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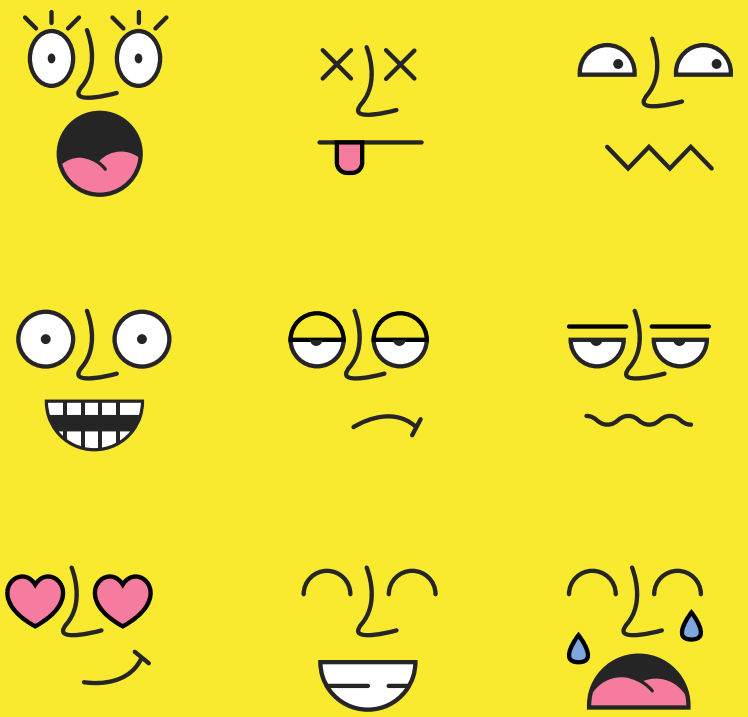

Make games, make yourself

Want to lose weight? Then design a game. Preliminary data by ***Dr Stefano Gualeni*** *edges towards game design as a self-transformative experience that could change political views or even our capability to excel at that dreaded organic chemistry. Words by* ***Ashley Davis****.*

Game design is hard to pin down. It is a motley and multidisciplinary tangle of practices and know-how that can be recognised either as a form of art, a scientific endeavour, or simply personal expression, to name a few. Game design can also be understood as a form of communication through which designers engage in a 'conversation' (so to speak) with their players. In the process of designing the game, designers must consolidate what they know about the player experience they are crafting. Game design therefore involves careful research, iteration, and game testing. It could be said that, together, these processes are in themselves a learning experience.

Game design lecturer Dr Stefano Gualeni (Institute of Digital Games, University of Malta) sees the learning potential of video game design. A recent branch of his research focuses on how game design intersects with what the French philosopher Michel Foucault calls 'technologies of the self': techniques by which individuals obtain a degree of self-betterment and expertise.

In a recent study performed in an informal collaboration with the Behavioural Science Institute (BSI, University of Nijmegen, Netherlands), Gualeni gave students of the University of Malta's M.Sc. in Digital Games the task of designing and developing computer games that would improve players' unconscious attitudes to healthy food. Students were to work in groups and had five months to develop playable video games. The students did not know that Gualeni was, at the same time, conducting an experiment on the students themselves to see if the game design activity transformed their attitudes and eating habits.

Students could adopt two out of three methods used in psychology to provoke attitudinal changes in a digital game. The first method, called 'evaluative conditioning', involves consistently associating healthy food, such as vegetables, with positive stimuli in order to improve a player's

Screenshots from the game *Necessary Evil*

Photo by Edward Duca

***Virtual Worlds as Philosophical Tools* is Dr Gualeni's radical book that was published by Palgrave last Summer**

Dr Stefano Gualeni is an architect, philosopher, and game designer best known for creating the videogames *Tony Tough and the Night of Roasted Moths* (1997) and *Gua-Le-Ni; or, The Horrendous Parade* (2012).

Being both a philosopher and a game designer, Gualeni works at the intersection of continental philosophy and virtual world design. He studies virtual worlds in their role as mediators of thought: as interactive, artificial environments where philosophical ideas, world-views, and thought-experiments can be explored, manipulated, and communicated objectively.

His book, *Virtual Worlds as Philosophical Tools* (Palgrave, 2015), recognises computers as instruments to (re)design ourselves and our worlds and as gateways to experience alternative possibilities of being. He examines virtual worlds as the contexts where a new humanism has already begun to arise.

attitude towards it. The second, called 'attention bias', requires players to focus their attention on healthy food while dismissing unhealthy food. In the final method, called the 'go/no go' paradigm, players would need to perform a certain action when presented with healthy foods, but not when presented with unhealthy foods.

To help the research along, the games produced by the Maltese students were short, single-player, and involved frequent action on the part of the player. Students were asked to make games that were not too predictable and that ended with a 'game over' screen, quantitatively summarising the gameplay session.

One group of students made the game *Fast Food*. In the game, players select to play as one of a number of aspiring cooks. Research shows that players develop a closer affinity with in-game characters when they can choose and customise them to some extent, and that affinity normally makes the transformative qualities of the game more effective. Players

Screenshots from the game Fast Food by M.Sc. in Digital Games students Yasmin Cachia and Rebecca Portelli.

then select healthy ingredients while avoiding unhealthy ones as they pass quickly down a conveyor belt. The game uses both the 'attention bias' and 'go/no go paradigm' methods by asking players to react to healthy ingredients while completely ignoring those that are unhealthy.

So, did making a game to provoke healthy food choices actually improve the designer's unconscious attitude towards high-fat and sugary foods? Did they start eating healthier food?

Before even talking to the students about the project, Gualeni performed an implicit-attitude test (IAT) on each student to determine their initial attitudes to healthy food. The test measured the time taken for each student to identify different foods as being healthy or unhealthy, thereby measuring the strength of their automatic associations to healthy food in general. Gualeni also asked students to report their weight and dietary habits. He collected the same data at the end of the experiment for comparison.

The group that worked on food-attitude related games collectively lost 6 kg over five months, while the students who did not work on these games collectively gained 4 kg.

His results showed that attitudes to healthy food improved more among game design students who worked on the assignment than those of a control group. The group that worked on food-attitude related games collectively lost 6 kg over five months, while the students who did not work on these games collectively gained 4 kg. Since not enough students were tested, no statistical correlation could be teased out, meaning that more studies are needed for any strong conclusions.

This small pilot study is not irrefutable, but does suggest something very interesting: designing a game might help transform those people's attitudes and behaviour, a finding that would have many applications in learning and education. Gualeni plans to continue with similar studies concerning the messy practice of game design as one of the crucial 'technologies of the self' of the 21st century. In the next experiments, he will investigate if such change in food-related-attitudes applies to other areas of our lives. It could help change political views, make someone better at organic chemistry, help become a more aware recycler, and deepen awareness on certain ethical issues.

Perhaps, one day, game design exercises will be as common in classrooms as drawing, painting, and crafting activities. This approach could transform the classroom.