# Critical Review: Improving the Efficacy of Games for Change Using Personalization Models

The use of technology for encouraging behavioural change to benefit its users or the wider community is a long-term area of research. This review will present a summary and critical analysis of Orji et al. [2017] whose paper explores the use of personalisation models as a persuasive device for improving the efficacy of games which are designed to change user behaviour, as well as putting forward a set of suggestions for future work in this domain of Persuasive Technology.

## Summary of Contributions

Orji et al. seek to answer two main research questions. Firstly, whether tailoring games for change to a specific player type increases their persuasiveness. Secondly, whether the beneficial effects of tailoring are mediated by an improved play experience.

To meet their objectives, the authors begin by assessing the current state of the domain of games for change.

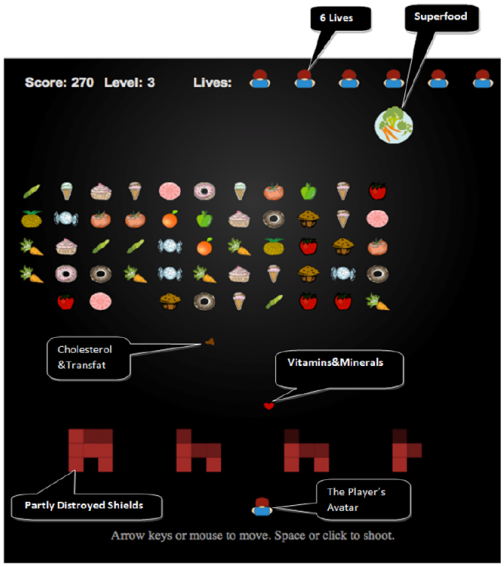


*Figure 1: "Junk Food Aliens" (JFA): A persuasive game designed to change gamer behaviour towards healthy eating.*

*Table 1: $\beta$ values: Strength of motivation of different players that result from different strategies.*

| Strategies / Gamer type | CMPT/ CMPR | COOP | CUST | PERS | PRAS | SEMT/ SUGG | SIML | REWD |
|---|---|---|---|---|---|---|---|---|
| Achiever | - | .15 | - | - | - | .10 | - | .10 |
| Conqueror | .25 | - | - | .12 | - | .12 | .14 | - |
| Daredevil | -.10 | - | - | - | - | -.14 | .11 | - |
| Mastermind | .12 | - | .10 | .12 | - | .14 | .12 | - |
| Seeker | .10 | - | .19 | .11 | .10 | - | - | - |
| Socializer | .11 | .17 | -.12 | - | -.12 | -.13 | - | - |
| Survivor | .17 | -.20 | -.13 | - | - | .27 | - | -.14 |

CMPT/CMPR = competition and comparison, COOP = cooperation, CUST = customization, PERS = personalization, PRAS = praise, SEMT/SUGG = self-monitoring and suggestion, SIML = simulation, REWD = reward.

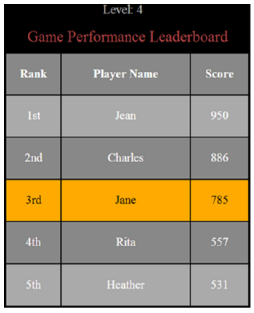


*Figure 2: Competition-based version of JFA.*

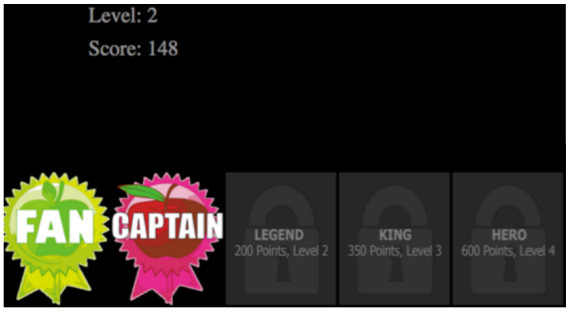


*Figure 3: Reward-based version of JFA.*

## Justifications for Conclusions

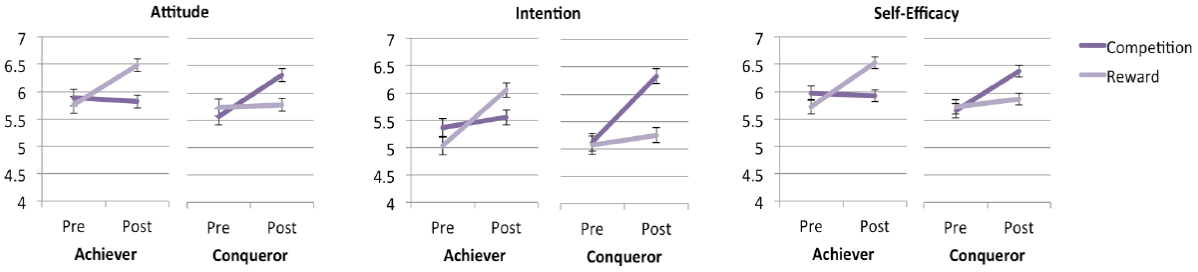


*Figure 4: Mean values $\pm$ SE for Attitude, Intention, and Self-Efficacy by Gamer type (Achiever, Conqueror) and Game version (Competition, Reward).*

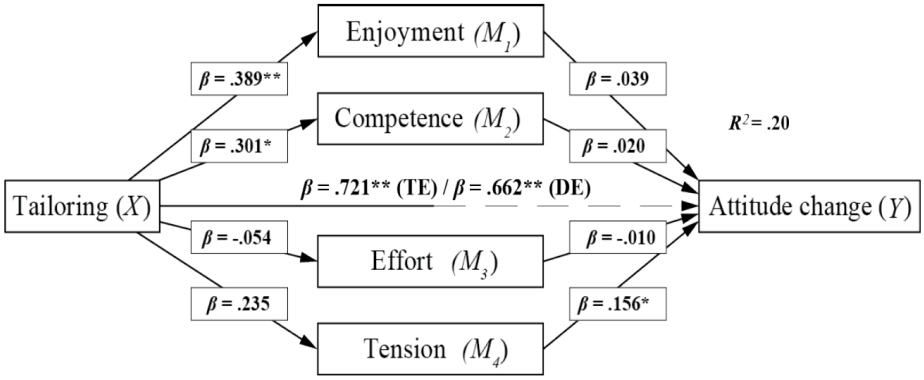


*Figure 5: Parallel mediation model of tailoring on attitude change with play experience as mediator.*

## Limitations and Suggested Further Work

## Conclusion

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# References

Rita Orji, Regan L. Mandryk, and Julita Vassileva. Improving the efficacy of games for change using personalization models. *ACM Trans. Comput.-Hum. Interact.*, 24(5):32:1–32:22, October 2017. ISSN 1073-0516. doi: 10.1145/3119929. URL `http://doi.acm.org/10.1145/3119929`.