

**ACTUAL AND *DE FACTO* CHILDLESSNESS
IN EAST JAVA:
A PRELIMINARY ANALYSIS**

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Philip Kreager, Oxford Institute of Ageing and Somerville College
and Elisabeth Schröder-Butterfill,
Oxford Institute of Ageing

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Abstract

The limitations of state provision in developing countries have meant that research on elderly welfare has more or less inevitably focussed on support available via family systems. The short answer to the question “What help exists for poor and frail elderly people?” presupposes a simple solution: *their children*. This supposition rests on plausible and even indisputable facts: women's completed childbearing in the developing world has averaged 4 and over; the proportion not marrying in most of these societies is tiny; and levels of natural sterility never exceed 8% of couples. In consequence, the demographics of the supply of children have long concentrated on the potentialities of over, rather than under, reproduction. There is, however, a wider set of factors to be considered. Divorce and remarriage may effectively separate older people from their children. Pathological sterility may seriously curtail fertility. Children may have left the community and be out of contact. Children may have died. Children may be present in the community, yet enmity, incompetence, or other commitments effectively separate them from their parents.

This paper uses findings from anthropological and demographic field research in a rural community in East Java to examine the extent of actual and *de facto* childlessness and its implications. The results are placed in the context of provincial and national level data sources. Four outcomes are noted. First, a wider set of demographic variables is needed to characterise the situation of the elderly than is commonly employed in studies of population ageing. Second, levels of childlessness are remarkably high in the study community: one quarter of the elderly population have no children, and almost 40% have either no or one child; provincial and national data indicate that these local findings belong to a wider pattern. Third, obtaining accurate reportage of childlessness requires sustained field research and familiarity with the study population; standard survey and census schedules are likely to under-report the extent of the phenomenon significantly. We hope that these findings will stimulate other researchers to re-examine their data. Fourthly, understanding the practical implications of the availability of children helps us to understand the prevalence and fragility of alternative strategies for old age, like adoption and patronage.

The Problem

At the centre of Old Batavia, in Jakarta, there is a square with a Dutch colonial canon. This canon, as any guide book will inform the visitor, is mounted by childless women in the hope of capturing its magical powers of fertility. The brass knob on the canon's top is shiny from centuries of fondling. We do not need to look very far or deep, in other words, to find evidence of popular concern in Indonesia regarding childlessness. Nor are such concerns unfounded. In one of the few comparative studies of the subject in the developing world, a survey of sterility and childlessness in 28 countries participating in the World Fertility Survey, Vaessen (1984) found that Indonesia ranked fifth in levels of infecundity and childlessness among women who had completed their childbearing. Hull and Tukiran's (1976) pioneering work on this subject in Indonesia recorded variations in childlessness across the main islands in the era before fertility declines began (see Table 1). On Java, where the vast majority of women are married by their early twenties, levels of childlessness varied from 14 to 23% of ever-married women aged 30 and over. Only in rural areas of Sumatra did childlessness fall a little below one woman in ten.

Table 1. Percentages childless among ever-married women aged 30 and over by province and residence, Indonesia 1971 (*Selected provinces by rank*).

Province	Rural %	Urban %
1. East Kalimantan	23.63	15.67
2. East Java	16.96	23.36
3. South Kalimantan	16.41	16.64
6. Central Sulawesi	15.29	12.51
8. West Java	14.41	15.85
9. Maluku	14.03	13.32
10. Bali	13.97	18.08
9.* Jakarta	-	14.51
23. West Sumatra	9.03	10.08
26. Bengkulu (Sumatra)	8.42	10.88
Indonesia Total	13.74	16.35

Source: Hull and Tukiran 1976:19. * Refers to urban ranking

In analysing 1971 census data, Hull and Tukiran used an expanded definition of childlessness. Their figures refer not only to women reporting never having given birth, but also to those whose children had died, as well as those from whom no answer on

parity was obtained. The matter is a sensitive one; as the authors state, “it is obvious that for most Indonesians children are valuable, not only because of the social approbation attached to childbearing, but also because of ... the assurance they provide of a secure and comfortable old age. ... Clearly childlessness constitutes an economic problem of major proportions for the elderly” (1976:23). Indeed, once the security of older generations is introduced into discussion, a wider set of forces inducing childlessness must be considered. Pathological sterility may curtail the fertility of many women. Divorce and remarriage may effectively separate parents from their children. Children may have left the community and be out of contact. Or they may be present, yet enmity, incapacity, or other commitments prevent them from providing any help. Thus around a numerical core of couples *actually* childless on conventional demographic grounds (primary and pathological sterility plus child mortality), we need to consider a broader band of *de facto* childless: those whose children, present or absent, are unwilling or unable to take a caring role.

Ageing research and policy in developing countries often acknowledge the potential significance of childless elderly and those living alone (e.g. Cowgill 1974; Rubenstein 1987; Siriboon and Knodel 1993).¹ In societies in which pensions and health provision for old age are not undertaken by the state, so the argument runs, most parents have few alternatives other than their children. Old people without children appear *ipso facto* vulnerable. The importance of childlessness arises, of course, as a sub-topic of current concerns about the social and economic implications of emerging age-structural imbalances, both in the developed and developing world. Indonesia is a prominent case in point: the 4th largest population in the world, its elderly population is expected to increase fourfold between 1990 and 2025 (Kinsella and Taeuber 1992). In selected provinces, like Yogyakarta and East Java, the age structure will then resemble the age structure of European populations: the proportions aged 60 and over will increase from 11% in Yogyakarta and 8% in East Java in 1990 to 20% and 16%, respectively (Ananta *et al.* 1997:183).

Interpreting these macro-trends is complicated by at least two sets of factors. One, which reflects patterns of lifelong labour force participation, is that many elderly with and without children are fit and financially self-supporting. As we shall see, this provides no guarantee of their well-being. They may, for example, spend the greater part of their income continuing to support children or grandchildren (cf. Hermalin

1999). Their capability may even discourage preparation for the time when their own health and earnings fail. A second body of problems arises from vagaries in standard units of measurement. The great majority of available information derives from censuses and surveys, in which the household is the privileged unit of data. Significant numbers of elderly people in Indonesia live alone, either in single person households, or only with a spouse (9% and 10%, respectively, 1993 Indonesian Family Life Survey (IFLS)). Important regional differences exist: in East Java 11% of elderly people live alone and a further 9% live just with a spouse; in West Java the figures are 17% and 31%, respectively, and in West Sumatra 17% and 19% (1993 IFLS). Inferring welfare from residential data, however, is unreliable. Evidence from Thailand (Knodel and Debavalya 1997) and the Philippines (Domingo *et al.* 1993) shows that elderly people living alone are not necessarily childless nor vulnerable, whilst those living in households with their children are not necessarily secure.

Historians and anthropologists remarked many years ago that household-based data are unable to reflect local social, economic and demographic processes (Berkner 1975; Goody 1972). Numbers of elderly living 'alone' take no account of family and community networks. Living alone may be a temporary stage of family life cycles, or, as we found in East Java, solitary residence may reflect preferences.² It is encouraging, therefore, that the literature on Southeast Asian populations is increasingly directed to issues at intra- and (more rarely) inter-household levels, especially flows of wealth and labour, and gender relations (see Ofstedal *et al.* 1999; Lillard and Willis 1997; Cameron and Cobb-Clark 2001; Wolf 1992; Casterline *et al.* 1991). As yet, the vast majority of data remain survey-based, with multi-round surveys existing for some countries (e.g. Malaysia, Indonesia, Thailand). Even repeated cross-sectional snapshots, however, cannot solve the problems historians have posed, as they do not actually monitor the processes of local support networks.

The problems are manifold. Many patterns of exchange between households take us into spheres that resist survey methodologies of the kind generally preferred in economic and social demography: the informal economy, the influence of religious organisations, customary law, and ritual observance. Exchanges between households and generations involve qualitatively different and changing relationships over time and space; such relations are not continuous, and may change abruptly owing to life crises. As we shall see, available survey data at regional and provincial levels in Indonesia

have experienced difficulty providing a consistent picture of basic demographic facts like children ever born or infant mortality, let alone the interaction of variables like infertility, divorce and migration which underlie them.

This complexity accounts perhaps for why, despite recorded levels of childlessness, no study has looked in depth at the situation of elderly people without children in Southeast Asia.³ To disentangle the logic of demographic and *de facto* childlessness, we have to map the size and composition of networks in which older people participate, the choices and strategies they pursue, and the constraints which persons of differing social strata have to face. This paper will draw on findings from anthropological and demographic field research in a rural community in East Java to construct a demographic profile of actual and *de facto* childlessness, and to trace some of its implications. East Java is an obvious first port of call for such research. As Hull and Tukiran showed, the province was characterised thirty years ago by the highest levels of childlessness in the archipelago. The prominence of childlessness—affecting almost one woman in four—is still visible in populations of elderly villagers reported on in the present paper. To begin with, we shall review regional and local population data in order to update the demographic picture. Combining survey data with in-depth life histories then goes some way toward resolving the limitations of standard survey and census schedules.

1. The Indonesian Family Life Surveys (IFLS)

The most recent attempts to provide nationally representative demographic data for Indonesia are the 1993 and 1997 Indonesian Family Life Surveys (IFLS), carried out by the Lembaga Demografi, University of Indonesia, in conjunction with Rand, Santa Monica (Frankenberg *et al.* 1995).⁴ The data allow a regional breakdown of childlessness by age and residence, and examination of the possible influence of mortality on numbers childless. Table 2 provides figures on women who stated their parity as zero for Indonesia, Java and East Java. As our concern here is with the elderly population only childlessness in older age groups is represented.

Table 2. Women who have never given birth by age group and residence.

IFLS (1993) Age	urban %			rural %		
	Indo	Java	E.Java	Indo	Java	E.Java
30-59	4.4	5.5	7.2	4.3	5.6	7.2
60-69	5.5	6.3	3.5	7.3	6.8	11.0
70-95	10.6	11.1	18.8	10.6	9.4	11.1
N=	3517	1630	454	4099	2162	696
IFLS (1997)	urban %			rural %		
	Indo	Java	E.Java	Indo	Java	E.Java
30-59	3.9	4.4	5.7	3.7	4.0	4.9
60-69	5.9	6.6	1.9	6.4	7.6	10.8
70-95	6.2	8.0	4.5	6.0	4.7	2.3
N=	3668	1878	479	4608	2495	816

Source: IFLS (1993, 1997).

Childlessness falls dramatically between the two rounds of survey in the over 70 year-olds, and noticeably among the 30-59 year-olds. Among 60-69 year-olds there is no consistent pattern. Unfortunately a number of problems beset the interpretation of these trends. The survey question tabulated in Table 2 elicited responses on primary sterility.⁵ Of course some allowance needs to be made for women who preferred not to report babies dying at birth or as infants; their inclusion will have exaggerated primary sterility. However, even if we were to accept that the data are all reports of primary sterility amongst ever-married Indonesian women, the figures are incredibly low. The standard demographic estimates given by Henry (1965) for natural fertility populations (i.e. those not practising contraception) cite 8% for couples in which the wife is aged 30. Henry's estimates provide a useful standard for age groups over 30, as their childbearing took place before the spread of contraceptive use in Indonesia in the early 1970s. With the exception of the oldest cohorts in urban East Java in 1993, all the figures in Table 2 are below that Henry calculates as sterile at age 35 (15%).

There are good reasons for considering that, rather than reflecting genuinely low levels of sterility, these figures reflect sampling and interviewing deficiencies. Sample sizes for rural elderly women in East Java in 1993 are very small (N=138), and are even lower in the 2nd round due to age-specific attrition (N=127).⁶ Among women aged 70 and over, the sample declines from 63 in 1993 to only 44 in 1997; in terms of infertile respondents, there is a decline from seven women to only one woman. Although this might reflect poorer survival among the childless (*see below*), random effects, for

example differences in successfully tracking households, are just as likely to be at play. If the IFLS is actually to serve as the standard data set for the study of ageing in Indonesia—as it has been hailed—a larger, age-stratified sample will clearly be necessary.

Questions may also be raised with regard to interview procedure. Fieldwork in East Java has shown that significant numbers (c. 30%) of adopted children are initially falsely identified as own children, and children that have died may be omitted entirely. These problems can arguably be overcome only by sensitive probing and repeat interviewing; adoption presents a major challenge to field staff, which is unfortunately not discussed in IFLS publications of which we are aware.

A further problem with Table 2 is the large difference in reported childlessness in the oldest (70-95) age group between the two rounds of the survey, especially in East Java. The 2nd round shows much smaller figures. What reasons may be given for this apparent decline? First, as noted above, differences may simply reflect random effects, as sample sizes for these cohorts are small. A second possibility is that the data reflect differential mortality between childless and non-childless elderly people. As Cain (1986:380) remarks for Bangladeshi communities, it is conceivable that childless elderly people experience higher mortality, leaving relatively more respondents who have children in the second round of the survey.⁷ However, against the argument for excess mortality among the childless we need to balance the argument that the infertile may face better life-time survival chances, as Maternal Mortality Rates (MMR) were, and are, very high in Indonesia, even by international standards. According to United Nations estimates, the MMR in the early 1990s was still 650 per 100,000 (Iskandar 1997:220). A third possibility is that there were improvements in infant mortality a long time ago, which were somehow masked as never born babies in the 1993 survey, but not in the 1997 round. As significant improvements in infant mortality in Indonesia only date to the late 1950s (see Table 4, below) this possibility seems unlikely. Another possibility, for which there is also no supporting data, is that there were real declines in sterility due to improvements in sexual health. This might be relevant to explaining the modest declines in women aged 30-59 who have never given birth, but cannot account for the apparent dramatic improvements among elderly women who had long completed their reproduction before the surveys. Finally, changes in the composition of the survey cohorts may play a role. The progression of some women aged 60-69, who had

comparatively low sterility levels in 1993, into the 70-95 cohort in 1997, might serve to depress the overall levels of sterility in that older age group. The same effect would occur if sterility was particularly prevalent among the very old who are most at risk of dying. This explanation might fit the observed trend in rural Indonesia and rural Java, but does not fit the data for rural East Java where the 60-69 year-olds have high sterility in 1993, but the 70-95 year-olds in the 2nd round have very low sterility. There is no obvious explanation for this trend.

All in all, IFLS data on sterility do not inspire confidence. Although they broadly support the view that East Java is the epicentre of childlessness in Indonesia, we cannot trust the levels and trends over time that the data imply. Is the evidence for surviving children any better? Table 3 summarises women's statements of surviving children according to the IFLS. These data may be compared broadly with those reported by Hull and Tukiran (1976); those women surviving the 25 years between the 1971 census and the IFLS surveys should, in principle, be reflected in both sources.

Table 3. Women who have no surviving children by age group and residence.

IFLS (1993) Age	urban %			rural %		
	Indo	Java	E.Java	Indo	Java	E.Java
30-59	15.6	17.6	20.3	12.8	14.9	17.5
60-69	10.4	13.5	12.3	11.2	11.6	20.5
70-95	17.2	16.3	18.4	16.5	16.1	23.8
N=	3517	1630	454	4099	2162	696
IFLS (1997)	Indo	Java	E.Java	Indo	Java	E.Java
30-59	18.8	21.3	23.1	15	16.6	19.3
60-69	11.8	13.7	5.8	10.1	11.8	16.9
70-95	11.7	13	4.5	12.7	13.4	18.2
N=	3668	1878	479	4608	2495	816

Source: IFLS (1993, 1997)

Figures for childlessness are substantially higher than for reported sterility, as would be expected. In line with Hull and Tukiran's findings, the data for the 1993 and 1997 IFLS show childlessness among the elderly population to be at or above 10% for most of Indonesia. Again, East Java has particularly high levels of childlessness (17-24% among rural elderly women). On the whole, however, Table 3 has many of the weaknesses of Table 2. For example, in urban East Java, where Hull and Tukiran detected the nationally highest figures of childlessness, the 1997 IFLS finds comparatively low

measures of childlessness among the elderly. Once again, there would appear to be considerable declines in levels of reported childlessness between the two survey rounds which remain difficult to interpret. Improvements in infant and child mortality in the 1940s and 1950s could explain some of the decline. However, the evidence points to a later decline in mortality (see Table 4 and Table 5, below), which means that the shift in childlessness in the oldest age cohorts between 1993 and 1997 cannot be accounted for in this way. There are no identifiable reasons why the figures for rural East Java should be so much higher than the urban figures, contrary to what Hull and Tukiran found. Nor do these data conform to other statistical sources.⁸

2. Survivorship

As just remarked, levels of infant and child mortality experienced by older generations during their childbearing years (roughly the 1940s to 1960s), as well as adult and maternal mortality experienced by their children, are important to understanding current levels of childlessness. Unfortunately, no vital registration system existed in the period in question, and even today reportage of deaths in Indonesia is incomplete. Although reliable data for the first half of the 20th century are not available, estimates suggest that life expectancy at birth declined from 35 in the late 1930s to 27.5 years during the 1940s, only recovering to pre-war levels in the mid-1950s. Infant mortality has been estimated at around 250 per thousand live births in the 1940s, the period in which many currently elderly people were giving birth (Hugo *et al.* 1987:117). Based on retrospective pregnancy histories in a poor village in Yogyakarta, Hull found evidence for a marked increase in infant mortality during the 1940s, from 140 per thousand in 1940 to 270 per thousand in 1945 (cited in Singarimbun and Hull 1977:228). Unfortunately region-specific data are even more sparse. Retrospective estimates based on the 1973 Fertility-Mortality Survey in Indonesia suggest that infant mortality in rural East Java stood at 172 per 1000 live births in 1945 (see Table 4); significant declines did not occur until the late-1950s (Singarimbun and Hull 1977:228). Indeed, inferring from 1961 census data, East Java was estimated to have an IMR of 175 even in the late 1950s (Hugo *et al.* 1987:119).

Table 4. The decline in infant mortality rates in rural Java, 1940-1965.

	W. Java	C. Java	E. Java	Poor village in Yogyakarta
1940	-	-	-	139
1945	145	180	172	271
1950	143	128	168	205
1955	122	100	133	100
1960	115	97	92	77
1965	104	92	81	82

Source: Singarimbun and Hull (1977:228).

If we consider child mortality, that is deaths to children under age five, the effect of mortality is even more devastating. As with infant mortality, the data available are scant and ambiguous. Based on the 1973 Fertility-Mortality Survey, Utomo and Iskandar (1986) cite the following levels of under-five mortality for cohorts of children born from the 1940s on.

Table 5. Under-five mortality rates by birth cohort and region

Year of Birth	urban			rural		
	W. Java	C. Java	E. Java	W. Java	C. Java	E. Java
1945-49	269	253	228	282	301	261
1950-54	216	171	168	271	218	131
1955-59	180	161	137	245	178	192
1960-64	161	126	120	217	164	143
1965-67	136	117	108	188	157	117

Source: Utomo and Iskandar (1986:15), based on 1973 Fertility-Mortality Survey.

According to these data, more than a quarter of children born in the 1940s in rural East Java died before their fifth birthday. The figures broadly support the estimate from the 1993 IFLS for Java as a whole (33.3%) and our research village (32.6%) that a third of childless people are childless due to the death of all children. Obviously this includes deaths to children above the age of five, for which we do not have regional or national estimates. The apparent decline in child mortality over time in Table 5 may be exaggerated: indirect estimates based on the 1971 Census suggest that under-five mortality still stood at 177 per 1000 births in East Java in 1967; Iskandar (1997:208) even puts the figure as high as 245 for the same year. Clearly, large margins of error surround all of these estimates of infant and child mortality and allow only the overall conclusion that probably between a fifth and a quarter of children born to cohorts of women who are currently elderly died before they reached age five.

What is striking is that Central and West Java generally had higher levels of child mortality than East Java. Yet, as we have seen, levels of childlessness were highest in East Java. This suggests that factors other than child survival require serious attention. If we bring evidence on fertility levels into the picture, we can begin to see what these factors are.

Table 6. Average number of children ever born (CEB) and children surviving (CS) per ever-married woman (rural), by age and Javanese province, Census 1990.

Province	55-59		60-64		65+	
	CEB	CS	CEB	CS	CEB	CS
East Java	4.25	3.43	4.09	3.20	4.10	3.00
Central Java	4.92	3.86	4.62	3.54	4.36	3.24
Yogyakarta	4.85	4.17	4.67	3.89	4.70	3.71
West Java	5.53	3.97	5.13	3.59	4.94	3.36
Indonesia	5.10	3.96	4.83	3.64	4.60	3.34

Source: Biro Pusat Statistik 1992:239, 242.

Table 6 shows that fertility was by no means very high in most of Java before the demographic transition. In East Java currently elderly women had on average 4.1 children; this is the lowest completed fertility for that age group within Indonesia. The figure is comparable to those parts of Africa (e.g. Gabon) in which the impact of pathological sterility was most severe (Frank 1983), and is lower than reported in all but a few historical European communities (Knodel 1983).⁹ The fact that the figures decline with age could suggest increasingly imperfect recall of fertility among older women, but is likely also to reveal a genuine effect. Women who were 55 years old in 1990 had their prime childbearing years in the late 1950s to late 1960s; those who were 60 had them in the 1950s, whereas those who were 70 had them in the 1940s. As mentioned above, fertility was at an historical low during the latter decade. The 1940s was a period of severe economic hardship in Java, coupled with poor health conditions (see section 4, below) and marital disruption.

Table 6 also shows the difference in average number of children ever born and surviving. In East Java women aged 65 and over in 1990 had on average lost 1.1 children over their reproductive life; the figure for 60-65 year-old women is 0.9 children. Mortality appears to have been particularly severe in West Java, where women lost on average 1.5 children over their life-times. The difference between children born and children surviving is lower among younger women, which is not surprising considering that health conditions and life expectancy improved after the 1960s. Of

course all of these measures hide huge variations between economic levels and individual women, an issue to which we return in Section 6.1, below.

3. Reported Childlessness in an East Javanese Community

The review of national and provincial patterns of childlessness may be summarised briefly. The 1971 Census, the Indonesian Family Life Surveys and village data all confirm above-average levels of childlessness in rural East Java: Hull and Tukiran estimated that 17% of all married women aged 30 and over were childless in 1971; the corresponding figure for the 1985 Intercensal Survey is 11%; the 1993 Indonesian Family Life Survey found 15-24% of elderly people to be childless (declining somewhat, for reasons that may be artefactual, to 17-18% for the 1997 IFLS). Levels of primary sterility and the mortality of children, whilst high, appear to be insufficient to explain this pattern. A realistic estimate of current levels of childlessness in the elderly population requires two new departures. First, we shall narrow our focus to a single village in East Java, which enables us both to clarify several of the data problems which beset standard survey and census approaches, and to examine a number of the social processes underlying childlessness. Second, we shall widen the profile of demographic factors determinant of childlessness to include the impact of marriage patterns and pathological sterility. A comparative demographic perspective results, in which the significance of the Indonesian case relative to patterns of childlessness in other societies may be shown. We then turn to processes that remove even surviving children and adoptees from elderly support networks.

The data in this section were collected as part of a comparative research project on population ageing and elderly support in Indonesia, funded by the Wellcome Trust.¹⁰ Field research was conducted by a British-Indonesian research team in three rural communities: West Sumatra, West Java and East Java. In this paper we draw on findings from our East Javanese research village, where fieldwork was conducted between April 1999 and December 2000. The village, with a population of about 2500, lies in a fertile area south of Malang. Its proximity to the district capital and several local markets explains the mixed economy that characterises the village: agriculture is the main occupation of only about 12% of the adult working population, and only 15% of households still own a plot of irrigated rice-land (*sawah*), often too small to produce a sellable surplus. Most large landholdings within the village boundary are in the hands

of outsiders, with only a handful of households in the village owning plots of one hectare or more. As concerns non-farming activities, roughly a quarter of all working villagers are engaged in trade (mainly petty trading of food), 12% in transport, 8% in factory work, and almost 10% in the civil service or army. Twenty percent of elderly households in the village receive a pension by virtue of previous employment in the latter two sectors.

Economically, the differences between the richest and poorest strata in the village are pronounced in terms of housing, income, consumption and social interaction. Nonetheless, the majority of households (75%) fall into the middle two economic strata in which differences between families are modest. The majority of the population (88%) is Muslim, a further 10% are Hindu, and 2% Christian. There is evidence that the village is undergoing a period of Islamisation, with the influence of modernist Islam gaining strength, and more and more people converting from Hinduism to Islam. Young people and families are targeted in particular. It is thus not surprising that there are large differences in religious affiliation by age, with a quarter of elderly people professing Hinduism or Christianity, but fewer than 10% of people under age 45. Although there are differences of degree, one of the aims of modernist Muslim factions is to replace Javanese mystical and traditional practices—ritual celebrations (*slametan*) to mark births, deaths and other life-cycle events—with practices they consider more in line with Islam. In this respect their influence has so far remained modest, with only a small number of families (maybe 15%) refraining from holding or attending *slametans*.

Field-research involved 12 months of residence in the community spread over two visits. The principal researcher was assisted by young Javanese assistants, university graduates from outside the community. This was to enable a sufficient number of in-depth interviews and revisits to be conducted. In addition, Javanese was the preferred language over Indonesian in the majority of conversations, particularly with elderly women talking about sensitive issues. Fieldwork proceeded by first constructing a complete household map of the community, and identifying all households with an elderly person. Almost all (95%) of the 210 elderly people (defined as aged 60 and over) in the village were then interviewed at least once. Most elderly people (70%) were revisited formally and informally, and extended re-interviews were completed with 45% of respondents. The aim of the latter was to collect detailed life-histories and information about an elderly person's potential and actual support

networks. In order to differentiate support networks between economic and social strata, two randomised surveys were conducted towards the end of fieldwork, one on household economy and support beyond the household in the village as a whole, and one on elderly people's health and health-care use.

Information was routinely collected about numbers of children and grandchildren, and where they are now living. This information was obtained from men and women, as frequent divorce and remarriage means that spouses often have different numbers of children. As soon became clear, people do not necessarily give complete or accurate information about sensitive topics like childbearing or marriage and divorce during first or even second interviews. Familiarity with the community, however, and involvement in village life, encourage confidence. In the course of re-visits changes in people's accounts of their childbearing occurred in some 40 cases, representing 20% of the elderly group. Such changes carry important implications for how we understand their lives and current situations. Familiarity proved even more crucial concerning the sensitive topic of adoption: almost a third of respondents who had ever adopted initially identified an adopted child as an own child. The extent to which people revise their accounts raises serious doubts about the accuracy of IFLS and other survey sources, discussed in preceding sections. Table 7 summarises findings on fertility, childlessness and availability of children in the village.

Table 7. Percentage of elderly respondents (men and women) by number of children ever born (CEB), children surviving (CS) and children in the village (CIV).

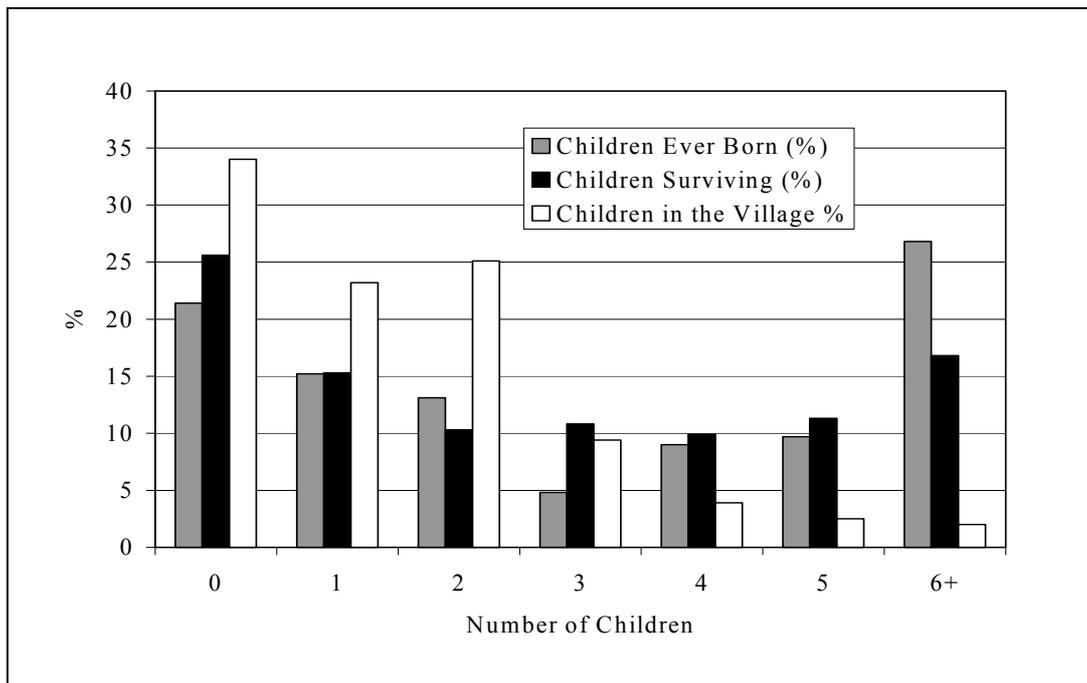
	CEB %	CS %	CiV %
0	21.4	25.6	34.0
1	15.2	15.3	23.2
2	13.1	10.3	25.1
3	4.8	10.8	9.4
4	9.0	9.9	3.9
5	9.7	11.3	2.5
6+	26.8	16.8	2
N=	145	203	203

Source: Fieldwork data, 1999-2000. Data on children ever born are incomplete as probing for this information was only introduced after childlessness emerged as a topic of particular relevance. Information on respondents not re-interviewed at a later stage is thus often lacking.

As this table illustrates, childlessness does not affect only a small minority of elderly people in rural East Java.¹¹ As many as 21% say that they have never given birth. Although revisits significantly improved data quality, this figure is likely to overestimate primary sterility slightly, as some people without children may never admit that they had a child who died. Where an elderly person has no surviving siblings in the community (63%), there is little chance that such information will emerge in other interviews. However, village levels of child mortality in the relevant generations are broadly in line with regional data on infant and child mortality. Most childless elderly people stated—with much regret—that they had never given birth. A third (32.6%) said that they had a child, or children, who died, leaving them childless as a result. Of all children reported ever born to our elderly respondents (N=519), 35% died (N=184). This groups together a range of cohorts of children, as well as deaths to all ages; reportage of the dates when these children died is not sufficiently reliable to allow age-specific child mortality profiles to be constructed. The proportion of children dying is in excess of the child mortality figures reported for East Java above (see Table 4). Cumulative mortality will anyhow be higher than child mortality.

Data on children surviving and children resident in the village are more easily verifiable, as household rosters, interviews, and our surveys may be cross-checked. The main challenge is to identify adopted children *as adopted*, rather than own (see Section 6.5, below). As Table 7 shows, a quarter (25.6%) of elderly people in the village have no surviving children, and a third do not have a child living in the village. As we shall see, these high levels of childlessness and unavailability of children have important implications for the support networks of old people.

Figure 1. Elderly Respondents in East Javanese research village by number of children ever born, children surviving and children in the village.



Source: Fieldwork data, 1999-2000.

The information from Table 7 is represented visually in Figure 1. This reveals a strikingly u-shaped, polarised distribution of the number of children ever born and surviving. Half of the respondents have two or fewer children, the other half three or more. Forty percent of respondents have no or only one surviving child. As we discuss below, children are often not reliable sources of support in old age; hence people with only one surviving child may be considered at least potentially vulnerable. All in all, demographic childlessness—consequent on primary sterility, child mortality and pathological sterility—needs to be understood as part of a wider picture of sub-optimal fertility in a pre-transitional population where deliberate avoidance of pregnancy was absent. Declining fertility and improved health care after 1970 will no doubt reduce the effect of child mortality for future generations of elderly. The majority of women in Indonesia today can expect to have 2-4 children surviving.¹² For currently elderly in East Java, however, recent demographic history has meant that significant proportions do not have children of their own. It is to an account of wider demographic forces that have established this pattern that we now turn.

4. Marriage and Infecundity

That marriage patterns may play a significant role in childlessness is a familiar theme in several world regions, although comparative analysis has not—to our knowledge—been undertaken. One historical and two contemporary cases stand out. In early modern Europe as many as 20% of women in some areas remained spinsters (Hajnal 1982). Childbearing outside wedlock was low (usually accounting for less than 5% of births), and correlated closely with trends in marital fertility over the whole of the 17th and 18th centuries (Laslett *et al.* 1980); bearing children to be raised outside marriage, in other words, does not appear to have been an accepted option. Delayed marriage (for women on average, at age 23 and above) would have further increased the likelihood of childlessness, especially in those groups in which a woman's marriage was postponed well after age 30, when fecundability begins to decline (Wilson 1986; Bongaarts and Potter 1983:42-3). The overall implications of the “European marriage pattern” thus point to substantial numbers of elderly without children (say, one fifth), although national and regional estimates are not available.

Contemporary Western Europe provides a second scenario, in which the implications for childless elderly lie mainly in the future. Competing demands which professional women face with regard to marriage, career, and childbearing, coupled with high and increasing levels of divorce, point to a potentially significant rise in childlessness, both voluntary and involuntary. According to Prioux (1993), data on Western Europe show six countries in which approximately one-fifth of women aged 40 are childless. The value of these figures is obviously lessened by a number of uncertainties. Not all of these women have reached menopause, hence a certain amount of childbearing may still occur. Estimates are not usually given for men remaining childless, for whom comparable cohort issues arise. Marriage and remarriage can turn childless men and women into step-parents. Alternatively, remarriage (and perhaps rising levels of cohabitation) may have the opposite effect: divorce may lead to *de facto* childlessness where it effectively separates one partner from his or her children. Secure estimates of the accumulated impact of trends on elderly cohorts and their childlessness are, once again, not available.¹³

Overall levels of childlessness are also difficult to estimate in the third case, contemporary sub-Saharan Africa. There pathological sterility has long been recognised as a considerable factor reducing fertility. Frank's (1983) reports three countries in

which 20 to 30% of women remained permanently childless, and a further seven countries in the range of 11 to 17%. Several aspects of evolving marriage patterns appear to facilitate transmission of the most likely cause of infertility, gonorrhoea, since they increase the likelihood of multiple sexual contacts. Extra-marital relations, often with prostitutes, may be tolerated for men whose wives are observing post-partum abstinence; childlessness is popularly attributed to a woman's infecundity, leading to divorce and remarriage; sexual experimentation before marriage may be common; polygynous marriages, which traditionally involved an estimated 9 to 48% of women, depending on ethnic group, remain important (Pebley and Mbugua 1986:339); new forms of plural marriage have proliferated in recent decades (Bledsoe and Pison 1994); and the spread of AIDS adds further, and potentially major, uncertainties (Gregson 1994). Not surprisingly, given levels of infertility, alternative child supply arrangements, notably fostering, are common in many areas (Kreager 1980). The fluidity of marriage arrangements, together with incompleteness of data, make precise estimation of infertility impossible, let alone assessing implications for future elderly populations.

Levels of childlessness in Indonesia indicate a fourth setting in which marriage patterns and infecundity are serious contributors to childlessness. The pattern is a distinct one which cannot be assimilated to any of the three regional cases just outlined. To begin with, permanent celibacy and late age of marriage characteristic of historical Europe cannot be used to explain high levels of childlessness in Java, since marriage is almost universal. According to the 1993 IFLS, one percent of elderly women in Indonesia never married. Of the 210 elderly in our East Javanese community, only one woman claimed never to have been married; a further two elderly who initially declared themselves as never married, later admitted brief marriages that had not been consummated. In addition to being universal, marriage has also historically been early, beginning for girls in their early, and boys in their mid-teens. As late as 1980 the mean age at first marriage for women in East Java was 19 years (Hugo *et al.* 1987:161). Nuptiality, in short, should promote *high* rates of reproduction, making levels of childlessness all the more remarkable.

Another aspect of Javanese marriage which distinguishes it from historical European patterns is traditionally high rates of divorce. In the early 1950s, for example, there were 22 divorces per 1000 population aged 15 and over in East Java, as compared

with fewer than one per 1000 in England and Wales at that time (Jones 1992:3). Historical data suggest that these high levels of divorce were already in place in Java in the 19th century (Boomgaard 1989:145-6). First marriages—traditionally arranged by parents—often ended in early divorce with little stigma attached. Data from the 1973 Fertility-Mortality Survey indicate that among the 1940-49 marriage cohort (which coincides with the marriage cohort of many of our elderly respondents and with a period of war and unrest in Indonesia) 21% of marriages in rural East Java had ended in divorce within 5 years of marriage; other parts of Java show similarly high rates (Muliakusuma 1976, cited in Jones 1992:13).

As European marriage patterns have tilted strongly toward high rates of divorce since the 1970s, so divorce in Java has declined steeply, one of the few regions in the world where this is the case. The general divorce rate for East Java in 1985 was 2.7, compared with 4.0 in England and Wales (Jones 1992:3). Divorce affects fertility and childlessness via exposure to sexual intercourse, as it is likely to be preceded by periods of marital estrangement, and followed by (possibly prolonged) periods outside sexual union. Most, but by no means all, divorced or widowed people in Java remarry, which means reproductive life may be cut short. Data from the 1973 Fertility-Mortality Survey suggest that 54% of first-time female divorcees had remarried within two years, and 83% within five years (Jones 1992:29). The impressive decline in divorce in Java notwithstanding, *currently* old people in East Java are still affected by the high divorce regime in the past, as Table 8 shows.

Table 8. Number of marriages to elderly men and women, by sex and residence: Indonesia and East Java.

	Once %	Twice %	Three or more %	N	
Indonesia ¹	Urban Men	63.1	21.0	15.7	329
	Urban Women	69.1	21.4	8.5	365
	Rural Men	55.0	28.1	16.9	772
	Rural Women	60.7	23.4	15.5	790
East Java ¹	Urban Men	58	19	23	73
	Urban Women	75	24	1	92
	Rural Men	53	36	11	204
	Rural Women	63	27	10	236
Village ²	Men	40.3	35.8	23.9	67
	Women	48.3	31.4	20.3	118
	Childless Men	42.9	28.6	28.6	14
	Fathers	39.6	37.7	22.6	53
	Childless Women	32.3	41.9	25.8	31
	Mothers	54.0	27.6	18.4	87

Sources: ¹ IFLS 1993; ² Fieldwork data 1999-2000.

Table 8 shows that having been married more than once is common among the elderly in East Java. According to the IFLS, almost half of rural elderly men, and 37% of women have been married more than once. Remarriage is consistently lower in urban areas. This may be due to socio-economic differences: poorer, less educated people are more likely to divorce than their better-off or more educated counterparts (Jones 1992:25). This is borne out in our village data where 60% of the richest, but only 34% of the poorest elderly were married only once. Village figures indicate higher rates of remarriage than suggested by the IFLS: fewer than half of all elderly respondents were married only once, and more than one in five three or more times. Thus field research indicates once again that caution must be observed in interpreting IFLS data. People are reluctant to admit to frequent marriage, and may be quite selective about what, out of a long series of life events, they remember and report. Many respondents, for example, only 'owned up' to having been married several times during second or third interviews, especially if the marriages had been brief.

Table 8 separates childless and non-childless respondents at the village level. Remarriage is more frequent among childless women, with two-thirds of the childless, but less than half of mothers having been married more than once. Given that childlessness is involuntary and carries considerable stigma in rural Java, failure to have children is often an explicit reason for getting divorced and remarried, either in the hope of having children with a different partner, or as a means of obtaining step-children. The

greater propensity for divorce among the childless also means that fewer childless elderly are married in old age, as Table 9 illustrates. Remaining single has important implications for potential support networks, especially for elderly men for whom support from a spouse is often more important than support from a child. Among elderly men who have children, only 9% are without a wife, in contrast to a quarter of childless men. Many of the latter are thus doubly disadvantaged: they have no children, and lack a wife who is likely to be younger and able to support them in old age. Childless elderly women are slightly more likely to be married than women with children, although for both groups being without a spouse in old age is the common experience. For elderly men, the proportion married according to the IFLS (91%) is similar to village data, but lower proportions of elderly women in the village are married compared with the IFLS data (23-28% as opposed to 36%).

Table 9. Current marital status of elderly people by sex and childlessness.

	Non-childless ¹ (%)		Childless ¹ (%)		East Java ² (%)	
	Men	Women	Men	Women	Men	Women
Never married	0	0	0	2.9	0	0
Married	91.2	22.7	76.5	28.6	91	36
Widowed/divorced	7.0	68.0	17.6	57.1	8	57
Divorced ³	1.8	9.3	5.9	11.4	1	7
Total (N)	57	97	17	35	278	330

Sources: ¹ Fieldwork data 1999-2000; ² IFLS 1993. ³ 'Divorced' includes only people who are definitely divorced, rather than widowed. The category 'widowed or divorced' are widowed persons, some of whom divorced before their former spouse died

Divorce is a potentially important determinant of childlessness not only because it may curtail marital sexuality, but because, as in sub-Saharan Africa, high rates of divorce increase the possibility of multiple sexual contacts and hence the potential spread of sexually transmitted diseases (STDs). Some elderly villagers admitted that divorce was preceded by extra-marital affairs; there is also evidence from elsewhere in Java which parallels the African pattern whereby husbands of childless women are likely to enter into polygynous unions (V. Hull 1975: 285, cited by Hull and Tukiran, 1976:21). Divorce, widowhood and the spread of STDs may also be by-products of economic and social upheaval. Indonesian cohorts currently in their 70s experienced childbearing during the Japanese occupation and subsequent struggle for independence. As observed in Section 2, levels of fertility in East Java during and immediately following the war

years are amongst the lowest ever observed in non-contracepting populations. Levels of divorce in the older generation should, in this respect, be understood as merely one outcome of a wider and complex set of historical forces which acted on the past fertility and infertility of older generations, and in consequence shape their lives today. It will be helpful to outline what is known regarding the disease environment in the first half of the 20th Century, so that the current situation may be understood in its historical context.

Colonial and wartime evidence of sexually transmitted disease is limited, but suggests high prevalence in those parts of the archipelago characterised by high population density and mobility. East Java is one of the most densely populated areas (680 per km²). The population was very mobile, with landless peasants forced to find employment in, or related to, the armed forces, and to seek work in port cities or seasonally on plantations. As disease environments, all of these settings were characterised by poor sanitation, crowding, poverty and personal insecurity. The implications for STDs are reasonably clear. Dutch sources report roughly 25% of Indonesian troops as infected with STDs as early as the end of the 19th century, with even higher levels among Dutch troops (Van der Sterren *et al.* 1997:206). A recent study of attendants of antenatal clinics in Surabaya, East Java, found a significant legacy of this longstanding influence: 8% of women were infected with chlamydia, and 0.5 % with gonorrhoea (Moeloek 1998:3).¹⁴ Hull and Tukiran, in view of the high levels of childlessness in urban areas, reasoned that sterility “is related to the incidence of venereal disease (associated with port cities), tuberculosis, vitamin deficiencies (especially vitamin E), and vaginal infections (cause by *E.Coli* or genital mycoplasmas). As such it is higher in areas where nutrition is substandard or where, in the case of infection, medical care is lacking. Both venereal disease and vaginal infections would be contagious and thus might be found to affect large densely settled population groups, especially in the cities” (1976:21). They remark that poor urban health conditions would also be conducive to infant and child mortality. Poorer health services in rural areas should also be kept in mind: infant and child mortality were lower in urban than rural areas (Hugo *et al.* 1987:125; Utomo and Iskandar 1986:15).

High levels of population mobility would have ensured that venereal disease was not confined to urban areas. There is evidence that sterile women are more likely to be divorced (in addition to Table 8, see V. Hull 1975:285, cited in Hull and Tukiran 1976; and Jones 1992:23), and also frequently involved in migration. Such women were

a likely source of urban prostitutes; prostitution was widespread by early in the century (Jones *et al.* 1995). At a local level, then, the spread of STDs could have served both as a result and a cause of population mobility. There is no doubt that the male as well as the female population was highly mobile. In the village studied, 63% of childless elderly had lived elsewhere at some stage in their lives; the difference between men and women is small (68% versus 60%, respectively).

This situation would undoubtedly have been exacerbated by the poverty which accompanied colonial labour policies and subsequent wars, of which only the briefest outline is possible here. During the Dutch colonial period, fertile land over much of Java was forcibly requisitioned for sugar-cane and other cash-crops, leaving insufficient land for rice in years of poor harvests; peasants were also required to contribute heavy labour services to the colonial power (cf. Onghokham 1975, Hartveld 1996). The Japanese occupation of 1942-45, with its forced labour and confiscation of all rice, was crippling. Condemnation of the Japanese period as one of greatest hardship is a prevalent theme in the life histories of elderly respondents. People remember vividly going hungry at that time, having to eat cassava and wear sacks for clothing. Added to this was the constant fear of being caught smuggling food or cloth, or being conscripted into the Japanese army (*romusha*).

The Japanese occupation was immediately followed by the war for independence that raged particularly fiercely in the area between Surabaya and the south of Malang. At one time in the late 1940s, for example, the entire population of our research village had to flee to nearby Mount Kawi to escape the fighting between Indonesian nationalists and the Dutch army. External forces thus led to high population mobility and pushed the population of East Java often into extreme poverty and food shortage. Under the circumstances, it is hardly surprising that recorded fertility in Java declined in the 1930s, and did not recover until the 1950s. Crude Birth Rates fell from 45 per thousand before the 1930s to 39 per thousand in 1940-45 (Hugo *et al.* 1987:137). The frequency of widowhood, remarriage and divorce, and the lack of stigma attached to the latter, is also readily understandable in these circumstances.

5. *De facto* Childlessness

Before turning to people's responses to childlessness, some account is necessary of those elderly who have surviving children on whom they cannot rely. The estimate of

one quarter of elderly without children which arises from a strictly demographic accounting of childlessness is at best conservative when it comes to assessing actual availability of children for old-age support. There are two reasons why such an estimate is problematic. First, not all people who fail to have children, or whose children die, remain childless. There are other ways of obtaining children, for instance through adoption or marriage to someone with children (see below). Second, not all people who have surviving children have access to their support. Some lose all contact with children due to out-migration, divorce or conflict, or have children incapable of providing support. To demographic childlessness reflecting the play of mortality, infertility, and marital disruption, we must add *de facto* childlessness: the lack of access to support from any children.

As a small, but potentially vulnerable sub-population, the *de facto* childless cannot be recovered from extant survey sources. Questions customary in survey methodologies regarding frequency of contact with non-resident children, and flows of support between generations, are the subject of a growing critical literature (e.g. Hermalin 2000). In general, frequency of contact carries no control over quality or content of interactions, whilst snapshots of economic flows provide little check on the discontinuous and many-sided nature of family relations. Children with whom there is little or no contact will in most cases simply not be mentioned during a one-off interview. Ethnography provides one of the few alternatives for an assessment of *de facto* childlessness, as surveys conducted in later stages of field research may be checked against information from life-history interviews, observational data and information provided by third parties.

De facto childlessness has many causes and different degrees of finality, which reflects on estimates of the size of this vulnerable group. Five causes may be distinguished here. First, out-migration of children may leave parents without any source of support locally available. As the data in Table 7 (above) show, a third of elderly respondents do not have any children living in the village. This poses a problem for old-age support which is reliant on proximity, whether the care provided is physical or emotional. Moreover, children living elsewhere contributed material assistance to their elderly parents only rarely and irregularly. Six elderly in the village received absolutely no support from an absent child; a further twelve had no children remaining in the village, but received sporadic support (visits, small remittances).¹⁵

The second factor, divorce, can leave parents *de facto* childless if it results in the loss of contact with children. Children generally remain with their mother following a divorce, although they may be placed in the care of grandparents or other relatives for a time, especially if both parents intend to remarry. Usually intended as temporary, these arrangements may become permanent, with the effect that the child later feels little or no loyalty towards its biological parents. Where children remain with their mother, they often have little contact with their father, not least because there are no expectations that fathers should support children and ex-wives after divorce. Physical separation when a parent moves away following a divorce may add to the likelihood of alienation. Men are thus particularly vulnerable to losing children due to divorce, and three elderly men ended up *de facto* childless for this reason.

A third group of *de facto* childless people are those with handicapped children who are unable to provide material or practical support, although their emotional support should not be underestimated. Six respondents have seriously handicapped or psychologically ill children who require more support than they can give; two of these have no other children and can therefore be classed as *de facto* childless.

Fourth, there are less clear-cut cases of families in which the younger generation is *economically* very unsuccessful, less successful than the parental generation. These children tend to be a net-drain on parental resources, rather than a source of support. Almost half (44%) of elderly people in the village have at least one child that receives more help than it provides. A third of such children are still unmarried, but the majority are either married or past marrying age, and many have 'independent' households. It is not easy to assess potential *future* support, or the emotional and practical help from such dependent or unsuccessful children. One elderly woman in the village received no support whatsoever from her ineffectual son, even when she was very ill, and a further six elderly *only* have children who are a net drain on their resources, and can therefore be classified as *de facto* childless.

Finally, the most distressing cases of *de facto* childlessness are those in which elderly people have become estranged from their children as a result of conflict. There were three elderly women in the village for whom this was the case. Where people are childless due to conflict, the welfare and happiness of the elderly person is affected in multiple ways. The lack of support from children is exacerbated by the painful fact of conflict, the stigma attached to serious familial discord in the village, and the reduced

likelihood that surrogate children will fill the gap. The following case illustrates the devastating effects of such *de facto* childlessness.

Case 1. Mbah Sadia¹⁶

Mbah Sadia is one of the oldest women in the village. She married and had children during the Dutch era, that is before 1942. Today only one daughter survives. This daughter lives next door to Mbah Sadia, in fact, the old woman's minute, primitive bamboo shack is built onto the end of her daughter's large brick house. Despite her advanced age and blindness on one eye, Mbah Sadia still works, albeit for a pitiful income. Every day she walks for miles, looking for firewood and edible leaves, herbs and wild vegetables which she sells for a few hundred Rupiah (Rp.12,000 = £1). On occasion she only has plain rice to eat. Her daughter, who is quite well-off and close at hand, provides virtually no support to the old woman. What little she does offer—the occasional prepared meal—is often refused. Severe animosity between mother and daughter goes back decades. Mbah Sadia left the village when her first husband died in the late 1930s to find a livelihood as a domestic servant in the nearby town. Her two children were brought up by a childless older sister. To this day the daughter resents her mother for having 'abandoned' her. She is clearly embarrassed by her mother's refusal to accept help, and the public display of destitution literally on her doorstep. She also condemns her mother's past life-style, notably her many marriages and divorces: "She knows no shame!" The rich daughter thus feels legitimised in distancing herself from her disreputable mother. Not surprisingly, Mbah Sadia clings to her independence, despite the poverty it entails. Accepting help from an estranged and disapproving daughter would amount to accepting charity and surrendering control over her life. Moreover, because Mbah Sadia ostensibly has a daughter who could care for her, neighbourly charitable support is not forthcoming.

Table 10 summarises the extent of childlessness in the East Javanese study community if demographic and *de facto* childlessness are taken into account.

Table 10. Extent of demographic and *de facto* childlessness in Research Village.

Type	Number	% of all Elderly	Cumulative %
Actual childlessness	52	25.6	25.6
<i>De facto</i> childlessness (no support)	11	5.4	31.0
<i>De facto</i> childlessness (net drain)	6	3.0	34.0
<i>De facto</i> childlessness (all absent)	12	5.9	39.9
Total (all elderly, N=203)	81	39.9	39.9

Source: Fieldwork data 1999-2000.

The table shows that 5% of elderly people in the village receive no support at all from any children, either because of conflict, loss of contact with, or incapacity of, a child. These elderly are in practice indistinguishable from elderly who have no surviving children. A further 3% have children that are currently a net drain on parental resources; such children are rarely able to support their parents to a significant degree at a later stage. On top of this are 6% who do not have any children in the village; although they occasionally receive visits or small gifts, the support is neither of a kind nor consistency to be reliable. In sum, depending on the criterion used, between 11 and 29 elderly

people can be classed as *de facto* childless. On this count, the percentage of childless cited earlier (25.6%) should rise to 31-40% of the elderly population. However, as we shall argue in the sections to follow, Table 10 paints too negative a picture of the availability of children to elderly people. Whilst the 5-14% of elderly who are *de facto* childless constitute a seriously vulnerable group, almost half (48%) of those without children have been successful in acquiring access to children by means of adoption or marriage to someone with children. A summary measure that discounts demographically childless people who have successfully adopted a child, or established a close relationship with a step child, but includes *de facto* childlessness may be termed *real childlessness*. According to such a definition, 17.2% (N=35) of all elderly in the village can be considered childless: they have no access to support from a child in their old age.¹⁷

6. Overcoming Childlessness

High rates of childlessness raise serious questions for elderly welfare in contemporary East Java. What options for livelihood and support are open to elderly people without children when they become frail or are temporarily incapacitated? Are elderly people without children really at a general disadvantage, or do equally good alternatives to children exist? In fact, childless elderly do have access to support from offspring who are not their biological children. Informal adoption (*anak angkat*) has long been present in Java, and Southeast Asia more generally (see Djamour 1959 on adoption in Singapore, and Carsten 1991 on Malaysia). Of the 52 childless elderly in the village, 32 (61.5%) reported adopting a child at some stage in their lives. Adoption is not exclusive to the childless, 20% of elderly people with a child of their own had also adopted. Adoption is not, however, entirely reliable: only 50% of adoptions among the childless resulted in long-term support for the elderly.

Other options, in varying combinations, can often be seen at work. One important source of support derives from charitable institutions operating either through religious or voluntary organisations, or via less formal neighbourhood networks (cf. Scott 1976:41). A third option is support by children acquired via marriage or remarriage. A fourth is patronage: provided that the elderly are able to work, or are long-established clients of better-off members of the community, then their services, even if decreasing or ceasing with age, may still be rewarded by continuing support.

Wealth, at least in theory, provides a further option: elderly people with capital could simply purchase necessary assistance. The material possessions of better-off elderly people (usually ownership of agricultural land, or pensions received by retired military and government personnel which also cover spouses) would certainly permit this, and their astuteness in dealing with regional and local market economies is often considerable. Economic rationalism, however, does not hold sway, as the position of the better-off is legitimised chiefly by their deploying resources in ways readily seen as benefiting other villagers as well as themselves. We are here in the zone of what anthropologists have called ‘restricted exchange’: mutual benefits must arise from relationships amongst kin and villagers, exchanges taking place not on a once-only or unidirectional basis, but as part of continuing social ties (Sahlins 1965; Mauss 1954). Perhaps the best-known traditional institutions in Javanese society (communal ritual meals—*slametan*—and mutual help among villagers—*gotong royong*) are supposed to ensure that even poorer members of a village are able to give as well as receive. There are no cases in our data of a straight market solution to provision of elderly care.

The demographic evidence reviewed in previous sections indicates that childlessness and poverty appear to be inextricably linked in Indonesian society (also Singarimbun and Hull, 1977). As we have seen, poor health due to poverty may have an impact on fertility via differential widowhood and divorce; very poor elderly in our village, for example, are four times more likely than the rich to have been married three or more times. Poverty also affects exposure to, and treatment of, sexually transmitted diseases. Roughly a third of childlessness in Java is the outcome of infant and child mortality also reflecting poor health conditions.¹⁸ The absence of children can make people more economically vulnerable throughout their lives, unless alternative sources of economic support are available in times of crisis.

Recognised social and economic differences provide a framework within which the several routes to overcoming childlessness may be viewed. All four of the alternatives to having one’s own children just noted tend to reflect negatively on social standing. All involve a great deal of uncertainty. Adoption is the only option favoured in all strata, doubtless because, in providing substitute children, it conforms most closely to the normal family idiom. The other options are the lot of poorer strata, reflecting their relative, and sometimes severe, powerlessness. Taking each option in turn, we shall find ourselves moving gradually up the social scale.

6.1 Socio-Economic Differences and Childlessness

First, however, it is necessary to establish what this scale is. Although ethnographers have remarked that no explicit class structure is recognised in Javanese society (Geertz 1963), villagers in fact have a keen sense of differential social and material well-being. Table 11 and Table 12 rely on a simple typology of socio-economic strata, developed on the basis of ethnographic and local survey data: beginning from interviews and observed behaviour, a household survey was designed which aimed at capturing economic differences recognised by villagers. Quantitative data on assets, housing, consumption, types of work, income, pensions, savings and informal and formal support were collected. The terms used to describe each of the four strata in the table are translations of phrases which recurred in village responses to questions about economic position.¹⁹

Table 11 contrasts the household socio-economic status of childless elderly people with that of elderly people who are parents. Elderly here are classified as childless on the basis of demographic childlessness, that is, if they have never given birth, or if their children have died.

Table 11. Demographic elderly childlessness by socio-economic status of households.

Households: Socio-Economic Status	Childless %	Non-Childless %
I Very rich	17.3	21.6
II Comfortably off	17.3	30.7
III Ticking over	26.9	28.8
IV Very poor	38.5	19.0
Total (N)	52	153

Source: Fieldwork data 1999-2000.

Comparison shows that the two groups are quite similar for economic strata I and III, but that the childless are twice as likely as parents to be very poor. Overall, more than half of the non-childless, but only a third of the childless live in households that can be classified as rich or comfortably off.

In Table 12 a more realistic measure of childlessness is used. Childless elderly who have successfully acquired a child via adoption or marriage are included among the non-childless. By contrast, those who have children but receive no support whatsoever from any of their children are included among the childless as *de facto* childless (N=11, see Table 10). On this definition, roughly 17% of all elderly in the village are childless.

Table 12. Real elderly childlessness by socio-economic status of households.

Households: Socio-Economic Status	Childless %	Non-Childless %
I Very rich	11.4	22.5
II Comfortably off	5.7	32.0
III Ticking over	20.0	26.9
IV Very poor	62.9	16.0
Total (N)	35	169

Source: Fieldwork data 1999-2000.

The difference in socio-economic status between the childless and non-childless is now much larger. The figures are powerful: people without access to a child in old age are extremely likely to be poor. Almost two-thirds can be classified as very poor, a further 20% are merely ticking over. By contrast, only 43% of elderly with children fall into the poorest two strata, and in particular they are unlikely to be very poor (16%). The childless elderly in economic strata I and II present a special case: they are relatively poor elderly people who reside in, and derive some support from, a rich household to which they are either unrelated (4 cases) or related by a kinship tie that is not very close (2 cases). The former can be characterised as clients of rich patrons for whom they have worked for a long time and with whom they now reside (see Section 6.3, below).²⁰

As with demographic childlessness, the lack of children and poverty are closely linked. Being poor may explain why a person has failed to have, acquire or keep a child. Rich childless people, for example, are in a better position to provide material security to a potential adoptee, and are thus more likely to be given a child to raise. The superior social standing of the rich also makes it much less likely that their request for an adoptive child will be refused. As a result, all of the rich or comfortably off childless elderly in the village had at some time in their lives adopted a child, compared with only half in economic strata III and IV. By being able to offer a good inheritance or other benefits to their children, rich adoptive parents are able to cement their ties to adoptive children, making it less likely that the child will return to its biological parents, as often happens (see Section 6.4, below). Thus all of the rich childless elderly (strata I and II) who had ever adopted a child had at least one loyal and supportive adopted child, compared with only two-thirds among the poorer adoptive parents (strata III and IV). For those, who do not have a child, or have lost contact with a child, life-time poverty may be exacerbated in old age by lack of support from the younger generation.

Childless elderly are, for example, more likely to be living alone, as Table 14, below, shows.

6.2 *The Logic of Charity*

Having established the distribution of childlessness in the socio-economic landscape of the village community, we shall now examine the options open to the childless, beginning at the bottom of the socio-economic scale. Face-to-face, personalised charitable support from known benefactors is very common in rural East Java. It includes the giving of cooked or uncooked food, small sums of money, inexpensive medicine, and sometimes shelter. Women in the village will not infrequently take a plate of food to a poorer neighbour, playing it down with a comment like, “*Oh, it’s nothing. I just give them some food when I have cooked too much.*” The vast majority of poor people are in receipt of charitable support now and then, but for most it represents one avenue along with family support, employment, or support from the religious community. Perhaps more important, the lines between charitable giving of food, and the commonplace exchange of food and help as part of ritual and social village life, are blurred. On occasions like weddings, circumcisions, deaths, or religious festivals, families prepare food as a part of a brief ceremony (*slametan*); this food is then distributed among neighbouring households, irrespective of economic or kinship status. These exchanges are not understood in terms of charity, but nonetheless represent important sources of indirect material support: one third of households in our survey stated that they only ever consumed meat when given it as part of a *slametan* meal.

One of the defining characteristics of households in Economic Strata IV is that they depend on extra-household support—from other kin members or the community—for a significant part of their everyday needs. Complete reliance on charity affects five out of 52 childless elderly people (10%); in addition, five *de facto* childless people fall in this category. The following example highlights what such dependence can look like.

Case 2. Mbah Putih

Mbah Putih was first mentioned by a group of well-to-do women when talking about the elderly without children in the village. They described her as an extremely poor elderly childless woman in her 70s who lived alone in a tiny bamboo shack. This shack had been erected for her in an act of mutual neighbourly support (*gotong royong*). The house did not have water or electricity, so Mbah Putih had to fetch water from a neighbour, cook on a firewood stove and walk to the river to wash and go to the toilet. The women emphasised Mbah Putih’s dependence on others: “If she’s not given it by neighbours, she doesn’t have anything to eat” (*kalau nggak dikasih tetangga nggak makan*). They hastened to add that she did not have to go hungry.

Mbah Putih had been widowed for a very long time; her two children had died. She used to work as a small trader of snacks in the nearby market, but had stopped a long time ago because she was too old to manage. She acknowledged that for her daily needs she depended upon her various neighbours who gave her small sums of money to buy food. The only relatives Mbah Putih still had were an older brother and nephews in a nearby village. The brother had apparently sold the inheritance from their parents without giving her a share of the money, hence Mbah Putih had little if any contact with him. On our first visit Mbah Putih claimed never to be ill, hence not in any need of medical treatment.

Soon after, however, Mbah Putih fell ill. Although the women from the neighbourhood still brought her water and food, they openly gossiped about her, complaining about her smell and her apparently huge appetite! A few days later the old woman was collected by her nephew, the son of her estranged brother. Someone had let him know that she was ill. Clearly, no-one in the neighbourhood was prepared to provide physical care, or medicine to her during her illness. Not long after, Mbah Putih died in her nephew's house. Any trace of her existence in the village was quickly erased, the bamboo shack pulled down, and her name never mentioned again.

The most striking characteristic of the support Mbah Putih received from her neighbours, like house, food, or money, is its unidirectional nature. Mbah Putih was by popular definition incapable of reciprocating (*"If she's not given it by neighbours, she doesn't have anything to eat"*). Although it is likely that over a longer time span, i.e. taking into account earlier life-course interactions, Mbah Putih made contributions to others, this was not mentioned by the neighbours as their motivation for helping her.

The fact that Mbah Putih is seen as having absolutely nothing to offer is perhaps surprising. The literature on ageing in developing countries often assumes that in rural, 'traditional' settings, the elderly are valued by virtue of their experience; even if they are no longer able to contribute economically, they are guardians of local knowledge (e.g. Cowgill and Holmes 1978:15). We found no evidence of such a blanket positive evaluation of the elderly in East Java. The way people talked about Mbah Putih, or about people in similar situations, made it clear that they were considered of no value. They no longer received visitors, other than people dropping by some food. They were no longer invited to participate in the preparations of weddings or other ceremonies. Poor elderly people who still participated in economic and ritual activities were, by contrast, able to retain self- and collective respect.

Although Mbah Putih could contribute nothing to local exchange networks, her presence and dependence on the neighbourhood did provide an important source of moral identity to the community. The act of building a house for Mbah Putih was mentioned by people as proof that neighbours in the village still look out for each other. *Gotong royong* gives respectability and a positive reputation to the people involved, and to the community in general. Such 'generalised exchange' (Sahlins 1965:147) provides

a kind of safety net for the childless poor, but only up to a point: as the case of Mbah Putih makes clear, it does not extend to physical care in ill health.

Thus, childlessness in itself does not necessarily imply lack of support. Nor does poverty automatically mean reliance on charity. In addition to being poor and childless, or ill and childless, what characterises elderly who become dependent on charity is their failure to forge lasting alternative relationships—with other relatives, adopted or step-children, or patrons. The following example illustrates another typical trajectory, in which minimal support is once again dependent on sources outside kin networks.

Case 3. Pak Rahmad

Pak Rahmad, a man in his early 60s, was economically quite successful until he fell seriously ill a few years ago. Now he is no longer able to support himself through work, and in addition needs considerable sums of money for medicine, as well as increasingly intensive care as his illness progresses. Over the years he has had to sell his assets to cover his costs. He has no children to rely on. He lost contact with his biological daughter after he got divorced from his first wife. With his second wife he adopted a child, but she eventually returned to her biological parents. Hence Pak Rahmad is now entirely dependent upon his wife, who is also unable to work, and a Muslim brotherhood to which he belongs and whose members quite often give him food or money.

This case illustrates the unfortunate coincidence of illness, resultant poverty, and *de facto* childlessness. Pak Rahmad's attempt at adoption was thwarted by the child's biological parents, who kept up regular contact and influence over the child. As we shall see, his case is similar to other failed adoptions in the village.

6.3 *Acquiring Children Through Marriage*

One of the major themes running through all of the case material is the importance of exchange and reciprocity (see also van der Geest 1997). People build relationships by giving, or fail because a network of exchange relations was never established. The absence and, even more acutely, the breakdown of close personal relationships is a source of great sorrow for elderly people. Not having an appropriate person care for you clearly carries stigma. Since 27% (N=14) of the childless elderly respondents in our village mentioned having a step-child (*anak tiri*), the question naturally arises whether marriage to a spouse with children presents a solution to their need of lasting personal relationships. Broadly speaking, the answer is no. Access to a child via marriage is highly gendered. Men are structurally in a better position to come into close contact with a stepchild as children are more likely to remain with their mother following a divorce. Men are, however, less able to establish a close relationship since father-child

links are generally characterised by respectful distance. Men, in short, are less inclined to interact and engage in exchange with (step)children. The situation of stepmothers is scarcely better, as stepmothers are popularly feared and accused of treating their stepchildren badly (cf. H. Geertz 1961:42, Jay 1969:151). Indeed, there is a verb, *menganaktirikan*, (literally “to stepchild someone or something”) which means to neglect someone or something (Echols and Shadily 1997:18). Women are usually only ‘allowed to’ develop a relationship with stepchildren if the biological mother is dead or absent. In only one case we encountered in the village had an elderly woman been successful in establishing a lasting bond with stepchildren by taking on the role of surrogate mother. The need to make some kind of special commitment to, or investment in, stepchildren is well-illustrated by the case of Mak Mut and Mbah Amat:

Case 4. Mak Mut and Mbah Amat

Mak Mut, a divorcée in her early 60s, lives with her mother, Mbah Jah, and step-father, Mbah Amat. She is the oldest of Jah’s three children; two younger siblings live in Sumatra. Mut’s father died when she was still small, and her mother married Amat, a childless divorcé, a few years later. While growing up, Mut lived with a variety of maternal relatives, as her mother was working in nearby Malang. Hence she did not live with her stepfather—nor her mother—for most of her childhood. However, when Mut was a young divorcée, she and her sister went to join her mother and stepfather in Sumatra where the couple had gone to work. For roughly 25 years Mut lived very close to them in Sumatra, and her only son lived with Jah and Amat for most of his childhood. In the mid-1980s Mut, and a little later Jah and Amat, returned to East Java and moved into their current house. This house had been built on land Jah inherited, with money that Mut and Jah had earned. Amat, the stepfather, who used to work as a builder, had helped to build the house, but had not invested any money in it. Two distinct household economies were contained within this single domestic unit. Relations between the three members were strained and conflictual. Mut and her stepfather almost entirely ignored each-other. Mut never gave anything, like cooked food or money, to her stepfather directly; her assistance would only reach him via his wife. Stepfather and stepdaughter both emphasised that they are not father and daughter. To the old man, at least, this seemed to be an explanation in itself. Mut was more specific: she repeatedly explained that her stepfather had never reached out his stepchildren. In all these years, she said bitterly, he had not given her a single gift, no food, “not even a glass of water”. She also complained that her stepfather had invested neither in their house in the village, nor in her mother’s house in Sumatra. Indeed, Amat had once said to Mut that there was no point, since he had no children of his own who would later benefit from such property.

The example of Mak Mut and Mbah Amat illustrates that there is nothing automatic about the relationship between step-parents and step-children in Java. Despite their association spanning many decades, Mut and Amat do not have a close bond, nor do they consider themselves as parent and child. In the eyes of the step-daughter, for a relationship to have arisen, her step-father would have had to make some kind of inclusive gesture, some form of material or emotional investment, towards her. Although the coresidence with his step-daughter provides the elderly man with a

minimal level of support, this support appears almost incidental, as it is always channelled via Mak Mut's mother.

In only three out of the 16 cases of childless or *de facto* childless elderly people with a step-child does the step-parent have a close and supportive relationship with his or her step-child. In a further four cases occasional contact and sporadic support exists. Clearly, then, acquiring a child through marriage is not a reliable or common route around childlessness in East Java.

6.4 Patron-Client Relationships

The desire to maintain economic, physical, and residential independence is often more important to East Javanese elderly people than the question of who will care for them should they become dependent. This is understandable, as the period of complete dependency in people's lives is likely to be short, if it occurs at all. The significance of continued employment among the childless elderly is indicated in Table 13 which contrasts the work status of childless elderly with those having surviving children. (We here use real childlessness as the definition.)

Table 13. Current work status among elderly respondents by childless status.

Current work status	Childless %	Non-Childless %
Not working	44.1	55.3
<i>Income from pension or land</i>	0	19.4
<i>Unable to work</i>	20.6	13.5
<i>Unpaid domestic work</i>	11.8	10.6
<i>Not working</i>	11.8	11.8
Paid work	32.4	37.1
Infrequent or unpaid productive work	23.5	8.3
Total (N)	34	170

Source: Field data 1999-2000.

Elderly with children are more likely than their childless counterparts no longer to be working. The difference is mainly due to the fact that almost 20% of the elderly with children receive a pension or income from land. The childless elderly who no longer work are mostly unable to work due to illness or frailty; this may be a reflection of the fact that the childless as a group are older than those with children (33% of demographically childless are 75 and over, compared with 18% of parents). There appears to be no real difference between the two groups in the proportions in regular paid work. However, if occasional work is taken into account, 56% of the elderly

without children and only 45% of those with children work. Occasional or unpaid productive work (for example, intermittent paid domestic work, or selling produce from a garden when the opportunity arises) tends to be badly paid and unreliable. Reliance on such work reflects the fact that access to regular work in old age is not guaranteed, and underlines the fact the childless are often poorer, and therefore forced to take any kind of work they can. On the whole the data suggest that childless elderly people are more likely to *have to* retain economic independence by working in old age.

Data on household composition confirm that the elderly without own or adopted children are likely to be living on their own. Indeed, they are three times as likely:

Table 14. Household compositions among elderly respondents by childless status.

Household composition	Childless %	Non-Childless %
Alone	22.9	7.1
Husband and wife	31.5	10.0
Two generations ¹	17.2	17.1
Three generations	0	47.1
Skipped generation	2.9	11.8
Other	25.7	5.9
Total (N)	35	170

Source: Field data 1999-2000. ¹ This includes two *de facto* childless people who live with handicapped children, two living with a step-child from which they receive little support and two living with their elderly parents.

For the childless, living alone can be more problematic than for those with children, as the latter often have a child living close-by who may provide support. Another striking difference between the two groups is that a quarter of childless people live with ‘other’, compared with fewer than 10% of those with children. This category includes elderly people living with a sibling or a distant relative, or living with their employer. The latter fall under the rubric of patronage and will be discussed in more detail here.

Working to maintain economic independence in old age usually means access to paid employment (e.g. factory or agricultural work, domestic service), self-employment (mainly petty trading), or control of means of production (usually agricultural land). Among the childless elderly, 68% fall into the paid employment category, 32% into self-employed and none own means of production; among the elderly with children the percentages are 25%, 57% and 17%, respectively. Long-established work relations with particular individuals prepared to ‘keep them on’ in old age are often crucial to elderly people’s access to paid work. The implicit understanding is that the person giving

employment takes on certain responsibilities towards his or her employee. It is generally understood, for example, that the same people should be repeatedly hired for work to be done in the fields, thus assuring agricultural labourers of a pool of regular employment for years, even decades. The patron is expected to give gifts of money or clothes to his client at *Idul Fitri* and similar occasions. The continued reciprocal aspect of the patron-client relationship, even if the client's work is largely symbolic, is very important to the elderly people involved, as it lends legitimacy to the support they receive, and therefore makes the relationship less unequal, less like charity.

Patron-client relationships are not confined to relations among non-relatives. Quite often it is a rich relative who provides some form of employment to a poorer relation, though not generally a member of the nuclear family. By engaging in a relationship of mutual exchange—labour for material support—the giver and receiver can avoid constant confrontation with the extreme hierarchy present in 'pure charity'. The following case illustrates this interweaving of kin support and patronage.

Case 5. Mbah Mis

Mbah Mis was married at least five times; he himself admits that his frequent divorces and remarriages were related to his childlessness. Eventually, with his penultimate wife, Mis had a son. Sadly, after his son had married and started a family, the son died. Mis' wife also died. Soon after, he married Mak Nah, who died in April 2001. The couple do not have any children together, but Nah had one son who is married and lives close by. He is very poor and unsuccessful: not a source of support (cf. section on stepchildren).

Despite his advanced age Mis still works as a farmer. He inherited quite a bit of agricultural land from his parents. Some of this was sold a long time ago, in order to pay for the circumcision of his son. When his previous wife was ill he also sold land for her medication, and then to pay for the costly funerary rites. Finding it harder and harder to make ends meet, Mis decided to sell the remainder of his agricultural land. Upon hearing this, Pak Jumadi, the nephew of Mbah Mis, tried to dissuade his uncle from selling the land. When Mis insisted, Jumadi offered to buy the land under very favourable conditions for the old man. Jumadi bought the land, but allows Mis to continue working it for a regular weekly wage, and with the added concession that Mis may keep the bulk of the produce. Jumadi has also on previous occasions employed his uncle and aunt, and various other poor relatives, to do agricultural work on his *bengkak* land (land over which he has use-rights by virtue of his job as a village official). Jumadi's actions are acknowledged as being very generous by Mis and other members of Mis' family.

What is of interest here is the *kind* of support that Mbah Mis receives from his nephew. This support does not take the form of a so-called free gift, but is in exchange for services, even if these are of an almost symbolic nature. Mis, by being paid in money and kind for work done for Jumadi, can retain a sense of independence that would vanish were he simply given money. The kinship link between Mis and Jumadi is sufficiently close to fall within the network of relationships where some support would be normatively expected. Especially given Jumadi's high standing and comparative

wealth, and his uncle's poverty and childlessness, it can be taken for granted that support for Mis will continue even after he can no longer 'work for his money'. But it is almost certain that once the mutual exchange aspect ceases to exist, the support Mis receives will be limited to fulfilling his daily needs. Jumadi's generosity is already limited in certain respects: he did not, for instance, pay for the hospitalisation of Mis' wife.

Status considerations play an important role in explaining the support arrangement between uncle and nephew. By helping his uncle, Jumadi, who has an elevated position in the village, can be seen as generous and caring. This is particularly important as the rich in the village are quickly accused of being aloof and stingy, and therefore have to engage in readily observable forms of generosity in order to maintain social legitimacy (cf. Scott 1976:41). Patronage, however, is subject to conflicting forces in the modern economy, which may with time come to work against the elderly poor. More and more people are selling their small, unprofitable plots of land to large landowners living outside the village, who often work in conjunction with larger agrobusinesses, like the sugar factory in nearby Kebon Agung. These large landowners will bring in their own, external work parties to work the land, rather than hiring locals. Even villagers who still own land have begun to shift to contracting out harvest work by selling a standing crop to an external firm (see also White 2000). The motives were made clear by younger-generation respondents: "If we organise the harvest ourselves by hiring neighbours and relatives, we have to pay in kind, as well as having to share some of the harvest with close relatives. If we sell the standing crop, we can keep all the money ourselves!" For the elderly in the village who depend on access to unskilled work, these changes seriously undermine their possibility of maintaining economic independence in old age.

6.5 *Anak Angkat*

Acquiring children via adoption is the most common response to childlessness in East Java. Of the 52 elderly people who are childless, 32 (61.5%) stated that they had ever adopted a child.²¹ *Anak angkat*, literally 'raised child', is rather imperfectly translated as 'adoption', or by other terms like 'fostering' sometimes used in the anthropological literature (cf. Carsten 1991). In Java, adoptions are very rarely formalised or officially recorded. In the majority of cases the *anak angkat* is the child of a relative, and unless

the biological parents have died, the child will usually maintain contact with his or her family of origin. This poses a constant threat to the adoptive relationship. Far from being a straightforward solution to childlessness, each adoption faces two challenges which have to be overcome in order for support in old-age to ensue. First, the bond with the *anak angkat* has to be established successfully and maintained; in other words, there is a question of loyalty. Second, the *anak angkat* must actually provide support to his or her adoptive parents; hence there is an issue of reliability. The latter, of course, is a challenge that affects biological and adoptive parents alike. The following case study highlights the potential reversibility of adoption in East Java.

Case 6: Bu Dinah

Bu Dinah is a widow in her 60s. Her economic situation is constrained. Dinah and her husband never succeeded in having children. Instead they raised Rudi, the youngest son of Dinah's cousin. This cousin has seven surviving children, all of which live locally. She and her husband, a former religious official, live a stone's throw from Dinah's.

In separate interviews with Dinah and her cousin, an interesting conflict in the adoption narratives emerged. Dinah refers to Rudi as her *anak angkat* and says she and her husband cared for Rudi since he was very small; they schooled him and looked after his everyday needs. According to the biological mother, Rudi used to only sleep in Dinah's house, but was given food and money for schooling by his biological parents. She does not use the term *anak angkat* when talking about the relationship between her son and cousin.

A few years ago, after her husband had died, Dinah offered her house to Rudi; the house was officially changed into Rudi's name. However, after the house had already changed owner, Rudi's biological parents, who are quite wealthy, decided to divide up their inheritance. They gave land and a house to each of their children. Rudi was included in this generous act. Soon after, he married and moved into the house that had been built for him by his biological parents. Dinah was distraught. She says that Rudi now never comes to visit her despite living so close, indeed she has the feeling he no longer wishes to know her. Dinah now feels extremely vulnerable as she has already handed over of her house and land to son, leaving her without assets and without support.

At the heart of the failure of Bu Dinah's adoption lies a common ambiguity surrounding adoption in Java which arises from the fact that the transfer of children is rarely absolute. Being the son of a close relative of Dinah's, Rudi maintained regular contact with his biological family. As the comments and actions of his biological parents showed, they still considered him as their son, whilst Dinah regarded him as her *anak angkat*. She was doubtless aware of the contested status of her relationship to Rudi. In an attempt to reduce the ambiguity and tie Rudi closer to herself, she passed on her house to him. In doing so she stated that she considered him her child and therefore entitled to inherit from him: this is a perfectly respectable thing to do. (It is not unusual for parents to pass on their inheritance to their children well in advance of their death.) However, the biological parents did not concede: they ignored the fact that Rudi now already has ownership of a house and offered him another one. As the biological parents

enjoy much higher social and economic standing in the village, they can openly contest Dinah's claim to their son without drawing social condemnation. The case raises interesting questions about the assumption in ageing literature that support to parents in old age is positively related to support and material assistance previously received from parents (e.g. Dowd 1975; Caffrey 1992). We found that within the domain of parent-child relations, as opposed to relationships with wider kin or non-kin, the giving of support by parents does not automatically engender reciprocal support, or even expectations that such support should occur.

The case of Dinah is not an isolated one: many of the elderly people who had adopted a child went to great lengths to win the loyalty of their charge, for example by giving generous gifts, by making themselves useful, even by moving villages to escape the influence of the biological parents. These strategies were far from fool-proof: in total about 20% of childless elderly who had ever adopted a child experienced the loss of the *anak angkat* to the contesting demands or attractions of the family of origin. Even where an adoption is successful in terms of loyalty or recognition of the adoptive parents, the *anak angkat* does not necessarily ensure support in old age. The following example highlights the general unreliability of children as sources of support in old age.

Case 7: Mbah Haji Lina

Mbah Haji Lina is a wealthy elderly widow in her late 70s. Her father was a respected village head in colonial times. She was married three times, all marriages remained childless. Together with her third husband she adopted three children from various relatives. All children were educated to a high level, and given land and houses when they married. The daughter established a successful career in the city and moved away. The eldest son died, leaving only the middle son in the community.

When in her early 70s, Haji Lina found herself going blind. Suddenly she could no longer rely merely on her wealth, but needed someone to look after her practical daily needs. Her two *anak angkat* proved unable to care for her. The daughter was unwilling to move back to the village, nor did her career permit her to care for her mother in her own home. Lina's surviving son, although locally available, considered his own family priority; nor was the elderly woman willing to move in with him and face the prospect of being cared for by her daughter-in-law. Lina had to turn elsewhere for support. She decided to offer inheritance of her house to one of her granddaughters, on condition that she care for her. The granddaughter, in her early 20s and recently married with a small child, moved in and now cooks, shops and cleans for her elderly blind grandmother. In addition to the house, she receives money for the daily shopping. Interestingly, during the first few interviews, the elderly woman always referred to her granddaughter as one of four *anak angkat*. It was only later that we realised that she was in fact a granddaughter.

Mbah Haji Lina – like Bu Dinah earlier – overcame childlessness by adopting children from relatives. Due to her good economic starting position she was able to accumulate wealth over her life-time. In accordance with common expectations in the village, she then distributed most of her wealth to her children. There is a clear sense

that both having children that turn out a success, and doing the right thing with regard to these children, is an important source of identity and respect for Lina. Yet, even though she invested heavily in her children in terms of education and wealth, they did not turn out to be reliable sources of support in old age. This unreliability of children is a common theme in elderly people's accounts of intergenerational support; half of those *with* children, for example, have children that are a net drain on their resources. More specifically, among childless elderly who had adopted a child, a quarter received no support whatsoever from the *anak angkat*, and a further 25% received only sporadic and insufficient support. If we consider adoptions failed due to the breakdown of the adoption as such and successful adoptions where support is nonetheless lacking, we find that more than half of all adoptions do not result in old-age support.²² Mbah Haji Lina is in the fortunate position of still having wealth which she can use to secure an alternative source of support.²³ For most childless elderly this is not an option: their economic situation is so constrained that dependence on charity is the likely outcome.

Conclusion

The preceding pages attempted a first comprehensive account of demographic and social factors underlying high levels of childlessness in East Java. The issues raised are of wider sociological interest as no comparative framework appears to exist for the subject, despite a number of major historical and contemporary cases. The overriding question for comparative analysis is how to define and measure childlessness. We have tried to provide an answer to this question, and to focus on the implications of childlessness for one of the most important social and welfare problems arising from a lack of children: support for the elderly. What do current levels of childlessness imply for the welfare of older people? What alternatives are open to elderly without children? How do differences in economic and social status impinge on people's alternatives?

Indonesia is an apt setting in which to explore these issues. Aggregate data sources for Indonesia report between 10 and 25% elderly as childless. These sources also indicate that children are the expected avenue for most elderly in need of assistance. Childlessness is at levels comparable to those indicated by the—admittedly limited—available sources on historical and contemporary Europe. Moreover, estimates for provinces like East Java show levels of population ageing not dissimilar to European projections. In short, the relative availability of children is likely to remain a problem.

At a time when European governments have come to question the capacity of the state to provide services for future cohorts of elderly, and to emphasise the importance of the family, we can study the extent to which family and community networks do or do not provide elderly support in a context in which state provision is negligible.

But are aggregate data sources for Indonesia—chiefly demographic surveys—reliable? As we have seen, extant surveys point to the existence of the problem, but they do not enable us to establish levels unambiguously, nor to specify underlying processes. However, by comparing these sources to local survey and case study materials, collected as part of in-depth field research, we have been able both to substantiate the higher levels of childless elderly reported, and to move beyond the broad aggregate picture.

The childlessness of currently elderly people reflects a more complex pattern of demographic variables than is usually considered in writings on population ageing, in which the main forces are seen to lie in improved longevity coupled with declining fertility. Fertility levels in East Java during the main childbearing years of currently elderly people (roughly the 1940s and 1950s) were already low, owing to patterns of pathological sterility and marital disruption. Levels of infant and child mortality took an estimated one-fifth to one-quarter of the births that did occur to these cohorts. The deaths of some adult children would further have depleted the numbers of elderly people's surviving children. These demographic factors together comprise what we have called *demographic* childlessness, resulting in some 25.6% of elderly not having any surviving children at the end of the twentieth century. A further 5 to 14% *de facto* childless need to be added to this figure, to allow for elderly parents whose children have migrated, suffer disabilities, or are otherwise unable or unwilling to provide support. Against the remarkably high figure of 31 to 40% childless, however, there must then be set the high level of adopted children—about two-fifths of childless elderly adopted a child who now contributes support—and a number of other arrangements. We have used the phrase *real childlessness* to describe net total childlessness, once the *de facto* childless have been added to the *demographic* childless, and adoption and other alternatives subtracted from that total. Elderly childless represent 17.2 % of the elderly population, or one in six elderly. Stratification by social and economic status shows that two-thirds of this group are very poor, and four-fifths exist at or below minimum subsistence which effectively requires community support or other forms of charity.

¹ The sparse literature on childless elderly in developed countries has focused on the support networks and potential imperilment of the elderly without children (cf. Kivett and Learner 1980; Johnson and Catalano 1981; Johnson and Barer 1995; Wenger *et al.* 2000; Wenger 2001).

² On preferences for living separately from children see also Mehta *et al.* (1992) and Li (1989:60) for Singapore, and Lopez (1991) for the Philippines.

³ Some studies have looked at particular aspects of a lack of children, like adoption (Jay 1969, H. Geertz 1961; Djamour 1959), or living alone in old age (Siriboon and Knodel 1993).

⁴ A third round of the IFLS with reduced coverage was undertaken in 1998 to assess the impact of the economic crisis, and a fourth in 2001.

⁵ The questionnaire asks all women selected for interview: "Have you ever given birth?" If 'yes', follow-on questions about children who have died, who are living at home, or living away are asked.

⁶ The IFLS has been very successful in tracking households from the original sample in follow-up surveys: in total, 93.5% of households first sampled in 1993 were re-interviewed in 1997 and 1998. This low rate of attrition is attributed to thorough tracking of households even across provincial boundaries (Thomas *et al.* 2000). However, at the individual level attrition was much higher. This is doubtless due to the instability of household arrangements in Indonesia, and the effect of mortality. Among the elderly female population, for example, 11% were missing in 1997; among the 70 and over age-group the figure is 27%.

⁷ Limited data from our research village lends some support to the idea of excess mortality among the childless. Of the 15 elderly who died between April 1999 and April 2001, half were childless. This excess of deaths among the childless cannot be explained purely by age effects (i.e. deaths and childlessness both being clustered among the oldest age groups), though given the small number of cases, the relationship may be spurious.

⁸ According to the 1980 census, 10.5% of women aged 30 and over [13.4% aged 60 and over] in rural East Java had no surviving children; the corresponding figures for the 1985 intercensal survey (SUPAS) are 11.3% [13.5%], and for the 1990 census 8.8% [12.6%]. All these figures are much lower than the 17.5-19.3% derived from the IFLS [17-24% for older women]. The various SUPAS and census sources are consistent with Hull and Tukiran's findings that childlessness is lower in rural than urban areas (for example, 13.5% versus 20.6% for women aged 60 and over in the 1985 SUPAS). According to the IFLS, the distribution of childlessness is reversed, reaching 17-24% among rural elderly, but only 4.5-18% among urban elderly.

⁹ Even in the 1990s, East Java is characterised by particularly low fertility in comparison to other regions of Indonesia. According to the 1994 Demographic and Health Survey, the Total Fertility Rate in East Java was 2.2; only Jakarta, Yogyakarta and Bali have lower levels. An examination of underlying proximate determinants found that East Java was still affected by levels of infecundity (17% of ever-married women aged 15-49) well in excess of infecundity in other regions (Kasmiyati and Kantner 1998:5). The authors conclude that this prevalence of infecundity, probably owing to sexually transmitted diseases, explains in part the low levels of fertility in the region, that do not correspond closely to levels of contraceptive use.

¹⁰ The research project, "Ageing in Indonesia: A Comparative Study in Social Demography, 1998-2001", is a collaboration between Oxford University and the following Indonesian institutions: Pusat Penelitian Kesehatan, Universitas Indonesia; Lembaga Demografi, Universitas Indonesia; Badan Penelitian dan Penerapan Antropologi, Universitas Andalas.

¹¹ The levels of childlessness we found in East Java are quite close to childlessness in contemporary developed societies; for example, 18% of elderly Americans, and 23% of elderly Hungarians are childless (Wenger 2001).

¹² According to the 1994 Indonesian Demographic and Health Survey only 8% of married women aged 35-39 in Indonesia have no or only one surviving child, and almost 60% have two to four children (Central Bureau of Statistics *et al.* 1995). For rural East Java the picture even for currently 35-39 year-olds is less positive, with 20% having no or one surviving child, and 60% having 2-3 children.

¹³ Clare Wenger *et al.* (2000) studied a sample of 1150 childless elderly people in Liverpool and found half of them never-married. Childlessness was more common among elderly women (24% of her sample) than elderly men (19%).

¹⁴ Although medical provision was historically better on Java than other areas of Indonesia, it remained seriously deficient until the second half of the 20th century. The Dutch had introduced vaccination against smallpox in the 19th century, and were trying to fight diseases like malaria, cholera, typhoid, yaws, hookworm and even the plague in the 20th century (Boomgaard 1986). However, the emphasis was on preventive measures, with the treatment of individual patients left in the hands of local and private health services. Free or cheap access to curative care was extremely rare, especially in rural areas, during the Dutch era (Abeyasekere 1986). Venereal diseases were only specifically targeted after 1950 when the first Venereal Disease Institute in Indonesia was opened in Surabaya, East Java. It was only after 1968 that gonorrhoea was being treated as part of the programme (Susila 1984).

¹⁵ Richer parents are more likely to have their children move away; 50% of the richest elderly in the village had more than two children who had moved away, compared with 11% among the poorest. This is perhaps not surprising, as rich parents are more able to provide their children with good education, which enables them to obtain prestigious jobs in cities or other parts of Indonesia. Despite this, rich elderly were slightly less likely to be without any child in the village than the poorest, suggesting that they are in a better position to entice at least one child—often a less enterprising one—to remain in the village.

¹⁶ All personal names in this and subsequent case histories have been changed.

¹⁷ In this measure we include the eleven *de facto* childless people who receive no support at all from children, but not those who receive occasional support, or whose children live elsewhere and maintain some contact. Only 24 out of the 32 elderly who had ever adopted a child are considered non-childless; eight either experienced the breakdown of the adoption relationship or receive no support whatsoever from their adopted child.

¹⁸ Singarimbun and Hull (1977), for example, show significant differences in the proportions of children dying by economic status in research villages in Yogyakarta. We found that among elderly women who had ever given birth, 62% of rich women (economic strata I and II) had never lost a child, compared with 28% of poor women (economic strata III and IV). Moreover, 41% of the latter group had lost two or more children, compared with only 28% among the richer group.

¹⁹ Thus ‘ticking over’ is a direct translation of *cukup-cukupan*. The position of the very rich (*orang kaya*) and very poor (*kurang mampu*) was materially evident and reflected in people’s attitudes and behaviour towards them: for example, by feeling restraint (*sungkan*) towards visiting a rich household, or pity (*kasihan*) towards a very poor neighbour. The second strata which we term ‘comfortably-off’ (*lumayan*) was arrived at by a process of elimination: these households were neither very rich, nor merely breaking even, as witnessed by the fact that they were able to save and buy occasional large consumer items. For a more detailed discussion of economic strata see Kreager (2000) and Kreager and Schröder-Butterfill (2003).

²⁰ Table 12 can also be constructed using individual-level, rather than household-level socio-economic status. Such a classification tries to capture access and entitlements to resources within a household. On this definition, poor patrons living with rich clients, or elderly parents who coreside with well-off children but have no access to money, are classed under a lower socio-economic status. This then results in even starker socio-economic differences between the childless and non-childless: no childless elderly are found among the very rich or comfortably off, and 80% are very poor; by contrast, almost half of elderly with children are very rich or comfortable according to their individual economic status, and only a quarter are very poor. Further fieldwork is desirable to collect more data on individual access to, and control over, economic resources.

²¹ It is impossible to study the extent of adoption by means of existing survey sources. The IFLS, for example, relies on the household head identifying an adopted child present in the household as adopted, rather than own. No probing questions are included in the questionnaire; nor would this necessarily pick up adoptees. The Demographic and Health Surveys are slightly more useful in that

they ask about the residence of children ever born; this allows estimates to be made of how many children live with neither of their parents. In East Java, the proportion is 8.4% - higher than anywhere else in Indonesia (Central Bureau of Statistics 1995:14).

²² Half of all adopting childless elderly had more than one *anak angkat*, and most had managed to forge lasting and reliable bonds with at least one. For this reason the failure rate per adoption (in excess of 50%) is higher than per childless elderly (25%).

²³ The late-in-life adoption of her granddaughter differs significantly from Mbah Haji Lina's earlier adoptions. Here the arrangement is in response to a clearly defined need, rather than a more general desire to create a family. As grandchildren in Java do not usually have any responsibilities towards their grandparents, nor stand to inherit from them, Mbah Haji Lina normalises the living and support arrangement by publicly referring to her granddaughter as an adopted child (*anak angkat*), despite the fact that the so-called adoption occurred when her granddaughter was already grown-up and married.

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