Chapter 4
Aging Suit: 
An Accessible and Low–Cost Design Tool for the Gerontodesign

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ABSTRACT
The population pyramid is being inverted and the designers are facing challenges in the way they design products, spaces, and services for elder people. Although the design is composed of both cultural and social aspects, the functional aspect takes relevance for autonomy and empowerment of the person that gets older. To design products centered on the physical capacities of the elder population, the aging suit has being used as a tool for the gerontodesign. In countries like Mexico, its application is limited by the manufacturing cost. For this reason, as part of a design methodology for elder people, a low-cost suit was developed focus on the design students and professionals located in Latin America.

INTRODUCTION
The global aging of the population is a reality that has been glimpsed since some years ago. The main issue is not that the world has more elders than children, but the world is transforming, because as life expectancy increases, it is much more likely that grand grandfathers, grandfathers and parents live together, not necessarily in the same house. In fact, in some European countries, more than 40% women over 65 years old are currently living alone. In Denmark, is 55.1% (CSO, 2007:21) of women over 65. Global aging covers a diverse series of problems that are of the competence of every human being, regardless we are interested or not in aging processes. According to the global report about aging and health (Beard et al., 2015) aging and health needs to be addressed because several reasons: the first one belongs to human rights promotion, the second is to promote the sustainable development and the third one obeys the economic aspect.

Mexico is a country that counts with a population that exceeds 112 million people. Of them, a little more than 10 million has more than 60 years, this, based on the national population and housing census, carried out by the National Institute of Statistics and Geography (2010b:3). According with the recent
inter-census survey of the same institution (INEGI, 2010b: 35), is estimated that the population has increased to almost 120 million. Therefore, the number of elderly people has also increased. In Mexico 30% of older adults in Mexico are economically active (INEGI, 2010b: 132) but the reality observed in supermarkets where people over 60 can be seen as “volunteer packer”, a work promoted by the National Institute of Older Adults (INAPAM, 2016) reflects that older people in Mexico perform tasks that require efforts that most of the adult population cannot perform efficiently. Voluntary packers require stand up for extended periods of time, in addition to having fine motor skills and hand-eye coordination. It is important to avoid that older people perform tasks that demand beyond their functional capacities. In order to promote older adults in tasks according to their functional capacities, it is necessary to have empathy towards the situation that many of them present.

To design a safe and inclusive environment that promotes a healthy performance of any activity, whether work or recreation, it is necessary to understand which capacities both functional and of various kinds an older adult person own. Just as the volunteer packers, we can observe in our day to day adults performing tasks that require physical skills such as gardening, blacksmithing, bakery, among many others. The environment is becoming a problem for people who remain economically active, but also for those who have a high degree of dependence, the older adults who require special care. The experience of aging may necessitate transitions in living environments, either through adaptations to current residences or through relocations to more supportive environments (Perry, Andersen & Kaplan, 2014: 75).

As a general objective of this chapter is to deepen the use that has been given to a design tool for older adults or gerontodesign, as well as to know how the aging suit has been applied in different places, a tropicalized proposal is made to the Mexican context, in order to reduce the costs of this tool as well as not only make it accessible to professionals and students of industrial design, architecture and other disciplines where the development of product and spaces is the objective, but to any individual who has to coexist, decide and propose some program, service or product for older adults.

BACKGROUND

Design for the older adult population, has been considered as part of design for minorities (Papanek, 1984) has become a hot topic, which is being addressed in various parts of the world. There are records indicating studies in 1800 to determine the relationship of man with environmental effects related to light, sound, weight and other variables (Kopec, 2012: 8), this is known as Environmental Psychology, which is related to the design for the aging according with The American Psychological Association (APA). In the other hand, the design for older adults has its beginning in the environmental gerontology initiated by E. Birren in the fifties (Hans-Werner Wahl & Weisman, 2003) Lawton and Nahemow defined it as the adaptation of the human to his environment and that environment presents alterations (1973). In Parmelee and Lawton referred to the environmental gerontology has been delayed by those who execute it in the field work, they specifically pointed to architects, interior designers, and planning specialists. Parmelee and Lawton said that those professionals did not generate theory (1990), thing that in our days is changing because the new perspective about the designer rol and for the implementation of new design approaches and new design tools as the aging suit. In recent years besides the design for aging, we talk about gerontodesign that emerged from the social anthropology of Portugal, which is defined as: