GAPS IN THE FAMILY NETWORKS OF OLDER PEOPLE IN THREE INDONESIAN COMMUNITIES

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Abstract

Family networks are widely assumed to be a key source of support for older people in Indonesia and Southeast Asia more generally, although empirical study of their composition and functioning is in its infancy. This paper draws on ethnographic and survey data collected in longitudinal research of ageing in three rural Indonesian communities, in order to identify demographic and social factors limiting the size of elders' networks. Gaps in networks commonly emerge as a result of childlessness, migration and alienation, but their implications for older people's vulnerability is shaped by socio-economic status, reputation and cultural norms.

Keywords: adoption; childlessness; elderly; migration; networks; socio-economic stratification; vulnerability

Introduction

The Indonesian parliament has recently been debating proposals for a comprehensive social insurance system for all Indonesian workers, including old-age pensions and health care (Hari 2004; Task Force for Social Security Reform 2004). At present no universal state system of minimal old-age support exists, the draft bill envisaging a step-wise extension of coverage to all workers and their families, including those in the informal sector, by about 2025. In the interim, family and community support are assumed to provide adequate protection, although the potential of fertility decline and 'modernisation' to undermine informal systems of support is acknowledged (e.g. Tambunan & Purwoko 2002: 38f.; Gough 2001: 183f.; Hugo 2000). The proposals have, however, already become controversial: in the view of critics, they are fiscally unsustainable and administratively impossible (International Labour Organisation 2003; Arifianto 2004). Whatever the outcome of this important debate, there can be little doubt on two points. One is that networks of family support for elders will remain crucial. The other is that the continuing adequacy of this support rests on supposition much more than evidence. This paper provides the first comparative analysis of Indonesian older people's actual family networks, drawing on ethnographic and local survey data for three rural communities. The research was addressed to identifying where and how gaps in networks of support emerge, and whether and how members cope with them. As the work proceeded, mounting evidence has enabled more specific sources of vulnerability to be analysed. Here we shall examine the impacts of socio-economic status, migration of children, and childlessness on older people's support networks.

The research setting

Since April 1999, three communities located in East Java, West Java and West Sumatra have been the subject of longitudinal ethnographic and demographic field study. The communities are actively integrated into regional, national and international economies, whilst also retaining their traditional economic base in agriculture and local trade. They differ in terms of family systems and in the extent to which migration has emerged as a central strategy of family networks. All are predominantly Muslim. Although all share in the national language, the languages spoken in the home are predominantly Javanese, Sundanese, and Minangkabau, respectively. Interviewing has thus needed to remain sensitive to differences of expression in more than one language in each site. These several similarities and differences mean that the communities provide a substantial indication of the heterogeneity of intergenerational support, yet, as we shall see, commonalities emerge with respect to gaps that restrict assistance to older people in all three locations. Table 1 provides a short profile of the three communities called Kidul, Citengah and Rao-Rao.

Table 1. Characterising the Three Villages

	Kidul	Citengah	Rao-Rao
District and Province	Malang, East Java	Sumedang, West Java	Tanah Datar, West Sumatra
Main ethnic group	Javanese	Sundanese	Minangkabau
Family system	nuclear and bilateral	nuclear and bilateral	extended and matrilineal
Village population (approx.) [a]	2,000 [c]	1,100	700 [c]
Population aged sixty and over [a]	10.6%	7.3%	18%
Elders' children no longer resident in the village [b]	46%	45%	75%
Households owning rice land [b]	13%	55%	66%
Work force employed in… [b]			
agriculture	15%	65%	43%

trade	25%	12%	38%
civil service	10%	5%	7%
other occupations	50%	18%	12%
Elderly households in receipt of a pension [b]	20%	31%	3%

Sources: [a] household rosters and neighbourhood censuses, 1999-2000; [b] randomised household survey, 2000. *Note*: [c] refers to hamlet we worked in, rather than entire village.

The communities are situated in three of the five Indonesian provinces that reported more than 7 percent over the age of 60 in the 1990 census, and proportions are projected to rise to between 10 and 16 percent by 2020 (Ananta et al. 1997; see also Hugo 2000; Arifin 2004). As Table 1 shows, older populations in certain rural areas can already be in this higher range.

Research on the extent and functioning of support networks requires combined qualitative and quantitative data. Fieldwork and the collection of life histories enabled mapping of kin networks and observation of exchanges within them over time. Semi-structured interviewing achieved substantial coverage of the elderly, between 80 and 97 percent in the respective communities; repeated in-depth interviews were conducted with between 20 and 60 elderly in each site, complemented by in-depth interviews with one or more other adult family members in most cases. Fieldwork made possible observation of local events and processes, and enabled familiarity with problems and adjustments to changing circumstances that make up much of people's daily lives. Randomised surveys of household economy and inter-household exchanges with 50 'young' households and 50 'elderly' households in each of the three communities then served two important functions in developing this qualitative and quantitative data base: they substantiated differences in social and economic status within and between networks which shape family and community responses to older people's needs; and they enabled quantitative analysis of the role of support from absent network members.

Network parameters

Aggregate levels of completed fertility among currently elderly people in Indonesia are modest when compared with most of South and South East Asia, estimates varying in a range of 4.59 to 5.42; elders aged 60 and above in 1990 had on average 4.1 children ever born (Biro Pusat Statistik 1992: 239 & 242; Hirschman & Teerawichitchainan 2003; Hermalin 1995). These levels suggest that there is a substantial supply of adult children available to elders, should they be in need of assistance. The availability of adult children, however, is not uniform across the population aged sixty and over. In the three communities, sizeable minorities of elders are involuntarily childless (between 7 and 25 percent), and migration removes between 45 and 75 percent of children from local networks. These raw figures, of course, provide only a starting point for discussion. Some childless elders are able to create substitute kinship links, for example by adoption and remarriage (Schröder-Butterfill 2004a). Migration in the younger generation may constitute part of a strategy of kin networks to maintain or enhance family position within local status and wealth hierarchies, and net benefits may then accrue to the elderly. But migration can also result in greater vulnerability among older network members, for example, when remittances are not forthcoming, when grandchildren are left in the care of older people, when assets have to be sold to raise capital needed for a child's departure, or when illness creates the need for physical care (Kreager 2004a; Schröder-Butterfill 2004b).

Because differences of socio-economic status condition the functioning of networks (especially the availability of capital to help close gaps in support), our first task in the following pages is to provide a brief account of rural Indonesian social stratification and the main differentials between strata that constrain elderly support. The impact of childlessness and migration will then be considered in this context. Any study of gaps in family support must, however, also give careful account of the shifting composition of network membership. The third section of this paper outlines a practical method for monitoring this complex phenomenon, and then illustrates it in a series of case histories. This approach has been designed to assist in resolving some familiar ambiguities in research on intergenerational transfers. The rationale underlying our approach may be briefly stated as follows.

In Indonesian research, as in most studies of ageing in Southeast Asia, the analysis of elderly support often focuses on transfers of money and services in parent-child dyads. Studies emphasize, for example, support from individual children (often

a single co-resident child) at a specific point or points in time; this approach reflects familiar constraints of survey research (e.g. Cameron 2000; Chan 1997; Knodel & Ofstedal 2003; Biddlecom et al. 2003). Ethnographers, in contrast, have long emphasized the importance of wider sets of kin, whether in the typically bilateral kinship systems underlying nuclear families of Java (e.g. Niehof 1992; Geertz 1961), or in extended family systems characteristic of major groups like the Minangkabau in Sumatra (Indrizal 2004; Kato 1982). There is an outstanding need to bridge these perspectives.

Networks, of course, involve much more than dyadic transfers, they are systems of communication in which the actions of any one member influences the behaviour of a greater or lesser range of others. Support for elders is only one part of what family networks accomplish. Knowledge of the normal range and functioning of networks is necessary to understand the relative priority and role of elders in them. In this paper we are concerned chiefly to show how the sub-set of members relevant to a given older person can be identified and followed over time, and the net effects of this sub-set's actions on that elder's welfare. From this point of view, an elder person's life history is at base a story of selected genealogical links and the material, emotional, and social ties that adhere to them. The central issues are, first, to specify the pattern of successive memberships that comprise an elder's network and, second, to show how networks adapt to the absence or departure of key members. This approach opens up, in turn, the examination of issues that go beyond what can be presented in a short paper: the role of networks in mitigating or exacerbating the impacts of macro-level economic and demographic changes.

To summarise, support provided to the elderly commonly varies across three dimensions:

1. *network composition*: support is provided by differing sub-sets of kin (drawn selectively from a potentially wide range of siblings, children and grandchildren, nieces and nephews, and other kin or neighbours); the selection depends on the nature of links established between these network members over the elder's life course;
2. *kinds and levels of support*: members of sub-sets provide differing modes of assistance, including money, care, visits, or combinations thereof; patterns of assistance reflect some attempt to strike a balance amongst members according to their differing capacities and other demands they must meet;

there is thus a moral dimension to elderly support which has an important bearing on the identity and reputation both of individuals and of a family as a whole;[i]

3. *temporal discontinuity*: membership of a sub-set, and the kinds of support each member provides, change to accommodate changing needs of the elderly and the altered circumstances of individual members. Sub-sets of kin giving support, in short, are not fixed, nor can the distribution of responsibilities be assumed as constant.

In short, there is a complex and changing division of labour entailed in providing support to older people. We turn now to examining how this division of labour is structured, looking first at the effects of social stratification.

Strata and networks: where do the gaps emerge?

Indonesian villagers are alert to variations in status and wealth, without relying on formal class or caste boundaries to distinguish them. Anthropologists and historians have been able to employ only a few economic markers in order to capture the main differences (Penny & Singarimbun 1973; Hart 1986; Hüsken & White 1989; Wolf 1992; Sumartono 1995; Breman & Wiradi 2002). The picture which emerges from these studies emphasizes the ability of a few families in a given community to maintain control over prime agricultural land (*sawah*). This provides the start-up capital for dominating local patronage and trade. Over time, the relative social and political status of these families has then enabled them to widen their influence by presiding over the expansion of rural industry, construction and transport. The outcome is a society composed of three or four strata: 1. landed families underpinned by control of enterprises and jobs in the civil service; 2. small landholders, together with successful shopkeepers and local traders; 3. labourers; and 4. the poor (those with intermittent work or no longer able to work, widows, unmarried divorcées, etc.). Strata at the top and bottom of this structure are relatively few in numbers, comprising between one-fifth and one-third of the community.

As the case histories given below confirm, this picture remains a useful point of departure for understanding family support systems. The picture is, however, increasingly dated. Capital in land remains a common trait of the rich, but not necessarily. The great majority of income and influence in this group now comes more often from their other enterprises. Simple economic determinism needs to be

resisted, as status is obviously not decided by mere material wealth. Downward mobility commonly reflects misconduct (family conflict, promiscuity, irreligion, profligacy, brutality) which not only undermines social respect, but the cohesive functioning of networks. Upward mobility, meanwhile, may occur in non-landholding families able to combine commercial and other non-agricultural enterprises with moral behaviour that establishes respect (e.g. Jay 1969; Schröder-Butterfill 2002).

Observation and in-depth interviewing in the three communities broadly confirmed the social reality of a fourfold status differentiation. All villagers could say which were the richest families, describing them in Java variously as *orang kaya* (rich person), *wong sugih* (rich person) or *benghar pisan* (very wealthy), and in Sumatra as *urang baharto* (person with wealth). Patterns of education and religious observance (notably, pilgrimage), together with local survey data on assets, income and expenditure for this group, were consistent with local opinion. Typically, the rich own modern consumer goods like TVs, telephones and quality furniture, and live in brick-built houses with tiled floors and modern amenities. In the Javanese sites the rich included not only large landowners and owners of fish-ponds, but also successful business people (e.g. owners of construction and transport firms) and civil servants (see Schröder-Butterfill 2002: 129ff.); in the Sumatran setting the rich typically combined agricultural wealth with profits from successful cloth trade. Social intercourse emphasizes deference in everyday social life: poorer villagers commonly avoid visiting their rich kin, as gossip is likely to portray them as looking for hand-outs.

Villagers could also readily identify which were the poorest families, using phrases like *kurang mampu* ('less able'), *wong susah* (person who experiences hardship), or *urang bangsek* (poor person) to describe them. In this stratum, family income depends wholly or partly on charity, and neither modern productive assets nor consumer goods are found. The poor typically live in wood or bamboo houses with earthen floors, without basic amenities or ready access to modern medical care. In the Sumatran site, they were further distinguished by being almost entirely newcomers to the village (*pendatang*).

Distinguishing the two middle strata is less straightforward, as the differences between them are not so immediately recognisable in everyday discourse. No single phrase recurs consistently to describe those who are neither rich nor poor. Contrasting levels of wealth and material assets are, however, indicated in local

surveys, in which some households in the broad band between rich and poor possess twice the average income of the others (Schröder-Butterfill 2002: 137). Typically, households belonging to the former grouping have reasonably secure and often multiple small incomes; several household members may work, and incomes may be supplemented by support from elderly parents and profits from small plots of land. We refer to this group as being 'comfortable', reflecting a number of terms like *lumayan* (fair), *manangah* (middling) or *sadang* (moderate) that recurred in people's observations on them.

The situation of those households between the 'comfortable' and the poor is captured aptly by a phrase common to all three communities, *cukup-cukupan*, translatable as 'ticking-over'. These families lack the diversified resources of the 'comfortable'. Although their labour enables them to be self-sufficient and to participate as full members of the community in most social exchanges, they have no material safety net or fall-back position should a health or other crisis occur. Not surprisingly, as the threat of descent into outright poverty is ever present, quite a number of *cukup-cukupan* households are the objects of occasional charitable support. In sum, we can say that common descriptions of the status of individuals and households in these communities generally correspond to the fourfold pattern observed in the wider literature, and conform to economic data on the three communities. However, it is important to reiterate that explicit classes are not a feature of rural Indonesian society.[ii]

Social mobility is evidently a crucial consideration for understanding how gaps in the ability of families to support their older members emerge: downward changes in material well-being and social reputation are likely to be an important consideration shaping the ability and readiness of family members to come to elders' aid. The case studies of Jamain and Asrul, below, provide typical examples. The absence of mobility at the bottom of the social scale is also a factor: there remain, particularly in the Javanese communities we studied, significant numbers of poor labourers' households unable to save or to help children get a start in life. Children in these cases are less likely to continue contact with parents after leaving the community (e.g. the case of Rumiati, below). Wealth and inheritance arrangements can be designed to attract kin who might fill gaps created by absent children or nil childbearing. However, as the cases of Haji Lina and Dinah will demonstrate, this course remains fraught with uncertainty. On this reasoning, we may expect that the

most likely loci of gaps in old-age support will occur where elders' status has fallen, and where those elders and offspring have never advanced beyond the lower end of the social ladder.

Membership of a given economic and social level, of course, is not sufficient to explain how people cope (or fail to cope) with the impacts of misfortune and misconduct. Knowledge of stratification needs to be linked to family and community networks, since these networks can mobilise support within and between strata. Networks, however, are by no means secure. They may protect people from the consequences of downward mobility and abject poverty. But they can also function to enforce social opinion when things go wrong, and in such cases only pity, and perhaps charity, are felt to be appropriate. In general, therefore, asking the question "Where do the gaps emerge?" leads us beyond descriptions of static economic and social position to look at the potential role of networks in mitigating or reinforcing vulnerability. An obvious starting point are cases where networks are small or absent. As we shall see, basic demographic constraints have a major role to play in accounting for network capacity.

Childlessness

Tables 2 – 4 show variations in childlessness and the availability of children in the three communities by parents' social status.[iii] Levels of childlessness have an evident bearing on the size of support networks, which differ markedly. What is at issue is not just having children to rely on, but the greater involvement in the daily life of the community at each life stage of one's children growing up (e.g. arranging ritual celebrations to accompany birth, circumcision, and marriage; assisting in costs of education, entry into the job market, and so forth). Involvement opens up many further opportunities for forging links to kin and neighbours.

Table 2. Availability of surviving children by economic status of elderly people in Kidul, East Java (column percentages)

No. of children	Strata 1	Strata 2	Strata 3	Strata 4	Total
0	23.1	15.8	26.2	40.0	25.7
1	12.8	14.0	11.5	24.4	15.3
2	2.6	7.0	18.0	11.1	10.4
3	2.6	17.5	13.1	6.7	10.9
4	10.3	8.8	9.8	8.9	9.4
5	15.4	19.3	6.6	4.4	11.4
6 or more	33.3	17.5	14.8	4.4	16.8
N=	39	57	61	45	202

Source: Semi-structured interviews, 1999-2000. Differences are significant (χ^2=55.7, p=0.001).

Table 3. Availability of surviving children by economic status of elderly parents in Citengah, West Java (column percentages)

No. of children	Strata 1	Strata 2	Strata 3	Strata 4	Total
0	18.2	0	9.8	0	6.9
1	0	0	4.9	16.7	3.4
2	0	0	9.8	33.3	6.9
3	9.1	10.3	14.6	16.7	12.6
4	0	10.3	22.0	0	13.8
5	9.1	44.8	17.1	16.7	25.3
6 or more	63.6	34.5	22.0	16.7	31.0
N=	11	29	41	6	87

Source: Semi-structured interviews, 1999-2000. Differences are significant (χ2=42.3, p=0.03).

Table 4. Availability of surviving children by economic status of elderly parents in Rao-Rao, West Sumatra (column percentages)

No. of children	Strata 1	Strata 2	Strata 3	Strata 4	Total
0	0	7.0	9.5	14.3	7.4
1	0	2.3	14.3	0	4.9
2	0	16.3	4.8	28.6	12.3
3	20.0	14.0	19.0	0	14.8
4	0	11.6	14.3	0	9.9
5	20.0	14.0	14.3	28.6	16.0
6 or more	60.0	34.9	23.8	28.6	34.6
N=	10	43	21	7	81

Source: Semi-structured interviews, 1999-2000. Differences are significant (χ^2=51.9, p=0.04).

We shall examine overall levels of childlessness first, before turning to differences between economic strata. Childlessness is most common by far in the East Javanese community. Overall, one in four elderly have no surviving child, and a further quarter have only one or two surviving children. These figures reflect historical patterns of marital instability and infertility in East Java (see Schröder-Butterfill & Kreager 2005; Jones 1994; Hull & Tukiran 1976 and Table 5, below).[iv] In the other two villages, the availability of children is much more favourable, although childlessness is still above levels of primary sterility considered normal by demographers for pre-transitional populations (Pressat & Wilson 1988). In the West Javanese village of Citengah, and in Rao-Rao in West Sumatra, seven percent of elderly have no surviving child. The percentages of elderly people with small families are also quite low, with only 10 percent having one or two surviving children in Citengah, and 17 percent in Rao-Rao.[v] Aside from these significant minorities, fertility reflects levels cited above for Indonesia as a whole: in both villages more than half of all elderly have five or more surviving children. Fertility is higher in the Citengah, where the modal category is formed by elderly with five children surviving (25.3 percent).

The village data for East Java and West Sumatra broadly correspond to other sources on childlessness in Indonesia (see Table 5). An early analysis of the 1971 Indonesian census by Hull and Tukiran (1976) identified rural East Java as particularly affected by childlessness, with 17 percent of women over age 30 having no surviving child. West Sumatra was among the provinces with lowest reported childlessness.

Table 5. Percentage of women in rural areas of selected Indonesian provinces with no surviving child by age-group of women

	1971[a]	1980 [b]		1985 [c]		1990 [d]		1993 [e]		1997 [f]	
	30+	30+	60+	30+	60+	30+	60+	30+	60+	30+	60+
West Java	14.4	8.1	13.7	8.1	11.4	6.6	10.9	8.4	11.6	7.0	20.0
Central Java	13.0	7.6	11.1	7.9	11.7	6.3	10.1	n.a.	n.a.	n.a.	n.a.
Yogyakarta	11.7	6.3	9.1	7.8	11.7	4.9	7.9	n.a.	n.a.	n.a.	n.a.
East Java	17.0	10.5	13.4	11.3	13.5	8.8	12.6	11.4	18.1	7.8	13.3
West Sumatra	9.0	5.5	9.2	5.4	9.3	4.2	6.3	6.8	5.8	4.5	5.3
East Kalimantan	23.6	9.5	11.9	7.8	11.7	6.9	8.9	n.a.	n.a.	n.a.	n.a.

Sources: [a] Hull and Tukiran (1976: Table 4), based on 1971 census data. The authors counted non-stated parities as zero parity. [b] 1980 Census data (own calculations). [c] 1985 Intercensal Survey data (SUPAS) (own calculations). [d] 1990 Census data (own calculations). [e] 1993 Indonesian Family Life Survey data (own calculations). [f] 1997 Indonesian Family Life Survey data (own calculations).

Later censuses and surveys indicate a decline in childlessness over time in all areas of Indonesia, but East Java continues to have disproportionately high levels, and West Sumatra low levels. Census and survey data are, however, likely to underestimate childlessness. In Java, where adoption is common, many villagers identify adopted children as own children in first interviews; only the greater familiarity and contact which ethnography allowed enabled us, in subsequent interviews and contacts, to learn that these children were in fact adopted. This problem provides an excellent case in point of the data liabilities of stranger-interviewers, recently highlighted by Weinreb (2004). In the case of West Java, our figures on childlessness appear low when compared with census sources cited in Table 5. West Java is known in the

demographic literature of Indonesia as an area of historically high levels of maternal, infant and child mortality (Singarimbun & Hull 1977; Utomo & Iskandar 1986; Biro Pusat Statistik 1992). The distribution of childless elderly in Citengah may, of course, be due to the relatively small number of elderly people surveyed there.

The relatively small sample sizes possible in village-level data nonetheless indicate a clear trend linking the availability of children to relative economic status. Tables 2 – 4 show that in all three communities, the rich are more successful in having large numbers of surviving children, and there is a clear declining trend in large family sizes as one moves down the economic strata. For example, in the East Javanese community, Kidul, 33 percent of rich elderly parents have six or more children, compared with only 4 percent among the poor; the comparable figures for Rao-Rao and Citengah are 64 and 17 percent, and 60 and 20 percent, respectively. In both Kidul and Rao-Rao childlessness is most common among the poorest elderly (40 and 14 percent). As we shall see below, adoption further reduces the lack of children among the better off in Kidul, leaving childlessness even more heavily concentrated among the poorer groups. In Citengah, childlessness appears highest among the rich, but the picture is dominated by one well-off childless couple. Table 6, below, simplifies the data presented above by merging economic groups to juxtapose the upper two economic strata versus the lower two economic strata.

Table 6. Availability of children to elderly people by membership to upper or lower two economic strata

	Kidul		Citengah		Rao-Rao	
	Upper	Lower	Upper	Lower	Upper	Lower
No children	18.8	32.1	5.0	8.5	5.7	10.7
One or two children	18.8	32.1	0	19.2	15.1	21.4
Three or four children	20.9	19.8	17.5	34.0	24.5	25.0
Five or more children	41.7	16.0	77.5	38.3	54.9	42.8
N=	96	106	40	47	53	28

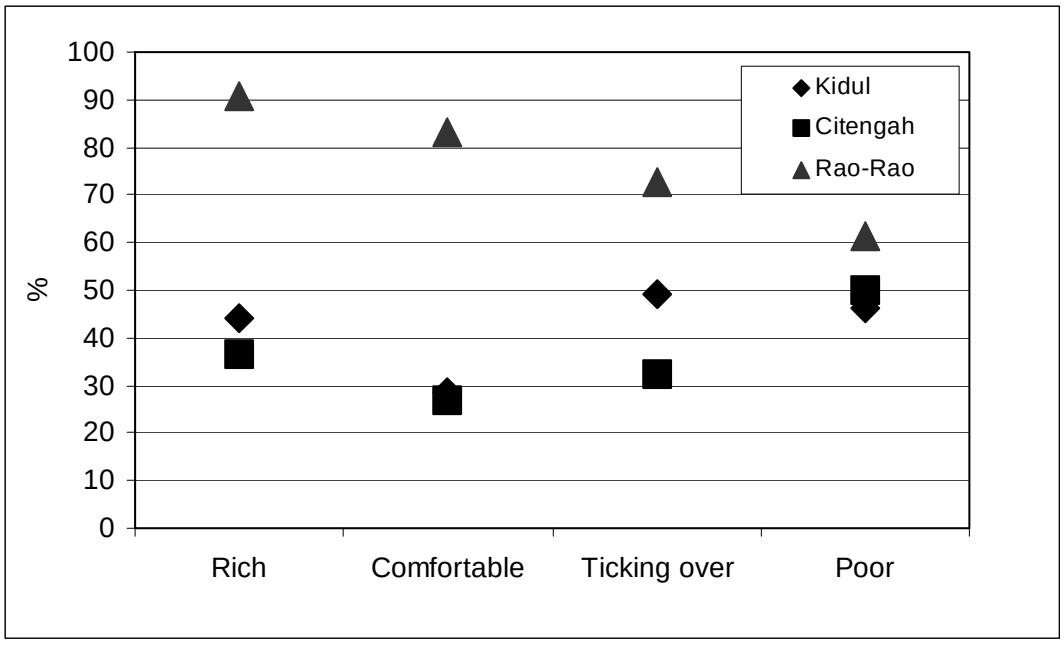
Source: Fieldwork data 1999-2000. For Kidul and Citengah the differences are significant (χ^2=22.2, p=0.008 and χ^2=18.9, p=0.026); Rao-Rao the difference is not significant.

The association between economic status and availability of children in old age is now striking: in all three communities the better-off are much less likely to be childless or have small family sizes, and much more likely to have large numbers of children. Between one quarter and two-thirds of elderly people who are economically disadvantaged have either no children at all, or only have one or two surviving children. This points to much smaller networks of close kin, and the need to rely on kin other than children among the poorer groups in all three communities studied.

Migration

The second demographic factor that reduces network size, migration, is evident in Figure 1. This figure is based on local survey data and shows the proportions of adult non-coresident children who have left the vicinity of their parents. Children are classed as 'away' if they have moved at least 10 kilometres from the village, although the actual distances vary considerably among the three communities.[vi] (Children not away are defined as those who have left the parental home but live in the village or in a neighbouring community, where visits can be made on foot or at best necessitate a short bus ride. Generally speaking, contact with children in this 'nearby' category is frequent, although exceptions exist.)

Figure 1. Percentage of adult children living 'away' by economic status of parents



Source: Household surveys, 2000. *Note*: 'Away' is defined as living at least 10 kilometres away.

The West Sumatran community, Rao-Rao, shows a clear gradient from rich to poor, numbers away ranging from 91 percent among the rich to 62 percent among the poor. In the Javanese communities, the maximum never rises above (the nonetheless substantial level of) 50 percent of children away from the community. This contrast reflects the important role of labour migration (*rantau*) in the culture and history of the Minangkabau. The identity and status of young men depends on success in their employment on *rantau*, involving several years, and often an adult lifetime, away from the community. Young women also often spend substantial periods away, although there is strong expectation that at least one daughter will return to live in the home community so that ancestral property is maintained and properly managed. The historical role of *rantau* has resulted in highly effective extended family networks able to organise both employment away from the community and the sending back of remittances. Religious organisations and special migrants' associations play a major role. Although many men and women establish themselves permanently elsewhere in Sumatra, in Java, or in wider Southeast Asia, they continue to support kin and religious networks in their home communities.

The two Javanese communities show striking differences, which are discussed in detail elsewhere (Kreager 2004a). Half of the children of the poorest strata in Citengah, West Java, are away, whereas the proportions are only in the range of one in three in the other strata. In Kidul, East Java, it is only the second strata which stands out; it shares with the second strata in Citengah the lowest percentage away in all the communities. The other three strata in Kidul vary in a range of 44 to 50 percent, without a clear gradient between groups. Javanese communities do not share in the strong cultural identification with migration that characterises the Minangkabau. The history of migration is, rather, reasonably typical of the gradual integration of rural communities into wider regional and national economies that has been traced in most of the world (cf. Tilly 1978; Moch 1992; Massey 1990; Hugo 1982). In brief, village communities were never entirely self-contained, participating in frequent local movements which have gradually expanded with the growth of trade, communications, transport and industry. It is impossible to capture this pattern in conventional statistics employing rural-urban typologies, since most of the movement is temporary and circular. What does change significantly over time, however, is the emergence of networks as a key factor in organising increasingly distant and diverse flows of people (e.g. Breman & Wiradi 2002). As noted in the introduction, this

process tends to give greater advantage to better-off strata, whose capital and access to education and government jobs enables them to manage market developments. Although there tend to be across-the-board improvements in living standards, there are relative losers. Some well-placed families choose to remain in the traditional agricultural sector, and by keeping more of their children at home where they tend to be under-employed and less educated, they suffer a deterioration in relative wealth. This appears to be reflected in the somewhat lower percentages of children 'away' in Strata 2 in the two Javanese villages. Amongst the poorest strata, such declines in wealth are likely to accompany increasing age and disability, as the example of Rumiati, below, will show.

In sum whilst there can be no doubt that Figure 1 confirms a strong tendency to outward movement in all three communities, with important variations between socio-economic strata, the extent to which having children away represents a net gain or loss obviously requires us to ask further questions. Specifically, what is the capacity of family networks to compensate for poverty? What may be called the "culture of migration" among the Minangkabau, where remittances are important to establishing personal and family identities and proving relative success, indicates that residence away from home need not remove younger people from active elderly support roles. In all three communities, however, there are good reasons to expect that the size of networks amongst some of the poorer strata will be small, notably where childlessness and lower fertility combined in the past to reduce the size of current elders potential networks. And where parents are unable to contribute to setting up their children in life, whether at home or away, there may be added risk that continued contact with children, or potential support from them, will cease. Having successful children, whether one is rich or poor oneself, carries no guarantee that they will be around to help when they are most needed. Here the question of the division of labour amongst the members of a family network in providing elderly support looms large. It is therefore to questions of the functioning of networks over time, their size and composition, that we must turn for answers to how and why gaps emerge, and whether anything is done about them.

Network Characteristics

As networks in rural communities remain kin-based, extensive, and subject to change, the study of gaps in elderly support requires us to distil a large body of information in order to identify which members of these networks are actually or potentially able to provide support. Genealogical diagrams, of the kind that genetics and anthropology have long employed to detail members and their links, provide a readily available tool for this purpose. Kin diagrams may appear to be merely static pictures of relations by marriage and descent at a given point in time. However, by recording changes at successive intervals, and by keeping track of the divergent accounts that different members of kin groups give of their shared family history, diagrams readily reveal processes of network change. Shifts in membership reflect changing roles of members within a network, conflicts, competing interests, and patterns of solidarity. Comparison of recurring network patterns, for example as they characterise the behaviour of different social strata, becomes a diagnostic method for identifying where and why gaps in support are likely to emerge.

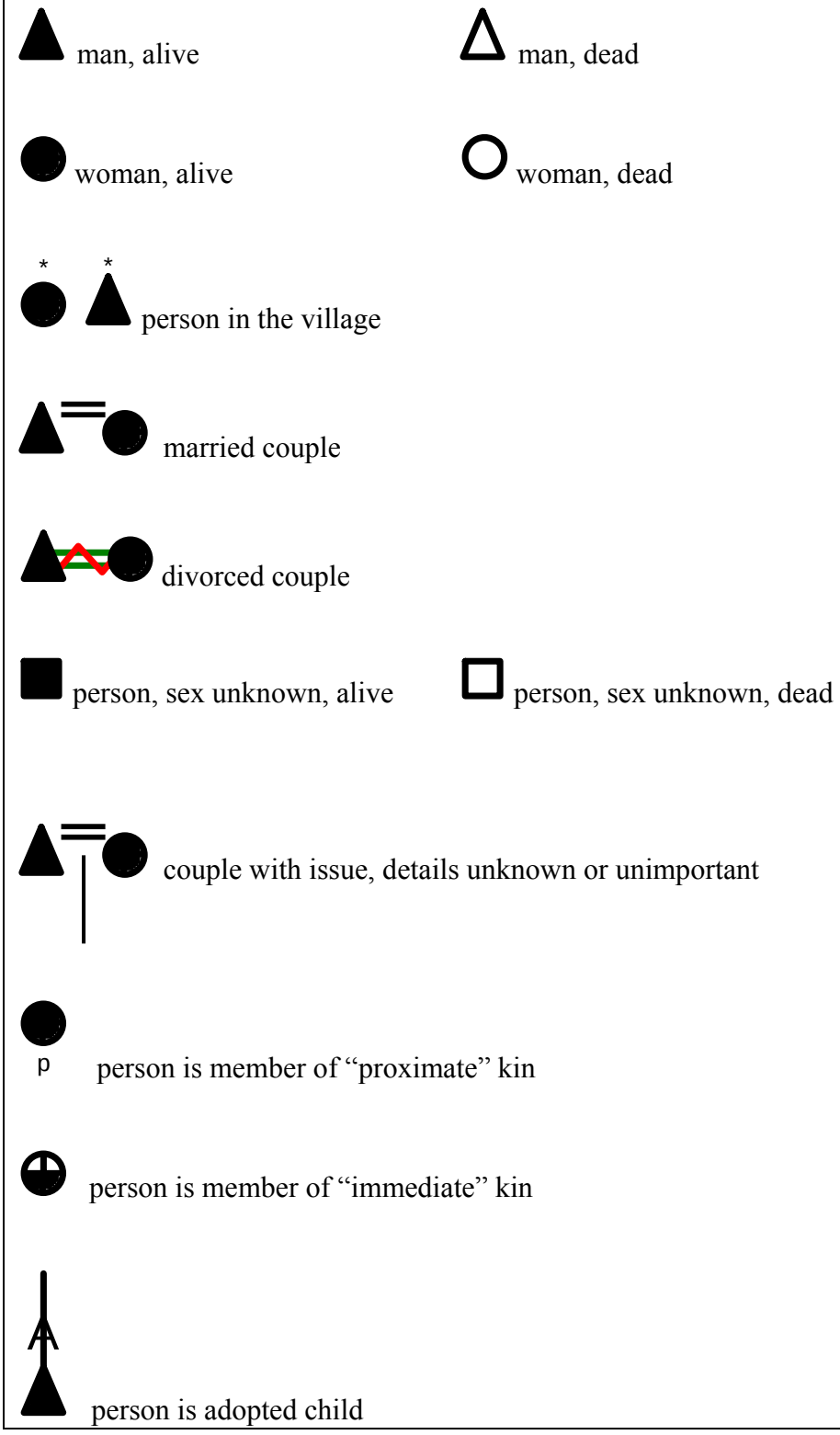
It has often been observed that, in any given society, different sub-sets of kin are relevant to different social and economic purposes (Goody 1972; Bourdieu 1976; Skinner 1997). Common examples include sub-sets participating in arranged marriages, distribution of inheritance, and the organisation of labour specific to different tasks. As far as we are aware, however, no comparative methodology has been developed specifically for collecting and analysing data on elderly support networks over time. The method proposed here is based on the *kindred*, that is, on all relations by descent and marriage of a given older person, also taking into account neighbours and others where relevant. Genealogical data is supplemented by qualitative and quantitative evidence of transfers of money, property, and services between the specified elder and other members of the kindred over his or her life course. Observation of the three communities has shown that in Indonesia, where there is no norm designating a particular child or other kin member responsible for an older person in late life,[vii] considerable heterogeneity is likely to exist in the membership of the sub-set of kin that actually take on the tasks. It is normal that only a small minority of children and others who in the past have received assistance from an elder will, in turn, provide primary support to them.

A kindred may be divided into progressively smaller sets of members, gradually narrowing the focus to the sub-set of primary support for an older person. The widest group of relevant kin may be called the *abstract kindred,* which includes the total range of kin recognised by an elderly person. This reference group is 'abstract' in the sense that very few people have the need, or even the occasion, to compile all of the kin to whom they are related, and can usually do so only after some reflection. The *proximate kindred* is a subset of the abstract kindred, composed of those kin with whom an older person has or had important material relations (e.g. giving and/or receiving money, labour, care, education, property etc.). The *immediate kindred*, then, is a sub-set within the proximate kindred on whom an older person expects to depend in frailty or crisis, on whom they are currently relying, or to whom they are currently giving primary support. As the proximate and immediate kindreds are evidently related most directly to the question of gaps in support, they will be our focus here.

Kin diagrams readily summarise most of the information necessary to distinguish the three dimensions of elderly support outlined at the beginning of this paper. They can be used to detail the size of networks, and their composition by category of kin and gender; to distinguish levels of support according to membership in proximate and immediate kindreds; and, when recorded at successive points in time, to show the discontinuity of memberships. In short, kin diagrams specify empirically the sub-sets of community members engaged in elderly support. The diagrams enable us to map and compare the way different kinds of support from different categories of kin are combined in a given network. As diagrams can be compiled for each strata, comparisons of sub-sets within and between strata become possible, and the influence of social and economic mobility assessed.

Six diagrams will be used here for purposes of illustration, drawn from a total of 60 older persons' diagrams across the three communities. The key to symbols employed in the diagrams is given in Figure 2. Life history data provide a long-term picture which in some cases reveals successive changes in elders' kindreds. We will not be in a position to map successive changes in network roles and memberships for all of these elders until resurvey and follow-up in-depth interviews are conducted in 2005. The following discussion of the principal factors leading to gaps in elders' networks may, therefore, be regarded as preliminary.

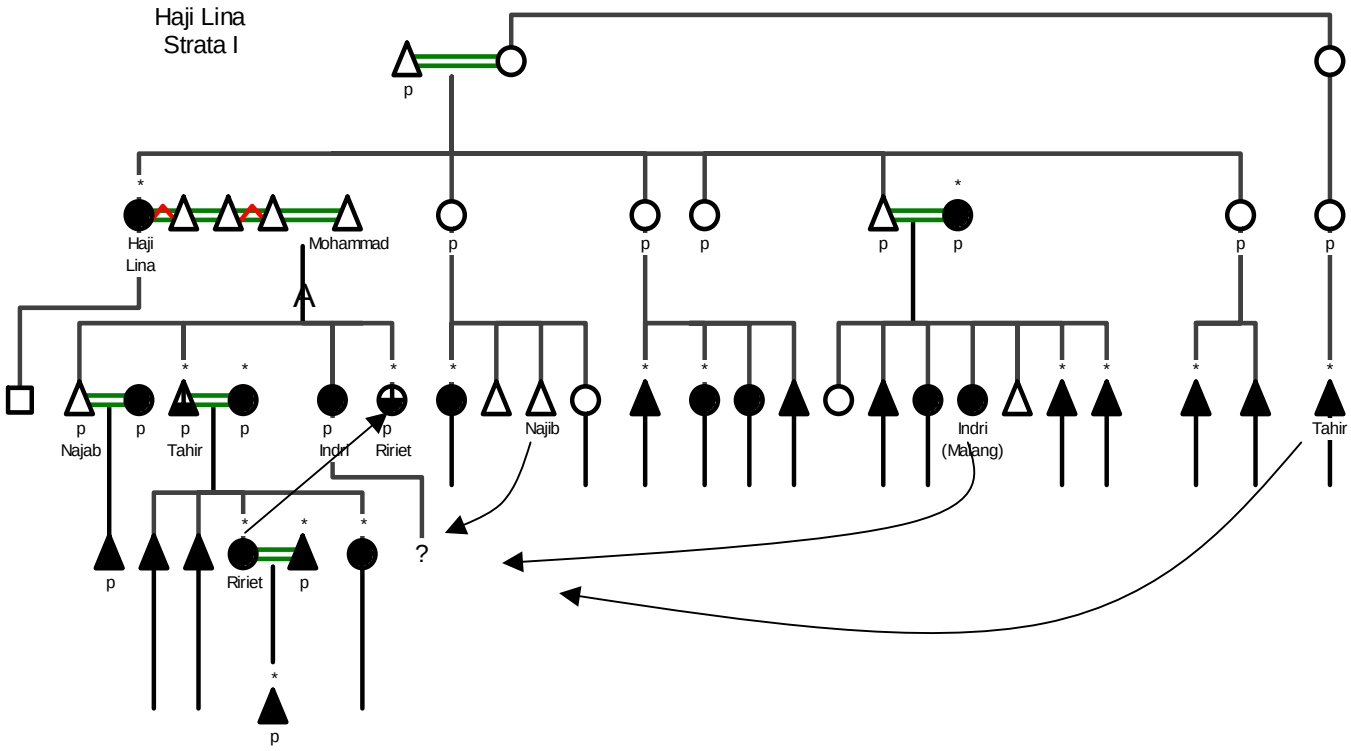
Figure 2. Key to kin diagram



Overcoming Childlessness?

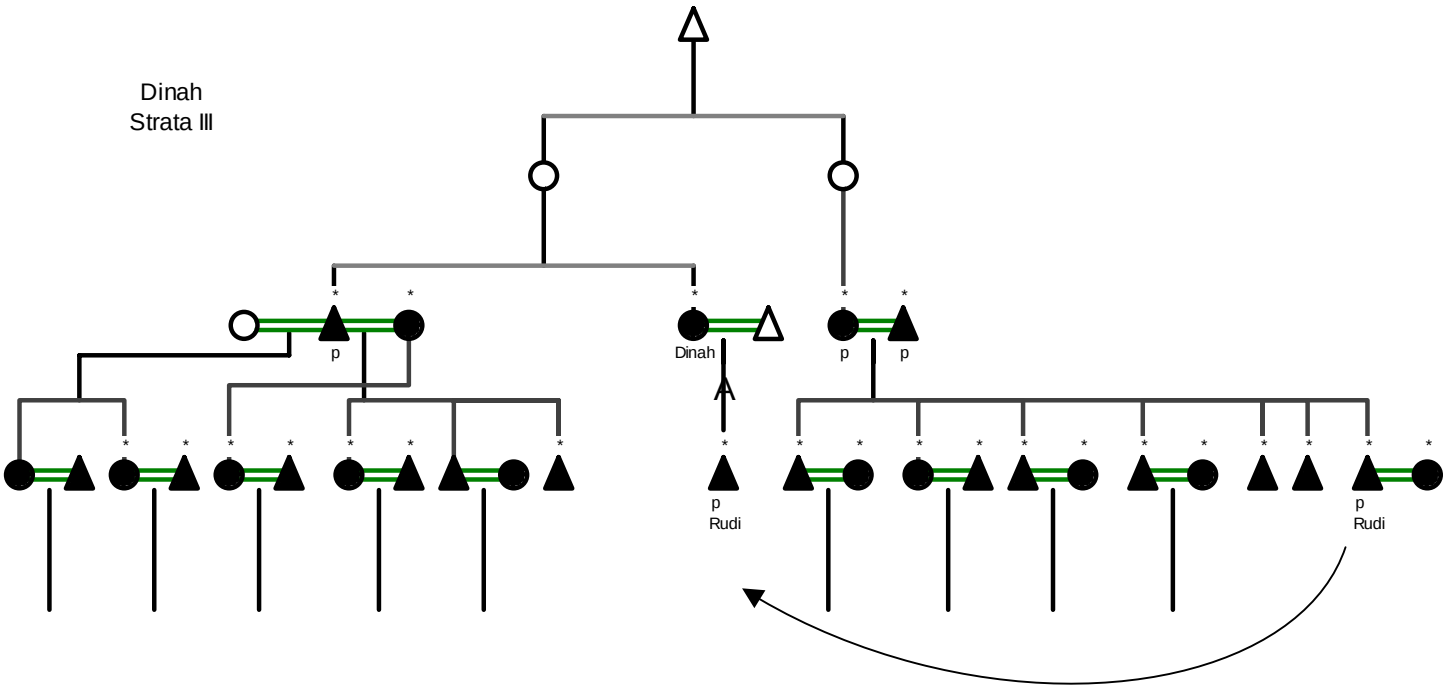
Figure 3 shows the proximate and immediate kindred of a rich but childless widow in Kidul, East Java, whom we have given the alias Haji Lina (all personal names used here are aliases).

Figure 3. Haji Lina's kin diagram



As can be seen from the diagram, time (or death) has removed half of the 17 kin who compose the proximate kindred. Yet of this ample group (to which we might expect that Haji Lina could turn for assistance, since many of the flows of support were *from* her to others), only two (an adopted son and his daughter) comprise the immediate kindred on whom she now relies for daily support. Her own wealth has enabled her to secure their support and remains a hedge against potential major expenses, like hospitalisation, should she need it. A contrasting case is provided by Figure 4, alias Dinah, a childless, 'ticking over' widow, whose immediate kindred is currently nil.

Figure 4. Dinah's kin diagram



In Java, the most common and acceptable response to childlessness is to adopt a child or children, usually the offspring of relatives. These adoptions are not formalized, which can lead to their being contested. Adopted children are referred to as *anak angkat* (raised child), but many parents will not readily admit to strangers that their child is adopted, and will instead talk merely of their *anak* (child). Only sustained contact with the study populations has allowed us to uncover both the full extent of childlessness and the pervasiveness of adoption. In Kidul, almost two-thirds of childless elderly had ever adopted a child, and in Citengah, one third. The following is a brief résumé of Dinah's and Lina's life histories.

Case studies: Dinah and Haji Lina

Dinah and her husband, whose economic situation can be described as ticking over (strata 3), have remained childless after many years of marriage. Lina had a baby with her first husband, but it died in infancy. She then went through a series of divorces and remarriages before settling down with Mohammad, a successful farmer and trader. None of these marriages, however, produced children. Lina is the eldest daughter of a former village head, and retains the wealth and position that implies (strata 1). Both elderly women have a large network of locally available kin, not only siblings and their offspring, but also cousins and their children. As Figure 3 shows,

Lina and Mohammad adopted three children from among their kindred: first Najab, Lina's sister's son; then Tahir, the son of a cousin; finally, Indri, the daughter of Lina's younger brother. These children were brought up and educated by their adoptive parents; their marriages were arranged for them, and they were given land in the village. Dinah and her husband raised Rudi, the youngest son of Dinah's cousin, who is married to the village religious leader (*modin*) (see Figure 4). After Dinah's husband died some years ago, she transferred ownership of her house to Rudi, although she continued living in the house.

After reaching old age, both women have encountered problems. Najab first left the village, selling his house and land, and subsequently died. Indri established a successful career in the nearby town and very rarely returns to Kidul. Only Tahir remained in Kidul; he took over his father's business and quickly ran it aground. Meanwhile Lina was going blind. Dinah's problems were even more severe: she found that her cousin had been undermining her relationship with Rudi by claiming that he wasn't really adopted by Dinah, but had merely stayed in Dinah's house. After Dinah had given Rudi her house, the cousin countered by providing Rudi—and all of Rudi's siblings—with a house in Kidul. In the end the higher-status biological parents prevailed, and Rudi moved out of Dinah's house. Nowadays, he hardly ever sees Dinah, and he certainly offers no hope of old-age support once Dinah can no longer work as a domestic servant. Lina, by contrast, was able to negotiate a way out of her vulnerable position. Her own house had already been promised to Indri, but she still had money. So Lina had another house built in her back-yard and announced that whoever agreed to care for her, would be given this house. Ririet, one of Tahir's daughters, took up the offer. Ririet and her young family moved in, and she is now responsible for Lina's day-to-day care, including cooking, shopping and cleaning, and aiding her blind grandmother at night when she wishes to pray. In addition to the house, she is given money for daily expenses. Although the arrangement has an almost contractual character, Lina has succeeded in normalising it by referring to Ririet as her *anak angkat*.

As these contrasting examples show, informal adoption in Java provides a recognised way of filling gaps in family networks. Adoption, however, requires careful nurturing of ties that hopefully will ensure the adoptees' loyalty. Adoption is prone to failure, either because children turn out not to be reliable sources of support

(as in the case of Lina), or because the contacts that adoptive children often maintain with their families of origin results in later reversion of their loyalties (as in the example of Dinah). Potential access to *anak angkat*, and the likelihood of an adoption being successful, are shaped by people's social, moral and economic standing. Couples who are poor or whose reputations are questionable may be regarded as unable to care for an adoptive child, or their fitness as parents may be censured after they have already started raising a child—say, because a marriage fails or economic disaster strikes—and the child is then taken back. In Kidul all rich or comfortably-off childless elderly had adopted at least one child, whereas half of the ticking over and poor elderly hadn't. Similarly, whereas all rich and virtually all comfortably-off childless elderly had at least one of their adoptions succeed, fewer than half of the poor managed to overcome childlessness, despite having ever adopted a child.

Frequent recourse to adoption has an important bearing on levels of childlessness and how they are measured (see Table 7). *Actual* childlessness, that is, levels of childlessness *after* successful adoption or other means of acquiring children are taken into account, needs to be distinguished from *demographic* childlessness, defined as the product of demographic factors that lead to nil childbearing (e.g. sterility, non-marriage), or the death of all children. In determining levels of *actual* childlessness, however, it is not enough to subtract those elderly who have successfully adopted a child or children. Elderly parents who derive no support whatsoever from any surviving child (for instance, because children are estranged or have severed links after moving away or following a conflict) need to be included amongst the actually childless (see Schröder-Butterfill & Kreager 2005 for details). As Table 7 shows, actual childlessness is more heavily concentrated among the poor than demographic childlessness. In Kidul, for example, demographic childlessness is common among all economic strata, but particularly affects the poor (40 percent). Most elderly in strata 1 and 2, and many in strata 3, manage to gain children through adoption or remarriage, so that *actual* childlessness is lower in these groups (in the region of 4 to 13 percent). The poor, however, often fail at adoption and may even 'lose' children they have, leaving almost half of all elderly in this strata without any support from a child. This lack of children exacerbates their vulnerability; poverty and low status partly explain the existence and persistence of gaps in support networks, and these gaps then contribute to material insecurity. Those childless elderly like Dinah, who find themselves without the support of an *anak angkat* in their

old age, are forced to rely on more uncertain and less attractive options, like support from a rich patron, or stigmatising charity, and further economic decline in old age is inevitable.

Table 7. Distribution of elderly childlessness among economic strata in Kidul, East Java: contrasting *demographic* and *actual* childlessness

	Demographic childlessness [a]	Actual childlessness [b]
Strata 1	23.1	10.0
Strata 2	15.8	3.5
Strata 3	26.2	13.1
Strata 4	40.0	46.7
Overall	25.7	17.2
	[N=52]	[N=35]

Source: Fieldwork data 1999-2000. *Notes*: [a] Elderly who have not given birth or whose children have all died. [b] Elderly who have neither own nor adopted children and those whose children provide no support.

Comparison of the networks of childless elderly with those having adult children in the three communities suggests that Dinah and Haji Lina may be regarded as reasonably typical. The immediate kindred of childless older persons ranges between zero and five persons, with childless elderly in the top two strata at the upper end of that range. The immediate kindred of elderly with children is not dissimilar, ranging from one to six. The proximate kindred of childless elderly is, however, markedly smaller, in these cases amounting to about half of those with children. Although these figures remain tentative, there can be little question that the disproportion of poor childless elders, as indicated in Table 7, points to significant gaps in elderly support. Structural factors like adoption, and its variation between

strata, illustrate very well the need for network data if an accurate picture of the situation of older persons is to be gained.

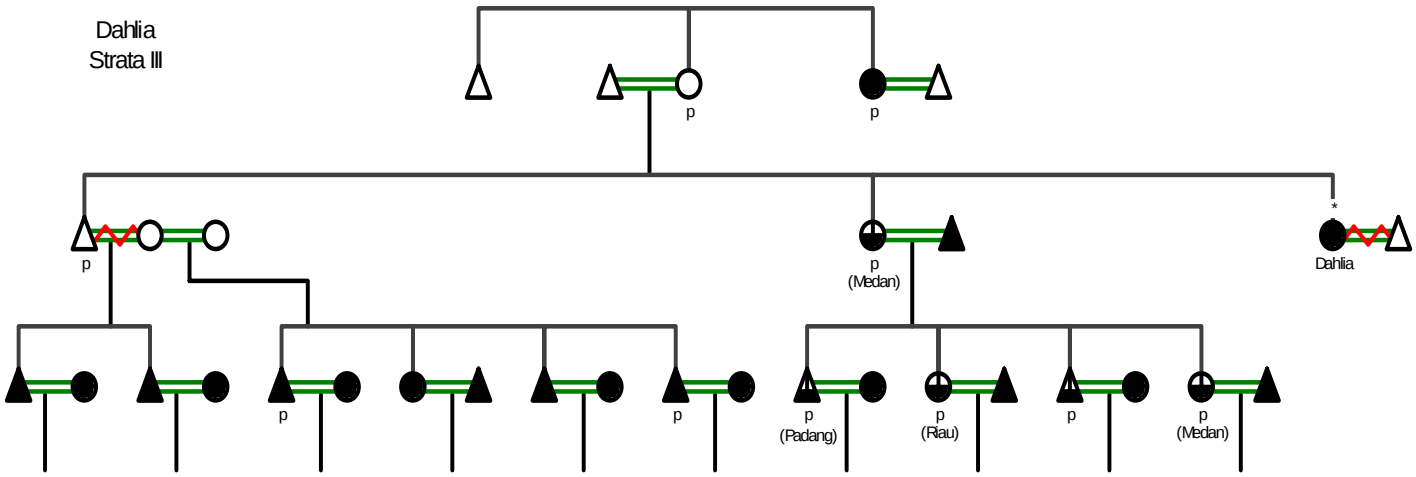
Variation between the communities in the way networks respond to elderly needs may be demonstrated by reference to Rao-Rao in Sumatra, where adoption never occurs—there is no need of it, as the logic of the extended family system ensures that responsibilities for, and rights in, children are shared among members of the same matrilineal *rumah gadang* (ancestral house). Sisters' sons and daughters are normatively enjoined to assist their maternal kin (Indrizal 2004). Indeed, no terminological distinction is made between a woman's own children and the children of her sister, both being referred to simply as *anak* (child). Children may refer to their matrilateral aunt as *mandeh ketek* ('small mother', if the aunt is junior to the mother) or *mandeh gadang* ('big mother', if the aunt is senior to the mother), but will in general simply call her *amak* (mother). A woman without children can thus take a positive and respected place in the family as classificatory mother of her sister's children (van Reenen 1996: 214). Problems arise for the Minangkabau less from the elder's own childlessness *per se,* than from the combination of other key network characteristics: where networks are small and, especially, where sister's children are also lacking. The contrast between the following cases illustrates the negative impact of multiple gaps in extended family networks.

Case studies: Dahlia and Jamain

Although Dahlia, a divorcée in her seventies, has no children of her own, she knows that the children of her older sister care deeply about her (see Figure 5). One nephew visits every two weeks and gives her money, another returns from his migration site every few months and provides Dahlia with money and items for daily needs. Meanwhile, a niece routinely sends money every three months. All of her sister's children and some of her brother's children (who, of course, belong to a different matriline) visit her at the end of Ramadan and give her gifts of money, food or clothing. Her sister has followed one of her daughters to North Sumatra, and that niece has repeatedly extended an invitation to Dahlia to come and live with them. Thus far, however, Dahlia prefers to remain in her familiar surroundings, where she also enjoys control over crops grown on land owned by her matriline. In Dahlia's case, her matrilineal network is able to provide material and emotional support,

although her lack of a younger relative permanently in the vicinity entails some loneliness and may leave her vulnerable as she grows frailer.

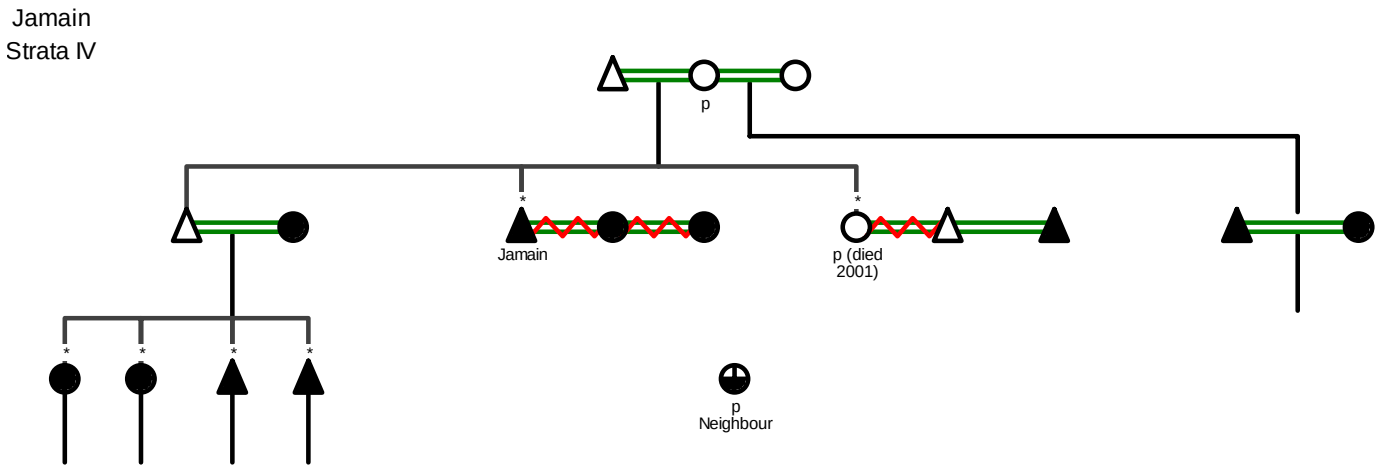
Figure 5. Dahlia's kin diagram



Untypically for men from Rao-Rao, Jamain only briefly partook in labour migration and returned unsuccessful, settling in a small shack on the edge of the village. Both his marriages were childless and ended in divorce (see Figure 6); the second, to a woman from outside Rao-Rao, earned him opprobrium from fellow-villagers for marrying an outsider. Jamain's older brother has four children, but their first loyalties lie with their mother's matriline, and in any case their relations with Jamain are not warm. It is to his sister and her offspring that Jamain should look for support. Unfortunately, she, too, remained childless and poor, and recently died. Jamain lives out his life reliant on support from a sympathetic neighbour, who gives him food, and unsympathetic fellow-villagers, who only occasionally and unwillingly give him money when he begs. The lack of female matrilineal descendants in the extended family network of Jamain means that his matriline is doomed to extinction. Since his sister died, Jamain can at least live in his ancestral house (*rumah gadang*) and benefit from the fruits of the rice-land. Eventually, the house with its land will fall to a distant, collateral line. Given the logic of lineal kinship organisation, with its systems of ever more distant and inclusive units—in the case of Rao-Rao, extending out from the smallest mother-child unit (*samande*) to the members of one ancestral house (*saparuik*), the lineage (*kaum* or *sapayuang*) and then the clan (*suku*)—relatives

can usually be traced by going back several generations (Indrizal 2004). Had Jamain conducted himself in a manner more in keeping with the ethos of the people of Rao-Rao, someone from such a collateral line might well have stepped in to help, and money sent back to the village by successful migrants, distributed by the Mosque, would have been more forthcoming.

Figure 6. Jamain's kin diagram



Neither Dahlia nor Jamain started from a position of advantage, belonging to strata 3 and 4, respectively. Both are childless, and both have matrilineal relatives who might be expected to help out. Yet their outcomes are very different. The contrast arises directly from the fact that Dahlia has remained within moral norms of her network, while Jamain has not. On the one hand, none of Dahlia's immediate kindred reside in the village, yet it's size (four individuals) and the support it provides are ample. The only uncertainty she faces if, for example, she becomes frail, is the possibility that she will have to reside with kin away from the village. Jamain, on the other hand, is without doubt at a comparative disadvantage because the size of his immediate and proximate networks is substantially lessened by his sister's childlessness (and her subsequent death); but it is chiefly his behaviour that has left him without recourse to the collateral kin and community institutions that would normally, in Minangkabau society, come to his rescue.

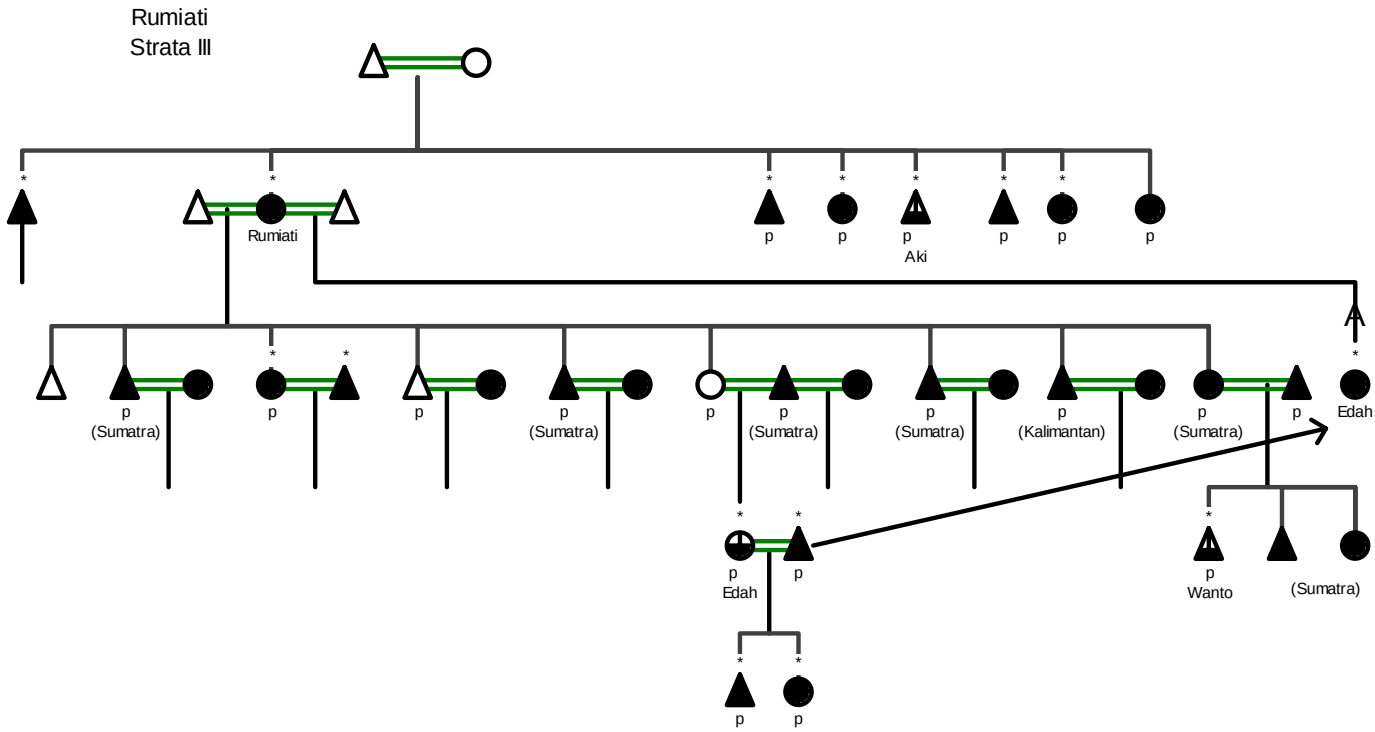
Depleted Networks

Dahlia's situation may also be contrasted sharply with that of another elderly woman in strata 3, Rumiati. The large size of her proximate kindred (see Figure 7) would at first glance appear to indicate that she has an extensive network from which to expect support. The reality is different.

Case study: Rumiati

Rumiati, a widow in her late 70s, lives in Citengah, our West Javanese research village. Her parents were not prosperous, and their small inheritance of agricultural land (*sawah*) had to be divided among Rumiati and her seven siblings. Rumiati and her first husband had eight children (see Figure 7). A son died in infancy, a daughter in childbirth, leaving a baby girl, Edah, who was then raised by Rumiati. After her husband died in the 1960s, Rumiati remarried but had no further children. Despite working hard as agricultural labourer, Rumiati was unable to extend her ownership of *sawah*. Indeed, half of the plot she inherited has been sold off over the years. First, Rumiati needed money to enable several of her children to depart on transmigration to Sumatra and Kalimantan. A further sale provided a 'loan' to her granddaughter/adopted daughter to start up as a trader; this loan was never repaid. None of the five children that have left have ever returned or sent money, not even her youngest daughter, who left her first-born son, Wanto, in Rumiati's care when she departed. The only daughter who is now nearby is poor and relies on sharecropping the remainder of her mother's land to survive. Rumiati's present income from agricultural labour has to support her and her coresident grandson who is still at school. Most of her assistance—in the form of cooked food or care in illness—derives from Edah (the granddaughter/adopted daughter), who was given the larger half of Rumiati's house after her marriage. One of Rumiati's younger brothers, Aki, who is comfortably off, sometimes gives her some 'pocket money'.

Figure 7. Rumiati's kin diagram



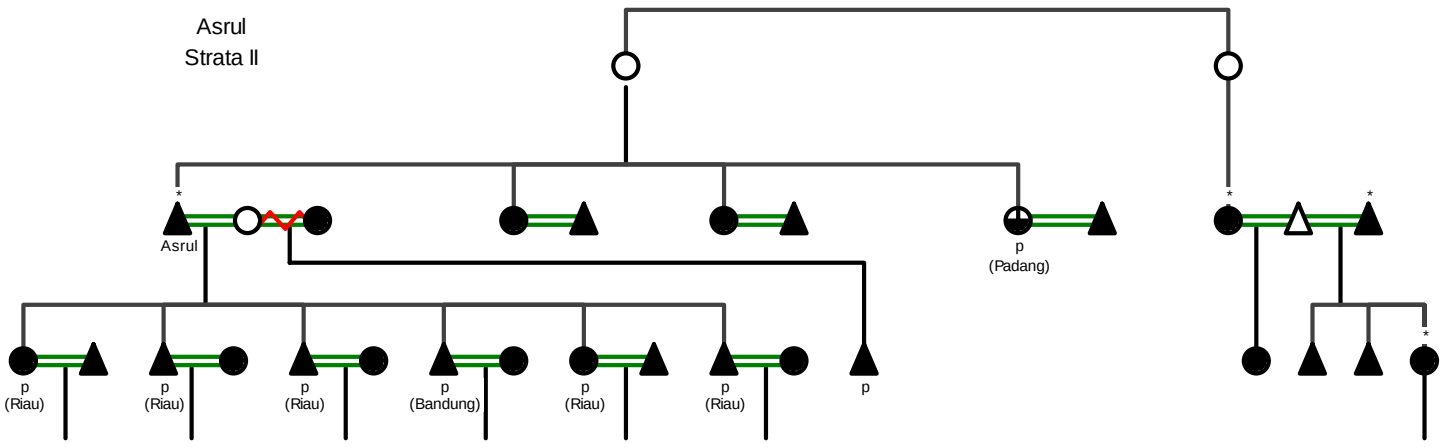
Unlike Dahlia, who is childless but has a reliable network made up largely of sister's children, Rumiati's proximate kindred is composed almost entirely of her own children whom she has supported, but who have left her and not kept in contact. The situation is well summed up by the contrasting sizes of her proximate network (21 persons) and her immediate (3 persons). The comparison of Rumiati and Dahlia also highlights important differences between the Minangkabau and Javanese communities. In Java, parents are expected to assist adult children to become independent, often to the limits of their ability, and to step in if necessary even after children have left home. This does not entail expectations of reciprocal flows of support to elderly parents. It is also not uncommon for grandparents to be left in charge of grandchildren when the middle generation migrates, without this eliciting regular or adequate remittances (Schröder-Butterfill 2004b). The contrast to Rao-Rao is total: young grandchildren were never left with grandparents, and remittances were the norm.

The final case study provides an instance in which downward social mobility, consequent on loss of reputation, has broken up a support network otherwise characterised by economic success in both older and younger generations.

Case study: Asrul

Asrul, now in his seventies, is originally from Rao-Rao, but spent most of his adult life away on labour migration (*rantau*). His economic success on *rantau* placed him in strata 2. His first marriage was to a woman from Rao-Rao who bore him four sons and two daughters (see Figure 8). All of these children are grown up and married, and all are away on *rantau*, most of them in Sumatra, but one in Java. All children are economically successful. After his wife died, Asrul decided to remarry whilst on labour migration. Without consulting his children or wider family, he married a much younger Javanese woman who bore him a son, now of primary school age. This decision created a huge rift between Asrul and his adult children and wider family. Marriage to someone from outside Rao-Rao—worse, from outside the Minangkabau ethnic group—is strongly disapproved and, of course, more so if done without seeking agreement from family members. Nonetheless, Asrul decided a couple of years ago that it was time for him to retire to Rao-Rao, and he brought his young wife and son to the village. Not long after, the wife left him for another elderly man. This added acute shame to Asrul's already damaged reputation, and he is now often ill and depressed. Although his children send him small sums of money at religious festivals, they never visit; thus, going to live with one of his daughters is not an option. Of his matrilineal kin in the village, none are prepared to help. One of Asrul's sisters, however, who lives in the provincial capital of Padang and is quite wealthy, invites him to stay with her, so that he does not have to live alone in the village all of the time. In this way he also has better access to medical facilities.

Figure 8. Asrul's kin diagram



The proximate and immediate networks for Asrul in Figure 8 once again give the impression that there are ample human resources available, and Asrul and his relations are not poor. The diagram could easily be extended to include his sister's children and those of his own children, categories that are commonly involved in exchanges in other Minangkabau family networks. In Asrul's case, however, these normative responsibilities within the matrilineal kindred do not apply. Only one member of his matrikin forms his immediate kindred, to which none of his six children belong.

Commentary

These six case studies, taken as a set, illustrate patterns of vulnerability and responses to them that recur in the in-depth interview and survey data we have collected. Although indicative of the kinds of gaps that appear in the 60 support networks from which the examples are drawn, and also of how and whether such gaps may be filled, the cases clearly require caution if they are to be interpreted for more general purposes. In particular, we need to keep in mind that memberships of proximate and immediate networks may change, as may the roles that members play. Our observations to date are intended to be a stage in a continuing study.

What is striking about all of the cases, notwithstanding this reservation, is that the constraints of childlessness and of absent children make the likelihood of any abrupt and lasting improvement in the situation of vulnerable elders very small. A lack of available children means that gaps can emerge in the networks of rich and poor alike, although they are much more likely to be enduring for the latter. Giving birth or adopting children carries no guarantees. Those who have children, like Haji Lina, Rumiati and Asrul, may find that support given in the past is not reciprocated. A poor widow, like Rumiati, may find that adult children are still dependent, and that grandchildren must be raised without the parents' assistance. The network alternatives to children's support are fairly evenly balanced in the case studies between reliance on siblings and on grandchildren (again, own or adopted). Such reliance underlines the importance and fragility of network contacts built up over the elder's life course. For example, the six elders discussed in detail here have some 56 siblings (including siblings' wives or husbands, who may contribute to networks), of

whom 20 can be found in elders' proximate kindreds. Of these, only three participate in immediate kindreds. Only in Dahlia's case are numbers of more extended kin in the younger generation actually available and willing to lend support, the major role being played by sister's children, as befits Minangkabau norms.

Concluding note: gaps in the networks

In this paper we have explored methods that enable vulnerable sub-groups of elderly to be identified, and the processes that underlie their situation to be traced. Only when populations in need are closely specified, and the causes of their problems understood, can we expect the limited resources of governments to be used efficiently. The methods followed enable the older generation to be transected by social strata and by the kin networks to which they belong. Particular attention has been given to the diverse composition of these networks, and case studies presented which demonstrate characteristic variations in the kinds and levels of support that may be given. These networks can be characterised by (1) their size, (2) the identity of their members by kinship relation, (3) the spatial location of members, (4) factors affecting the reputation and mobility of members, and (5) the social strata to which they belong. Gaps in networks emerge primarily in consequence of a lack of available children, owing to combined forces of infertility, migration, and social alienation. Securing support in lieu of reliable children (or adoptees) is much more unlikely in lower social strata, although the problems of doing so are manifest in all.

Acknowledgements

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References

Ananta, A., Anwar, E. N. & Suzenti, D. (1997). Some Economic Demographic Aspects of 'Ageing' in Indonesia. In G. Jones & T. Hull (eds.), *Indonesia Assessment: Population and Human Resources* (pp. 181-203). Canberra, Singapore: Australian National University and Institute of Southeast Asian Studies.

Arifianto, A. (2004), *Public Pension Reform in Indonesia: Issues and The Way Forward*. Jakarta, SMERU.

Arifin, E. N. (2004). "Ageing and Provinces and Districts in Indonesia". Paper presented to the International Workshop "Old-Age Vulnerabilities: Asian and European Perspectives", Brawijaya University, Malang, Indonesia, 8 - 10th July 2004.

Berkner, L. K. (1972). The Stem Family and the Developmental Cycle of the Peasant Household: An Eighteenth-Century Austrian Example, *American Historical Review* 77: 398-418.

Biddlecom, A., Chayovan, N. & Ofstedal, M. B. (2003). Intergenerational Support and Transfers. In A. Hermalin (ed.) *The Well-Being of the Elderly in Asia: A Four-Country Comparative Study* (pp. 185-229). Ann Arbor: The University of Michigan Press.

Biro Pusat Statistik (1992). *Penduduk Indonesia: Hasil Sensus Penduduk 1990*. Jakarta: Biro Pusat Statistik.

Bourdieu, P. (1976). Marriage Strategies as Strategies of Social Reproduction. In R. Forster & O. Ranum (eds.), *Family and Society* (pp. 117-142). Baltimore: Johns Hopkins Press.

Breman, J. & Wiradi, G. (2002). *Good Times and Bad Times in Rural Java*. Leiden: KITLV Press.

Cameron, L. (2000). The Residency Decision Of Elderly Indonesians: A Nested Logit Analysis, *Demography* 37: 17-27.

Chan, A. (1997). An Overview of the Living Arrangements and Social Support Exchanges of Older Singaporeans, *Asia-Pacific Population Journal* 12: 35-50.

Frank, O. (1983). Infertility in sub-Saharan Africa: Estimates and Implications, *Population and Development Review* 9: 137-144.

Geertz, H. (1961). *The Javanese Family: A Study of Kinship and Socialization*. New York: Free Press of Glencoe.

Goody, J. (1972). The Evolution of the Family. In P. Laslett & R. Wall (eds.), *Household and Family in Past Time* (pp. 103-124). Cambridge: Cambridge University Press.

Gough, I. (2001). Globalization and Regional Welfare Regimes: The East Asian Case, *Global Social Policy* 1: 163-189.

Hari, K. (2004), *Bright Future Awaits Employees After Retirement The Jakarta Post*.

Hart, G. (1986). *Power, Labor, and Livelihood: Processes of Change in Rural Java*. Berkeley and Los Angeles: University of California Press.

Hermalin, A. (1995), Aging in Asia: Setting the Research Foundation. Asia-Pacific Population Research Reports No. 4, East-West Center, Program on Population, Honolulu.

Hirschman, C. & Teerawichitchainan, B. (2003). Cultural and socioeconomic influences on divorce during modernization: Southeast Asia, 1940s to 1960s, *Population and Development Review* 29: 215-253.

Hugo, G. (1982). Circular Migration in Indonesia, *Population and Development Review* 8: 59-83.

Hugo, G. (2000). Lansia - Elderly People in Indonesia at the Turn of the Century. In D. R. Phillips (ed.) *Ageing in the Asia-Pacific Region: Issues, Policies and Future Trends* (pp. 299-321). London: Routledge.

Hull, T. & Tukiran (1976). Regional Variations in the Prevalence of Childlessness in Indonesia, *Indonesian Journal of Geography* 6: 1-25.

Hüsken, F. & White, B. (1989). Java: Social Differentiation, Food Production, and Agrarian Control. In G. Hart, A. Turton & B. White (eds.), *Agrarian Transformations: Local Processes and the State in Southeast Asia* (pp. 235-265). Berkeley: University of California Press.

Indrizal, E. (2004). Problems of Elderly without Children: A Case Study of the Matrilineal Minangkabau, West Sumatra. In P. Kreager & E. Schröder-Butterfill (eds.), *Ageing Without Children: European and Asian Perspectives on Elderly Access to Support Networks* (pp. 49-76). Oxford: Berghahn Books.

International Labour Organisation (2003). *Social Security and Coverage for All: Restructuring the Social Security Scheme in Indonesia - Issues and Options*. Jakarta: International Labour Office.

Jay, R. (1969). *Javanese Villagers: Social Relations in Rural Modjokuto*. Cambridge MA.: M.I.T. Press.

Jones, G. W. (1994). *Marriage and Divorce in Islamic Southeast Asia*. Singapore: Oxford University Press.

Kato, T. (1982). *Matriliny and Migration: Evolving Minangkabau Traditions in Indonesia*. Ithaca: Cornell University Press.

Knodel, J., Chayovan, N. & Siriboon, S. (1992). The Impact of Fertility Decline on Familial Support for the Elderly: An Illustration from Thailand, *Population and Development Review* 18: 79-103.

Knodel, J. & Ofstedal, M. B. (2003). Gender and Aging in the Developing World: Where are the Men?, *Population and Development Review* 29: 677-698.

Kreager, P. (2004a). "Migration, Social Structure and Old-Age Support Networks: A Comparison of Three Indonesian Communities". Paper presented to the International Workshop "Old-Age Vulnerabilities: Asian and European Perspectives", Brawijaya University, Malang, Indonesia, 8 - 10th July 2004.

Kreager, P. (2004b). Where are the Children? In P. Kreager & E. Schröder-Butterfill (eds.), *Ageing Without Children: European and Asian Perspectives on Elderly Access to Support Networks* (pp. 1-45). Oxford: Berghahn Books.

Massey, D. S. (1990). Social Structure, Household Strategies, and the Cumulative Causation of Migration, *Population Index* 56: 3-26.

Moch, L. P. (1992). *Moving Europeans: Migration in Western Europe since 1650*. Bloomington: Indiana University Press.

Niehof, A. (1992). Mediating Roles of the Traditional Birth Attendant in Indonesia. In S. v. Bemmelen, M. Djajadiningrat-Nieuwenhuis, E. Locher-Scholten & E. Touwen-Bouwsma (eds.), *Women and Mediation in Indonesia* (pp. 167-186). Leiden: KITLV Press.

Penny, D. & Singarimbun, M. (1973). *Population and Poverty in Rural Java: Some Economic Arithmetic from Sriharjo*. Ithaca: Cornell University.

Pressat, R. & Wilson, C. (1988). *The Dictionary of Demography*. Oxford: Blackwells.

Schröder-Butterfill, E. (2002), *Ageing in Indonesia: A Socio-Demographic Approach*. PhD Thesis, Department of Social Policy and Social Work, Oxford University, Oxford.

Schröder-Butterfill, E. (2004a). Adoption, Patronage, and Charity: Arrangements for the Elderly Without Children in East Java. In P. Kreager & E. Schröder-Butterfill (eds.), *Ageing Without Children: European and Asian Perspectives* (pp. 106-146). Oxford: Berghahn Books.

Schröder-Butterfill, E. (2004b). Inter-generational Family Support Provided by Older People in Indonesia, *Ageing and Society* 24: 497-530.

Schröder-Butterfill, E. & Kreager, P. (2005), Actual and *de facto* Childlessness in Old Age: Evidence and Implications from East Java, Indonesia, *Population and Development Review* 31,1,19-55.

Singarimbun, M. & Hull, T. (1977). Social Responses to High Mortality Which Act to Support High Fertility. In *IUSSP International Population Conference, Mexico* (pp. 225-239). Liege: IUSSP.

Skinner, G. W. (1997). Family Systems and Demographic Processes. In D. I. Kertzer & T. Fricke (eds.), *Anthropological Demography: Toward a New Synthesis* (pp. 53-95). Chicago: University of Chicago Press.

Sumartono (1995). Social Stratification and the Election of a Village Head. In B. M. Holzner (ed.) *Steps Towards Growth: Rural Industrialization and Socioeconomic Change in East Java* (pp. 267-284). Leiden: DSWO Press, Leiden University.

Tambunan, T. T. H. & Purwoko, B. (2002). Social Protection in Indonesia. In E. Adam, M. von Hauff & M. John (eds.), *Social Protection in Southeast and East Asia* (pp. 21-73). Singapore: Friedrich Ebert Stiftung.

Task Force for Social Security Reform (2004), *Rancangan Undang-Undang Republik Indonesia Tentang Sistem Jaminan Sosial (Draft Bill)*. Jakarta.

Tilly, C. (1978). Migration in Modern European History. In J. Sundin & E. Söderlund (eds.), *Time, Space and Man* (pp. 175-197). Stockholm: Almquist and Wiksell International.

Utomo, B. & Iskandar, M. (1986). *Mortality Transition in Indonesia 1950-1980*. Bangkok: Economic and Social Commission for Asia and the Pacific.

van Reenen, J. (1996). *Central Pillars of the House: Sisters, Wives and Mothers in a Rural Community in Minangkabau, West Sumatra*. Leiden: Research School CNWS.

Weinreb, A. A. (2004), The Limitations of Stranger-Interviewers. Department of Sociology and Anthropology Working Paper Series 2004-04, Hebrew University, Jerusalem.

Wenger, G. C. (2001). Ageing Without Children: Rural Wales, *Journal of Cross-Cultural Gerontology* 16: 79-109.

Wolf, D. L. (1992). *Factory Daughters: Gender, Household Dynamics, and Rural Industrialization in Java*. Berkeley: University of California Press.

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Notes

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[i] A typical example in the three communities is one in which children, who have left the village and succeeded in finding employment in the modern sector, then contribute regular but modest amounts in economic terms to their parents' income (usually the gift of small sums at visits to the village for annual religious festivals). The majority of day-to-day support for the elderly comes from their own labour, supplemented to a greater or lesser degree by care and food given by relatively poorer children still in the community. When, for example, a health crisis involving hospitalisation occurs, this distribution of support may shift radically, some distant children paying large hospital bills, while others perhaps return to the village to assist in post-operative care. It may be noted, at least in the Javanese case, that monetary support, even when regular, is generally small.

[ii] Terms like *orang kaya, lumayan, cukup-cukupan*, and *kurang mampu* do not comprise a classificatory system. They are informal terms and phrases observed in daily speech which we often found ourselves writing down in the course of fieldwork, without their functioning as a set of pigeon-holes.

[iii] As divorce and remarriage are common in the older generation, spouses often have different numbers of children. For this reason we collected data on the availability of children for men and women separately. If only women are considered, then 19 percent have never given birth and 27 percent have no surviving child in Kidul, 9.3 percent have never given

birth and 11.6 percent have no surviving child in Citengah, and 6.7 percent have never given birth and 6.7 percent have no surviving child in Rao-Rao.

[iv] The levels of childlessness in East Java are comparable to childlessness among elderly people in contemporary developed countries (e.g. 18 percent among Americans, 23 percent among Hungarians, see Wenger (2001)), where voluntary childlessness and non-marriage play some role in explaining the lack of children. They are also found in societies affected by high levels of pathological sterility, such as in parts of Sub-Saharan Africa (see Frank 1983; Kreager 2004b).

[v] As noted in the introduction, the Minangkabau of West Sumatra are matrilineal. For reasons of lineage continuity and inheritance of ancestral properties, it is crucial to have daughters. As sons cannot pass on ancestral property, couples consider themselves childless if they have no daughters; thus, gender specific availability of children needs to be taken into account. Although only seven percent of elderly people in Rao-Rao have no children, as many as 17 percent have no daughters.

[vi] In the case of Kidul, the majority (43 percent) of children 'away' live between 10 and 100 kilometres from their parents—thus, at a distance where visits are still easily accomplished—but more than a third live on a different island or even abroad; the remaining 20 percent live on Java, but more than 100 kilometres away. For Citengah, two-thirds of children 'away' are no further than 100 kilometres away, and 28 percent are on a different island or abroad. For Rao-Rao the picture is rather different, here movement involves greater distances, typically to other parts of Sumatra (46 percent of those 'away'), to Java or another of Indonesia's many islands (44 percent), or even abroad (8 percent).

[vii] In contrast, for example, to stem family systems in European history (Berkner 1972) or contemporary Thailand (Knodel et al. 1992).