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Continental Differences in Attention for Dependent Adults

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Continental Differences in Attention for Dependent Adults

Jesús Rogero-García

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Abstract

Most studies on the care of dependent people have been at the national level and have focused on formal paid care. The aim of this working paper is to offer a comparative global picture of adult care systems—comprising paid and unpaid care—that have been developed in the different regions of the world. To this end, a method for estimating care demand is proposed that takes into consideration the age and the average life expectancy in poor health of the populations. The empirical basis is formed by demographic and health information of the United Nations and the European Commission. An estimate is presented of the volume of care demand and the composition of care supply on different continents. The results show that the regions with greatest per capita unpaid care overload are Africa and, a long way behind, America and Asia.

Key words

Aging, dependency, care, caregivers, comparative research.

Resumen

La mayor parte de los estudios sobre atención a personas dependientes son de carácter nacional y se han centrado en la atención formal remunerada. El objetivo de este documento de trabajo es ofrecer una imagen global comparada de los sistemas de cuidado a personas adultas —formados por cuidado remunerado y no remunerado— que se desarrollan en las diferentes regiones del mundo. Con este fin, se propone un método de estimación de la demanda de cuidados que toma en consideración la edad y el promedio de vida con mala salud de las poblaciones. La base empírica la conforma información demográfica y de salud de Naciones Unidas y la Comisión Europea. Se ofrece una estimación del volumen de demanda de cuidados y de la composición de la oferta de atención en los diferentes continentes. Los resultados muestran que las regiones con mayor sobrecarga de cuidado no remunerado per cápita son África y, a gran distancia, América y Asia.

Palabras clave

Envejecimiento, dependencia, cuidado, cuidadores, investigación comparativa.

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1. Introduction

THE situation of dependent persons is currently a matter of great interest for academics, designers of public policy and the public, especially in countries with the most developed economies. Generally, the analyses in this field have been confined, on one the hand, to the national level and, on the other, to formal systems of care. This has had two consequences. First, national studies provide visions that are difficult to compare amongst themselves, which limits the opportunities for comparing public policies. Second, the omission of the unpaid sector gives an incomplete and distorted version not only of attention to dependent people, but also of society as a whole, whose economic and social development is maintained by unpaid caregiving. This lack of information reinforces the invisibility of this sector: it is not measured because it is not valued, and it is not taken into account in drawing up policies because it is not known about (Pérez Orozco 2009: 6).

This paper addresses the care systems for dependent adults that have been developed throughout the world. The aim is to describe the means by which current societies confront situations of dependency in adults and older people. It is an ambitious proposal, given the enormous diversity of contexts and circumstances of disability. For this reason, care demand and supply are estimated, paying special attention to the time spent on unpaid care in each region. The care of adults who are dependent as a result of short- or long-term illness is included in the analysis. The terms “unpaid care” and “informal care”, on one hand, and “paid care” (by public organizations or households) and “formal care”, on the other, are used interchangeably.

This paper forms part of a wider research project on unpaid work in the global economy, carried out in 2009 and 2010 under the direction of María Ángeles Durán and with the support of the BBVA Foundation. The great breadth of the work, which encompasses contributions from seven researchers, calls for multiple publications: a monograph (Durán 2012) and five working papers, including this one and those by Díaz and Llorente (2012), García Díez (2012), Domínguez (2012) and Durán and Milosavljevic (2012).

The papers range over different types of unpaid work (childcare, care of elderly people), different research methods (demographic and econometric techniques) and different regions (Latin America, Africa); though each monographic contribution can stand alone as an independently produced piece of research, the various perspectives complement one an-

other. All six publications are concerned to identify the differences between work and employment, seek an international perspective, use dependency scales (in particular, the Madrid II scale), introduce time horizons and, as far as possible, estimate the time demand involved in meeting unpaid care needs.

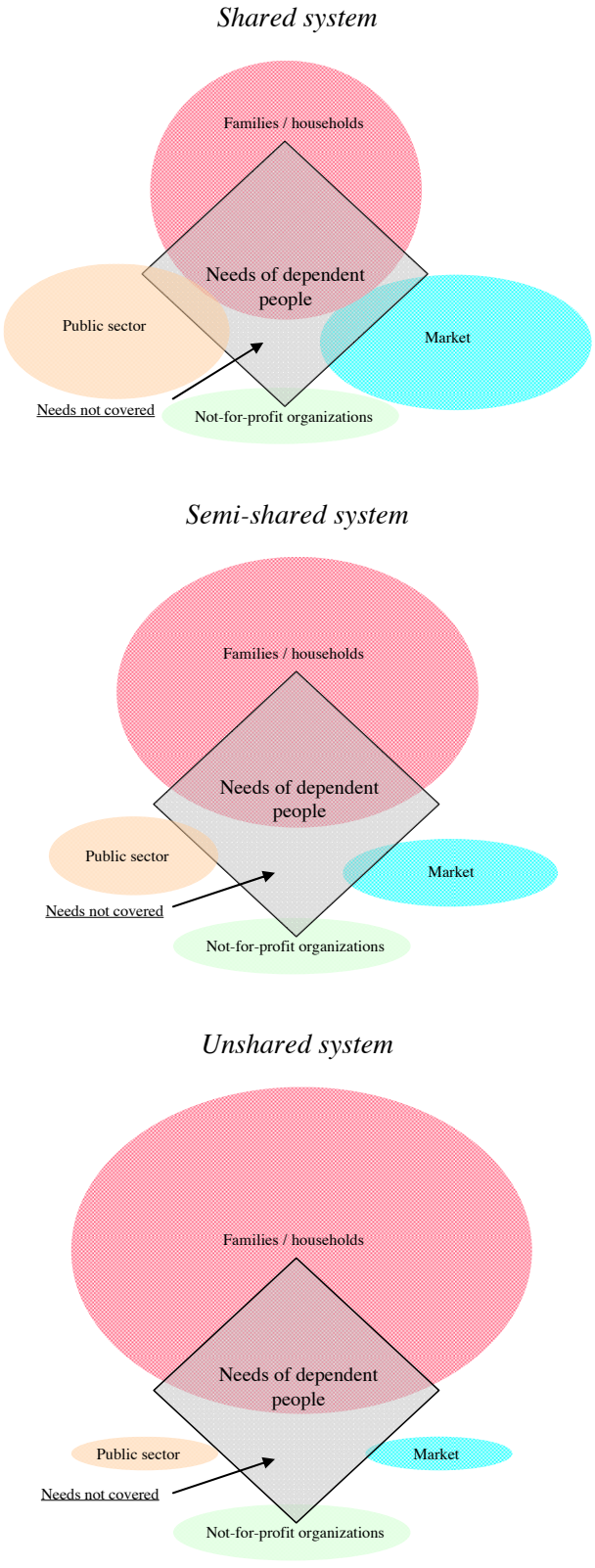
2. Adult Care Systems Throughout the World

THE different ways it is possible to organize care have been described using the metaphor of the "care diamond" (Razavi 2007; Kofman and Raghuram 2009), which reflects the multiple empirical realities of attention to dependent persons. The care diamond identifies four important actors: families, the public sector, the private sector and not-for-profit organizations. The importance of each of these varies between regions and over time, and depends on diverse factors such as the level of economic development, forms of coexistence and culturally determined attitudes to women and the care of others[1].

It is possible to draw up a general typology of systems based on the idea of the diamond. Three types are proposed, based on how care is divided up among the various agents: "shared", "semi-shared" and "unshared" systems. In Figure 1, which illustrates the three systems, the diamond symbolizes the needs of dependent persons. The circles around the diamond represent the agents and should be interpreted with respect to (a) their size, which correspond to their volume and capacity in each society, and (b) their presence within the diamond, in other words, their contribution to covering the needs of dependent people. The scheme treats these types from a theoretical point of view, in such a way that, in reality, each country or region can exhibit characteristics of more than one system.

[1] Ideas of care and the activities that stem from them vary across societies. For example, in Europe, collecting water or firewood are not very important activities, whereas in Africa they take up huge amounts of time.

FIGURE 1: The three systems of care for dependent persons: Shared, semi-shared and unshared



Source: Author.

2.1. The shared system

In this system, the family is the agent with the greatest presence, but the participation of the public sector and of the market is important, albeit to differing degrees according to social groups. The needs of dependent people are broadly covered, although there are still pockets of the population where care is lacking, especially in the lowest classes and among older people who live alone. Likewise, there is a significant proportion of overburdened and unremunerated caregivers, although this is less than in other systems.

The shared care system operates in most European countries, North America, Japan and Australia—areas characterized by advanced economic development. Within this system, there are notable differences among countries. For example, the OASIS study compared the model of care for people aged over 74 years in England, Israel, Germany, Norway and Spain (Table 1), and found that only in Norway were public services more important than families (Bazo and Ancizu, 2004). Spain was the country with the lowest proportion of people aged over 74 years who received care from public services.

TABLE 1: Incidence of care services for persons aged 75+ years

Order	Norway	England	Germany	Spain	Israel
1	Public services	Family	Family	Family	Family
2	Family	Public services	Private services	Private services	Private services
3	Private services	Private services	Public services	Public services	Public services
4	Voluntary sector	Voluntary sector	Voluntary sector	Voluntary sector	Voluntary sector

Source: Bazo and Ancizu (2004).

In Australia coverage of formal services is widespread and has increased in recent years, especially those provided in the home (Brennan and Phillips 2007). For its part, Japan has similar service coverage to that of some European countries. Its system is based on universal public dependency insurance, which is subsequently invested in public and private services, and in which public administrations determine the level of need and the amount of care each person requires (Abe 2009). Despite that, the great majority of unpaid care continues to be done fundamentally by the women of the family.

In countries with shared care, part of the debate about the organization of care is directed at guaranteeing the unpaid caregivers and dependents a set of basic rights. The need to change policies from "providing services" to "guaranteeing independence" of de-

pendent people and their carers has been considered. In this respect, the national health system, the third sector, families and communities have been encouraged to guarantee the right of caregivers to maintain their standard of living, to lead an independent life, and to have support services available and adequate training (Carers UK 2008). This change with respect to the social consideration of carers can be attributed to the ideas of "social justice" for people being cared for and the caregivers (independence and freedom to take decisions), and of "social investment", which relates to the productive capacity of the caregiving relatives (Williams 2009).

2.2. The semi-shared system

In this system, the family fundamentally provides the care, the contributions of the other agents being slight by comparison. Formal care services, both the public and the private, are scarce. The private system is slightly more important than the public system, and is used by privileged social groups. What few public services exist are aimed at populations that are highly dependent and have almost no economic resources. The types of attention available in the public and private sectors are very different: whilst in the former it is aimed at satisfying the most compelling needs (food, basic hygiene, provision of medicines, etc.), the latter covers a broader range of activities (domestic tasks, transport, etc.). The areas of the world where the semi-shared system is most frequent are Latin America and Asia, although it is also found in some European countries.

In the case of Latin America, becoming dependent arises in fragile socioeconomic contexts that are characterized by high levels of poverty, great social inequalities and intensely unequal access to health services (Huenchuan, Roqué and Arias 2009). Care within the family accounts for almost all the attention to dependent people in Latin America, with the exception of a small sector of the population who can afford private services. Since even the basic health systems of these countries still have significant shortcomings, the coverage of care services by the public sector, which is considered to be a subsequent step in the development of a welfare state, is still practically non-existent.

The situation in Asia is, broadly speaking, similar to that of Latin America, with the notable fact that it contains 60% of the world's population. The circumstances of the two giants of the region, China and India, merit special attention. China is characterized by a

Confucian or East Asian welfare system, based on family support—especially that of the sons. Government aims have focused (and it is predicted that they will continue to do so) on economic growth and political stability, and social service benefits to address dependency are still scarce. These shortfalls are especially marked in rural areas. The biggest challenge that China will face in the coming years is the so-called *four-two-one problem*, i.e., the difficulty of satisfying the care needs of parents and grandparents of the single-child generation, especially in rural areas (Peng and Phillips 2004). Along with the absence of a basic social security system, the migration from the country to the cities in China has weakened the ties of family support, with two main consequences: the instigation of new strategies based on financial and material support, and a greater risk of care deficits (Luo 2008). In the case of India, the health system provides very uneven coverage that has a long way to go before it is universal. Significant levels of the population lack health services, especially in rural areas, and the upper classes opt for private health services (Palriwala and Neetha 2009).

2.3. The unshared system

The unshared system of care is perhaps the one most closely associated with a particular region—Africa—in which the action of agents other than those in the home is almost insignificant. The analysis of attention to dependency in Africa should be understood in its broadest context, characterized by serious shortcomings in the area of health. The situation of the people who are dependent due to disability is more delicate in Africa than in any other part of the world. In spite of families and communities providing practically all of the care, shortfalls in care are very common. Additionally, in the African case, rural to urban drift is causing a weakening of the rural care system, which is sensitive to the strength of family relationships. To become dependent often means experiencing a sharp deterioration in health as a result of the multiplying effect produced by the joint absence of the most basic of health services and of care services. In this region, the activity of non-governmental organizations to alleviate the consequences of dependency is more important than anywhere else in the world.

The organization of care in these countries has had consequences that extend beyond their borders, particularly in recent years. The main effect is the spread of the phenomenon of the “global chains of care”, i.e., the population movements and transnational relationships

that arise and are maintained with the aim of providing care for dependent people. In these chains, care work is transferred from some homes to others on the basis of their place of origin, gender, social class and ethnicity (Pérez Orozco et al. 2008). The growing demand for low-paid careworkers in developed countries ultimately affects the care system of the countries of origin. In some of them emigration has left a care vacuum for the indigenous population that is very difficult to fill. In this context, one may speak of a process of "exporting the care crisis" from the destination countries to some of the countries of origin (Pérez Orozco et al. 2008: 101). The main positive consequence is the great wealth that the repatriated earnings from this type of work represent. With respect to care work, it has been noted that these remittances do not help families to pay for private care services, but rather enable unpaid caregivers in the countries of origin to subsist in better conditions (Martínez Franzoni, Largaespada and Ulloa 2009).

3. Demographic Trends and the Difficulty of Measuring Disability

DISABILITY for reasons of health affects older people more intensely, for which reason an aging demographic structure is one of the most important factors determining the care needs of a population. According to the UN, the population aged over 64 years will have grown from 523 million in 2010 to 1487 million in 2050, the proportions changing from 7.6% to 16.2% of the world population (UN 2009b). Although only a few decades ago not many people imagined that living longer would be a problem, the current demographic trend is nowadays considered to be a "demographic earthquake" that will usher in a new international order in the population, constituting a collective challenge of the first order (UN 2002). This new demographic situation is accompanied by other global processes of at least equal importance: the ever greater gap between rich and poor, the geopolitical transformations in which Asia plays an increasingly influential role, the progressive equalization of the rights and lifestyles of women and men in the most industrialized countries and the technological advances in all walks of life.

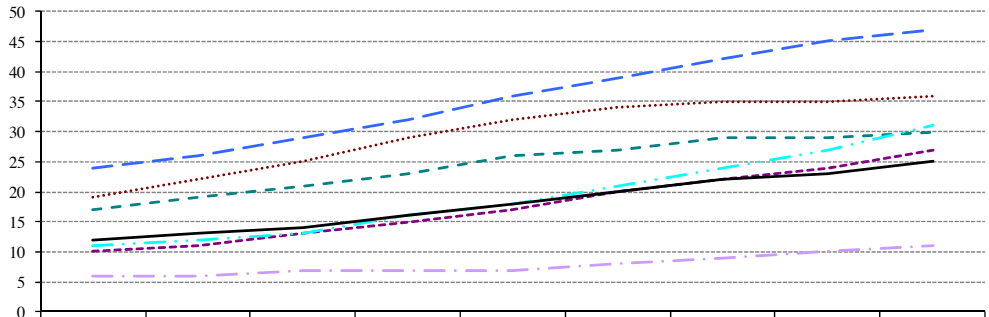
Although there is general agreement amongst demographers that the proportion of people older than 64 years will increase in most parts of the world, this increase will not be

the same in all regions. In the case of Europe, the projections suggest an increase in this group from 16.3% to 27.4%, reflecting a sharp increase in the post-working age population, if current retirement ages remain the same. Different scenarios are predicted for the less developed countries. For example, the UN estimates that Africa's population will grow from its current 3.4% of the population aged over 64 years to 7.1% in 2050, which, on one hand, will be a success since people will live longer, but on the other, a challenge since mechanisms will have to be put in place to care for them.

In the developed countries, the weight of numbers of the elderly population will unleash an "aging of society" (Bazo 1998), which is understood to be a process involving significant changes in the social and economic organization of the general population. The direction of these changes will depend on the capacity of societies to anticipate their needs, or, in other words, on policy planning. Nevertheless, the social importance of old age becomes obvious not only in the increased demand for health and care services, but also in their contribution to the care of children and adults (Meil Landwerlin 2000), their political involvement in the third sector (IMSERSO 2008), and their great capacity for consumption (tourism, technical help, leisure and entertainment, etc.). In this respect, it has been estimated that the elderly own 25% of the broad money supply (de Lorenzo 2003).

According to the UN, the dependency rate of those over 64 years will increase from 12% in 2010 to 25% in 2050, the increases being especially marked in Asia, Latin America and Europe (Figure 2). The European case provides a particularly good example: a dependency rate of 47% is predicted for 2050, which means that for each person over 64 years of age there will only be two people between 15 and 64 years. Today the ratio is one to four. The dependency ratio of the elderly in Asia, Latin America and Oceania will be around 30%. The question is whether the demographic change will be accompanied by the economic, political and social measures required to maintain decent standards of living for the population as a whole. In this respect, it has been forecast that the GNP set aside for long-term care in Europe will increase from 1.2% in 2007 to 2.3% in 2060 as a result of demographic aging alone (European Commission 2009: 29).

FIGURE 2: Dependency ratio of people aged 65+ years[1], 2010-2050 (%)

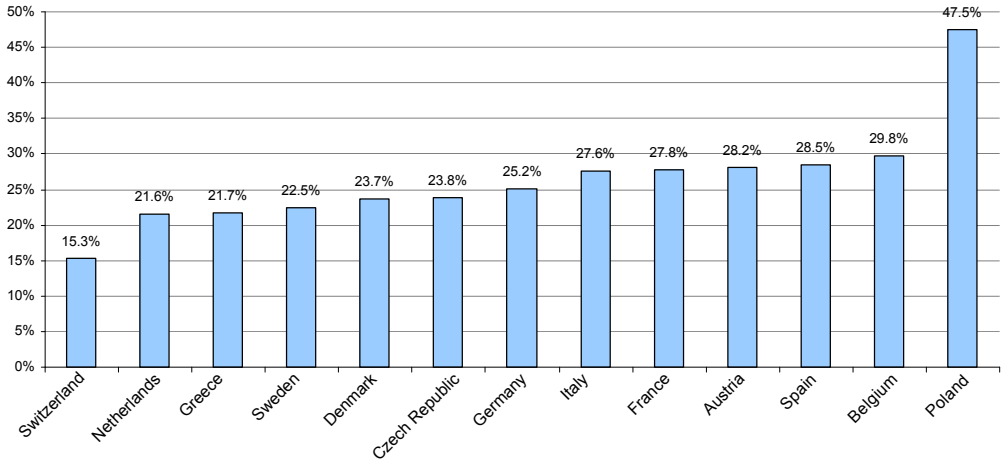


	2010	2015	2020	2025	2030	2035	2040	2045	2050
Africa	6	6	7	7	7	8	9	10	11
Asia	10	11	13	15	17	20	22	24	27
Oceania	17	19	21	23	26	27	29	29	30
Latin America	11	12	13	16	18	21	24	27	31
North America	19	22	25	29	32	34	35	35	36
Europe	24	26	29	32	36	39	42	45	47
World	12	13	14	16	18	20	22	23	25

(1) Ratio of the population aged 65+ years to the population aged 15-64 years.
Note: Medium projection scenario.
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision, http://esa.un.org/unpp [November 12, 2009].

One of the main problems arising from trying to predict care demand is the lack of comparable data for different regions and countries. The first hurdle is to establish a single concept of disability and dependency for different societies, since these concepts vary by place and over time. Both definitions, of disability and dependency, are couched in terms of what are considered activities of daily life (ADLs). We may ask whether ADLs are the same in all societies, and independent of, for example, their economic development. It seems evident that this cannot be the case and that, just as the day-to-day practice of ADLs differs, so do the ideas of disability and dependency. These difficulties of establishing a definition of disability valid for different countries are illustrated by a recent analysis of data from the SHARE Survey (Esparza and Abellán 2009). The results show significant differences in the prevalence of disability among the 65+ year age group in various European countries (Figure 3), which are probably due to the absence of a common reference, more than to any real variation in the disability rate.

FIGURE 3: Disability rate among persons aged 65+ years in Europe, 2006



Note: Percentage of people aged 65+ years with problems with at least one of the activities of daily living.
Data: Survey of Health, Ageing and Retirement in Europe (SHARE).
Source: Esparza and Abellán (2009).

The difficulty of measuring disability also lies, in large measure, in the differences between the sources of information. These sources are frequently disparate in their aims, the quality of their sampling designs and the organization of fieldwork (UN 2009a). Table 2 illustrates how the data on disability prevalence in different countries is highly variable. Although a large part of these differences is due to the demographic structure, which is much older in the case of New Zealand and Australia than in the other countries, it is probable that the instrument for capturing information from the former two countries is more sensitive to situations of difficulty in the population. These differences are not only due the real status of disability in these countries, but also to the methodologies and concepts used in each case. These measurement difficulties often lead to the data being used to estimate the volume of dependent population directly.

TABLE 2: **Disability prevalence ratios by country: Asia-Pacific region**

Country	Source	Prevalence ratio (%)
Afghanistan	2005 Survey	2.7
Bangladesh	1987 Survey	1.0
Cambodia	1999 Survey	1.6
Laos	1996 Survey	0.6
India	2001 Census	2.0
Nepal	1999-2000 Survey	1.6
Pakistan	1998 Census	2.5
Australia	1998 Survey	19.3
New Zealand	2001 Survey	19.5

Source: Trani and Bakhshi (2008, 2: 44–64).

4. Care Demands of Dependent Adults: The Freetown Scale

EACH society requires a different amount of care work, based on the needs and demands of its population. Below, the care demands (paid and unpaid) are estimated for people over 15 years of age in the different regions of the world between 1950 and 2050. To do this, the Madrid scale (Durán 2002)[2], which attributes a theoretical level of dependency[3] to each age group, is taken as the starting point. In the Madrid II scale, care demand is measured in terms of units: it is estimated that people between 15 and 64 years of age demand one unit of care, those between 65 and 79 years require two units, and those above 80 years need three units.

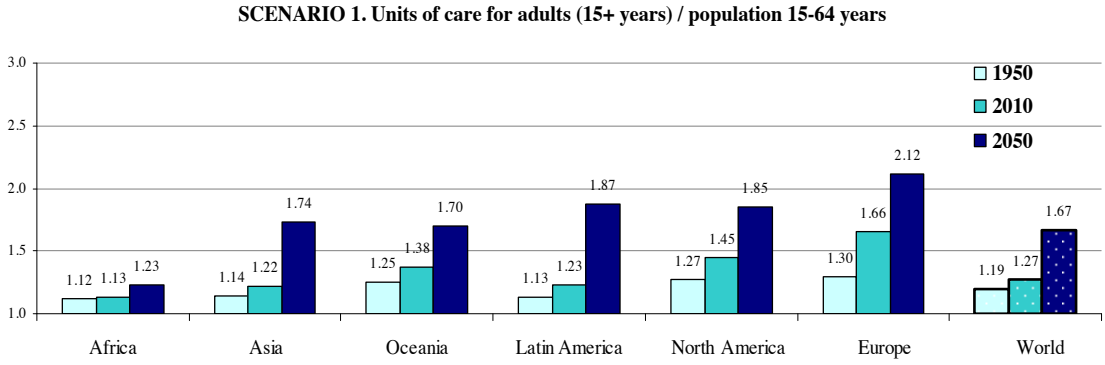
Consistent with the Madrid II scale, the combined effort to help dependent adults will have increased substantially between 1950 and 2050 in all regions of the world, as illustrated in scenario 1 (Figure 4). At the present time (2010), and considering the case where all care for dependent adults will fall to the 15 to 64-year-old population and will be carried out without remuneration, each person would be providing for free an average of 1.27 units of care to elderly people. The distribution of care demand is very unequal from region to re-

[2] Initially, this study took the Madrid I scale as its starting point, but the Madrid II scale was used in the final version.

[3] It has been estimated that approximately 90% of the health and social resources consumed by dependent Spanish people aged over 64 years is concentrated in their final seven and a half years of life (Rodríguez and Codorniú 2002).

gion: Europe is at one extreme, where each individual between 15 and 64 years provides 1.66 units of care, while Africa is at the other, where, with a much younger age structure, people provide 1.13 units of care per capita. The prediction for Europe is that the units of demand will increase to 2.12 in 2050, i.e., 63% more. The increase for Africa will be 10%, to give a figure of 1.23 units.

FIGURE 4: Madrid II scale.[a] Distribution of care for adults among the population aged 15-64 years, by continent and year

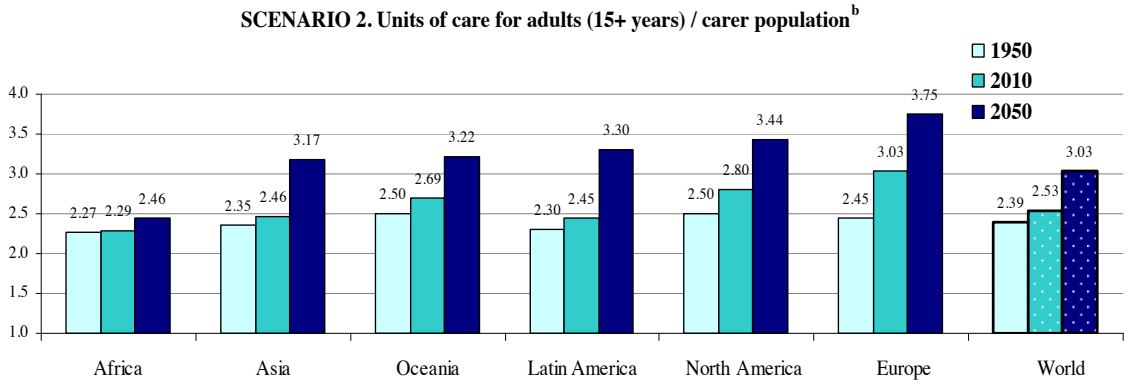


(a) Coefficients applied to the population: 15-64 years = 1 unit of care; 65-79 years= 2 units of care; 80+ years= 3 units of care.
Source: Author, based on United Nations data (2009a).

Scenario 1 is based on the assumption that all care is uniformly distributed among the adult population, and that it is provided without remuneration. However, research into unpaid care of adults has consistently shown that, in all regions studied, the majority of carers are women, and they usually spend more time doing this than do male carers (Bittman et al. 2004). Likewise, a substantial proportion of those aged over 64 years, irrespective of their health status, are also care providers (generally to their dependent spouses).

Considering the above, Scenario 2 is built on the following hypothesis: it is estimated that 70% of the carer population is made up of women between 15 and 64 years, and 25% of it by men of that age; likewise, it is estimated that 20% of those between 65 and 79 years are involved in care. Under the assumption that all care is distributed evenly across this population, each person would currently be responsible for 2.53 units of care demand. If the demographic structure of the population does not change, this figure will increase to 3.03 units by 2050 (Figure 5). The inclusion of some of those people aged over 64 years in the caregiver population means that differences in per capita care between continents will be slightly reduced.

FIGURE 5: Application of the Madrid II scale.[a] Distribution of care for adults among the unpaid caregiver population, by continent and year



(a) Coefficients applied to the population: 15-64 years = 1 unit of care; 65-79 years = 2 units of care; 80+ years = 3 units of care.
(b) Estimated population of carers: (70% women 15-64 years) + (25% men 15-64 years) + (20% elderly 65-79 years).
Source: Author, based on United Nations data (2009a).

The Madrid II scale has enabled us to make an initial estimation of the care demand of the elderly by region, but there is still room to improve these estimates. This scale is built on an age structure that presupposes a significant increase in the situations of dependency due to disability from the age of 64 years, a fixed age limit that has been applied here to the different regions of the world. Although the population data are certainly reliable with respect to the numbers and ages of people in each country, they do not by themselves reveal the proportion of dependent people (Sanderson and Scherbov 2010). Disability refers to a negative relationship between the health of individuals and their context (UN 2001: 9), i.e., it depends on environmental factors like the types of infrastructure, building design, climate, and health and education service coverage. The dependency and care levels of a society vary as a function not only of age and health status of individuals but also of that society. It is therefore necessary to combine demographic information with other indicators in order to estimate more accurately how many people need care in their daily life.

The data from a range of international organizations indicate that there are huge inequalities between the different areas of the world with respect to food, hygiene, housing, personal security and health (UN 2009a). For example, being born in Norway means having available, on average, 3,780 dollars of public money for health care (2006 data), while for those born in Mexico this figure is 327 dollars, 67 dollars for Haiti and 23 dollars for Sudan (WHO, 2009). Thus, a Norwegian person has 164 times as much money for their healthcare as a Sudanese person, which means that for a Norwegian, a broken bone, appendicitis or flu

will be a tiny anecdote that passes almost unnoticed during the course of their life, while for a Sudanese person these are likely to produce permanent disability or even death. The differences in resources are reflected in indicators such as those of healthy life expectancy, which is 74 years in the Norwegian population and 50 in the Sudanese population. The analysis of care must take into account that resources for tackling health risks vary enormously depending on the place someone is born.

For the most developed countries, the bulk of the research supports the "theory of mortality compression" (Braña 2004), which argues that medical advances, positive health behaviors and other contextual factors bring about a reduction in morbidity and functional disability (Fries 1980). Morbidity is compressed in periods during which life expectancy increases at a slower rate than morbidity-free life expectancy (Guralnik 1991). Jeune and Bronnum-Hansen (2008) found that the healthy life expectancy of Danish people older that 64 years had increased more than their total life expectancy between 1995 and 2005. In a similar vein, the study by Mathers et al. (2001) strikingly showed that the mean number of years in good health is related to the life expectancy of the country: the lower the life expectancy, the greater the average number of years a person is likely to live in poor health. It is not possible, therefore, to calculate future care demand solely from demographic predictions, without taking into account estimates of the changing age-related health status of populations.

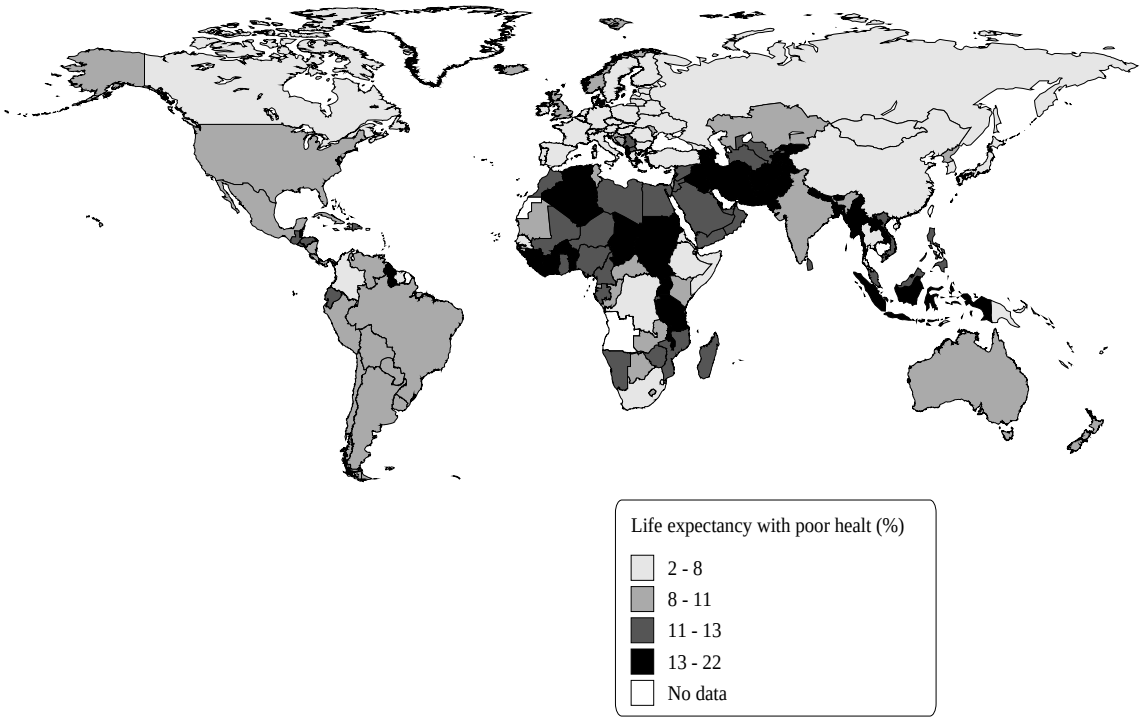
In the Spanish case, the disability prevalence rates among people aged 65 or more decreased by just over two percentage points between 1993 and 2003 (from 19.4% to 17.0%) (Casado 2006, 2007). This trend meant that, despite the increase in the population aged 65 years or more, the number of dependent elderly people scarcely increased. This change was confirmed in the recent publication of the INE's *Encuesta de Discapacidad, Autonomía Personal y Situaciones de Dependencia* (the Spanish National Statistical Institute's Survey on Disability, Personal Independence and Dependency Situations), which also reflects high stability in the prevalence of disability (around 9%) in the general population between 1999 and 2008 (INE 1999, 2008), despite the aging demographic structure. It seems plausible, therefore, that the improved quality of life and health in previous stages, especially childhood, and factors such as biomedical advances, the progressive elimination of physical barriers in the environment, the use of new technologies and the improvement and increase in health and care services are helping to neutralize, in part, the effect of demographic aging (Sarasa and Mestres 2007).

Similarly, when making projections, it may also be presumed that care needs will not be the same in 2050 as they are currently, since the expectations of both dependent people and their carers will have risen and, probably, they will demand different forms and standards of care from what was provided decades before (for example, greater emphasis on the promotion of independence or better hygiene). Subsequently, this redefinition of needs could lead to an increase in care demand.

It certainly cannot be presumed that the dependency level is solely a function of the demographic structure, since that would mean attributing to age aspects that are also generational (Pérez Díaz 2000). The 65-year age limit established in the Madrid II Scale may be useful for making calculations about economically developed countries, but is less so for the others. In the case of Spain, 22% of people between 65 and 79 years of age have some disability, the proportion rising to 52% among those older than 80 years (INE 2008). These proportions are considerably higher in countries that do not have infrastructures and services that are comparable to those of Spain, or in which significant events have taken place, such as wars or natural disasters. For example, in Sierra Leone, the civil war between 1991 and 2002 left thousands of people as dependents due to amputations or other injuries, as well as producing a serious problem of malnutrition that affects one in two of its people to this day.

The estimates of care need to be weighed against their context, which may be more or less debilitating. To do so it is necessary to include composite indicators of health and disability of populations in the estimation of care demand. As has been pointed out, despite the efforts of national statistical institutions and multinational organizations, the data on the prevalence of disability are not comparable from one country to the next. One possibility is to use data that are not directly informative about dependency but do tell us about their causes. One indicator that could be useful for comparative purposes is “life expectancy in poor health”, although measuring this is not without its difficulties (WHO 2009). Poor health is not evenly distributed across all regions of the world (Figure 6), but depends on a large group of factors. For example, the Spanish population has a 6% mean life expectancy in poor health—one of the lowest in the world—while that of Sierra Leone is 22% —the highest of any country.

FIGURE 6: Life expectancy in poor health (%) in the world 2007



Note: The difference between total life expectancy and healthy life expectancy, expressed as percentages. Healthy life expectancy is the mean number of years that a person may expect to live in good health, taking into account the years lived in poor health due to illness and/or injury.
Source: Author, based on United Nations calculations (2009a), from World Health Organization (2009) and United Nations (2009b) data.

The most refined indicators of care demand for a population need to weight the demographic structure according to the health status of each population. This is what the Freetown Scale, created specifically for this paper, tries to encompass. The scale is named after the capital of Sierra Leone, the country whose population lives the highest proportion of its life in poor health. The Freetown Scale assumes that each health status generates a level of dependency, whose intensity varies by age group. It is assumed, therefore, that the amount of care generated by the population depends on (a) its age and (b) its health status (Table 3). The Freetown Scale, like the Madrid II scale, considers that the 15 to 64-year-old age group generates, a priori, one unit of care demand, the 65 to 79 age group generates two units, and those 80 years and above generate three units. To this weighting by age, the Freetown Scale applies a new weight based on the percentage of life with poor health in the region in question. Thus, a person's care demand is given by:

$$\frac{\textit{Percentage of life with poor health in region} \times \left(1 \textit{ if age} = 15\text{-}64,\ 2 \textit{ if age} = 65\text{-}79,\ 3 \textit{ if age} \geq 80\right)}{10}$$

In this way, an African person of 80 years or older generates 3.9 units of care, given that the percentage of life with poor health in the region is 13 and their age is equivalent to three units of demand: $\frac{13 \text{ x } 3}{10} = 3.9$

TABLE 3: Freetown Scale. Coefficients applied to the population, by region

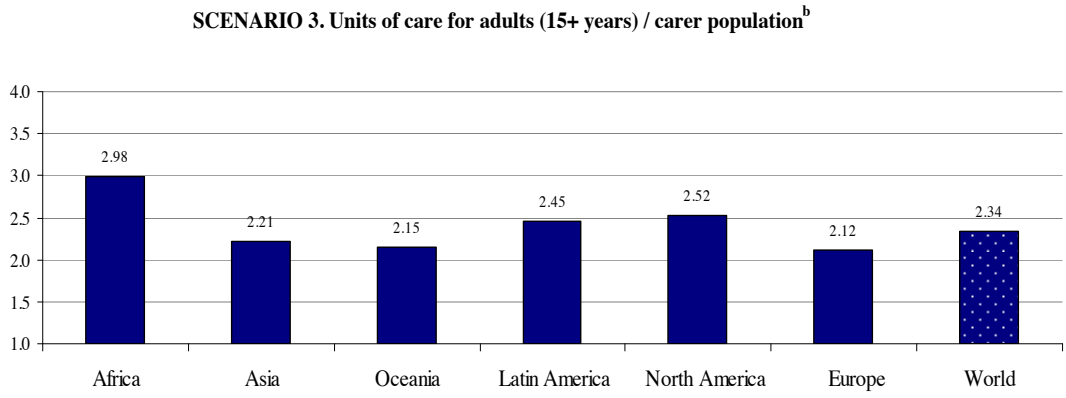
		Africa	Asia	Oceania	Latin America	North America	Europe	World
A	Percentage of life with poor health[1]	13	9	8	10	9	7	9
	Coefficients applied to the population							
B	15-64 years (A*1/10)	1.3	0.9	0.8	1	0.9	0.7	0.9
C	65-79 years (A*2/10)	2.6	1.8	1.6	2	1.8	1.4	1.8
D	80+ years (A*3/10)	3.9	2.7	2.4	3	2.7	2.1	2.7

(1) Estimates based on United Nations data (2009a)..

Source: Author

From a global point of view, the estimates of care demand in the world according to the Madrid II and Freetown scales differ very slightly (Figure 7). If the entire demand fell on the care-giving population, each person would currently be responsible for 2.34 care units, close to the 2.53 units estimated by the Madrid Scale. On the other hand, the distribution of care units in the population of the different continents varies substantially with the scale used. The weighting according to the Freetown Scale describes a new distribution of care demand among the regions. Whereas the Madrid Scale previously indicated that Europeans faced the most units of care demand, now it is the Africans who encounter the highest figure, at almost three units per capita, followed a long way behind by the Americans. Europe occupies the last place with respect to the volume of demand faced by its carers (2.12 units). As has been discussed, calculating care demand projections for 2050 requires information not only about demographic structure but also about the health status of the population for each region for that date. Since these data are not available, the most sensible thing to do is maintain, for the moment, a transversal view.

FIGURE 7: Freetown Scale.[a] Distribution of care for adults among the unpaid care-giving population, by continent, 2010



(a) Coefficients applied to population: 15-64 years= 1 unit of care; 65-79 years = 2 units of care; 80+ years = 3 units of care.
(b) Estimated population of carers: (70% women 15-64 years) + (25% men 15-64 years) + (20% elderly people 65-79 years).
Source: Author, based on United Nations data (2009a).

5. Unpaid Care for Adults: Comparison by Continent

UNTIL now, estimates have been made of the population demanding care. This demand can be estimated using demographic data and information about health status. However, it is much more difficult to estimate care supply, in other words, the way that these needs are met. Both types of information, on care supply and demand, help us understand what traits characterize the system of care for dependent adults in each society. Information about care supply can be broken down into the following elements:

1. Extent: volume of population supplying care, i.e., how many of the population provide care.
2. Intensity and type: the amount of time caring and the activities it involves.
3. Quality: amount and type of needs met by the types of care work.
4. Repercussions: consequences of care beyond the recipient, i.e., within the immediate environment (carers' health, family finances, etc.) and in society in general (macroeconomic effect, consequences for health and care services, etc.).

The economic statistics only describe one facet of national realities. The other facet, generally obscured by the official figures, is unpaid care, the true basis of welfare and health

throughout the world. Unpaid care work is the great shock absorber of the impact of dependency on the standard of living of disabled people. For example, it is reasonable to suppose that, if the family commitment to care were the same in Norway and Sudan, the distance in healthy life expectancy between the countries would be even greater. Unpaid care not only contributes to the maintenance of national economies from a material point of view (enabling the work force to carry out its function), but also to the preservation of the social ties expressed in smaller social units (families, communities, neighborhoods and towns) that create and maintain the mortar that strengthens society (Sennett 2000). Likewise, there are negative consequences for the standard of living of the care-giving population as a result of families fulfilling this important function, due to the unequal distribution of care responsibilities.

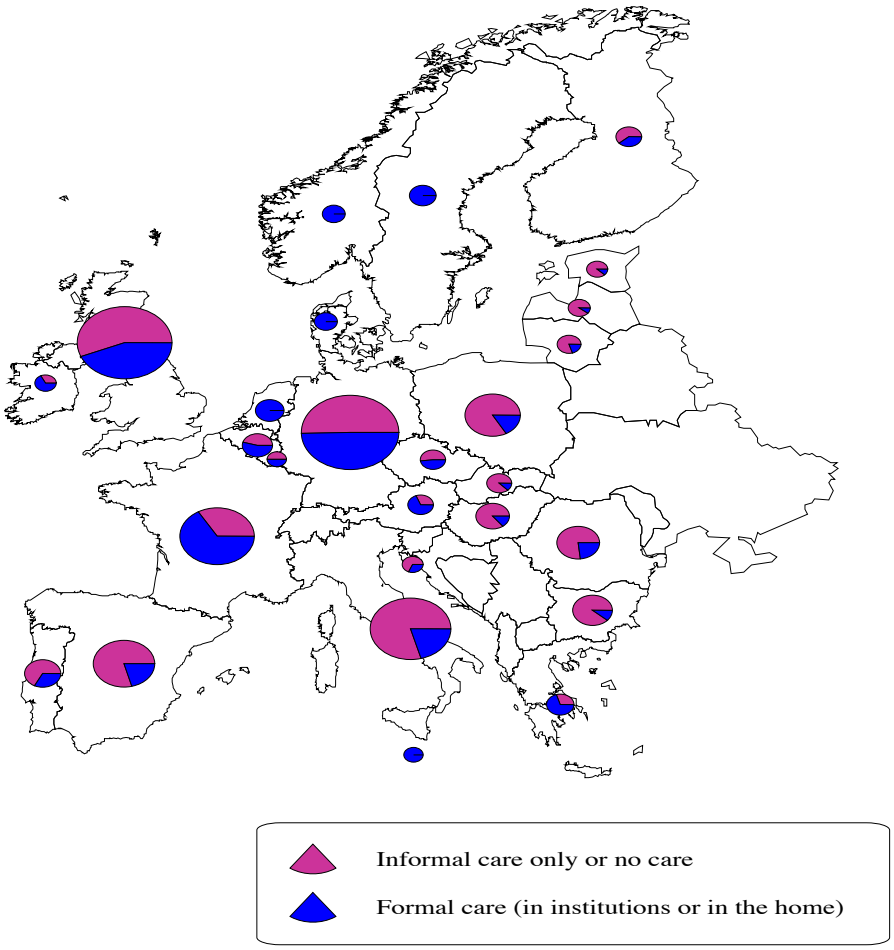
The monetarized and unmonetarized economic subsectors (Durán 1995) are present to varying degrees in each society and from moment to moment. Generally, unmonetarized activity adapts itself to monetarized activity. For example, economic crises usually result in increased unemployment and reduced household income. Fortunately, wealth does not only stem from the market and, when the monetarized economy contracts, it is the contingent of invisible workers—many of whom are also visible workers in the market—who redouble their efforts to provide welfare. Households react by attempting to compensate for the reduction in incomes through unpaid production. In circumstances of scarcity, public and private care services are weakened, and the family extends its function to fulfill a greater proportion of needs.

Despite the importance of this activity and of the work of some multinational organizations (UN 2006; Eurostat 2008), information is not available to allow international comparisons of the time devoted to the care of dependent people. This is because, on one hand, the diversity of economic and social contexts means that it is not easy to apply the same concept of care easily from one context to another (Kofman and Raghuram 2009), and, on the other, there are considerable methodological differences between the surveys from different countries, largely concerning the inequality of resources available for gathering the information. The interest in shedding light on unpaid care has increased on all continents, but it is still too soon to be able to make reliable comparisons between different regions of the world.

Although comparable data on time spent giving care are not available, reliable estimates do exist at the level of coverage of formal services in some areas of the world. The European Union has recently published a report setting out expenditure scenarios for different countries, based on demographic projections and the estimated evolution of formal and informal care. Ac-

cording to this report, 41% of people requiring long-term care in Europe enjoy some sort of formal care, in their home or in an institution (European Commission 2009), which means that the remaining 59% receive informal care or no care at all. Figure 8 illustrates the volume of dependent population, expressed by the size of the circles, and the percentage of that population who receive some type of formal care. Table 4 presents the figures in detail. The variations in coverage of formal care among countries are high, from 11% in Latvia to the coverage of the whole dependent population[4] in Sweden, Norway, the Netherlands and Denmark.

FIGURE 8: Volume of dependent people and percentage who receive formal and informal care. Europe 2007



Source: Author, based on European Commission data (2009).

[4] In accordance with the data, the whole dependent population receives some type of formal care. This does not mean that this support covers all care needs.

TABLE 4: **Dependent people who receive formal and informal care. Europe 2007**

	Total dependent people (thousands)	Formal care		Informal care only, or without care	
		Thousands of people	%	Thousands of people	%
Austria	268	185	69	83	31
Belgium	455	248	55	207	45
Bulgaria	841	97	12	744	88
Czech Republic	256	123	48	133	52
Denmark	164	164	100	0	0
Estonia	81	10	12	71	88
Finland	274	106	39	168	61
France	2,263	1,505	67	758	33
Germany	3,201	1,589	50	1,612	50
Greece	338	238	70	100	30
Hungary	594	86	14	508	86
Ireland	93	63	68	30	32
Italy	2,515	523	21	1,992	79
Latvia	123	13	11	110	89
Lithuania	191	39	20	152	80
Luxembourg	14	7	50	7	50
Malta	9	9	100	0	0
Netherlands	387	387	100	0	0
Norway	155	155	100	0	0
Poland	1,485	250	17	1,235	83
Portugal	698	227	33	471	67
Romania	971	228	23	743	77
Slovakia	239	31	13	208	87
Slovenia	76	24	32	52	68
Spain	1,728	362	21	1,366	79
Sweden	312	312	100	0	0
United Kingdom	3,094	1,353	44	1,741	56

Source: Author, based on European Commission data (2009).

Figure 8 shows the number of people who receive formal care, but does not provide information about the amount of formal and informal care. If it did so, the presence of unpaid care would be much greater than what the illustrated proportions show. For example, in Spain 21% of dependent people receive some type of formal care (European Commission 2009), but of those who receive formal care, more than 50% also rely on the support of family members or friends (Rogero 2009). Although the presence of unpaid care is greater in southern European countries (Esping-Andersen 2000), it has also been shown to be important in the north of the continent. Table 5 shows the estimates of the proportions of paid and unpaid care work in each region of the world, based on the general system of care for each continent. It consists of values constructed from fragmentary information that

cannot be compared between countries and is therefore inevitably influenced by the subjectivity of the author.

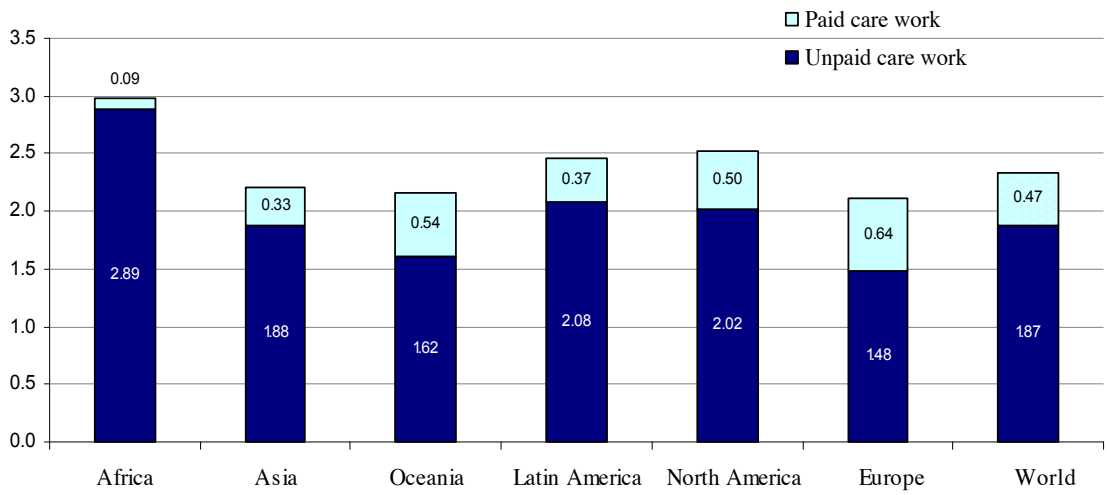
TABLE 5: Share of care work for adults in the world (percentages)

	Unpaid care work	Paid care work
Africa	97	3
Asia	85	15
Oceania	75	25
Latin America	85	15
North America	70	30
Europe	70	30
World	80	20

Note: Author's estimates.
Source: Author.

In accordance with these estimates, and if it is assumed that care demand is completely covered by supply, European unpaid caregivers provide the least amount of care, with 1.48 units (Figure 9). The better conditions of health and the more extensive care services considerably reduce demands for care from unpaid carers compared with other continents. Conversely, the demand taken up by African caregivers is the highest in the world, at 2.89 units, due to the greater health needs and the poorly developed services. Although a long way behind Africa, the second place is occupied by Latin America, at 2.08 units per capita. Asia, North America and Oceania occupy an intermediate position.

FIGURE 9: Per capita units of care for adults,[a] by type of care[b] and continent. 2010



(a) Coefficients applied to the population: 15-64 years = 1 unit of care; 65-79 years = 2 units of care; 80+ years = 3 units of care.
(b) Estimated population of unpaid caregivers: (70% women 15-64 years) + (25% men 15-64 years) + (20% elderly 65-79 years).
Source: Author, based on United Nations data (2009a).

Is it possible to estimate the amount of time spent by unpaid carers from each continent? Below we attempt to convert the units of care into time spent, a tangible and comprehensible element that refers to the effort that this activity requires on a day-to-day basis. Table 4 shows various estimates of the daily time dedicated to care work. The data reveal marked differences between different countries. As we can see in Table 6, Dutch women carers spend 39 minutes doing care work, around a third of that done by English women carers (114 minutes). Once again, a considerable part of this large difference can be attributed to the means by which the data have been derived, not to the reality. To put it another way, the estimates do not only vary with the socio-economic, political and cultural context of each country, but also with the characteristics of the source (sample type, definition of care, the year the information was collected, etc.). Nevertheless, it seems clear that, except in Germany and the United Kingdom, women carers devote more time than men, although in some countries, such as Spain and the Netherlands, the differences are not great.

TABLE 6: **Minutes per day spent on care of adults, by country, year and sex**

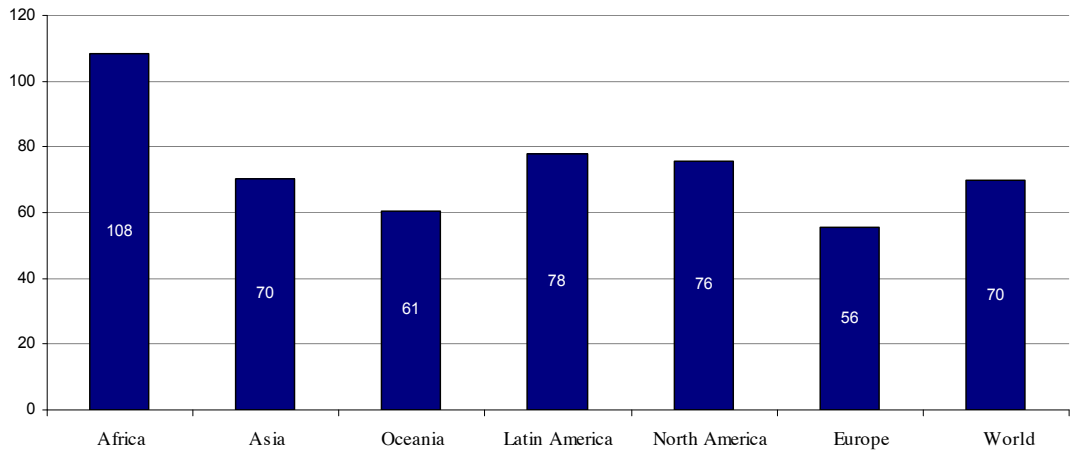
Country	Year	Men	Women
Spain[1]	2002-2003	92	99
Mexico[2]	2002	46	86
India[3]	1998-1999	33	46
South Africa[3]	2000	63	110
France[4]	1998	54	64
Germany[4]	1991	60	55
Netherlands[4]	2000	35	39
United Kingdom[4]	2005	126	114

Note: Supervision times not included.
Sources:
(1) Microdata from the INE (2003). Dependent people aged 64+ years.
(2) Pedrero (2008). Adults.
(3) Budlender (2007). Care of all people (including children).
(4) Microdata from the *Multinational Time Use Study* (MTUS), W58 dataset. Adults.

Based on the surveys analyzed and given that there is no evidence of significant differences between regions, we arrive at a worldwide average for daily time dedicated to the care of adults of 70 minutes for those undertaking care work[5]. Given this, the time spent by caregivers on each continent is as set out in Figure 10. These estimates indicate that African carers currently devote 108 minutes per day per unpaid carer to the direct care of dependent adults, almost twice that of carers in Europe and Oceania, and well above the values for Asia, Latin America and the United States. These calculations are based on the ideal assumption that dependent people receive and will continue to receive all the care they need, either from formal or informal care providers. It would be useful to collect regional data on the volume of the population that does not receive the care it needs. To this time must be added that given over to supervision and to domestic activities arising from the care of dependent people, which has been estimated as being much greater than the time for direct physical care work.

[5] The calculated mean is not intended to be a comprehensive value, due to the lack of information on time use.

FIGURE 10: Daily minutes of care of dependent adults by unpaid care worker, by continent. 2010



Source: Author, based on United Nations data (2009a) and various time use surveys.

6. Conclusions

THE phenomenon of dependency and care transcend geographies and generations, and today is more global than ever. This study has shown that even although many countries have recourse to indicators of formal care for dependent people (coverage, finance, etc.), no comparable information exists at the worldwide level in this respect (Fujisawa and Colombo 2009). Specifically, we lack consistent data on: (1) the prevalence of dependency, (2) the level and types of paid and unpaid care work, and (3) the volume of people in a situation of receiving insufficient care. If the objective is to minimize the social and economic impact of dependency, national statistical information must include accurate information about health, dependency and care work, in addition to demographic and economic data. To put this another way: if disabled people and their carers are not considered in the statistics, it will not be possible to roll out policies to satisfy their needs and guarantee their welfare.

Concern about the increase in the population aged over 64 years has often led to the conclusion that the pressure of dependent people on formal services and on care-giving family members is greater in countries with older age structures, i.e., in the most economically developed countries. The data analyzed in this paper contradict this assumption and show that it is the unpaid carers in the least developed societies who bear an especially high bur-

den of care, due to the poorer state of health of their populations and their unequal access to health, economic and social resources. This overburden is a millstone around the neck of the economic and social development of these regions.

Thus, this paper has shown the great inequalities between countries in the types of care of dependent people. Recent studies have revealed the great variability in the process of human aging, in which life expectancy and years lived in poor health may be substantially modified through not only biomedical, but also social and economic interventions (Vaupel et al. 2003; Jeune and Bronnum-Hansen 2008). In all regions, the means of reducing unpaid care demand reside in improving health indicators, fundamentally by the spread of education and prevention, increased coverage of health services and better wealth distribution. In many countries, these advances have significantly reduced the negative impacts of disability in the social sphere, but there is still considerable room for improvement. In this process, the role of public policies is essential for promoting equality of access to these resources, which subsequently leads to a redistribution of the costs of care among agents and social groups. In the meantime, these costs continue to fall on women and the most disadvantaged socio-economic levels in most of the world.

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NOTA SOBRE EL AUTOR - *ABOUT THE AUTHOR**

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