

# So...

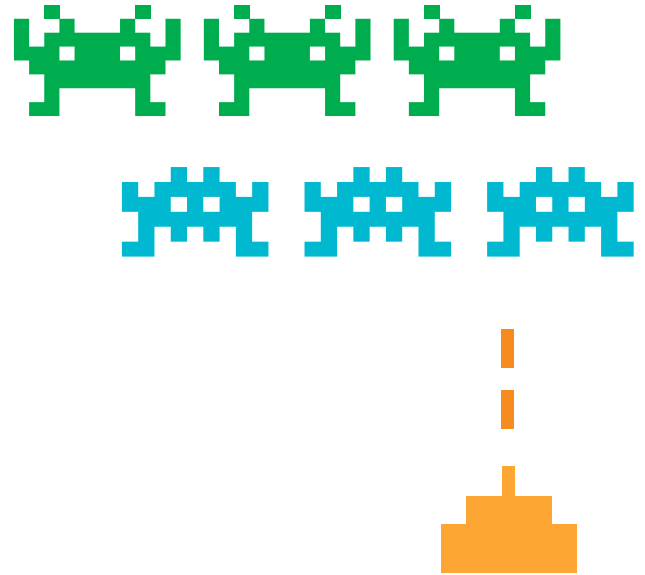
## SOCIAL SCIENCES RESEARCH STUDIES

- Study shows how video gamers experience altered visual perceptions after playing



- University studies pick up prizes at fire research conference

- New study aims to avert an over-50's 'brain drain' for UK organisations



## Study shows how video gamers experience altered visual perceptions after playing

Some video gamers experience altered visual perceptions after playing, new research has shown. The study, published in the International Journal of Human-Computer Interaction, has been carried out by experts in Nottingham Trent University's International Gaming Research Unit.

Led by psychologists Angelica Ortiz de Gortari and Professor Mark Griffiths, the research showed how some gamers reported distorted versions of real-world surroundings. Others saw video game images and misinterpreted real life objects after they had stopped playing. Gamers reported seeing video game menus popping up in front their eyes when they were in a conversation, or saw coloured images and 'heads up' displays when driving on the motorway.

The study involved the analysis of 656 experiences from 483 gamers collected in 54 online video game forums.

This is the first of a series of studies that aims to identify, classify and explain 'Game Transfer Phenomena' (GTP) experiences via the different senses: sight, sound and touch. GTP research focuses on gamers' perceptions, cognitions and behaviours influenced by video game playing and aims to further understanding of the psychosocial implications of altered perceptions induced by virtual technologies.

Visual illusions can easily trick the brain and staring at visual stimuli can cause 'after-images' or 'ghost images'. The novelty of this new study, the researchers say, is that GTP were triggered by associations



between video game experiences and objects and activities in real life contexts. The findings also raise questions about the effects of the exposure to certain visual effects used in video games.

In some playing experiences, video game images appeared without awareness and control of the gamers and, in some cases, the images were uncomfortable, especially when gamers could not sleep or concentrate on something else. These experiences also resulted in irrational thoughts such as gamers questioning their own mental health, getting embarrassed or performing impulsive behaviours in social contexts. However, other gamers clearly thought that these experiences were fun and some even tried to induce them.

Angelica Ortiz de Gortari said: "Visual experiences identified in GTP show us the interplay of physiological, perceptual and cognitive mechanisms and the potential of learning with video games even without awareness.

It also invites us to reflect about the effects of prolonged exposure to synthetic stimuli and the challenges that the human mind affront due to the technological advances that are still to come."

The researchers point out that the data was collected in online video game forums, and therefore, the psychological profile of the gamers in the study is unknown.

However, different gamers reported similar experiences in the same games. This highlights the relevance

of the video games' structural characteristics but gamers' habits also appear to be crucial.

Professor Griffiths said: "Some gamers may be more susceptible than others to experience GTP. The effects of these experiences appear to be short lived, but some gamers experience them recurrently. More research is needed to understand the cognitive and psychological implications of GTP."

This study shows there is a need to investigate neural adaptations and after-effects induced by video game playing as a way of encouraging healthy and safe video game playing.

