategic domain. It is nonetheless surprising that he makes no attempt to study the overall construction of marriage linkages except to say that they

form statistical patterns.[5] Thus, while paying close attention to the aggregate structuring of landholding groups, he does not envisage the possibility that the matrimonial initiatives he shows to be so instrumental in the definition and maintenance of such groups do, themselves, aggregate in an orderly fashion. It is to this that we now turn.



[5] A reason for his reluctance to analyze his marriage network is Leach's (1961:296) rejection of Radcliffe-Brown's conception of social structure "as a network of relationships between 'persons' or 'roles'" in which "[t]he stability of the system requires that the content of such relationships shall be permanent." Radcliffe-Brown's kinship network is indeed an idealist construct, and the shift to a more flexible kind of network analysis at the empirical level (as in Mitchell 1969) is foreshadowed by Leach's work.

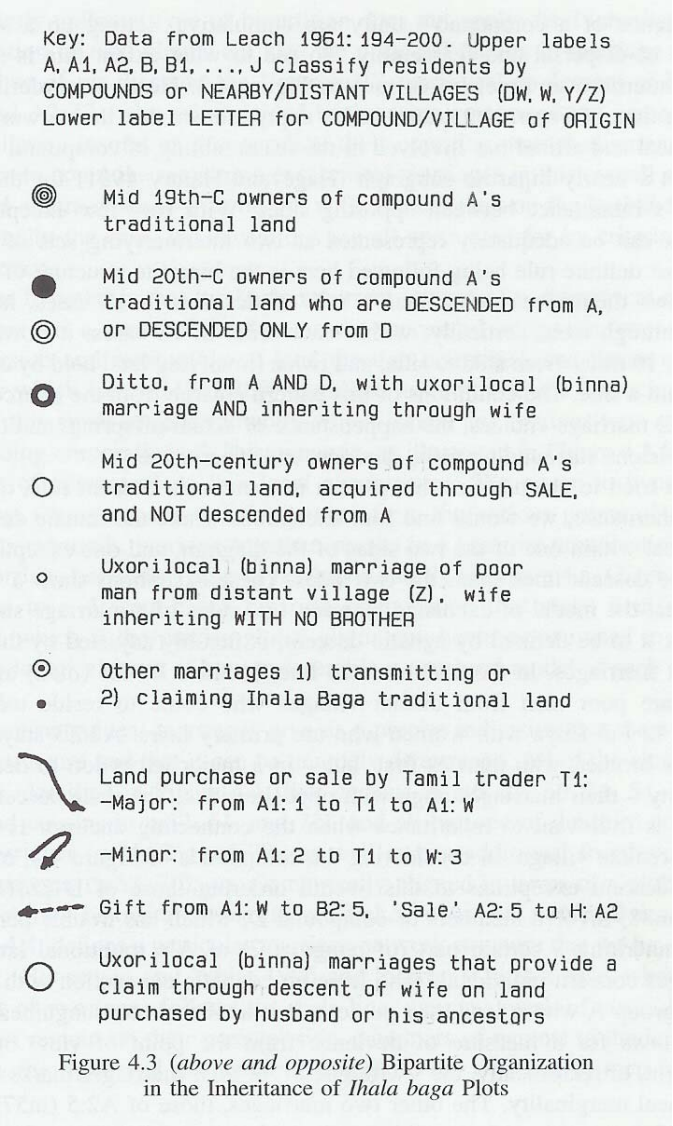


Figure 4.3 (*above and opposite*) Bipartite Organization in the Inheritance of *Ihala baga* Plots

MARRIAGE AS A SOURCE OF STRUCTURE

Leach emphasizes the strategic rather than structural dimensions of alliance. For this reason, he does not consider the systemic properties of the network of marriages involved in the ongoing dynamic of dispersal and reassembly that underlies the continuity of compounds as distinct landholding groups. As should now be evident, the

various ways in which marriage comes into play in the maintenance of a compound's unity are cumulative, setting up a systematic process of dispersal and reassembly. To see to what extent this is so, to see these patterns over time, let us turn to Figure 4.3. Here, a reordering of the relevant data of Figure 4.2 (same codes apply) shows that the network of consanguinal and affinal ties involved in the reassembling of compound A's lands contains a nearly bipartite subgraph (Hage and Harary 1991) for the flow of women's inheritance between opposing sides. With very few exceptions, this network can be adequately represented as two intermarrying sets of relatives. The most definite rule being followed here is the bipartite structure of the property flows themselves, rather than a rule of descent. In 18 cases, inheritance flows through men, vertically, within each side. In 18 cases, it flows through women, 16 times from side to side, and twice (involving land held by compound D) within a side. The conditions of this pattern emerge from the interconnection of actual marriage choices, the happenstance of actual offspring, and the claims and decisions surrounding gifts, dowries and inheritance.

If we tried to characterize this pattern in terms of a descent rule, quite apart from inheritance, we would find four exceptions where the female descent line is vertical, within one of the two sides of the diagram, and one exception where the male descent line spans the two sides. These exceptions show a variety of ways that the model of exchange between two sides of a marriage structure, if we took it to be defined by agnatic descent, is flexibly adjusted by the realignment of marriages. In the male descent line, brothers D1:Z1 (m42) and A2:Z3 (m15) are poor men from distant villages who come to reside uxorilocally (*binna*) in Pul Eliya with women who are primary heirs. A2:Z3 stays initially with his brother, who marries first, but -- in a major exception to descent-rule regularity -- their marriages align with opposite sides. The male descent line, of course, is irrelevant to inheritance when the connecting ancestor is poor and from a remote village. Of the four female-descent exceptions to this overall ordering, in the compound-centric view of Figure 4.3, those of D1:Z1(m42) and D1:C(m38) involve members of compound D, which has trouble perpetuating itself, inheriting a certain part (of *panguva* 2) of A's traditional land. These marriages concern individuals who have no cognatic connection with the compound group A whose land they possess, as though their consanguinal marginality allows for a measure of deviance from the point of view of alliance alignment, or reciprocally, the "wrongness" of their marriages marks their consanguinal marginality. The other two marriages, those of A2:5 (m57) and B1:DW (m81), are oriented to validate or transfer land claims from father-in-law to son-in-law; that is, they are undertaken with explicit strategic interests in land claims to be acquired or validated through the inheritance rights of the wife.[6] The principles that emerge from an examination of bipartite

[6] A2:5 was the first marriage of a third son of the dominant faction: his uxorilocal marriage (m57) provided him with capital for land from the father-in-law D1:Z2 (m51) from the poorer compound D which was also on the verge of disintegration due to the taint of two wrong *variga* marriages (1961:316). B1:DW's marriage attempted to validate a claim over land purchased by his ancestor through a uxorilocal marriage (m81) with a

tendencies and exceptions are that land inheritance and the validation of land claims are also the principal factor in marriage realignments as against a descent rule for sidedness. Thus, if we discount the "marginal" patrilineal co-descent of brothers A2:Z3 and A2:Z2 (who even resided in the same compound but came from a distant village) as it contradicts their opposing marital alignments, and we were to count the remaining exceptional marriages in this overall ordering as aligned contra-descent-wise on the wife's rather than on the husband's side, as is normally the case, the exceptions are all accounted for by criteria related to inheritance.

It is our hypothesis that the basic recurrent pattern of a diametrical ordering of alliances has a cumulative effect on the successful integration over time of the dispersion and reassembly of land through marriages, and hence over the principles which Leach (1961:300) identifies as central to the "structural continuity in this small-scale community which lacked any obvious type of exclusive on-going corporations." This dynamic, as illustrated in Figure 4.3 from the viewpoint of compound A, is a local phenomenon. We go on to hypothesize further that the aggregation of this pattern from the various points of view of different compounds, working together, results in a bipartite organization of the whole marriage network. This will be shown shortly in Figure 4.5. Given diverse exceptions to a descent-based bipartite organization that make it difficult to determine which is the precise global alignment, however, we need to address the methodological issue of how to assemble a structural model of such a global alignment.

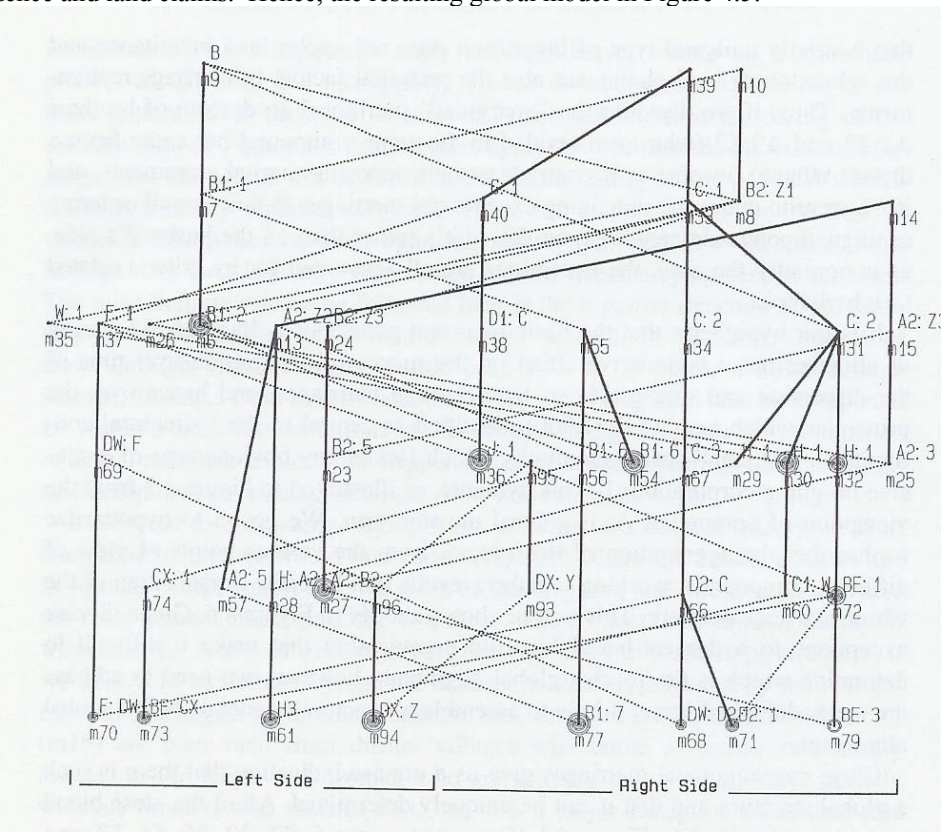
Close consanguinal marriages give us a precise indication that there is such a global structure and that it can be uniquely determined. All of the close blood marriages identified in Figure 4.1 (first cousins in m6, 27, 30, 36, 54, 77, and 94; second cousins in m32, 61, and 72), and all but one of the third cousin or closer marriages (m71, 73, and 79), as well as two additional fourth cousin or closer marriages (m68, 70) are diametrically aligned in terms of a global marriage structure. The overall, bipartite, sex-linked alignment of affinal ties, shown in Figure 4.4, defines a particular marriage network structure that we have called *sidedness* (Houseman and White 1996 and in press). In this case, whereas the alignment of marriages follows the male line, we may speak of *viri-sidedness*: while men remain on their parents' side, daughters of parents to the left marry men from the right, and daughters of parents to the right marry men from the left in 19 out of the 21 marriages (90%) in the figure ($p < .0007$), and in all 16 of the marriages associated with first and second cousin marriage ($p<.00002$).[7] Given this low rate of exceptions, it is possible to construct a unique best-

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descendant of the former sellers who had held hereditary title. He sold his wife's land to his brother just before divorced her -- "to prevent his wife's relations from recovering their land" (1961:199), an outcome that was much contested but led to the dissolution of compound D by her disinherited relatives. He then gave this land to H:A2, a brother living in compound H, which had been created from the former compound D.

[7] The count of marriages refers only to those where both sets of parents are known. The probability of these occurrences is based on an expectation that in a random graph only half of the marriages will fit a model of sidedness. Since not all of the circuits in the graph are independent, we note more precisely in the first

fitting model of sidedness for the marriages associated with blood marriages. Given this model, we can then add the other marriages from Figure 4.1 so that they best fit the model of sidedness and also the principles for exceptions involving inheritance, residence and land claims. Hence, the resulting global model in Figure 4.5.



In Figure 4.5 all the marriages in Figures 4.1 and 4.2 have been reordered (according to the sides in 4.4 and continuing the labels for husbands introduced in 4.2) to visually clarify the existence of a pattern of viri-sidedness: in 87% of marriages ($p < .002$) men take the side of their parents, daughters of parents to the left marry men who take sides on the right, and daughters of parents to the right marry men who take sides on the left.

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instance that 17 of the 19 independent circuits are sided, as are all 16 of the independent circuits in the second case, and we compute the probability of this occurrence under the null hypothesis accordingly.

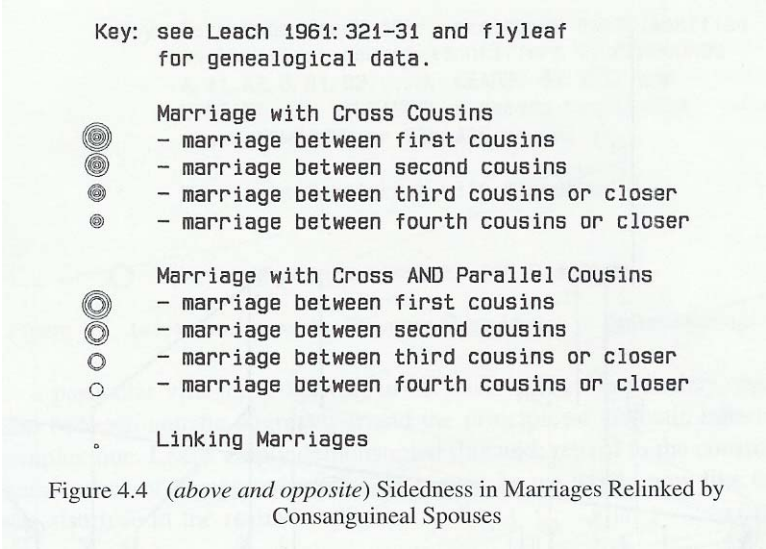


Figure 4.4 (*above and opposite*) Sidedness in Marriages Relinked by Consanguineal Spouses

Before examining this higher-order marriage structure more closely, let us remark that it would seem that something similar to the dynamic outlined above may also be taking place on the more inclusive, intervillage level within the largely endogamous zone comprised of Pul Eliya and its 5-6 surrounding villages. Thus, as a result of intervillage marriages, there is a fair amount of people from one village owning land in others. However:

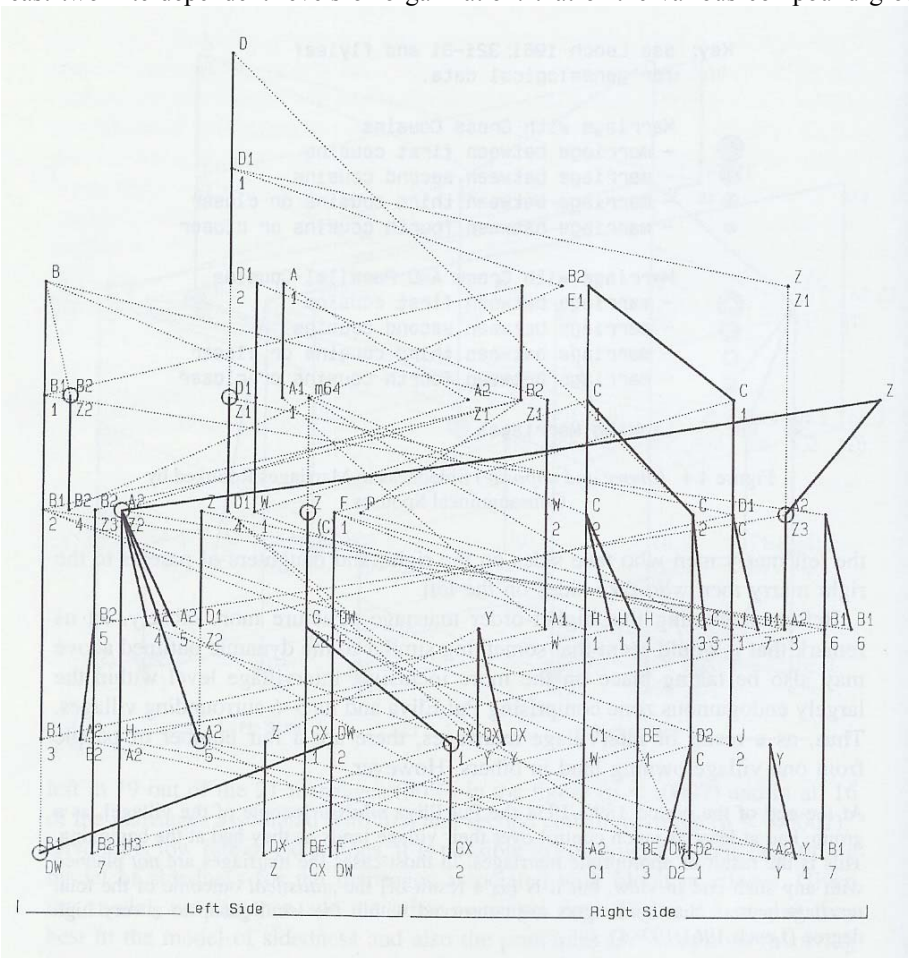
> At the end of the period 1890-1954 the Pul Eliya *minissu* [people of the village], as a group, had at least as much control over their village lands as they had at the beginning. This is the result of appropriate marriages. In most cases the marriages are *not* planned with any such end in view, but it is [as a result of] the *statistical* outcome of the total marriage pattern that land rights are conserved within the local group to a very high degree (1961:193-4).

There are insufficient data to identify the form of the intervillage marriage network. However, Leach's comments concerning the inhabitants of Wiralmurippu village, with whom 21% of Pul Eliya's marriages have taken place, suggest the presence of a sidedness pattern. He wrote:

> [C]onsidering the density of this affinal linkage between the two villages, it is at first surprising how little "cross-ownership" there is. In 1954 only 5 acres of Pul Eliya land [were] registered in the names of Wiralmurippu residents. Why? What clearly happens is that, *through the reciprocity of marriages, land titles which have passed out of the village are brought back again* (1961:139, emphasis added).

In this light, it would seem that the characteristic complexity of the Pul Eliyan social system -- the absence of a consistent set of overarching structural principles -- spans at

least two interdependent levels of organization: that of the various compound groups



within the significantly endogamous village community, and that of the village itself within the almost completely endogamous set of neighboring villages of the same subcaste. Indeed, the ongoing relationship between the devolution of landholdings and the continuity of localized identities (including compound groups) is acted out on both of these levels simultaneously. On both levels, this relationship, grounded in the indeterminacies of cognatic descent, is mediated, as we suggest, by matrimonial sidedness.

It is worth emphasizing, however, that we should not necessarily expect to find viri-sidedness on the intervillage level: Such a clear agnatic orientation may indeed be a

local phenomenon confined to the network of marriages centered on a particular village.

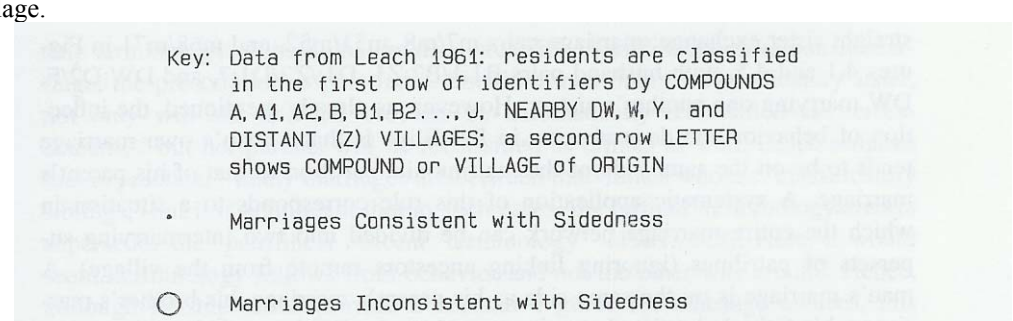


Figure 4.5 (*above and opposite*) Bipartite Organization of Entire Marriage Network

Moreover, in the case of Kandyan society, the relationship between agnatic aggregation and the principle of cognatic inheritance is a complex one. Leach amply demonstrates this with regard to the constitution and maintenance of compound groups. However, as we would now like to suggest, it is also true in the realm of alliance.

SIDEDNESS

One would not suspect from reading Leach that the networks of Figures 4.3, 4.4 or 4.5 would display an overall statistical regularity of (viri-)sidedness.[8] However, he has led us to be wary of entities that offer such a close approximation to unilineal entities on the one hand and to prescriptive alliance structures on the other. It is therefore necessary to specify the exact nature and the status of this bipartite organization and of the opposed collectivities that it defines.

Prior to their own marriage, individuals are embedded, through the marriages of their parents and siblings, in a network of prior marriage ties. How do their own individual marriages relate to this preexisting network? Specifically, to what extent are their own marriages consistent with the overall pattern formed by these preexisting affinal ties?

In its simplest form, a bipartite ordering of a marriage network corresponds to a situation in which marriages always take place between persons whose parents' marriages are on opposite sides of the marriage partition. The entire marriage network can be divided into two supersets of intermarrying sibling groups. We designate this most basic bipartite network structure by the term “dividedness.” *Dividedness* obtains

[8] We infer from Fox's (1967) comments on direct exchange in Ceylon that Leach discussed his findings as a statistical tendency towards two-sided direct exchange, but there is no such analysis in Leach’s book. It would have been counter to the objectives of his book to have done so if its demonstration required analysis of intermarriage frequencies between groups as defined by rules of descent. The present tools of analysis provide an alternative Leach did not consider.

in Pul Eliya in a trivial fashion: We observe only three cycles of intermarrying sibling groups, and all three are instances of straight sister exchange: marriage pairs m7/m8, m51/m52, and m68/m71 in Figures 4.1 and 4.5, with husband pairs B1:1/B2:Z1, D1:Z2/D1:7, and DW:D2/F:DW marrying one another's sisters. However, as already mentioned, the inflection of behavior one does observe in Pul Eliya is that a man's own marriage tends to be on the same side of the matrimonial partition as that of his parent's marriage. A systematic application of this rule corresponds to a situation in which the entire marriage network can be divided into two intermarrying supersets of patrilines (ignoring linking ancestors remote from the village). A man's marriage is on the same side as his parent's marriage, his brothers' marriages, his father's brothers' marriages, and so on. On the opposite side are the marriages of his sisters, his father's sisters, et cetera, and the marriages of his wife's parents, her brothers, her father's brothers, and so forth. This is the marriage network configuration we have called "sidedness," specifically *viri-sidedness*. *Uxori-sidedness* consists in the inverse pattern: A woman's marriage is on the same side as the marriages of her parents, sisters, mother's sisters, and so on.

It is worth emphasizing that matrimonial sidedness does not imply any particular distribution of group membership. In the case of Pul Eliya, for example, both side alignment and compound grouping have a clear-cut agnatic orientation. However, in spite of this, side alignment coincides neither with local compound group residence nor strictly (at a global rather than compound level like Figure 4.3) with the inheritance of compound group land. Nor are sides themselves recognized as separate, descent-based social units. The principle that organizes marriage tends to be viri-sided, as in inheritance, but bilateral kin ties and not unilineal descent validate the marriages as channels of inheritance. In short, side organization is an *alliance* structure, in no way deducible from considerations of group membership.

On the other hand, sidedness does not imply any system-centric, "prescriptive" alliance scheme. Indeed, sidedness constitutes an ongoing egocentric ordering process dependent upon existing marriage ties, a synchronic structure. In Leach's terms, sides are a statistical rather than jural structure. In other words, sidedness is an emergent phenomenon whose distinctive form does not consist in the application, in each case, of some kind of marriage rule, but rather in a systematic tendency towards a sex-linked bipartite ordering of the marriage network as a whole. From this point of view, sidedness refers less to a particular type of marriage than to a particular condition governing the overall integration of various marriage types.

Sidedness is fully congruent with the egocentric, Dravidian-type ("two-line"), kinship terminology found in Pul Eliyan society. Indeed, we have argued elsewhere (Houseman and White in press) that Dravidian-type terminology may be seen as a recoding of side organization from the perspective of the participant in marriage alliances. The two-sided template is, to be sure, a normative guide to sided marriage choices. At the same time, marriage strategies entail that such norms are occasionally broken, so that sidedness is not an automatic result of people marrying into appropriate

categories. Although the Dravidian-type kinship terminology of the Sinhalese does prescribe classificatory cross-cousin marriage, the prescription is postfacto. Should a man marry a classificatory sister, not only will she and her brothers be automatically reclassified as "cross-cousins" but her parents will be reclassified as affines as well. Leach remarks that in practice, "many marriages are between individuals who are 'classificatory siblings,' but it is significant that in such cases, the 'affinal' terminology always supersedes the 'patrilineal descent' terminology" (1961:128). Here, it would seem, terminology follows from behavior and not the other way around. Hence, while kinship terms provide a normative guide for marriage choices this guide is followed mostly in the special case where there are marriages between consanguinal relatives where role relationships are already closely interlocked. In the more general case, the norms associated with kinship terminology are adjusted "on the ground" in conjunction with interests and claims regarding land and water rights and their inheritance or validation through marriage.

The motivation towards sidedness at the actor level is seen in the perspective of those arranging marriages, who have a normative orientation towards specific exchange marriages in which both sides benefit equally and symmetrically, but also a strategic interest in validating claims over land detached from its agnatic source through marriage with a descendant from that source (1961:174, 193). Note how in Figure 4.3 all of the inheritance of compound A's land that flows through women, exclusive of members of the disputed compound D, moves from one side to the other, as if there were direct exchange between the sides.

Reciprocal exchange is associated with balance. A bride and groom contribute to the balance of resources between the sides of a shared personal kindred when their marriage restores, to the agnatic line of the groom's residential compound, rights in land or water that have devolved to an opposite-sided nonagnatic relative, who now is taken as a bride. Isogamous marriage, resource- and status-balanced, is one of the orienting motivations of marriage in many Dravidian groups (Milner 1988, Trautmann 1981), where direct or reciprocal marriage exchanges are common. Leach (1961:300-1) would argue, however, that the concerns for status-balancing in Pul Eliya arise out of the system of land use and allocation of land rights and dispose individuals towards cooperation and reconsolidation of land fragments among affines. In any case, he shows how both local changes in field layout (1961:208-9) and more global changes in land tenure under British administration (1961:217-40) led to changes in kinship and marriage organization.

Sides, as an emergent property of a marriage network, are not to be confused with moieties as a mechanism for direct exchange. As we have shown elsewhere (Houseman and White in press), although sidedness and moiety organization can both be subsumed under the idea of dual organization, they represent very different phenomena. Moieties are classificatory entities implying membership that can be reckoned according to a principle of unilineal descent; sides are behavioral entities entailing a particular set of

interdependent roles within a social network of bilaterally connected marriages.[9] The overall integration that sides imply, is, of course, proportional to the relational constraints inherent in the network itself. As we have seen, the principal structural constraint is the degree of genealogical connection between the alliances that connect the sides. The interlocking social network among relatives relinked by marriage between close consanguinals (as in Figure 4.4, with 100% viri-sidedness for those relinked by first and second cousin marriages) is more constrained towards the viri-sidedness prescribed in Pul Eliyans' Dravidian kinship terminology whereas affines and relinkage by distant consanguinal marriages are less constrained (90% sided for Figure 4.4 overall, and 87% for Figure 4.5) to a consistent viri-sided pattern of marriages.

To the extent that genealogical (including affinal) connections exist for all of the marriages, sidedness is more accurately spoken of as a *multicentric* alliance structure: It is a structure with integrative properties that operate across the viewpoints of multiple participants. Discovery of a principle of dual organization in marriage structure that is not synonymous with moieties, however, requires a rethinking of anthropological categories. In this sense, the concept of sides requires more precision and closer specification as to its realization in Pul Eliya.

AMBILATERAL SIDEDNESS

Viri-sidedness assigns a man's marriage to the side of his own parent's marriage, that is, to the side opposite that of his wife's parents' marriage. In the case of perfect viri-sidedness, this ordering applies to every case, and each marriage is consistent with the patterning of the network of prior affinal ties, in which both husband and wife are embedded. Sidedness, however, as we have argued, is a statistical regularity, and is often a local structure, excluding remote relatives, and more consistent from the viewpoint of local groups, compounds, or closely intermarried blood relatives. We should therefore not be surprised to observe, in a population at large, a number of exceptions to an overall structure of sidedness. In such "wrong" marriages, which may derive from any number of factors, the husband's parents' marriage and the wife's parents' marriage will be on the same side of the matrimonial partition. As such, these marriages will be inconsistent with the ordering of preexisting affinal links between their partners and other persons. Under certain conditions, however, this inconsistency will be greatly reduced. Such is the case, for example, where the prior affinal ties linking either the husband's or wife's marriage to the marriages of their respective parent's, siblings, and so on, are held to be socially irrelevant. A husband coming from a poor family in distant village to reside uxorilocally, in an area where local endogamy is the norm, is just such a case. The connections linking his own marriage to those of

[9] This way of defining role concepts (White and Reitz 1983) as opposed to group concepts has ably demonstrated its utility (see the journal *Social Networks* for extensive citations).

his parents, brothers, sisters, and so on., may be known, but they will be of little social significance in the new village. Specifically, these connections may be disregarded insofar as the structuring of the local alliance network is concerned. In such a situation, it is the wife, whose preexisting affinal connections *are* highly relevant, who becomes the reference for determining the ordering of the marriage on one side or the other. Normally, in a situation of viri-sidedness, this woman's marriage will be allocated to the side opposite that of her brothers' marriages. However, among certain populations, if the woman in question has no brothers and is the sole heir of her father's estate, the situation may change. It is, for example, a well-attested feature of Eurasian social structure (see Goody 1990) that in the absence of male heirs, this position may be filled by a daughter; in other words, a son-in-law may substitute for a missing son. In the case of sidedness, in keeping with the daughter's taking on an inheritance role normally played by a male, her marriage may be allocated to the same side as that of her parents', precisely as her missing brother's marriage would have been. Or, as seen from the husband's point of view, in keeping with his adoption of a consanguinal role -- i.e., that of son with respect to his wife's father -- a man's marriage will be allocated to the side of the marriage of his father-in-law. In this way, in some societies with dual organization, "wrong" marriages can be accounted for in terms of the systematic application of a further principle of social organization, one pertaining to residence, inheritance, ceremonial affiliation, and so on. In such cases, the actualization of sidedness may entail a number of minimally inconsistent exceptions, as if certain couples were "recoded" for largely explainable reasons. To the extent that this is indeed the case, we may speak of "ambilateral" sidedness.

Ambilateral sidedness is what we find in Pul Eliya. This is directly related to the Kandyan rules of cognatic inheritance and the attendant distinction between *diga* (virilocal) and *binna* (uxorilocal) marriage. In the case of *diga* marriages, we should expect the viri-sided pattern to be strictly adhered to. The situation is most ambiguous, however, in those *binna* marriages in which the husband removes himself, residentially and otherwise, from the locus of the network of his prior kinship connections, and when the *binna* marriage is to a woman from an estate without male heirs. Here, if the woman's marriage is allocated to the same side as her parents´ marriage, violating the viri-sidedness pattern, her status as sole inheritor allows her to take over the missing brother's position without creating conflicts for the husband if he is a poor man from a remote village. This contrasts with the *binna* marriages of men from within Pul Eliya or the neighboring villages, whose preexisting ties with other individuals are highly significant within the local network and cannot be ignored, and with the *binna* marriages of women having brothers, where the sidedness ordering implied by the latter's marriages cannot be easily dismissed.

If the sides in Figure 4.5 were perfect, all the male lines would align vertically on the left- or the right-hand sides, and all the female lines would be between sides, the daughters of the left marrying husbands on the right side and daughters of the right marrying husbands on the left. Where both partners come from within Pul Eliya, there

are no exceptional marriages, but there are nine other marriages that violate viri-sidedness: the open circles in Figure 4.5. There are six types of exceptions, of which the first four fit the *binna* pattern of marginality of the husband:

1. Binna marriages m42, m15 and m13 of poor men D1:Z1, A2:Z3, and A2:Z2 from distant villages to inheriting daughters with no brothers. Note that brothers A2:Z2 and A2:Z3 also violate a descent-based rule for sidedness.
2. Binna marriage m11 of (poor) man B2:Z2 from an unknown village to a daughter who inherited a subcompound in her first marriage, and where, in her second marriage, the brother's rights are no longer a consideration.[10]
3. Liaison m63, outside marriage, of Z(C), a poor man from a distant village, where the offspring was adopted by the mother's husband.
4. Second marriage m75 of a genealogically marginal man CX:1 to a woman from village Y, shifting from the side of his biological grandfather Z(C) to his adoptive grandfather.
5. Marriage m71 of the principal heir, D2:1, of the title to compound C's *gamarala* land which was then much dispersed, to a very distant patrilateral parallel cousin from a neighboring village (BE), whose father inherited from C:1 a plot of C's traditional land (Leach 1961:210, see also 276).
6. Marriages m57 and m81 of A2:5 and B1:DW (the latter nearby-village *binna*) which were oriented to validate or transfer land claims from father-in-law to son-in-law (see footnote 6), but were unsuccessful or the source of strife.

The exceptions to sidedness thus can be explained as a result of practices relating to the cognatic devolution of land: Six of the nine exceptions involve *binna*-type unions either between principal female compound heirs and (poor) husbands from distant villages or with genealogically marginal men where there are inheritance complications. Three other exceptions involve strategic bids to validate or recover property claims through the wife. It is, we suggest, the ambilateral, viri-sided patterning of the alliance network, as shown in Figures 4.3 through 4.5, that frames the cognatic inheritance of land rights in such a way as to ensure a high degree of consistency between landholding and cognatic descent over time.

CONCLUSION

What is at issue in the restudy of an ethnography such as Pul Eliya is the understanding of the relationship of a theory of practice, grounded in cumulative material and social constraints, and the emergence of outcomes that are not necessarily the result of or even expressed in rules, norms, and idioms (such as those of kinship terminology), but may instead provide an account of where and how such cultural phenomena emerge. The fact that Pul Eliyan kinship terms "express" sidedness at the egocentric level but that sides are unrecognized and unnamed -- emergent from variable inheritance and marriage practices rather than jurally normative -- represents the complexity of these relationships.

[10] Combining categories 1 and 2, all *binna* marriages of brotherless daughters with poor men from distant villages, excluding marriages between close kin (DX:Z) and sister exchange (D1:Z2), are associated with a change of sidedness; and the association has a high level of statistical confidence ($p < .002$).

Leach's *Pul Eliya* in many ways launched the issues that became the debates -- such as descent versus alliance -- of the 1960s:

> It is not merely that, in societies lacking unilineal descent, some such analytical process as this becomes appropriate, but that potentially this same method [his type of network analysis], applied to societies *with* unilineal descent, might produce disconcerting results. It might even be the case that 'the structure of unilineal descent groups' is a *total* fiction; illuminating no doubt, like other theological ideas, but still a fiction.
>
> . . . . Is it, for example, due to empirical fact or to theoretical bias that, in the spate of Africanist writing on systems of kinship and marriage, the emphasis has been all on kinship to the neglect of marriage? Common descent results in social solidarity, marriage differentiates and is the ultimate source of all social fission; the argument in its various manifestations is now well known. . . .
>
> 'Social solidarity[,]' as Radcliffe-Brown and most of his followers have used it, is a deceptive, unanalyzed concept. It does not follow that those who have common interests are the most likely persons to act in co-operation; nor does the fact that two individuals are placed in the same category by third parties necessarily impose upon them any solidarity of interest or of action (1961:302-3).

Leach's ethnography dealt with how the material context, "partly natural -- terrain, climate, natural resources -- and partly man-made -- houses, roads, fields, water supply, capital assets" is "a social product and is itself 'structured'; the people who live in it must conform to a wide range of rules and limitations simply to live there at all" (1961:306).

Leach's radical challenge was to the anthropologist's study of culture and to his or her assumptions about normative morality:

> Every anthropologist needs to start out by considering just how much of the culture with which [s/]he is faced can most readily be understood as a direct adaptation to the environmental context, including that part of the context which is man-made. Only when he has exhausted the possibility of explanation by way of normality should it be necessary to resort to metaphysical solutions whereby the peculiarities of custom are explained in terms of normative morality (1961:306).

In addition to Leach's challenge to move anthropology towards a theory of practice grounded in the circumstances of the material environment, we would add another, the challenge of viewing the grounding of social practice in the context of a social network which itself is the cumulative result, but hardly a determinate one, of past practices. Our restudy adds a focus on how the man-made outcomes of concrete marriage choices constitute another level of social environmental context that is structured, not in terms of normative reality but as emergent patterns of behavior, which are themselves the cumulative outcome of particular, strategically informed choices, provide the limiting conditions for the systematic aggregation of subsequent actions. It is not the principle of unilineal descent but the rights in the land (land that "possesses the people") that gives the structure to matrimonial sidedness and exchange in Pul Eliya. We take note of this regularity and its concomitant matrimonial structure by the term ambilateral sidedness.

Instead of taking kinship as a normative or moral order, network analysis of kinship and marriage relies, as it were, on an 'outside view' of kinship -- mapping out the cumulative effects of actual or past behaviors -- as well as detailed case material about actual people, events, and their mobilization of social actions, local norms, the contextualized use of vocabulary, and so forth. Our use of network analysis, moreover, has a particular strength not of separating aspects of the material environment such as compounds, land, and property, but of allowing us to map out in tandem elements from the social and material domains. Such an analysis helps to overcome the separation between the material and the social or cultural, a split that, as Leach noted, can plague an anthropology whose research concern includes the full complexity of human behavior:

> Running right through the literature of structuralist anthropology there is an underlying assumption that the social structure of a society and the material environment are two 'things' of comparable kind. Although intrinsically interconnected, the two 'things' have independent existence and are both 'real' in a comparable sense.
>
> Society is not a 'thing'; it is a way of ordering experience (1961:304-5).

Our strategy of mapping of material and social elements in tandem has allowed us not only to find hitherto unrecognized aspects of social structure -- matrimonial sides, organized in terms of direct or dual exchange -- but to show how they are intrinsically inseparable from the substratum of material practices. What allows this mapping is not only the concept that social and material biographies, those of people and of things, are intertwined (Brudner and White 1997; Appadurai 1968), but the operational idea that this entwinement of people and their material resources can be graphically represented, analyzed, and conceptualized in terms -- of both formal graph theoretic and substantive concepts -- that may be of wider use in the anthropological sciences.[11]

Two further questions are at issue in the Pul Eliyan materials. Leach argued that "people adapt their kinship allegiances to fit the topographical facts of the Old Field rather than the other way about. I also showed that in the only recorded instance of a major change in the Old Field layout the immediate consequences for the associated kinship group were catastrophic" (1961:217; see 208-9). The question here has to do with the nature of Leach's argument, which, narrowly phrased, is that localized kinship arrangements are built up around localized material practices. Is it not also necessary to include the larger, man-made material and symbolic aspects of the environment that encompass more regional or global systems of ownership and exchange? Leach also

[11] Our concept of ambilateral sidedness owes its inspiration to the tradition of graph theory such as explicated in Hage and Harary's (1991) concept of the bipartite marriage graph (see White 1993) as a formalization of "dual organization." The two concepts are quite distinct, however. Hage and Harary's analyses of kinship networks, insofar as they begin with descent or other *a priori* kinship groupings, thus cannot but fail to miss the distinctly cognatic flavor of sidedness in those societies with bilateral kindreds or in those lacking unilineal descent groups. We posit that many ideal models of kinship systems are misleading for precisely this reason: They contain unilineal illusions. Here, then, the network analysis of kinship and marriage has a major role to play in the reformulation of anthropological concepts.

showed that the piecemeal introduction by the British colonial administration of private ownership rights, where it replaced usufruct and the inalienability of land from hereditary claims in the land tenure and exchange system, introduced major changes in concomitant aspects of the social structure, away from a principle of equal access to land, and towards a stratified division between rich and poor. If we go back to Leach's discussion of the analysis of the material environment in relation to social and cultural practices, it is not only the material circumstances of the environment that are closely linked with social structural arrangements, but also the fundamental cultural principles of land tenure, including ownership and exchange.[12]

The second question is related to the first. We show in our Comparative Appendix that matrimonial sidedness is a widespread feature of the Dravidian language area in South Asia; it occurs with diverse material circumstances in the built environment. It is thus likely to be associated not with particular local land tenure arrangements but with a more general (but not necessarily uniform) set of Dravidian practices and beliefs, specifically those through which the land tenure and exchange system is related to usufruct and the inalienability of land from hereditary claims. Is it not also at this more regional level -- and not just at the level of a village ethnography -- that we should look at the biographic entwinement of people and things in keeping with the more general principles of what we have discovered here for a Dravidian culture regarding the sided pattern of exchange?

COMPARATIVE APPENDIX

Is matrimonial sidedness something unique to Pul Eliya, or, as we hypothesize, is sideness a more widespread feature of the Dravidian language area in South Asia? When Pul Eliya is placed within the wider context of the region, it has exactly those elements of reciprocal exchange between families described by Karve for Dravidian kinship networks. Karve (1953 [1965]:213) writes that exogamous clans are almost universal among the Dravidian speakers of southern and central India, yet:

> in a caste divided into exogamous clans, inter-clan marriages to cover all the clans never [take] place. Within an endogamous caste are thus formed smaller circles of endogamous units made up of a few families giving and receiving daughters in marriage. These small endogamous circles are not as absolutely endogamous as the caste but great dislike is shown by people to marry outside the smaller units . . . . The endogamous caste is thus divided further into smaller units which, for all practical purposes, are mutually exclusive.

Karve's description applies to the concept of *variga* (endogamous subcaste) that sets the limits of marriages between Pul Eliyans and certain sets of families in other

[12] This way of putting the question frames both traditional land tenure and market exchange as cultural constructions. Another way of putting the question, which underscores Leach's point, is: Are not the material practices involved in ownership, production and exchange closely related with concomitant social relations and concepts? Indeed, for the interpretation of any material, social or conceptual domain, we need to know or impute something about its concomitants.

villages within their region. He notes it is not uncommon for the relatively endogamous groups (such as the *variga*) to divide into two halves that intermarry with one another. Since the units of reciprocal exchange are made up of families rather than clans or lineages, even a single clan may be divided into different components that have nearly exclusive intermarriages with opposing affines.

Yalman's (1962, 1967:212-6) study of two Kandyan villages (Terrutenne and Vilawa) does not name any general concept such as sidedness. However, his examples make it clear that exceptions to what we have called sidedness corresponds to the Sinhalese idea of sinful (*dos*) or "wrong" marriage. The latter concept applies to marriages within the family circle that create inconsistencies in the application of Dravidian kinship terminology. At the same time, however, it is clear that Sinhalese concepts of exogamy are not based on blood kinship: Violations of sidedness are deemed to be sinful within a context of marriages with extended kindred, including distant affines. Yet when relatives are too distant or spatially remote, there is no concern about consistency with any type of dual ordering. Analysis of network data on kinship for Terrutenne and Vilawa shows that ambilateral sidedness, oriented to an agnatic norm as in Pul Eliya, is consistently involved in kinship structure. Sidedness -- and kinship terminology -- is adjusted to fit actual behavioral outcomes much as in Pul Eliya.

In a broader context, we hypothesize that ambilateral sidedness is a property of historically Dravidian marriage systems, and it is a frequent concomitant of the use of the Dravidian-type kinship terminology. Ambilateral sidedness is conceptually consistent with the cognatic basis of Dravidian-type terminology. Leach's fieldwork showed that the type of prescriptive symmetric exchange thought to characterize marriage alliances in South Asian societies with Dravidian terminology could not be understood in terms of unilineal descent groups exchanging wives in accordance with a fixed set of marriage rules (classificatory cross-cousin marriage). Instead, he showed that marriage alliances were much more cognatic and strategic than prescribed in terms of oppositions of unilineal groups. We concur with Leach and Obeyesekere that Sinhalese kinship relations are contingent and continually readjusted with respect to inheritance. We also concur with Leach that kinship and affinal alliances both form a statistical structure that frames the cognatic aspects of inheritance *and* help in principle to keep agnatic estates intact. Yet Leach identified no principle in affinal alliances other than overlap and competition among *pavula* kindreds that included close cooperation among affinal relatives. What we have found in our analysis of the Pul Eliya kinship network is that the ongoing existence of local groups and their perpetuation as landholding units is framed by an overall structure of reinforced empirical alliances: sidedness. It is the contingencies of inheritance, as well as issues of consistency in agnatic estates and egocentric kin terminology, that govern sidedness rather than rules of marriage or descent. The "two-line" Dravidian kinship terminology that defines marriageability in terms of classificatory affinity is secondary, giving way to concerns of inheritance.

At the comparative level, Pul Eliya brought home the lesson to British social anthropology that cherished concepts of unilineal descent, descent groups, kinship corporations, and structures of marriage alliance had to be respecified in terms of flexible and dynamic principles of cognatic kinship. Our own argument has been in keeping with this perspective. Indeed, one of the things that comes out of approaching kinship and marriage in Pul Eliya in network terms, as we have done here, is that the operative units -- i.e., the family-name identities stemming from residential compounds -- are ambilinear groups. Leach resists the idea that compounds (and *gedara* names) are governed by ambilineal descent. He wrote, "There are parallels no doubt with the Maori *hapu* which Firth describes as based in 'ambilineal descent' and with the Iban *bilek* group which Freeman has described as based in 'utrolateral filiation'" (1961:101). But, Leach goes on to say, Pul Eliyan compounds are not descent groups, and there is "a degree of mechanical regularity which is absent in the empirical facts of the Sinhalese case." In some respects they are indeed more open. However, once we understand that switching of sides occurs for agnatic estates with a lack of male heirs, which leads to a daughter's marriage to a *binna* husband from a distant village, we see that sidedness in Pul Eliya is a property of the marriage system *after* ambilateral kinship readjustments have taken place. In short, the ambilineality rests with the compounds and marriage sides, not with descent groups.

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Endogamous subcastes, as in Pul Eliya, may span a wide spatial network of villages. Within the subcaste networks, it is clear that sidedness is not a generalized feature of endogamous subcastes (*variga*) but a localized one, extending in a consistent way only to closely allied families in neighboring villages. Sidedness creates a coherent system within the effective range of egocentric *pavula* for intravillage groups and their closest allies in neighboring villages. In order for distant outsiders to be incorporated into Pul Eliyan kinship networks with the approval of the *variga* court, they must not only be of the right *variga* but must also be willing to repudiate ties to their home villages. Hence, no consistency is required for marriages between distant villages. In this way, outsiders are easily absorbed into marriage sides, and the latter may retain a wide diversity of origin within the local network. In short, marriage sides do not necessarily (although they may) evolve into closely consanguinal kinship groups, and they do not require blood marriages with kin.

We remarked previously that where violations of sidedness can be accounted for in terms of their dependency upon additional regular features of social structure, we may speak of ambilateral sidedness. It is worth stressing, however, that such additional regular features of social structure are determined in an *a posteriori* fashion. In other words, the ability to explain some exceptions in terms of a certain organizational principle does not exclude the possibility that the remaining exceptions can be accounted for in terms of other, as yet to be identified organizational principles. In short, on one level at least, the degree of inconsistency of "wrong" marriages remains a relative and partially indeterminate evaluation. In this sense, the default value for sidedness is ambilaterality: Viri-sidedness and uxori-sidedness represent alternative statistical orientations of what is fundamentally a cognatic alliance structure.

In the circulation of persons and things, structural coherence emerges out of and situates social action through a dynamic of network formation. While building on the insights of Leach, the advance of this article is to assess alternative accounts of social structure and the principles of exchange through a non-aggregative and open-ended approach to social organization and process, and to show in this case how a dual organization of matrimonial exchange can operate in the context of a cognatic or ambilateral kinship system. Descent and alliance as theories were vastly limited by their insistence on aggregating the ethnographic data into either descent categories or abstract alliance models. A network approach to the more detailed empirical relations of descent, affinity, succession, inheritance, and other contextually relevant social constructions eschews such categorizing and aggregative *a priori*, but it need not sacrifice analytic clarity to microrepresentation. The size of a network is not an obstacle to asking new analytic questions about its structural properties and about how these properties unfold in time.