PREFACE

Hybrid Games and Interaction Design

The special issue N.56 of IxD&A journal focuses on the theme of 'Hybrid Games and Interaction Design' and aims not only to present the current state-of-the-art of hybrid games but also to explore the topic through the lenses of interaction design, in order to understand the new needs in the realm of technologies.

Board games gained significant momentum throughout the past two decades [1-2], with some of the best creations earning millions of dollars in funding platforms during 2021, despite the Covid-19 pandemic [3]. Additionally, digital games have surpassed all other media, from film to music, in investments and returns. Board and digital games are two forms of play that use the same base of design – the game design – so it was without surprise that a new hybrid approach, that mixed both media, would appear. Some workbooks and game design guides/frameworks suggest that digital games should be prototyped early just like analogue games, and digital game students should be trained to create tabletop games before developing their digital games [4-7].

Through the past five years, we have seen games with Augmented Reality (AR) [8], board games using smartphones as assisting tools [9], and tablets being used as boards [10], or even games using real food – edible games [11, 12]. This hybridism between the physical and digital is not strange to the domain of Human-Computer Interaction since the "tangible bits" purposed by Ishi [13], giving us the so-called "material turn" [14] for the past decade. But games have always been at the forefront of technological interaction innovation, demanding more and more from the engineers, and so presenting novel and previously unimagined possibilities to designers. In fact, the hybrid strategies in games contribute to a new experience that increases not only the player's immersion and interaction, but also greater contact with the content, presentation, atmosphere, and control of the game [15].

Despite these technological advances, gamers that prefer playing analogue games are not responding well to most of the attempt to introduce digital equipment into board games [16]. Hybrid game approaches are struggling to balance the traits and blends associated with tabletop games [17-19], for example, the enjoyment of tangible object manipulation, the face to face interactions, and the automation and visual media that digital games provide. From another perspective, analogue game designers use digital online tools such as "Tabletopia" and "Tabletop Simulator" [20] to design, test, and play games.

Within this framework, this special issue contributes to the discussion about the full impacts and effects of the move on human interaction with game artifacts, especially with hybrid environments, and it unravels what we should expect from the discipline of interaction design while using ludic approaches in the next decade.

This number includes contributions from researchers and experts covering the topics of Hybrid Games (the first two papers), AR Environments (the following three papers), and Hybrid Design Methodologies (the last paper).

The first two papers [21,22] present hybrid games for promoting innovative learning experiences. These hybrid games were played and evaluated by several users and their potential to improve learning outcomes through engaging and interactive experiences were discussed. The following three papers [23-25] propose game systems that take advantage of augmented reality environments to provide a more immersive and extended gameplay experience in different contexts such as digital content creation, spatial affordances in mobile games, and augmented audio in board games. Finally, the last paper [26] provides a case study that crosses design thinking with gamification and design education. This hybrid design methodology is used to design a game where, starting from a role-playing game scenario, players would have to design furniture from a user-centred design approach.

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Ana Patrícia Oliveira[1], Nelson Zagalo[1], Micael Sousa[2], Fotis Liarokapis[3]

[1] *DigiMedia, Department of Communication and Art, University of Aveiro, Portugal*
[2] *CITTA, Department of Civil Engeneering, University of Coimbra, Portugal*
[3] *Cyprus University of Technology, Limassol, Cyprus*