Communicating the Obvious:
How *Agents Against Power Waste* Influenced the Attitudes of Players and their Families

Mattias Svahn
Stockholm School of Economics, Sweden

Annika Waern
University of Uppsala, Sweden

EXECUTIVE SUMMARY

This chapter describes the game design and study of Agents Against Power Waste (AAPW), a large-scale field experiment where a persuasive pervasive game was put to use to influence households' attitudes towards electricity consumption. This game is particularly interesting as, although it was only the children of the family who were playing, the whole family was affected and to some extent forced to take part in the play activity. The style of game design has been called "social expansion" (Montola, Stenros, & Waern, 2009; Montola, 2011).The chapter focuses on how this impacted the psychological process of persuasion in responding families and individuals.

1. BACKGROUND

Energy consumption has a price in political and economic problems. In the OECD there has been a 160% rise in domestic electricity consumption during the 40 some-thing years since the energy crisis in the seventies (IEA 2008 p II.43 in Gustafsson, 2010). Electricity is often produced by burning fossil fuels, with diminishing supplies of fossil fuels which causes political instability (IEA 2011). The rise in consumption of electricity also leads to global warming (Solomon, Qin, Z. Chen, & Avery, 2007) which is an ecological problem. Taking inspiration from the Twin River project (Robert H., 1978), (van Houwelingen & van Raaij, 1989) and (Abrahamse, Steg, Vlek, & Rothengatter, 2005), whom all three underline the value of human behaviour in relation to electricity, this thesis approaches electricity consumption by focusing on human behaviour in households. Human behaviour in households is approached by using the pervasive persuasive game Agents Against Power Waste (hereafter "AAPW") to shape human behaviour in households. AAPW is a game that lets real life electricity consumption be a parameter in the game.

AAPW was the apex of a series of games that applied pervasive game design to the task of visualizing electricity consumption and heightening awareness of it, *(Bang, Torstensson, & Katzeff, 2006; Bang, Gustafsson, & Katzeff, 2007; de Jong, Balksjö, & Katzeff, 2013; Gustafsson & Bang, 2008; Gustafsson, Bang, & Svahn, 2009; Gustafsson, 2010; Katzeff, 2010).*

The team for the field test of AAPW was led by staff from the Stockholm of Economics together with the Energy Board of Mälardalen, the company Mobile Interaction, and the Energy Design Studio of the Interactive Institute.

2. SETTING THE STAGE

It should not be difficult to persuade households to consume less electricity. If prices consistently rise over a longer period of time that ought according to any credo of the rational economic man lead to a decrease in consumption of said product. Still, consumption has remained more or less constant (The Swedish Energy Agency, 2012).

One issue may be that while there is a will to conserve electricity in the general population the knowledge of how to go about it is low. This was found by (van Houwelingen & van Raaij, 1989) A pre-study on Swedish households with teen-age children (Torstensson, 2005) independently confirmed that. The situation seems ideal for a persuasive communications campaign. There are nevertheless difficulties.

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