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A framework for understanding old-age vulnerabilities

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Abstract

Identifying vulnerable older people and understanding the causes and consequences of their vulnerability is of human concern and an essential task of social policy. To date, vulnerability in old age has mainly been approached by identifying high risk groups, like the poor, childless, frail or isolated. Yet vulnerability is the outcome of complex interactions of discrete risks, namely of being exposed to a threat, of a threat materialising, and of lacking the defences or resources to deal with a threat. In this article, we review approaches to vulnerability in various disciplines in order to develop a systematic framework for approaching vulnerability. This framework distinguishes and examines the interactions among the domains of exposure, threats, coping capacities and outcomes. Drawing on European and Asian gerontological literature, we discuss what might be meant by these domains and their place in the understanding of vulnerability in old age. Two case studies are presented - one on homelessness in Britain, the other on familial care provision in Indonesia - to illustrate the ways in which specific vulnerabilities are created and distributed over the lifecourse.

Keywords

vulnerability; care in old age; homelessness; risk; coping; social networks

Introduction

The aims of this article are three-fold. First, we review how the concept of vulnerability has been developed and used in various disciplines. As will become clear, the notion of vulnerability produces considerable conceptual and terminological diversity, to which this paper cannot do justice. Instead, we develop a framework which captures those aspects of a vulnerability approach which are most relevant to the study of ageing. The framework disaggregates vulnerability into its constituent domains, namely exposure, threats, coping capacities and outcomes. The second aim is to examine these domains with reference to the research literature on ageing and old age: what might be meant by outcomes, exposure, threats, and coping capacities with reference to older people? This entails consideration of several questions: What outcomes in old age are people trying to avoid? What specific threats might they encounter, and what increases people's exposure to such threats? How do older people manage to protect themselves from bad outcomes in the face of threats? The final aim is to 're-assemble' the concept through two examples, one on vulnerability to homelessness in old age in Britain, based on work undertaken by Maureen Crane and Tony

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Warnes, the other on vulnerability to a lack of care in old age, which draws on our own work in Indonesia.

A framework for understanding vulnerability: insights from other disciplines

Vulnerability as an analytical concept first emerged in the environmental sciences, specifically for the study of the human impacts of natural disasters. Disasters had for long been regarded as a direct outcome of natural hazards, like floods, earthquakes or droughts, but this construction was undermined by the realisation that not every hazard results in a disaster, and not every person or group suffers equally in a disaster (Wisner 1993). The crucial link between a hazard - or external threat - and a disaster was found in the notion of a vulnerable population. To understand whether a bad outcome occurs, it is necessary to examine both the hazard and the population at risk of harm (Prowse 2003: 4).

Vulnerability in disaster studies was initially defined as the 'potential for disruption or harm' (Wisner 2004: 183).[1] Although the *potentiality* not the certainty of harm is explicit in the definition, it is problematic because it portrays the vulnerable person as passively subject to the threat (Bankoff 2001). Early approaches to vulnerability were typified by this construction, which emphasises the determining role of the hazard event, and to explain the severity of the damage puts the focus on the magnitude, rapidity of onset, duration and frequency of the hazard; it also encourages the presumption that, to reduce vulnerability, technological mitigation strategies are required, such as better monitoring and forecasting systems (*cf.* Heijmans 2001: 2).

A major problem with this way of thinking about vulnerability is its failure to recognise that the distribution of the risks of serious harm is highly uneven. More recent approaches have stressed the structural dimensions of vulnerability and seen it as socially constructed (Blaikie *et al.* 1994; Oliver-Smith 1999: 22; Zaman 1999: 193). As Hilhorst and Bankoff (2004: 2) put it, '[s]ocial processes generate unequal exposure to risk by making some people more prone to disaster than others, and these inequalities are largely a function of the power relations operative in every society'. In this approach, people's vulnerability is shaped or exacerbated by inequalities, disempowerment or access to social protection. This approach usually advocates mitigation strategies that involve long-term transformations of socio-political and economic structures, such as poverty alleviation, social security schemes, empowerment and inclusion (Benda-Beckmann and Benda-Beckmann 1994: 23; Brooks 2003: 4; Webb and Harinarayan 1999: 292).

Both approaches, by stressing respectively the threats and the structural conditions that shape exposure to threats, are liable to provide over-determined accounts of vulnerability. When studying human behaviour, we are interested in understanding how various individuals negotiate the challenges that they face and mobilise the resources at their disposal. If we are to understand vulnerability, an account of human agency is required. Chambers's definition (1989: 1) of vulnerability as 'the exposure to contingencies and stress, and difficulty coping with them', provides elements of such an account by giving equal weight to the threat and to the ability of an exposed subject to cope with that threat. His notion of *exposure* recognises the fact that not every subject is equally at risk to a given threat, and the reference to *coping* recognises that there is *something about* the nature and actions of a person that makes them more or less susceptible to harm, even if the subject's scope for agency is portrayed as heavily circumscribed (*cf.* Wisner 1993: 127). Chambers

[1]The *Oxford English Dictionary* definiton of vulnerable is 'may be wounded, is susceptible to injury or open to attack'.

went on to say, 'Vulnerability has thus two sides: an external side of risk, shocks and stress to which an individual or household is subject; and an internal side which is defencelessness, meaning a lack of means to cope without damaging loss'.

Chambers's definition supplies a basic 'anatomy' of vulnerability that can be adapted for the study of old-age vulnerabilities. It is useful because it separates and inter-relates different analytical domains that need to be distinguished for understanding who is vulnerable in old age and why (*cf.* Prowse 2003: 6). Figure 1 summarises a framework that is loosely based on Chambers's definition and which distinguishes threats, exposure, coping and outcomes. Vulnerability is a probabilistic concept; it captures the *relationship* or *proximity* of a subject to harm. A person's risk of suffering harm - her vulnerability - is the incremental outcome of a set of distinct but related risks, namely: the risk of being exposed to a threat, the risk of a threat materialising, and the risk of lacking the defences to deal with a threat.

The meaning of these terms is elaborated below, but broadly they may be thought of as states (exposure), events (threats) and relationships (coping capacity), all of which have specific probabilities. Thus, differential exposure, the differential likelihood and magnitude of the threat, and differential coping capacities all impact on the risks of encountering a bad outcome and on the severity of that outcome. The different domains can interact to compensate for each other, or can be mutually exacerbating.[2] There are therefore *degrees of vulnerability*, both in a person's proximity to harm and in the severity of the harm that she or he encounters. Certain individuals may be several contingencies away from a bad outcome, and we might think of them as either 'weakly' or 'prospectively' vulnerable (see Kreager 2006). Others have already met a 'bad end', and thus, strictly speaking, they are no longer *vulnerable*, or only vulnerable to the sequelae of their injured state. Figure 1 suggests the points at which interventions might be made: *before* a threat occurs, by reducing people's susceptibility or the likelihood and magnitude of the threat, or *afterwards*, by bolstering people's defences and preventing progression to a serious outcome (Hulme, Moore and Shepherd 2001: 9; Office of the Deputy Prime Minister 2005).

To use an example from gerontology, most people reaching their sixties are at risk of reduced income, and for some this might precipitate poverty. Those who during their working life contributed to a pension scheme are much less exposed to a dramatic fall in their income, and those with a life-time of poorly paid, part-time, insecure or informal employment are most susceptible (*e.g.* Barrientos 2000; Gunnarsson 2002; Heslop and Gorman 2002; Lloyd-Sherlock 2000; Patsios 1999). Even among those who experience income loss upon retirement, not all are equally likely to encounter poverty, as some might have compensatory coping strategies, such as financial support from family members, social assistance programmes, selling assets, running down savings, or reduced consumption. Certain strategies for staving off poverty are less desirable and successful in the long run because they jeopardise future consumption. Moreover, for some older people, additional disadvantages compound their lack of coping, for example, when loss of income is accompanied by illness that hastens the depletion of financial resources.

If the framework in Figure 1 is beguilingly neat, the example quickly draws attention to the complexities and ambiguities in real life that undermine the tidy distinctions. First, in certain contexts, some of the domains are very closely interlinked, particularly so with exposure and threats. Whilst some threats are independent of the population at risk (*e.g.* loved ones die irrespective of whether they are depended upon), others are inseparable from the factors that create susceptibility to them. In the example above, there is little to distinguish 'highly

[2]The emphasis of this paper is on bad outcomes, but of course the framework can equally well be used to account for why some people are secure and encounter a positive outcome.

uncertain and irregular employment' as an exposure factor from 'loss of income on reaching retirement' as a threat. Secondly, it is often not clear to which domain many factors should be ascribed; sometimes the decision logically depends on the ultimate outcome under investigation. One might be interested in vulnerability to ill health *per se*; alternatively, ill health may be modelled as something that exposes a person to the threat of employment loss, or as a threat that precipitates loneliness. At other times the ambiguity is not so easily removed, as in deciding whether childlessness or the unavailability of services is an exposure factor or a facet of restricted coping resources.

Thirdly, it is not always appropriate to distinguish all four domains. In the example above, vulnerability to poverty in old age *may* be due to a specific threat (the sudden loss of personal income upon retirement), but may result from gradual processes. Similarly, when trying to understand vulnerability to all-encompassing states, like social exclusion or low quality of life, a search for specific explanatory events may prove fruitless. Fourthly, vulnerability is embedded in wider structural and temporal contexts (for simplicity these are not represented in Figure 1). The various risks are shaped by factors like gender and ethnic inequalities, social stratification, cultural patterns, and political and welfare systems, which are constituted over long historical periods (Hilhorst and Bankoff 2004: 3 *ff*.). Equally, people's vulnerabilities are the result of their life histories, with past *outcomes* determining present *exposure* and *coping*. As the example shows, when studying a particular vulnerability, ideally we need to distinguish between event-specific and event-transcending outcomes - a particular bad outcome might be averted only at the cost of heightened exposure or weaker resilience to a future threat. In short, the proposed framework is an aid to conceptual and terminological clarity and consistency, but is not a comprehensive or deterministic model.

The domains that shape vulnerability in old age

This section examines the different sources of risk that constitute the framework of vulnerability in later life and assesses their relative importance. Systematic analysis requires first that the nature of the vulnerability under study is clarified, for the term 'vulnerable' is often employed as an ill-defined descriptor of people or groups who are in some way disadvantaged, or as a euphemism for 'poor', 'dependent', 'frail' or 'isolated' (Delor and Hubert 2000: 1558; Russell 1999; Wisner 1993: 127). This is satisfactory if the analyst is interested in vulnerability as a general state of being, for which it is impossible to specify a particular kind of harm, and where uncertainty, insecurity, powerlessness or the absence of forward planning are dominant aspects of a subject's situation (*cf*. Heslop and Gorman 2002: 6).[3] But where particular outcomes can be specified, it is advantageous to use the framework in Figure 1 to investigate pathways to 'bad ends' and to identify possible points of intervention.

Outcomes

'What is it a person is vulnerable to?' inevitably raises the supplementary question, 'Who defines vulnerability?' Are there objective criteria by which vulnerability can be assessed, or is vulnerability chiefly a subjective experience? Some authors posit the existence of universal needs that apply across societies; where these needs are not fulfilled, serious harm results. For example, Doyal and Gough (1991) identified health and autonomy as basic universal needs, from which secondary needs can be derived, like adequate nutrition, housing, health care, physical and economic security (for an application to the quality of life

[3]This sense of vulnerability is captured in the statement by a middle-aged man in Bulgaria: 'To be well is to know what will happen with me tomorrow' (World Bank 2000: 135). *Not* knowing 'what will happen tomorrow' seems a powerful indicator of vulnerability as a general state of being, albeit one that is difficult to analyse.

in old age, see Wiggins *et al.* 2004). Nussbaum (2000) talked of central human functional capabilities, like avoidance of premature death, bodily health and integrity, emotions, senses, affiliation and control over one's environment (for a discussion in relation to older people, see Lloyd-Sherlock 2002*b*). It is possible to deduce negative outcomes from such lists of human needs, *e.g.* the *lack of* adequate food, shelter, health care, freedom of expression or association, and to examine vulnerability in relation to these.

A related approach uses the concept of social exclusion, which is captured by composite measures of low income, infrequency of social contacts, non-participation in social and political activities, poor health and low quality of environment (Office of the Deputy Prime Minister 2005; Ogg 2005; Scharf *et al.* 2002). It is then possible to ask which older people are vulnerable to social exclusion as defined by these measures. Few would deny that these and similar states count as 'bad ends' irrespective of social or cultural context. Relying on concepts like 'universal needs' or 'social exclusion' as outcomes against which to assess vulnerability overcomes the problem that people who are habitually disadvantaged tend to have low expectations and might therefore not regard themselves as vulnerable (Lloyd-Sherlock 2002*b*). Such objectivity, however, can also have drawbacks, especially when studying old age, for it fails to capture the adjustments that people make to their goals in response to change. Many people, for example, recognise that perfect health or complete autonomy are not realistic standards by which to judge their experiences in old age (Secker *et al.* 2003; von Faber 2002). Defining people as vulnerable and in need of protection carries the dangers of overriding their priorities or their disempowerment. To exemplify, Kaufman (1994*a*; 1994*b*) found that older people rejected the medicalisation and surveillance that were prescribed to reduce their vulnerability to falls, malnutrition or health decline. Similarly, Russell (1999) encountered dissonance between her perception of certain older people as highly vulnerable and in need of services, and the older people's own perception of vulnerability, which focused on the undermining of their independence by having services forced upon them.

An alternative approach to identifying bad outcomes is to ask older people directly what they strive for or try to avoid. Recent work on quality of life in old age in Britain has much to contribute to vulnerability research, because the measures of wellbeing elicited from older respondents indicate the outcomes to which they feel vulnerable (Walker 2004). This research points to the importance of social relationships, health and mobility, financial resources, social participation, and safe and pleasant neighbourhoods for older people's wellbeing (Gabriel and Bowling 2004). Not surprisingly, there are interesting differences by ethnic group in what is prioritised, pointing to the need for more comparative work on what makes old age worth living (Bajekal *et al.* 2004; Gardner 2002). Especially in less developed countries, research on ageing still tends to prejudge people's priorities and to focus narrowly on material outcomes. Even social relationships are frequently examined primarily from a perspective of *support*, rather than taking into account the quality and wider meaning of family and community relationships for people's wellbeing (*e.g.* Biddlecom, Chayovan and Ofstedal 2003; Cameron and Cobb-Clark 2001; Knodel and Debavalya 1997). Whilst participatory and consultative approaches in policy are increasingly common (HelpAge International 2002; Office of the Deputy Prime Minister 2005), there remains a need for in-depth, qualitative research in different cultural settings on what constitutes good and bad outcomes in old age. The following is a preliminary list of the states that older people might feel vulnerable to: untimely or degrading death; lack of physical care and health care; oversupply of care and interference; poverty; exclusion from participation in society; homelessness; loss of autonomy and dependence; institutionalisation; lack of social contacts and loneliness.

Threats

By threats we mean specific events that have the power of propelling people towards bad outcomes, unless they have access to resources for mitigation. This article began by referring to disaster studies, which have conceptualised vulnerability with reference to a discrete and external threat or 'hazard', like a flood or drought. Concern with such environmental hazards is distant from the preoccupations of most researchers and policy-makers concerned with older people, although there is a growing realisation that natural and man-made hazards disproportionately affect them, partly because of their impaired mobility and partly because of the relatively low priority they receive in rescue and relief operations (*e.g.* HelpAge International 2001, no date; Wisner 1993). If interpreted broadly to include 'shocks' or 'crises', however, the concept of a threat aptly captures the often discontinuous nature of late-life progression, as when illness or bereavement disrupt a person's routine and force the mobilisation of coping resources to avert a serious decline in wellbeing (*e.g.* Crane, Fu and Warnes 2004; Steverink 2001; Wenger 1997). Indeed, precisely because certain threats are discrete, they are particularly useful for understanding vulnerability, because they throw into sharp relief the reliability and adaptability (or otherwise) of a person's support network and coping strategies (*cf.* Scott and Wenger 1995: 167 *ff.*). In other words, it is often in situations in which need becomes manifest or well-established arrangements break down that vulnerability can best be assessed.

Some threats, like declines in health and physical strength, disability, loss of income, loss of a spouse or other network members, particularly affect older people in that they arise from the biological and social processes of ageing. Indeed, recognition of the predictable and shared nature of certain life-cycle risks underlies social- and health-insurance schemes for older people, as well as family- and community-based arrangements of inter-generational support (*cf.* Gough and Wood 2004). Others are not life-stage dependent, but might pose greater dangers to older people if their capacity to cope with them is diminished: they include natural and man-made environmental hazards, wars, crime and economic crises.

Exposure

By exposure we mean states, like marital status or socio-economic position, which affect the probability of encountering a given threat or outcome. Exposure - also referred to as a 'susceptibility' or 'risk factor' - is introduced into discussions of vulnerability as the link between a threat and a person or group 'at risk' of the threat by virtue of having certain characteristics or inhabiting certain environments. Lifecourse approaches in demography and social gerontology have contributed to our understanding of vulnerability by uncovering exposure factors, often with origins earlier in life, which correlate strongly with insecurity in old age. For example, being unmarried or childless frequently emerges as associated with vulnerability to lack of support, loneliness and poverty in old age (*e.g.* Grundy 2006). Mental illness and poor socialisation increase the risk of abuse at the hands of carers, institutionalisation, or homelessness (*e.g.* Crane and Warnes 1997; Penhale and Kingston 1997). Recent work on social exclusion has drawn attention to the importance of environmental factors in shaping older people's vulnerability. Thus, Scharf *et al.* (2002; 2005) showed that people living in extremely deprived areas of Britain face considerably higher risks than the general older population of experiencing crime, social isolation and disaffection with their neighbourhood, and of being disadvantaged through the sparse availability of public and private services. Policies and societal values, such as ageism and age discrimination, can also be seen as contributing to people's exposure (Office of the Deputy Prime Minister 2005).

Exposure is however arguably the most problematic of the domains in the vulnerability framework because its determination carries the danger of reducing vulnerability to a set of

characteristics and of neglecting other key domains, especially coping capacities. The identification of so-called vulnerable 'risk groups' provides a useful preliminary sorting, although Wisner (2004: 186) disparaged the practice as a 'laundry list' or 'taxonomic' approach to vulnerability (see also Delor and Hubert 2000; Webb and Harinarayan 1999). *HelpAge International* (2000) published 'vulnerable individual checklists' for use in refugee camps that quickly identify those older people who require most attention because of their deficient living arrangements, kin availability, health, mobility and basic needs. Policy makers generally also like to focus on exposure factors when designing risk prevention and mitigation strategies (Kemshall 2002: 77; World Bank 2000: 141). To acquire a deeper understanding of who is vulnerable and why, a concentration on risk groups is less effective, as the following example from Asia shows.

In a study of vulnerability among older people in East and Southeast Asia, Hermalin, Ofstedal and Mehta (2002) identified several bad outcomes ('disadvantages') and nominated the 'vulnerable subgroups' that were particularly likely to encounter them.[4] The vulnerable subgroups were determined on the basis of '*a priori* knowledge about the process of ageing, previous studies or reports in the mass media' (*ibid*. 465), and included several of the 'usual suspects', such as the 'old-old', the spouseless, those without children or living alone, as well as less commonly identified groups, like rural residents, people with no education (in settings where this is the norm), and women in general. The authors then analysed their survey data to examine 'the extent to which groups thought to be particularly vulnerable to experiencing these outcomes were doing so relative to [all older people]' (*ibid*. 462). In fact, only four to 16 per cent of the variance in the specified disadvantages was associated with the defined 'vulnerable groups'. This was not surprising, because neither the reasons why women, uneducated elders or rural residents were supposedly more vulnerable, nor the factors mediating their vulnerability, were addressed.

Vulnerability is not intrinsic to personal characteristics, but arises from combinations of characteristics and, importantly, from interactions between exposure, threats and coping in specific contexts (Delor and Hubert 2000; Watts and Bohle 1993: 121). Marianti's (2002; 2004) research on widows in Java showed that Javanese culture, in contrast to cultures prevailing elsewhere (*e.g.* in Spain, India and Algeria), does not assign widows an exceptional status, much less a marginal one. There is considerable equality between men and women, and women control their own resources. If older widows are vulnerable, they are so as a result of a conflation of factors, such as lack of income, poor health and childlessness, and widowhood *per se* makes at best a small contribution (see also Wisner 1993: 131). But vulnerability is not invariable even among narrowly-defined risk groups. For example, not all childless and poor widows are prone to destitution or a bad death, because some manage to mobilise alternative sources of support; in other words, some have strong coping capacities (Kreager and Schröder-Butterfill 2004).

Coping capacities

By coping capacities we refer to the set of assets and relationships that allow people to protect themselves from a 'bad end' or to recover from a crisis.[5] According to Moser (1998),

[4]The 'disadvantages' included economic disadvantages (inadequate income, lack of assets, dependence on children), health disadvantages (poor self-rated health, functional limitations, impairments) and social disadvantages (infrequent visits from children, small social networks, depression and loneliness).

[5]The term 'coping' is from Chambers's (1989: 1) definition of vulnerability, although it is also used by other authors (*e.g.* Watts and Bohle 1993). It has been criticised as being too weak or fatalistic, for giving rise to an image of people merely 'getting by' or failing to get by (*e.g.* Prowse 2003: 23; Wisner 2004: 192). Other authors have sought terms that capture a stronger sense of agency: for example, Wisner (2004: 191) talks of 'capabilities', and Moser (1998: 3) of 'resilience', 'responsiveness in exploiting opportunities', even of 'means of resistance'. We agree that in some contexts these terms are preferable; in others, even talk of coping is too positive, for sometimes people are merely able to stave off the worst possible outcome.

every person has 'assets' that include labour power, human capital, productive assets, household relations and social capital (see also Lloyd-Sherlock 2006). This stock of assets is only part of what constitutes coping, for 'the ability to avoid or reduce vulnerability depends not only on initial assets, but also the capacity to manage them - to transform them into income, food or other basic necessities' (Moser 1998: 5). This conception of coping capacities emphasises individual strategies (and therefore contrasts with Chambers's weaker notion of agency), which enable people with the same assets and exposure to end up in different positions. In other words, what makes a person more or less vulnerable is not only the relationships and assets that she brings to an event or crisis, but also her ability to mobilise resources and support during an event. This gives coping capacities an important relational and dynamic aspect.

In the context of old-age vulnerabilities, coping capacities fall into three broad groups: individual capacities, social networks, and formal social protection. Individual capacities include personal wealth and human capital, *i.e.* education, skills and health. Aside from shaping people's accumulation of social and material resources over the life cycle (Broese van Groenou and van Tilburg 2003; Ogg 2005), human capital may influence older people's capacity to seek support in old age. Individual capacities also include personal adaptations that older people undertake to reduce their vulnerability, *e.g.* exercising to regain mobility after an operation (von Faber 2002). All in all, however, individual coping capacities are rarely sufficient for dealing with the challenges of old age; relational resources, be they social networks or links to formal sources of support, are usually more effective.

The importance of family networks for material, practical and emotional assistance in old age has been amply documented (*e.g.* Biddlecom, Chayovan and Ofstedal 2003; Grundy 2003; Knodel, Chayovan and Siriboon 1995; Phillipson *et al.* 1998; Wenger 1995). It has been shown that, in Europe, lack of family support predisposes towards institutionalisation in old age (*cf.* Burholt 1998; Scott and Wenger 1995: 164), whilst in Asia, it might lead to destitution and reliance on charity (Indrizal 2004; Marianti 2004; Vera-Sanso 2004). Of course, family networks are not always beneficial: some older people feel burdened by family conflict, whilst others provide intergenerational support which may reduce their capacity to support themselves (Evandrou and Falkingham 2004: 194; Schröder-Butterfill 2004*b*; Wiggins *et al.* 2004: 705). This underlines the fact that understanding old-age vulnerability requires examination not only of the size and composition of people's networks, but also of the quality of relationships and the nature and direction of exchanges (see the example below from East Java; and also Kreager 2006; van Eeuwijk 2006).

Social networks comprise not only family but also friends, neighbours and community institutions like religious and voluntary associations, mutual assistance arrangements and charity. All may reduce older people's vulnerability by providing support, companionship or advocacy, although little research has examined their roles (Kreager 2003; Marianti 2002; Midgley 1994: 223; Wenger 1990). On the whole, non-family based informal support arrangements are unlikely to protect from the worst outcomes in old age, as they rarely cover physical care or far-reaching material support. For example, community institutions in the developing world tend to operate on a basis of reciprocity, which means that older people who can no longer contribute are excluded and forced to rely on circumscribed and demeaning charity (*cf.* Schröder-Butterfill 2004*a*; Scott 1976). Even where exclusion is not the problem, the efficacy of informal support networks may be low if members are of the same age, wealth and status, and therefore suffer from similar threats and constraints. Put simply, poor people tend to have poor networks. Where, by contrast, informal institutions cut across economic strata - as in patronage arrangements or religious welfare institutions - they may create what Wood (2004: 51 and 64 *ff.*) has called 'dependent security' and maintain inequalities and disadvantage (see also Breman and Wiradi 2002).

The limitations of exclusive reliance on personal resources and informal networks to reduce vulnerability in old age make clear the importance of formal welfare provisions, like pensions and health and social services. These have the advantages of pooling risks across large numbers, of evening out individual differences in resources, and of economies of scale. The ability of formal welfare arrangements to reduce vulnerability to poverty, lack of instrumental support and health care has been well documented for countries of the North and South, although uneven coverage and quality are widespread (*e.g.* Gough and Wood 2004; HelpAge International and Gorman 2004; International Labour Organisation 2003; Lloyd-Sherlock 2002*a*; Ogg 2005). However, in Europe state provision is being stretched to its limits, and whilst coverage is expanding in many Asian countries (Adam, von Hauff and John 2002; Arifianto 2004; Asher 1998), it is unlikely to reach the European scale. Increasingly, therefore, attention is shifting to the interactions between family, community and state support, and to the question of whether formal support compensates for lack of informal support, or whether its distribution tends to reinforce inequalities in access to assistance (*e.g.* Lowenstein and Ogg 2003).

Case studies of old-age vulnerability in Britain and Indonesia

The argument to this point has disaggregated vulnerability into its constituent risks and shown that the nature of various risks and their inter-relationships depend heavily on the type and context of a particular vulnerability. To clarify the interactions between the different domains of risk, and to exemplify the pathways through the framework of vulnerability, the paper now examines two specific and contrasting types of old-age vulnerability.

Vulnerability to homelessness in old age

Homelessness in old age has been the subject of several in-depth studies by Maureen Crane and Tony Warnes since the 1990s, and their published research results and policy and practice discussions form the basis of the present discussion.[6] They have analysed pathways into homelessness in later life, and although they did not employ the exact terminology used in this article, their study of homelessness fits naturally into the framework developed here. Being or becoming homeless is an unequivocally 'bad outcome', even if a few homeless people prefer it to other, less desired, living situations. As Crane, Fu and Warnes reflected, 'homelessness is an *absolute social malaise* that is *intolerable*. ... becoming homeless is a dire condition and if protracted highly damaging to an individual's identity, self-worth, morale and physical and mental health. The experience stigmatises not only the individual but also the society that permits (or fails to prevent) the occurrence' (2004: 40, emphases in the original). Homelessness in old age is particularly pernicious, as people's physical defences in the face of deplorable living conditions and poor nutrition are likely to be weak. Homelessness often entails a host of further maladies, such as exposure to violence and crime, morbidity, poor access to social and health services and low life expectancy (see Figure 2).

Early approaches to homelessness blamed specific causes, such as housing shortage, eviction or bereavement (see Crane and Warnes 1997: 7, 29), but not everyone who loses her home or spouse becomes homeless; nor has the large-scale provision of subsidised housing prevented or solved the problem. Rather, homelessness results from a vicious

[6]During the mid-1990s, Maureen Crane conducted in-depth research on the circumstances and problems of 225 older homeless people in London, Sheffield, Leeds and Manchester (see Crane 1998, 1999; Crane and Warnes 1997). This was followed by a study of the outcomes of resettlement of older people in west London (Crane and Warnes 2000). Most recently, the ESRC has supported research into the causes of homelessness in a sample of 125 newly homeless people aged 50 or more years in England, with comparative studies conducted by collaborators in Boston, Massachusetts, and Victoria, Australia (Crane, Fu and Warnes 2004;Crane *et al.* 2005).

interaction of exposure factors, threats and multiple failures of coping capacities: 'A single incident may act as a "trigger", *i.e.* the actual event that causes a person to leave or to be evicted from their home, but other factors (states or events) are usually involved. ... For example, a person may have a mental illness, not be able to manage independently, and receive support from a parent or a spouse. Whilst the support is maintained the person is unlikely to become homeless. If the parent or spouse dies, however, or there is a marital breakdown and no other support is available, the person may be vulnerable and become homeless' (Crane and Warnes 1997: 29).

According to our framework, mental illness and dependence represent exposure factors that place individuals at risk from homelessness; they may be considered 'prospectively vulnerable'. A person becomes progressively more vulnerable as she accumulates exposure factors or threats and lacks compensatory safety nets. Crane and Warnes identified a number of common 'states' that predispose towards homelessness in old age. Several derive from earlier lifecourse stages, including disrupted or abused childhoods; mental illness, poor socialisation and poor daily living skills; having been in the army, navy, merchant marine or other highly structured working and living environments; small social networks and/or living alone; and alcohol or substance abuse (see Figure 2).[7] In many instances, several factors coincided, as when depression resulted from a bad childhood, or social isolation led to alcohol abuse.

None of these states in themselves explain homelessness. For this it is necessary also to consider threats and the failure of coping capacities. Crane and her colleagues described several pathways into homelessness that shared typical features, chiefly the inability to cope independently after an event has derailed habitual patterns of coping and support. Common threats that trigger descent into rough sleeping were loss of a partner, parent or other key social contact; loss of housing, particularly of tied accommodation; and increased severity of mental illness, especially paranoia (leading to abandonment of accommodation). Retirement or loss of work, and ensuing financial or psychological pressures, physical illness and anti-social behaviour (leading to eviction) were also precursors to homelessness (see Figure 2). The following brief examples give an idea of the interaction of different risks resulting in homelessness:

> One man became homeless at age 78 years when, following an accident, he was no longer able to occupy his room on the top floor of a Housing Association house. Initially he was moved into a room on the ground floor, but as this also served as the communal lounge, the arrangement proved unsatisfactory. According to the man's account, the housing provider claimed that no alternative, appropriate housing was available, and thus he had to move into a hostel (Crane, Fu and Warnes 2004: 12).
>
> In the case of a homeless woman, extremely stressful life events triggered mental illness. The woman was divorced, bringing up a daughter alone and looking after her increasingly confused mother whilst keeping down two jobs. After her mother was first taken into social services care and then died, she developed progressively paranoid ideas, one result being that she quit her work. Ensuing financial difficulties meant that she was unable to keep up with mortgage and bill payments. She was taken to court and her house repossessed (Crane and Warnes 1997: 32).

[7]For example, 58 per cent of the older homeless people who were interviewed reported coming from broken or disturbed homes; 41 per cent had had mental health problems before homelessness; 69 per cent of the men had spent time in the army or navy; 59 per cent of men and 39 per cent of women were never-married; only 39 per cent had children, of whom more than half had not had contact with their children in the past five years (Crane and Warnes 1997).

> One never-married man lived alone in a council flat. He suffered from a speech impediment and took up drinking quite heavily after being made redundant at age 58 years. Following a hip operation he briefly received home care, but this was soon discontinued due to his drinking and unco-operative nature. Nonetheless, he managed on his own and was often visited by his sister. Eventually, however, he allowed another heavy drinker to move into his flat and, not long after, a group of men moved in, stole his benefit money and locked him out of the house (Crane, Fu and Warnes 2004: 17).

The examples illustrate four important points for an understanding of vulnerability to homelessness. First, they underline the necessity of considering coping capacities. Some people are able to cope with multiple and serious challenges on their own, but the majority cope thanks to the support by family, friends, neighbours or social services. Thus, in providing examples of *failed* coping resources, the cases highlight the key role of formal and informal social support in preventing a negative event becoming a trigger to homelessness. Secondly, familial support is likely to be central to most people's coping capacities, but its existence cannot be taken for granted: significant minorities of older people lack adequate family support (see also Grundy 2006; Kreager and Schröder-Butterfill 2004). All the examples involved people with non-existent, small or defunct family networks. This deprived the vulnerable person of both direct emotional and practical support and a supporter to advocate for and mobilise formal support. A person who is illiterate, unconfident, or suffers from alcoholism or other 'deviant' behaviour is unlikely to make his or her needs known independently (Crane 1998: 176; Crane and Warnes 1997: 43).

Thirdly, the examples underline the role, and in this case failure, of formal support services in preventing homelessness. Many of the homeless people studied had been in contact with formal services, yet in some cases nothing or not enough had been done to protect them; in other cases, offered help had been refused. In identifying specific combinations of exposure and threats which create vulnerability to homelessness - many of which could be monitored by housing providers, GPs or hospital staff - a vulnerability approach can point to the social support gaps and contribute to service delivery improvements (*e.g.* Crane 1998: 179; Crane, Fu and Warnes 2004). As Crane and colleagues observed, British welfare services fail to provide integrated support to people with combined mental health, socialisation, substance abuse and anti-social behaviour problems and offer insufficient assisted-housing schemes to help people remain housed once they come off the streets (Crane, Fu and Warnes 2004; Crane and Warnes 2005). Seen in this light, vulnerability to homelessness in old age can be summarised as arising from the combined risks of manifest need for support, chiefly due to personal problems on the part of an older person, and a failure of formal social support. This clear-cut statement must be qualified, however, by the observation that not all homeless people whom professionals regard as vulnerable and in need of support share their assessment, and some refuse or obstruct assistance. This leads to the fourth point, that people's needs and their vulnerability are often contested, which raises intractable ethical, practical and intellectual dilemmas for the management of vulnerability. Imposing standards of good or bad outcomes on others is undesirable and often fruitless, yet it is equally unacceptable not to intervene to alleviate states of 'absolute social malaise' and, more generally, to raise people's expectations for their wellbeing in later life.

Vulnerability to a lack of care in old age

In Indonesia, by contrast with Britain, formal welfare services are negligible, and therefore vulnerability in old age is more often the outcome of deficiencies in family and community networks. In this section we draw on our research on older people in East Java in order to understand which older people are most vulnerable to a lack of care, and what coping capacities help avoid that end.[8] Care provision is a sensitive issue in East Java, as not only

the availability of care matters, but also various care arrangements and sources of care, have clearly differentiated social acceptability. Java has a nuclear family system in which great value is placed on the residential, material and practical independence of the generations. Despite these ideals, older people acknowledge the possibility that frailty, illness or disability may one day force reliance on others. Outright dependence is considered to undermine social status and may deprive older people of any right to determine what happens to them. For this reason, older people strive to counterbalance dependence with reciprocal exchanges and to avoid dependence on the 'wrong kind' of support, that is, on individuals or institutions not customarily expected to provide far-reaching help, to whom the recipient would become indebted and socially subordinated (*cf.* Schröder-Butterfill 2004*a*: 132 *ff.*).

There is a recognisable hierarchy of preferences with regard to care provision. Domestic labour is highly gendered, with women responsible for shopping, cooking, cleaning and caring for sick family members. For men in need of care, it is most acceptable to rely on their wives, and for both men and women, reliance on co-resident or nearby daughters is welcome. Increasing kinship distance is associated with an increased feeling of 'awkwardness' in the event of dependence, so reliance on daughters-in-law and grandchildren is regarded as inferior to reliance on spouses or daughters. Care by other relatives is even less normative, and care by non-relatives usually stigmatising and, if forthcoming, generally of low quality (Marianti 2002: 125 *ff.*; Schröder-Butterfill 2004*a*).

Inadequate or inappropriate care may mean an undignified and unpleasant last period of life or an untimely death (see also van Eeuwijk 2006). The 'bad outcomes' surrounding old-age care in East Java are summarised in Figure 3. Assessing vulnerability to a lack of care is complicated by the fact that both 'supply' and 'demand' is uncertain: older people may or may not one day need care, and the required care may or may not be provided. The risk of needing care is affected by threats such as illness, disability, or general frailty.[9] The risk of not receiving adequate care is affected by those threats that remove customary sources of care from networks, such as loss of a spouse or a child.

Given these norms, preferences and facts, it was possible to identify older people who *a priori* are most exposed to a lack of socially acceptable care. The figures reported here are from a village study of 206 older people in East Java (see Schröder-Butterfill 2004*b* for details).[10] Four 'risk groups' were initially distinguished: older people with no surviving children (25% of the sample); those with no adult children nearby (9%); spouseless men (7%); and *de facto* childless elders, *i.e.* those who receive no support whatsoever from existing children (5%) (see Figure 3). These largely demographic disadvantages correlate with economic disadvantages, with childlessness, for example, that is much more common among the poorer strata (*cf.* Kreager 2006; Schröder-Butterfill and Kreager 2005). Among the older people interviewed, 84 (41%) were 'prospectively vulnerable' with at least one exposure factor, and two-thirds of these had more than one exposure.

As Figure 3 shows, several acceptable pathways around these disadvantages substantially reduced the number of older people who were vulnerable at the time of the study. In the case

[8]The work by Marianti (2002; 2004) focused on family and community networks of widows in an urban setting. Schröder-Butterfill's research examined older people's networks in a rural environment and combined ethnographic and quantitative methods; the rural study was longitudinal with observations during four periods between 1999 and 2005 (for details see Marianti 2004; Schröder-Butterfill 2004*a*, 2004*b*).

[9]Stroke, falls, poor eyesight, serious rheumatic pains and attendant mobility problems are quite common in the communities we studied. In a survey of older people in three rural Indonesian communities (including the one studied by Schröder-Butterfill), 16 per cent of people aged 60 or more years were classified as having poor health and thus needing some degree of care (unpublished results).

[10]The location of the study areas is indicated on the map (Figure 1) in Kreager 2006: 43.

of childlessness, acquiring adoptees or step-children is not unusual, especially among the better off, whilst living with a rich patron was much rarer but a good solution for the poor. Many of the childless or *de facto* childless men had a wife to rely on. Among elders whose children were all absent, some had offspring within easy travelling distance who returned when the need arose, and some lived with an adult grandchild. Several of the widowed or divorced men lived with a daughter, daughter-in-law or granddaughter and were thereby assured of care should they need it. Some elders had several coping capacities, such as support from an adoptee and a wife. In addition to these preferred options, there were instances of older people relying on or looking to kin, especially siblings. All in all, only 16 of the 84 elders classed as 'prospectively vulnerable' to a lack of care in old age had no coping mechanism in place. They were either acutely vulnerable - a single crisis away from experiencing a lack of care - or they had already reached a 'bad end', that is, were suffering from ill health or frailty without being cared for, or were reliant on stigmatising charitable care by distant kin or neighbours (for examples see Marianti 2004: 163 *ff.*; Schröder-Butterfill 2004*a*: 134 *ff.*; Schröder-Butterfill and Kreager 2005: 42).

Even those with apparent coping capacities require further scrutiny, however, as social ties were not always reliable, and a single threat might undermine a coping strategy. To assess whether people's coping capacities can protect them from vulnerability, two approaches are available. One relies on cross-sectional data and estimates the expanse and strength of the support network; this reveals, for example, whether an older person has only a single acceptable option for care provision, or whether several links exist but are quite weak because of geographical or emotional distance. The other approach is to assess the reliability or flexibility of support networks with longitudinal data; this reveals the ultimate incidence of 'bad ends' and, more importantly, raises our understanding of vulnerability by uncovering the dynamic interplay of exposure, threats and coping capacities. Two brief case studies illustrate the longitudinal approach.

Lubis, a man in his eighties, had no children of his own but had four stepchildren from two marriages, and he had also helped to raise two sons of a neighbour. None of his 'children' had stayed in the village. When interviewed in 1999, Lubis lived with his wife, who was 15 years younger. Lubis himself was in good health and therefore considered relatively invulnerable to a lack of care, although the couple's material security was in doubt as they lacked steady income or regular support from children. By 2004, Lubis's situation had changed dramatically. His wife had left him to join her daughter elsewhere, after which for cooked food Lubis for a while relied on distant relatives in the village. When he fell, however, he became frail and often needed accompanying to the toilet and washing; the relatives soon tired of caring for him. One day Lubis was lured into a car under a pretext and taken to his great-nephew's house in a nearby town. When Lubis realised he was being dumped on a relative he hardly knew, he put up a tearful but fruitless protest. He survived a few more months, and his wish to be buried in the village was not respected.

Sofia, a pensioner in her mid-sixties, had seen both of her daughters die in adulthood, and thus doted on her only son, Budi, and her grandson, Andi, whom she had raised. Andi was 16 years-of-age in 1999 and stayed with Sofia, and Budi lived five kilometres away and regularly visited. Having no daughters or adult granddaughters, Sofia was quite vulnerable to a lack of care, but she had a good relationship with Budi's wife, and whenever she was ill or tired, she was invited to Budi's house to recuperate. In 2003, Budi was tragically killed in an accident. His wife quickly remarried and moved away. Sofia was suddenly very uncertain about the sources of her future care. When interviewed in 2005, she was pursuing two strategies: she was saving up to build a house for Andi in the hope that he would settle locally, and she had invited a married grandson and his pregnant wife to move in, hoping that a close bond might develop with the granddaughter-in-law.

The two vignettes show how sudden threats make relatively secure older people more vulnerable, and they reveal people's agency in reacting to new challenges. Sofia had a small and shrinking kin network, but her comparative wealth and generosity enabled her to forge new ties to forestall a potential lack of care in old age. Lubis's more extensive network comprised mainly weak or contestable ties (*i.e.* to informally adopted and step-children). His poverty and low social status, worsened by his wife's desertion, added to the unwillingness of kin and neighbours to care for him and deprived him of any bargaining power when it came to the final arrangements for his care.

A preliminary assessment of the longitudinal evidence on vulnerability to a lack of care suggests that, of those older people classed as 'prospectively vulnerable' in the study village, almost one-half (39 out of 84) were currently secure. These older people had apparently reliable access to care from a spouse, child (own or adopted), child-in-law or grandchild, or they had a close relationship with a sibling or patron. The other half, representing one-in-five of the older people in the village, were vulnerable to a lack of care in old age. They included those without coping capacities (some of which had already experienced a lack of care), as well as those with very limited or weak ties. A breakdown by economic status revealed that 'poverty in persons' went hand-in-hand with material poverty. Those who were vulnerable to a lack of care in old age amounted to one-quarter of those in social Strata I and II, but 58 per cent of those in Stratum III and 76 per cent in Stratum IV.[11] Their uncertainty about practical or physical care was compounded by their inability to protect their independence through access to health services and good nutrition.

Conclusions

The concept of vulnerability differs from other social science concepts that describe 'negative states', such as poverty, neglect and exclusion, in its *potentiality* and therefore the avoidability of its undesirable outcomes. Among the important implications for research, prevention and policy are the need to assess individuals or subgroups who are several steps away from a problem, and the requirement to understand both the *sources* and the *consequences* of vulnerability. In this article, we have argued for a systematic approach to the study of vulnerability and presented a framework that identifies its constituent risks. Among those in later life, it is impossible to distinguish those who are vulnerable from those who are secure by examining only exposure factors or common threats, because vulnerability arises from interactions between advantages and disadvantages accumulated over the lifecourse and the experience of threats in later life. Whether this interaction results in a better or worse outcome depends on the adequacy of the person's coping resources. The study of vulnerability therefore requires attention not only to the ways in which exposure factors are created and distributed over time, but also to the ways in which individuals manage or fail to mobilise social, material and public resources to protect themselves from bad outcomes.

The two case studies presented have illustrated these points well. In the British case, the state has assumed a large responsibility for securing the welfare of older people, which raises the questions of how it is that some people slip through the welfare net and become homeless in old age, and what characteristics and threats place people at that risk. In Indonesia, by default the family and community are responsible for providing support to needy members, but these informal networks operate unevenly. The issue thus becomes what determines the availability and reliability of support and care to older people. In the former case, personal disadvantages and the compartmentalisation and inflexibility of services emerged as important aspects of people's vulnerability; in the latter, demographic

[11]For details of socio-economic stratification in the locality, see Kreager 2006.

histories and economic and social status played key roles. On one level, the situations were very different, which underlines the importance both of defining the nature of vulnerability and considering the specific social, cultural, economic and policy contexts.

Contrasting methodologies were used to study the different vulnerabilities. Crane and Warnes worked retrospectively from an outcome - homelessness - and uncovered the pathways leading to it. A lack of care in old age as an outcome is more elusive, as it often only manifests itself when the need for care arises, which might be close to the end of a person's life, or indeed never. We were therefore forced to assess vulnerability prospectively on the basis of present network configurations, but were in some cases able to follow up support networks and see how good or bad outcomes unfolded. Longitudinal approaches - be they life histories or panel designs - are clearly important tools for understanding vulnerability.

On other levels, the two applications of the vulnerability framework revealed interesting commonalities and point to promising possibilities for comparative research. Both highlighted the centrality of understanding outcomes in later life in terms of events earlier in the lifecourse (*e.g.* childhood experiences and family formation), as these shape both people's sensitivity to crises and their resilience to them. In both settings, sudden events (*e.g.* loss of a carer and illness) often played a decisive role in making people vulnerable, but their occurrence was neither sufficient nor necessary for explaining the bad outcomes. The potentiality at the heart of vulnerability means that outcomes are never inevitable or perfectly predictable. Some person or institution may step in, or a vulnerable subject may mobilise resources to avert a crisis. This complexity and indeterminacy make vulnerability a difficult phenomenon to study, but also one that is worth pursuing. Raising our understanding of this intellectually rich concept promises to make a valuable contribution to the improvement of older people's lives.

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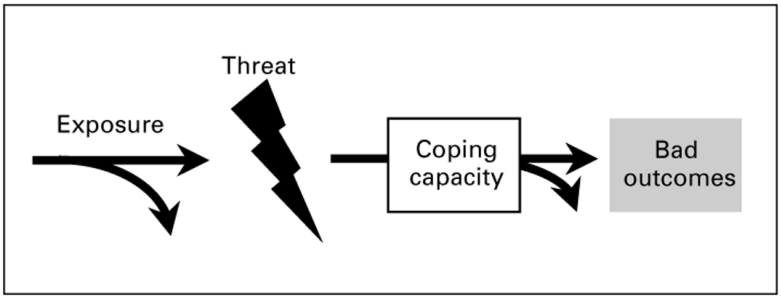

Figure 1.
A framework for understanding vulnerability.

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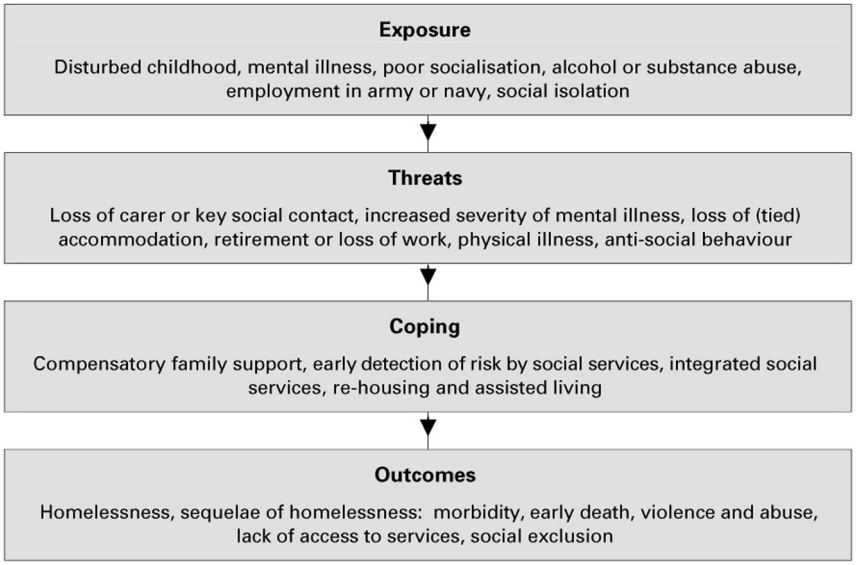

Figure 2.
Pathways to homelessness in old age.

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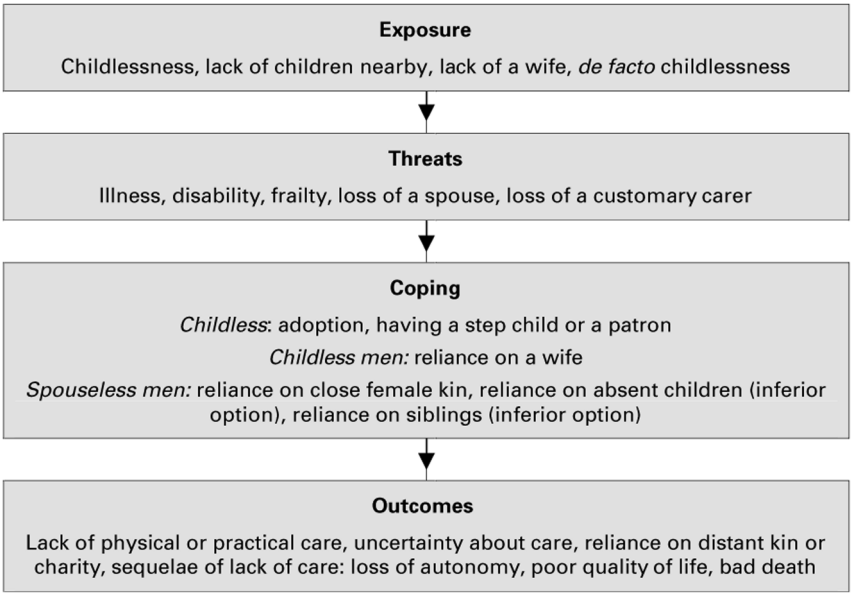

Figure 3.
Pathways to a lack of care in old age.

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