

Motivating gamers with personalized game design

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A team of multidisciplinary researchers at the University of Waterloo has identified three basic video game player traits that will help to make game design more personalized and more effectively motivate gamers in

both entertainment and work applications.

Gustavo Fortes Tondello, a Ph.D. candidate at Waterloo who co-authored the study with Lennart Nacke, an associate professor and director of the Human-Computer Interaction Games Group at Waterloo's Games Institute, has been developing a more definitive player traits [model](#) that gives scores for different preferences. The model generates scores for three different traits, including the degree to which players prefer action elements, aesthetic aspects, or goal orientation in games. Identifying traits makes it possible to analyze player preferences for different groups of people, including different age ranges or genders.

"By better understanding what people like when playing games, we can determine how best to apply those elements to situations that are not games," Tondello said. "We can create systems that are more pleasant to use and help people feel more engaged and motivated to achieve their goals."

The research began by analyzing a dataset of over 50,000 respondents who had been surveyed for an earlier player satisfaction model called BrainHex, developed by Chris Bateman with Nacke and colleague Regan Mandryk.

With BrainHex, researchers identified player archetypes, including seeker, survivor, daredevil, mastermind, conqueror, socializer, and achiever. In contrast, this more recent model generates scores for three different "traits," including the degree to which players prefer action elements, aesthetic aspects, or goal orientation in games. It's possible to then analyze those player preferences for groups of people who are in different age categories, or different genders, for example.

Tondello and Nacke, have been exploring what motivates people and

helps keep them playing certain games. Ultimately, they want to use the information to make game design more personalized and more effectively motivate gamers in both entertainment and work applications.

"Some people have been found to really enjoy daredevil, fast action elements of games, while others like the aesthetic elements, such as the art and graphic design," said Nacke. "The story can also be necessary for drawing some [people](#) into a [game](#)."

"If we can build systems that can adapt to and accommodate individual differences, interactive systems become more exciting and motivating for every one of us."

The study, *Towards a Trait Model of Video Game Preferences*, co-authored by Tondello, Nacke, Deltcho Valtchanov, Adrian Reetz, Rina Wehbe and Rita Orji, all of the University of Waterloo Games Institute, was published recently in the *International Journal of Human-Computer Interaction*.

Provided by University of Waterloo

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