



6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015) and the
Affiliated Conferences, AHFE 2015

Contributions of Ergonomics to an Affective Sustainability in Children's Furniture

Cristina Salvador*

*Centro de Investigação em Arquitectura, Urbanismo e Design, Faculdade de Arquitectura da Universidade de Lisboa, Rua Sá Nogueira, Pólo
Universitário, Alto da Ajuda, 1349-055 Lisboa, Portugal*

Abstract

Within the context of an investigation in product design, focusing on children's furniture (high chairs), a research was made, dealing with issues as affective sustainability, leading to waste reduction and product optimization. The child is a special target, since the need of affection and support and the potential intensity of emotional bonds are highly present in this early stage of human development.

Along with literary review, the use of Ergonomics and Human Factors as a tool, in order to observe and analyze children's behavior towards specific types of furniture through an interview based study, may contribute to a bigger understanding of what enables an emotional connection between subject and object and what are their parents' choices based on. Ergonomics may be an essential key to this understanding, as it helps unravel how humans interact with their surroundings in a full extent, both physically and psychologically.

Conclusions may not result in a magic formula in order to create super objects, which every children would want and love, but at least gives a better understanding on how sensitive and subjective child's attachment to objects can be and how decisive can Ergonomics be in the research process for a design project.

© 2015 Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of AHFE Conference

Keywords: Ergonomics and Human Factors; Product Design; Children's Furniture; Affective Sustainability.

* Corresponding author. Tel.: +351 21 3615000; fax: +351 21 3615001.
E-mail address: cristinasalvador@fa.ulisboa.pt

1. Introduction

To create a much better environment for children, adapting furniture to their needs both physically and psychologically is the main objective of this research in product design and also to provide solutions, which enable extended product life cycles, contributing to sustainable development. The goal is a project of a high chair following child's growth, which guarantees comfort, without being overpriced nor “disposable”.

Following a study on children's home furniture, concepts of sustainability through affection and bonding with objects were explored. An extended life cycle may not be only about the product's long lasting performance, but also about creating an object for children to bond. Product attachment is already seen as a precondition for products' sustainability and designing pleasurable products may enable the bond between product and user [1]. In order to attain this goal, it is necessary to understand more about what triggers this bonding process and searching what kind of features may enable emotional attachment to a certain object is an important step for an optimized design project [2]. Ergonomics may be an essential key to this understanding, as it helps unravel how humans interact with their surroundings in a full extent, both physically and psychologically [3], namely Hedonomics, by studying pleasure in interaction [4]. The use of Ergonomics and Human Factors as a tool for a wider view on children's physical and emotional reactions to a specific high chair was applied in previous studies [5], where children were the target as direct users of the object. The child's development has several and distinctive steps. Through anthropometric studies [6] and internationally accepted percentile growth charts [7] it is quite evident a continuous growing phase from birth until puberty. The baby doubles the size between 0-2 years old and proceeds in a continuous growth phase until 13 years old. From that point on, until 20 years old a slowdown occurs. Concerning cognitive aspects, Piaget (1896-1980) studied child's psychology in different phases of its development [8] and considered the construction of knowledge being made with the interaction between experience and reason [9]. Piaget divided child's growth in 4 stages: sensori-motor 0-2 years old, pre-operational 2-6/7 years old, concrete operational 7-12 years old and formal operational 12-20 years old. Focusing on the two earliest stages, specially in pre-operational stage, the child learns important techniques of representation and can communicate, share and be more autonomous. Although, revealing a mix of curiosity and search for autonomy, the shyness, fear and need for affection is highly present in these early stages [10]. These ever-changing phases of growth are a challenge to any intention of creating long-lasting attachment to a product, which even in more stable phases as an adult stage, is quite difficult to attain due to context and experience changes [11].

In this interview-based study, parents, as indirect users, who observe and follow their child's behavior towards the surrounding material environment, can help unravel the nature of the interaction with high chairs in a longer time period.

2. The study

2.1. Method and aim

This study is based on interviews with parents (aged 28-45), who have or had high chairs for their children (26 children). Their origins are mainly from Portugal (85%), but also from the Netherlands (15%).

Its aim is to search for information about:

- Which is the chosen product and what features were decision-making;
- Reaction, adaptation, identification, possessive behavior from the child and emotional bonding with the product;
- Use on daily basis, security and comfort;
- Rating of the chair and intentions for its future.

Does a high chair have to contain certain features that will enable the child's emotional bonding or is it enough to grow up with it, in a relationship based on habit and daily use? Do parents choose without allowing the child to have a small trial period with the product? It is necessary to know what are their choices based on and if they are satisfied. The questions for the interview are listed on Table 1.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات