

THE PROBLEM OF DOMESTIC ENVIRONMENT IN EVERYDAY LIFE OF THE ELDERLY

Elderly, Domestic Space, Autonomy, Home Automation, Design

Carlos Barbosa

IADE, UNIDCOM, NDS,
Lisbon - Portugal

Ana Cristina Daré

Escola de Artes e Design,
Caldas da Rainha

The world population has undergone a profound change in its demographic profile, due to the exponential growth of the elderly population. This phenomenon is a reflection of low birth rates and the increase in life expectancy, which has been taking place since the end of the XX century and early XXI century, and the evolution of medicine and technological development hardly can avoid the biological changes resulting from the aging process.

Housing designed for the mythical individual, does not consider changes in functional abilities which are subject during the life cycle, stimulating an imbalance in the use of housing and thus negatively affect the lifestyle, daily habits and their harmony.

The people who live their old age, find themselves using digital logic devices, which have no reference to the technological moment, causing unnecessary anxiety and even leading to accidents.

This paper aims to contribute to a reflection of society in general, so that the process of awareness grows deeper among all actors, from designers to users' own home environments, so that the principles structuring of spatial organization, which is based on man's relations with its own space and others, are always considered as data to consider the beginning of each project while safeguarding, in particular, the factors that determine the mobility and autonomy of individuals.

The methods of inclusive design consider all aspects of the human condition and make use of technical means and technology available, particularly in the context of home automation, to prevent or remedy the conditions that the built-up areas may contain affect the independence and freedom of individuals with limitations.

STROKE SEEN BY DESIGNERS

Assistive Devices, Stroke, User-Centered Design, Emotions, Healthcare

Ana Correia de Barros

UTAD – UNIDCOM/IADE

Carlos Duarte

UNIDCOM/IADE

José Bulas Cruz

UTAD

Sudden dependence from others is a serious problem for stroke victims, which affects their self-regard and quality of life (Carod-Artal et al., 2000). According to the official Portuguese figures (DGS, 2001), after the functional rehabilitation treatment, more than half of stroke survivors find themselves dependent of others in their Activities of Daily Living (ADL). Literature suggests that relying on equipment help, i.e. Assistive Devices (ADs), for ADL performance instead of personal help diminishes dysfunction and improves task efficiency (LaPlante et al., 2004; Verbrugge and Sevak, 2002), thus promoting independence (Hoening et al., 2003). In other words, stroke victims should be encouraged to use more ADs.

In trying to find which ADs stroke survivors use more often and what problems they encountered in performing several types of ADL, we developed a list of 42 ADL to evaluate degrees of capability and types of help used in ADL performance; also, we applied the Barthel Index (Mahoney & Barthel, 1965) to stroke patients, which is one of the official scales used in healthcare research and practice in Portugal, to evaluate stroke patients' degree of dependence, having noticed a high correlation between the obtained results in our list of ADL and the Barthel Index scores achieved by the patients. We observed that stroke patients are not using

ADs as much as they should and that there are many ADL which they are unable to perform, such as cutting own fingernails, cutting meat in the plate, or tying laces. Hypothesis forwarded in response, were that current ADs available in the market are not well suited for stroke patients' use (1), that ADs might be too expensive for stroke patients to acquire (2), that stroke patients may lack information regarding ADs' existence (3), or stigma related reasons (4).

DESIGN'S CONTRIBUTION TO THE NATURAL SCIENCES: THE USE OF IMAGES IN BIOLOGY

Design, Scientific Illustration, Biological Sciences, Drawing, Communication

Ana Teresa Bígio

UNIDCOM/IADE

Over the years, Natural Science publications have become, and continue to be, one of the most important methods of communicating research and results in Science. In order to communicate such results, scientific illustration is very often used to facilitate the description of animals, plants, or in some cases, the research techniques used. By applying the correct techniques, the illustrator can capture all of the characteristics of the living being, and translate them into a pictorial work which is capable of transmitting all the necessary knowledge.

Scientific illustration, through art, or at least by applying the same techniques that artists use, is an effective way of bridging the gap between the fields of Science and the public in general. It provides scientific investigators and/or research projects with a particularly vivid and realistic visual aid. It is, therefore, an important form of communication and can also be extremely important in captivating target audiences.

As in any pictorial representation, scientific illustrations can vary widely in terms of composition: ranging from linear and schematic diagrams to intricate masterpieces with well defined traces and contours, and a wide pallet of colours, etc. They are, thus, of great plastic complexity. Their main objective is to help characterize, as well as realistically represent an object and/or animal. Unlike creative art works, scientific illustrations strive to avoid different personal interpretations, and therefore contain no such ambiguities.

This paper's main objective is to identify in which ways graphic design can help create more appealing scientific images in the Biological Sciences, and thus improve such illustration techniques and methods in both the teaching of science, as well as in terms of its divulgation, namely through books, i.e., the main form of scientific communication.