# Productivity among older people in The Netherlands: variations by gender and the socio-spatial context in 2002–03

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#### ABSTRACT

Productivity among older adults manifests in engagement in paid work, voluntary work, giving support to others, home maintenance and housekeeping. This paper reports an investigation into the extent to which levels of participation in the different productive activity types in The Netherlands are associated with age, gender and the settings in which older people live. The regional and urban-rural dimensions of variation are examined. The data were derived from the European Study of Adult Well-Being survey (ESAW). The results show that the oldest women tended to restrict their productivity to the private domain of housekeeping, while the oldest men were more often productive in the community, and that regional variations were stronger for women than for men. Traditional gender roles particularly affected the way in which older women living in a peripheral region participated in productive activities. In contrast, the urban-rural dimension was more important for men than for women, partly because a group of older men in the cities were not involved in paid work. Overall, strong gender influences on the variations in productive engagement were found. Processes of age-related contraction and convergence in patterns of participation in productive activities were imputed from the cross-sectional data. A full understanding of the ageing and cohort effects underlying the reported patterns would require much more detailed information on the spatial and temporal dimensions of older people's activity patterns.

**KEY WORDS** – productive activities, ageing, gender, regional differences, urban–rural differences.

#### Introduction

- 'Productivity' is prominent in the contemporary western-country debate about appropriate responses to population ageing, and the issue conditions attitudes towards older people, who have to contend with an image of
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being *um*productive and being a (financial) burden on society (Warnes 1990). Growing old is characterised by withdrawal from the labour market and the end of child-raising responsibilities, and without any other clear models of their societal roles, older people are unclear about how they can contribute to society. To make the dilemma worse, being old is stereotyped as being frail and needy, and therefore a burden on social and health-care services and other age groups.

This picture changes, however, when productive activities beyond this narrow conception are considered, such as voluntary work, giving support to others, and diverse home maintenance and housekeeping activities (Herzog and House 1991). Studies have shown that older people make valuable contributions to society by performing these activities (Burr, Caro and Moorhead 2002; Knulst and Van Eijck 2003; Breedveld, de Klerk and de Hart 2004). They carry out and organise voluntary work, are important informal supporters, and reduce the demands on both formal and informal carers by looking after themselves for as long as they can. Seen from this perspective, participation in productive activities is an important indicator of the extent to which older adults are integrated with or contribute to society (Cribier 1990; Dykstra 1995).

The debate on productivity among older people insufficiently recognises the heterogeneity of the older population (Biggs and Daatland 2004). First, participation in productive activities is strongly related to gender. Although the gender division of household tasks has lessened among today's younger cohorts, older people grew up in an era of clearly differentiated gender roles: women were responsible for activities related to personal care, and men looked after financial security and formal relationships. This division was reflected not only in men having paid work and women being 'housewives', but also in gender differences in voluntary work and support to others (Fischer, Mueller and Cooper 1991; Van Doorne-Huiskes *et al.* 2002).

Second, there are important differences by age. Life expectancy is increasing, and the average age at which people both retire and reach 'the empty-nest phase' has fallen, which translates into a lower age at which a person enters socially-constructed old age. As a result, there are different stages of old age, commonly referred to as the 'young old' and the 'old old' (Neugarten 1996), or the third and fourth ages (Baltes and Smith 2003; Timmer and Aartsen 2003). The differences between these life stages are marked by many contrasting personal characteristics, as in health, income, educational level, living arrangements and lifestyles, and the differences have both age-related and cohort-succession dimensions. In general, however, people reduce their activity levels as they grow older, so that they withdraw from demanding activities and opt for less demanding tasks,

although with differences between men and women (Bukov, Maas and Lambert 2002; Klumb and Baltes 1999).

There are also spatial variations in participation in productive activities, but these have been neglected (Andrews and Phillips 2005). The timespace context conditions the multiple pathways through which older adults participate and integrate, and residential locations and environments influence the activity patterns of older adults. Specific environments can stimulate or hinder a person's participation in particular activities (Ellegård 1999). Employment opportunities, for example, are unevenly distributed, as are opportunities to participate in various socio-cultural associations and activities. The gender literature has long recognised that the living environment shapes and maintains different levels of participation in specific activities between men and women. Studies in western societies have featured, for example, the situation of middleaged women in both 'traditional' rural settings (e.g. Little 2002) and in complex modern urban environments (e.g. Bondi 1998). Much less is known, however, about the relationships between the living environment and activity engagement among older men and women. This article addresses three particular questions with reference to people aged 50-89 years who live independently in The Netherlands. To what extent do older men and women of different ages participate in and combine different types of productive activities? To what extent does a relationship exist between the socio-spatial context in which older adults live and their participation in different types of productive activities? To what extent do these relationships differ for men and women?

# Theoretical background

Although the gender literature has emphasised that productivity includes more than paid work, in the policy discourse older people are generally regarded as unproductive because they have passed the working and child-raising life stages. Much less recognition is given to the fact that being productive is an important element of older people's daily lives and self-esteem, although maybe in different ways from those of 'working' age (Klumb 2004). Gerontologists therefore advocate a broad conceptualisation of productivity that does not depend on monetary transfers and refers to anything that produces goods, services and benefits (Herzog and House 1991; Morgan 1988). The broad definition encompasses, in addition to paid work, voluntary work, providing informal help to others, home maintenance and housekeeping, and even self-care.

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This approach is often used in theories of 'positive', 'productive' or 'successful' ageing to identify and assess a wide range of roles that an older person can adopt and through which they contribute to society (Rowe and Kahn 1997). In response to the prominence of the prescriptive uses of positive, productive and successful ageing, critics have warned against an excessive concentration on the economic value of older people's contributions, not only in paid work but also in work-like activities. Over-emphasising the criterion of economic usefulness would mean that older people's identities are strongly constrained, and that their potential for self-development would be restricted (Biggs 2004). Nevertheless, the different types of productive activity have an important role in understanding the involvement of older adults in valuable activities, the differences that exist between older men and women, and the multiple ways in which older people participate in and contribute to society.

## Paid work

The retirement age of 65 years in The Netherlands for both men and women makes employment after this age unlikely. Since the 1960s, increasing numbers have retired well before 65 and even 60 years-of-age, although since the 1990s, the average age at which people withdraw from paid work has slightly increased (Van Doorne-Huiskes *et al.* 2002). For women, moreover, there is a generational effect. Most women in today's oldest cohorts left the labour market, if they were employed at all, when they married or were expecting their first child, but in younger cohorts, more women have followed and are following the pathway through employment and retirement (Pahl 1984).

# Voluntary work

In this study, voluntary work refers to the 'formal' kind, as it is often defined: unpaid work on a voluntary basis in any organisational context (Fischer, Mueller and Cooper 1991; Wilson and Musick 1997). Many volunteers have clearly defined positions in such organisations, and many entail supervising others, attending meetings, and specific work locations and times. Often the type of voluntary work that is taken up reflects a person's former occupation (Van Luijk and De Bruijn 1984), but there is a clear difference from paid-work, in that most voluntary posts do not have a retirement age. Women more often become involved in voluntary work for care and welfare associations, particularly for women and for older people, whereas men are more oriented towards sports, politics and hobbies' associations (Dykstra 1995).

# Giving support

Old age is often described as a phase of increasing dependency and need for care, but older adults also provide substantial support to others. Giving support, unlike (formal) voluntary work, is frequently based on individual relationships between the care-giver and receiver, *i.e.* the support is usually given to family, friends or neighbours, and rarely to unknown people (De Klerk 2003; Wilson and Musick 1997). Women more often than men give support to others, and their support is more often in the form of personal care, whereas men more often help with practical activities, such as home maintenance (Pruchno 2000; Van Doorne-Huiskes *et al.* 2002). In this article, support to others includes not only helping disabled or frail older people, but also the care provided by grandparents to grand-children

# Home maintenance and housekeeping

This category includes all the kinds of work that have to be done within or around one's own home. The activities are essentially forms of self-care, and require few interactions with others. They enable independent living and many are necessary tasks. To maintain a feeling of independence, people will prolong making a contribution to their own care, however small, for as long as possible. Besides their importance to the individual, undertaking domestic tasks makes a valuable contribution to society as a whole, because the pressure on formal and informal carers is reduced (Herzog and House 1991). The responsibility for undertaking domestic tasks, such as preparing meals, cleaning and laundry, is overwhelmingly borne by women. The contribution of most men to domestic work is mainly in non-routine, low frequency tasks, such as home maintenance and paperwork, or in offering a helping hand in daily tasks (Pahl 1984).

# Contraction and convergence at older age

Although most people remain active in one way or another until old age, the level of participation tends to decrease with increasing age (Bennett 1998; Klumb and Baltes 1999). The transition to retirement releases time for unpaid activities, but radical changes in a person's non-work activity pattern following retirement are rare (Gauthier and Smeeding 2003). Among the 'young-old', maintaining familiar activities is common, while at older ages selections are made, whereby a person continues less demanding activities and withdraws from more demanding tasks (Bukov, Maas and Lambert 2002). The withdrawal has both social and spatial

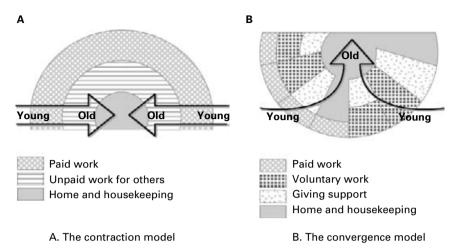


Figure 1. The age-related contraction and convergence models of participation in productive activities.

dimensions. As a person ages, their decreasing involvement with diverse and dispersed spaces and places has been described as 'a closing life-space' (Rowles 1978: 14).

The progressive constriction of older people's productive activities is summarised in a 'model of contraction' (Figure 1a). This envisages the first stage, in middle-age, as one of involvement in many types of activity in many and dispersed locations, that is, a stage of highly diverse roles and spatial behaviour. At later stages of the lifecourse, several layers of activity cease. Paid work, and therefore travelling to and from and spending time at a workplace, and in the derived social activities, are likely to cease, which for many marks the onset of old age. The second stage of contraction involves ceasing voluntary work and giving support to others, which loosens contacts with formal community life and communal spaces (Van Luijk and De Bruijn 1984). Giving support implies interactions with others (family, friends and neighbours), often outside the home but usually at no great distance (Schellingerhout 2003; Wilson and Musick 1997). Whether a person withdraws from voluntary work before giving support to others, or the other way round, is theoretically hard to predict. Wilson and Musick's (1997) hierarchical model suggested that formal voluntary work is positively associated with the likelihood of being an informal helper, but that giving support to others is not positively associated with voluntary work. After withdrawal from unpaid activities for the benefit of others, older adults enter the final stage in which productive life is restricted to the core self-care activities that are mainly at home.

The convergence model refines the contraction model (Figure 1b). It recognises that the contraction of activity engagement to self-care can be the equifinal outcome of different pathways (Smith and Gerstorf 2004). The contraction process starts at different ages and has different rates for different people, and it may be initiated from different starting points. One important – and gendered – distinction is between those for whom the process begins with the end of paid work and others. Some pathways are distinguished by whether or not the person engages in either voluntary work or giving support (or both). Nevertheless, theoretically all patterns eventually converge into solely home-based productivity.

# Productivity and the socio-spatial context

The characteristics of the environment in which people live condition the opportunities, constraints, norms and values that affect participation in specific productive activities and may be divided broadly into functional and socio-cultural aspects. The functional aspects refer to the presence or absence and accessibility of all kinds of organisations, facilities and services, most obviously the availability of employment or voluntary-work opportunities. The socio-cultural aspects relate to differences in a person's appreciation and acceptance of modern lifestyles and individualism, as opposed to 'traditional' values and community life. Segregated gender roles are more explicit in traditional settings, whereas gender emancipation is associated with modernity. The acquired cultural identities of a given area can also play a part, not least in the extent to which they survive or have been diluted by global socio-cultural processes (Hofstede 1980).

The socio-spatial environment can be characterised in many different ways. In The Netherlands, two spatial classifications are commonly used, one to describe regional differentiation, the other local variation (Van Engelsdorp Gastelaars, Ostendorf and de Vos 1980; Dignum 1997). First, the central region of the country, the Randstad, is distinguished from the intermediate and peripheral areas. It is the social and economic hub of the country, the most dynamic region, foremost in manifesting processes such as individualisation and secularisation, and known for its large and diverse labour market. While it is expected that older adults can profit from these opportunities, in the peripheral areas there are many fewer opportunities (Corpeleijn 2005). It should be noted that selective migration may exaggerate the regional differences in involvement in paid work. Several peripheral regions are attractive residential areas, and many older adults on (early) retirement leave the central region, leaving behind age-peers still in paid work. Overall, however, there are relatively low rates and few prominent flows of later-life migration in The Netherlands. Furthermore, participation rates in paid work are particularly low among older women in the peripheral region, probably as a consequence of relatively strong traditional gender roles (Van der Laan and Van den Bout 1990). Men in the peripheral region are expected to be less involved in domestic work.

Participation rates in voluntary work among the adult population (aged 18 or more years) vary by region in The Netherlands, the highest being in the north-eastern peripheral area of Drenthe (Statistics Netherlands 1988). A decreased willingness to commit to voluntary work has been seen as a negative accompaniment of modernisation (Putnam 1995), but it is also possible that in specific peripheral areas there are distinct customs of voluntary work. Whether these regional influences have a gender dimension is unknown. With respect to informal support, a recent study undertaken by The Netherlands Social and Cultural Planning Office (SCP) found regional differences in the extent to which adults aged 18-79 years supported their family and friends in housekeeping tasks (De Boer, Iedema and Mulder 2005). When controlled for socio-demographic and social-network factors, it was found that those in the southern regions of Zeeland, Noord-Brabant and Limburg most frequently gave support; the authors suggested that this may be because there are stronger family relationships in these regions. It is not known, however, whether these regional variations apply to older people, or the extent to which men and women differ. Older adults, particularly women, may be more focused on family life in the peripheral region, which could result in stronger relationships with their children and grandchildren that stimulate not only housekeeping but also other forms of support.

Turning to local factors, there are urban—rural differences. Large cities in The Netherlands have relatively high unemployment rates, not least at the older working ages. On the other hand, urban labour markets provide more opportunities to work part-time, and city lifestyles tend to have less gender differentiation, which might promote the participation of women in paid work (Corpeleijn 2005; Van der Laan and Van den Bout 1990). Their less gendered lifestyles probably also encourage men's participation in domestic tasks. More generally, it has been argued that the social processes associated with (strong) urbanisation involve the fragmentation of communal and familial networks and their replacement by individualistic lifestyles (Wirth 1938; Short 1991). These may, in turn, reduce the commitment to community organisations and have a negative effect on involvement in voluntary work. Timmer and Aartsen (2003) found that volunteering rates were higher in rural than urban communities, but that there were no significant gender effects.

De Boer, Iedema and Mulder (2005) found no significant relationship among those aged 18-79 years between the level of urbanisation and giving

support in housekeeping tasks. Again, however, there may be urban—rural differences among older people. In the villages, older people, particularly women, may be more focused on family life and giving support to children and grandchildren (including activities other than housekeeping, such as baby-sitting). Furthermore, giving support to neighbours may vary by urban or rural context. People in small communities have more contact with their neighbours than urban residents (Schmeets and Vullings 1999), which could result in higher levels of giving support to others. Finally, distance plays a significant part in supporting others (De Boer, Iedema and Mulder 2005). Older people's social networks are more spatially concentrated in city neighbourhoods than in small, rural communities (Thomése and Van Tilburg 2000). All in all, it is expected that older adults living in urban areas are less likely to be involved in giving support to others than those living in rural areas.

## Other personal and household characteristics

Besides age and gender, several other individual and household characteristics have been found to affect participation in productive activities. Participation requires a certain level of physical and mental capability. It has been shown that health problems restrict older adults' participation in all kinds of productive activity (Herzog and House 1991), and there is consistent evidence that there is a positive association with the level of education (Breedveld, de Klerk and de Hart 2004; Burr, Caro and Moorhead 2002). Household composition has also been found to affect activity patterns. Living with other household members increases participation levels, and is gender-specific (Dykstra 1995). Among older adults who live alone, the low level of social participation applies particularly to men, although the opposite could be expected for home maintenance and housekeeping. Men who live with a partner are less likely to do housekeeping. Furthermore, religiosity and commitment to church life are well known to be positively associated with participation in voluntary work (Wilson and Musick 1997). Some researchers have reported a positive relationship between religiosity and giving support to others (Breedveld, de Klerk and de Hart 2004), although others have found no association (Wilson and Musick 1997). Finally, access to private transport has to be taken into account. Car availability enables longer and more flexible journeys. Dykstra (1995) found that men and women with a driver's licence were more likely to be involved in voluntary work. Private transport also enables older adults to give specific types of support through offering rides and carriage services to others. Among today's older people in The Netherlands, however, many women have never had a driving licence.

#### Data and methods

The data for this study were collected by the European Study of Adult Well-Being in 2002-2003 (Ferring et al. 2003). In total, 1,939 face-to-face interviews were conducted with people aged 50-89 years living independently in three regions of The Netherlands: Noord-Holland (Amsterdam, Zaanstad and the village of Landsmeer), representing the central region; Noord-Brabant ('s-Hertogenbosch and surrounding villages), representing the intermediate zone; and Drenthe (Hoogeveen and surrounding villages), representing the peripheral region. Random samples were drawn from the municipal population registers for the sampled neighbourhoods. The response rate of the total sample was 43 per cent. When four separate age groups for men and women were compared, the achieved sample was representative of the national distributions, except that younger male and older female respondents were slightly under-represented. There were few older adults from ethnic minorities in the sample, partly because their national representation is low and partly because many were unable to understand the questionnaire in Dutch. Non-response rates were highest in urban neighbourhoods and the central region. Two-thirds of the nonresponses were 'refusals'.

#### Measures

The measurement of productive activity involvement was by means of the *Life Activity Assessment* instrument (Hawkins *et al.* 1996). All activities in which a respondent participated were listed under several main types of activity. To improve the comparability of the answers, pre-coded lists were composed to standardise the responses. The lists of activities were compatible with the lists used by the SCP in its time-budget surveys of social participation. As the respondents indicated the frequencies of participation for only a few activities, analysis of the comparative frequencies for the aggregate sample was difficult. No information was collected about the duration of activities. The pragmatic definition for participation in a particular 'productive activity type' was that the respondent participated in at least one of its included activities at least once a month.

Paid work included full-time and part-time employment. Voluntary work was variously for hospitals, nursing homes, community and neighbourhood centres, schools, churches, day-care centres, and for sports, recreational, cultural, political, action, women's and older people's organisations. Giving support included all forms of instrumental support (viz. assisting others in personal care, housekeeping, childcare, home maintenance, transport and with paperwork), and included some forms of social

support, e.g. visiting elderly or disabled people. To clarify further, home maintenance and housekeeping included preparing meals, laundry, cleaning, childcare, gardening, pet care, home repairs, and paperwork. The data made no distinction between support for household members (most often a spouse or partner) or for others outside the household, and it was not possible to control for the distance between network members. As almost every older adult was to some extent involved in home maintenance and housekeeping, a more discriminating measure was developed to distinguish 'principal housekeepers', that is, those who took care of the three main domestic tasks (i.e. preparing meals, cleaning and laundry, cf. Droogleever Fortuijn 1993).

A self-rated health measure was available. People were asked whether they had any health problems that restricted them from participation in activities. Household composition was identified in three categories: living alone, living with a partner only, and living with others. The last category mainly comprised couples with co-resident children. To measure the effect of commitment to church life, regular churchgoers were compared with all others, including irregular churchgoers (Breedveld, de Klerk and de Hart 2004). The variable for car availability was that the household owned at least one car. The characteristics of the residential area were measured by both the region of residence and a dichotomy of low and high densities of population (below or above 1,000 addresses per square-kilometre), which approximately represented rural and urban environments (see Den Dulk, van de Stadt and Vliegen 1992).

# Analyses

After bivariate analyses of the age-group and gender differences in levels of participation, logistic regressions of the levels of participation in paid work, volunteering and giving support, controlling for personal and household characteristics, were estimated separately for men and women. One effect of the national retirement age of 65 years is that at all later ages the participation rate in paid work is effectively zero; this relationship was built into the regression equations. To investigate further the gender differences, separate models were estimated which included the main gender effect and one interaction effect between gender and an independent variable.

### Results

# Contraction and convergence

Figure 2 shows the participation rates for men and women in the four types of productive activities by five-year age groups. As expected, labour

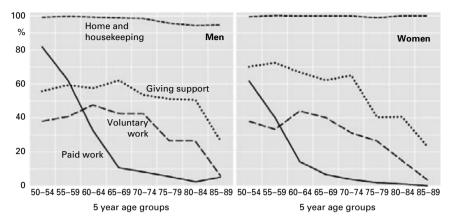


Figure 2. Involvement in productive activities by age and gender, The Netherlands. *Source*: European Study of Adult Well-Being 2003. See acknowledgements.

participation rates were highest in the youngest age group, and the older the age, the lower the participation rate. Nearly all (99%) of the male respondents declared that they had been employed for most of their adult lifetime, and over 60 per cent of the female respondents aged 70 or more years said that they had devoted most of their adult lives to housekeeping, while the comparable figure for those aged 50–59 was 40 per cent.

Giving support to others was more common than volunteering at all ages, and the differential was greatest among women in their fifties. In this age group, about 70 per cent of the women gave support, compared with less than 60 per cent of men. Participation in both volunteering and giving support to others was substantially lower among the oldest age groups. The data do not clearly indicate whether people withdrew from voluntary work at younger ages more than they withdrew from giving support to others, or the converse. Men and women aged in the sixties were involved in voluntary work more than men and women aged in the fifties. Although this could indicate a (temporary) substitution for the 'loss' of paid work after retirement, research shows that most people do not start volunteering after they have retired. The differences may be the result of cohort differences (Knulst and Van Eijck 2003; Gauthier and Smeeding 2003).

Men's and women's age-specific participation rates in volunteering and giving support to others differed, and the declines with increasing age were more consistent for women (Figure 2). Among those aged 75–84 years, men had a higher participation rate in giving support to others than women, although in all younger age groups, the inverse was the case. This unexpected inversion may result from a relationship between age and the predominant types of support for others. Women were more often the

housekeepers, visited disabled people, looked after children and grand-children, and provided personal care to their partners and others. The relative frequencies of these activities change with increasing age, as grandchildren age beyond infancy, and as time increases the likelihood of severe illness and a dependent partner's death. A higher percentage of men than women gave support in home maintenance and provided transport. These activities can be offered more generally to others and are usually less intensive.

There were also differences in orientation with respect to voluntary work. Men were more likely to volunteer for sports and recreation clubs and community organisations, while women were more often involved in residential care institutions and women's and older people's organisations, but relatively high percentages of both sexes were involved with churches and cultural organisations. Being 'productive' in one way or another in the private or domestic domain was not related to age, although the number of activities and the time spent on these activities tended to decrease with age. Only a few of the oldest men reported that they were not involved in any of these basic activities. Notwithstanding the high participation levels, there were manifest task divisions between men and women. Women predominated in meal preparation, house-cleaning and laundry, and although most men gave some time to housekeeping activities, they were involved more often than women in home maintenance, paperwork and gardening.

An even stronger gender division emerged among those who were the 'principal housekeepers', that is, took on all three domestic activities of preparing meals, cleaning, and laundry (data not shown). As expected, those living alone were the most likely to be principal housekeepers, but even among the men in this living arrangement, only 30 per cent had this productive role. Among those who lived with one or more others, only 11 per cent of men were principal housekeepers, compared with 73 per cent of women. This last figure was unexpectedly higher than the percentage (62%) of women living alone who were principal housekeepers. Some of the age group differences were even stronger. Among those aged less than 70 years, about 70 per cent of women were principal housekeepers, but after this age, the participation rate decreased progressively, to 44 per cent among those aged 85-89 years. The gradient of the decline in the participation rate with age was steeper for women than for men, but nonetheless, in all age groups, a higher percentage of women than men were principal housekeepers, whether or not they lived alone.

Table 1 summarises the participation rates in productive activities by gender and age groups. The figures are presented for the more common combinations that included volunteering and giving support. The patterns

T A B L E 1. Participation in productive activities by age group and gender, The Netherlands 2002–03

Gender and activity	Age group (years)				
	50-59	60-69	70-79	80-89	Tota
Men <sup>1</sup>			Percentages		
All productive activities	16.8	6.0	3.0	_	9.0
Paid work and voluntary work	11.3	3.5	0.5	1.4	5.7
Paid work and giving support	24.6	7.1	1.5	1.4	12.2
Paid work	18.8	5.3	2.0	_	9.4
Voluntary work and giving support	7.5	23.7	20.2	18.8	16.3
Voluntary work	3.5	11.7	10.6	-	7.4
Giving support	8.4	23.0	26.3	23.2	18.1
Home maintenance and housekeeping only	8.4	18.7	32.8	49.3	20.2
Other	0.9	I.I	3.0	5.8	1.8
Total	100.2	1.00.1	99.9	99.9	100.1
Women <sup>2</sup>					
All productive activities	11.3	2.5	1.3	_	5.4
Paid work and voluntary work	5.4	1.4	0.8	-	2.7
Paid work and giving support	23.2	4.6	0.8	-	10.6
Paid work	9.6	2.8	_	0.9	4.7
Voluntary work and giving support	14.8	25.6	18.6	9.4	18.1
Voluntary work	3.9	12.8	8.0	2.8	7.2
Giving support	21.7	32.0	30.8	26.4	27.1
Home maintenance and housekeeping only	9.9	18.1	39.2	60.4	24.1
Other	0.2	_	0.4		0.2
Total	100	99.8	99.9	99.9	100.1

Note: Percentages do not sum to 100 through rounding. All named activities except 'other', include home maintenance and housekeeping. 1. Calculated chi-squared 362.3 (24 degrees of freedom), p = 0.000. 2. Calculated chi-squared 367.8 (24 degrees of freedom), p = 0.000. Source: European Study of Adult Well-Being 2003. See acknowledgements.

of participation were consistent with Wilson and Musick's (1997) hierarchical model which proposed that supportive relationships with kin and neighbours do not translate into more public forms of voluntary work, while involvement in organised, public voluntary work encourages informal, inter-personal helping. Given the lack of longitudinal data, caution is necessary in identifying ageing effects, but the reported participation rates give strong indications of both declining participation with age and gender convergence at the oldest ages. The two youngest five-year age groups displayed the greatest gender differentials, but after 70 years of age, the differences were much less. Among those aged 80–89 years, almost one-half of the men and 60 per cent of the women were involved in only home maintenance and housekeeping. On the other hand, although the number of hours spent on these activities was probably low (see Raad voor Maatschappelijke Ontwikkeling [Council for Social Development] 2004), even among those in the oldest age group, about 25 per cent gave some

support to others, and no less than 19 per cent of men and nine per cent of women supported others *and* volunteered.

# Gender and the socio-spatial context

The results of the gender-specific logistic regression analyses of the relationships between the regional and urban—rural residential settings and participation in productive activities are shown in Table 2. As expected, the respondents in the peripheral region of Drenthe were significantly less likely to be in paid work than their peers in the central region. As Table 3 shows, the female paid-work participation rate in Drenthe was significantly lower than the male rate. When controlled for personal and household characteristics, as hypothesised it transpired that a relatively high percentage of older women in the area had spent their adult lives as 'housewives' (data not shown).

Older men living in the higher density urban areas were significantly less likely to be in paid work than those living in rural areas. A more detailed analysis showed that the low employment rate applied only to relatively deprived neighbourhoods. For women, the relationship between living in an urban area and having paid work was positive but statistically insignificant. This result might indicate that older working-age women living in urban areas have benefited from more opportunities to work parttime. In the regression of participation in paid work (below 65 years of age), the interaction between age and gender was highly significant (Table 3).

Variations in the socio-spatial context had no significant effect on participation in volunteering. The expectation that older adults in the peripheral region of Drenthe would be more engaged in voluntary work was only partially confirmed. Although a positive effect was found for both men and women, only for women was the effect significant (Table 2). The effect of living in an urban area on volunteering was, as expected, negative for both men and women, but for neither gender was the relationship significant, so the hypothesis that urban living would reduce participation rates in volunteering was not supported when personal and household characteristics were controlled. The interactions between gender and both age and urban—rural setting had an insignificant influence on the rate of participation in volunteering (Table 3).

Giving support to others was not significantly associated with the regional or urban–rural setting for either men or women (Table 2), and the interaction of gender with the living environment on this productive activity was also insignificant (Table 3). No evidence was therefore found of a stronger sense of family or neighbourhood commitment in the villages or peripheral regions (although it should be remembered that it was

TABLE 2. Beta logistic regression coefficients for participation in paid work, voluntary work, giving support and domestic work by gender

Terms and measures	Paid work		Voluntary work		Giving support		Domestic work	
	Men	Women	Men	Women	Men	Women	Men	Women
Region: (Ref. Noord-Holland)								
Noord-Brabant	-0.31	-0.29	-0.03	0.26	0.17	0.19	-0.13	0.01
Drenthe	-o.49*	-0.91***	0.19	0.36**	-0.12	-0.15	0.10	0.01
Urban (Ref. village)	-0.56***	0.05	-0.22	-0.22	0.12	0.09	0.37*	-0.23
Personal and household characteristics:								
$Age^{1}$	-o.31***	-0.27***	-0.03***	-0.03***	-0.02**	-0.05***	-o.o4***	-0.01
Health constraint	-1.05***	-1.07***	-0.14	-0.09	-0.03	-0.15	-0.01	-o.33**
Regular churchgoer	0.22	-0.05	1.00***	1.13***	0.20	0.53***	0.12	-0.02
Car available	0.79**	0.84**	0.31	0.43**	0.64***	0.24	-0.29	0.16
Educational level: (Ref. low)								
Middle	0.09	0.55	0.48**	0.68***	-0.14	0.61***	0.39	-0.08
High	0.73**	1.46***	0.89***	0.93***	-0.06	0.85***	0.59*	-o.50**
Household composition: (Ref. living alone)								
Living with partner only	0.35	-0.29	0.19	-0.30	-0.09	-0.49***	-1.96***	0.23
Other households	0.86***	-0.16	-0.07	-0.35	-o.64***	-o.41*	-1.59***	0.37
Constant	17.49***	14.35***	0.40	0.34	1.22*	3.26***	1.52	1.54**
Initial -2 log likelihood	1155.67	1108.70	1178.86	1284.59	1212.06	1349.27	762.11	1247.04
Model −2 log likelihood	713.89	739.03	1113.47	1180.86	1184.54	1248.03	678.87	1217.75
Chi-squared	441.78	369.68	65.39	103.74	27.52	101.24	83.24	29.29
Nagelkerke $R^2$	0.54	0.46	0.10	0.14	0.04	0.13	0.16	0.04
Sample sizes	(188)	(1012)	(883)	(1008)	(883)	(1012)	(883)	(1012)

Notes: All models had 11 degrees of freedom, and all were significant at p < 0.001. Ref: reference case. The relationship between age and paid work was assumed constant after age 64 years. I. The relationship between age and paid work is considered constant above 64 years-of-age.

Significance levels: \* p < 0.10; \*\*\* p < 0.05; \*\*\*\* p < 0.01 Source: European Study of Adult Well-Being 2003. See acknowledgements.

T A B L E 3. Interaction effects between paid work, voluntary work, giving support, and domestic work, by gender and selected socio-economic characteristics

Terms and variables	$\chi^2$	df	p	$\chi^2$	df	þ	
	A. Paid Work			B. Voluntary work			
Main effect male (ref. female)	B=0.78***			B=0.21**			
Interaction effects: male with:							
Region	7.95	2	0.07	7.52	2	0.39	
Urban	3.60	I	0.00	0.00	I	0.80	
Age <sup>1</sup>	14.28	I	0.04	3.06	I	0.98	
Health constraint	0.05	I	0.72	0.02	I	0.24	
Educational level	66.61	2	0.15	19.73	2	0.72	
Household composition	157.33	2	0.01	7.81	2	0.25	
Regular churchgoer	0.56	I	0.46	29.91	I	0.45	
Car available	65.22	I	0.55	12.78	I	0.94	
	C. Giving support			D. Domestic work			
Main effect male (ref. female)	B=-0.26***			B=-2.50***			
Interaction effects: male with:							
Region	2.81	2	0.73	223.07	2	0.57	
Urban	1.79	I	0.92	203.12	I	0.00	
Age	8.10	I	0.00	545.47	I	0.96	
Health constraint	3.55	I	0.41	195.01	I	0.42	
Educational level	4.97	2	0.00	420.65	2	0.03	
Household composition	9.52	2	0.00	553.46	2	0.00	
Regular churchgoer	0.11	I	0.50	65.54	I	0.81	
Car available	0.31	I	0.63	446.42	I	0.00	

*Notes*: I. The relationship between age and paid work is considered to be constant after 64 years-of-age. The presented results are from models that estimate the main effect and one interaction effect. df: degrees of freedom. B: regression coefficients of the models without interactions.

Significance levels: \*\*\* p < 0.001, \*\* p < 0.01.

Source: European Study of Adult Well-Being 2003. See acknowledgements.

not possible to separate supporting household members from supporting others). Living in an urban area significantly raised the likelihood of older men participating in domestic work, and the effect for older women was negative but insignificant (Table 2). In the regression of participation in this productive activity, the interaction between gender and urban—rural living was highly significant (Table 3).

# Personal and household characteristics and levels of participation

Increasing age had a negative effect on the likelihood of being engaged in productive activities, with the exception of domestic work among women. The negative effect was significantly stronger for men than women with respect to paid work, and higher for women with respect to giving support (Table 3). Health constraints had a strong negative effect on the likelihood of being employed for both men and women (Table 2). For women, health

constraints had a significant negative effect on participation in domestic work, but there was no relationship for men, and the gender-health interaction term was insignificant (Table 3). Health constraints insignificantly influenced volunteering or supporting others among both men and women.

Highly-educated older people were more likely to be employed and to volunteer, and highly-educated women were also more likely to support others and less likely to do domestic work (while highly-educated men were significantly more likely to engage in domestic tasks) (Table 2). The effects of educational level on giving support and on domestic work were markedly different for men and women. Men living in 'other households' (commonly a partner and a child) were the most likely to be in paid work. On the other hand, whenever another person shared the household, usually a woman, men were clearly less involved in domestic tasks. In contrast with previous findings (e.g. Schellingerhout 2003), older women who lived alone were the most likely to give support to others. It should be remembered that in this analysis visiting disabled people was counted as giving support, because older women who lived alone were the most likely to make such visits (it is possible that they valued the social interaction and company). With the exception of volunteering, household composition produced significantly different effects on productive involvement for men and women.

In accordance with previous evidence, regular churchgoers were the most likely to volunteer. For women, church commitment also had a significant positive effect on the likelihood of giving support, although the gender difference was insignificant (Table 3). Having a car available positively related to being in employment for both men and women, and had positive effects among women on participation in voluntary work and, among men, on giving support to others. It seems likely that helping with transport is an important helping activity for men. The gender differences in voluntary work, being a regular churchgoer and having a household car were however insignificant (Table 3).

#### Conclusions

Some limitations of the presented findings should be noted. Because the *European Study of Adult Well-Being* was a cross-sectional survey, ageing and cohort effects could not be disentangled. Moreover, the survey did not collect information on the frequency and duration of activity involvement. Had it been possible to analyse these aspects of productivity, the contraction and convergence processes, and the gender and socio-spatial differences might have been stronger. To have gained a better understanding

of the different ways in which men and women are productive in old age, and of the functional and socio-cultural influences of various residential environments, would have required more detailed information on the spatial and temporal dimensions of older people's activity patterns.

This analysis has nonetheless shown that although productivity in later life rarely stemmed from involvement in paid work, substantial numbers of older adults were productive inside and outside their homes and in both its formal and informal forms. With increasing age above 70 years, however, participation contracted and an increasing percentage restricted their productive life to the private domain. The variable patterns of productive activity among people aged in the fifties and sixties converged towards a core of home-based productivity, with comparatively little variation among octogenarians. These contraction and convergence processes were strongest among women. Men aged 80-89 years were more often productive outside the home than women of those ages, through both informal contacts and formal community associations, while a few of the oldest men did not participate in the private domain at all. The low variation in the oldest women's productive involvement reflected their very high commitment to 'caring' activities. In their own households, their responsibility for intensive housekeeping tasks was literally never-ending. By contrast, however, many of the women, who when aged in the fifties and sixties had provided informal support to others, found that later their contributions became redundant, as grandchildren became adolescents, and parents and dependent partners died. The help that many older men offered to others was usually less intensive.

# Modernisation and the residential setting

Despite the limitations of the data, they have provided valuable information about the relationships between the socio-spatial context of older men's and women's residential settings and their involvement in productive activities. First, the idea that regional differences in traditionalism and modernisation processes are reflected in lower volunteering and helping rates in the most modern region has not been supported for older people. Also, city life, which has consensually been seen as less committed to communal activities than rural or small-town societies, appears not to be associated with fewer older adults volunteering or providing informal support to others.

Second, it is striking that involvement in paid work among those aged in the fifties and sixties showed strong socio-spatial differentiation – this finding has great relevance for the current debate about how to raise the contributions of 'older workers' to the economy. It is important to understand the regional and local factors that lead to non-participation in paid work, and to understand that the influences differ for men and women. The high rates of non-participation in the peripheral region are likely to be related to the unusual prevalence of the life-long traditional or 'housewife' role among today's older women. For men, however, the low rate of participation in paid work in the rural and peripheral areas may be the result of the relatively high representation of young pensioners and retired migrants, who are generally prosperous, healthy and have relatively high participation in unpaid productive activities. In large cities, however, the non-participation in paid work of older men is more likely to indicate accumulated constraints, including poor health, low education, obsolescent job skills, and enforced redundancy or early retirement, particularly in deprived neighbourhoods. In this case, improving access to suitable jobs would be more likely to reduce the group's high rate of unemployment than increasing the retirement age.

All in all, it has been shown that gender is an important factor in interpreting the influence of socio-spatial factors on engagement in productive activities. The presented relationships suggest that the regional context is a more important influence on productive engagement for older women than for older men – the finding derives mainly from the differential involvement of older women in the peripheral region of Drenthe. For older men, the urban–rural dimension seemed to be more important – which derived mainly from their low participation in paid work and their slightly higher participation in domestic work in the cities. There was no evidence that these two types of productive activity were inter-related.

It has been argued that older adults could spend more time in productive activities (Raad voor Maatschappelijke Ontwikkeling 2004). Furthermore, to decrease the financial pressure of an ageing population, policy makers debate whether to raise the retirement-age from paid work. It is difficult to predict, however, whether an increase in participation in one type of productive activity has an effect on the level of participation in the other types, but possible that increased paid-work involvement among older people would reduce their important unpaid contributions, as in providing informal care. It is, therefore, important to consider all types of productive activity and to bear in mind that, by and large, older people participate in fewer activities than younger people.

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