

# The Precursors to Modern Hybrid Boardgames

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## Keywords

boardgames, hybrid games, history of game mechanisms, electronic boardgames, augmented games

## INTRODUCTION

Increasingly, commercial boardgames integrate digital technologies to create “hybrid” games that unite the physical game with a digital tool. In this paper, we examine early hybrid and electronic boardgames and reflect on their significance for understanding modern games and gameplay. Through close examination of four innovative games, *Lichtra* (1910), *Electric Base Ball Game* (Prentice 1928), *Assault of the Ogroids* (Chalk 1987) and *Nightmare* (Tanner and Clements 1991), we identify key functions performed by digital tools and demonstrate that modern hybrid digital boardgames (HDBs) continue to adopt and implement the same functions that electronics and digital tools performed in those early games.

Research attention to HDBs has generally focused on the adoption of enhanced or novel components for gameplay. For example, researchers have considered the novel use of sensors (Mandryk and Maranan 2002), digital tabletops (Hartelius, Fröhlander, and Björk 2012), and virtual reality technologies (Smit et al. 2019). These approaches are costly and require custom components. The game environments that they address are designed specifically for the research project. By contrast, our work focuses on commercially available games which use existing technologies that already exist in the player’s home such as a computer (e.g. *Detective* (Rymer, Trzewiczek, and Łapot 2018)), a smartphone or tablet (e.g. *Woofy Whoops!* (2017)) or an Alexa-enabled device (e.g. *St Noire* (Bushnell and Ortiz 2019)). In more closely related work, Nummenmaa and Kankainen (2019) have examined marketing material for commercial hybrid or electronic games, and Kosa and Spronck (2018) have examined tabletop gaming forum posts to consider attitudes to what they term “Augmented Tabletop Games”. This paper represents an attempt to trace the history of such hybrid or augmented games and to explore their significance for modern HDB design.

More than 65 HDBs have been released in the past three years alone. In total, we have identified 120 such games and a further 832 games that use some sort of electronic component in gameplay.

In the oldest hybrid or electronic games, a game’s digital components comprise simple electronic circuits which produce an effect (e.g. a noise) when a circuit is completed. *Operation* (Glass and Spinello 1965) is a well-known example of this genre, which originated with early quiz games (e.g. *Lichtra*). In these electronic games, the function of the digital components is to provide a (programmed) result or effect following a single player action; the current acts as a source of truth.

Proceedings of DiGRA Australia 2020

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To our knowledge, the first electronic game that was not a quiz game is *Electric Base Ball Game*. Here, two players manipulate physical switches, creating an electrical circuit. The selected combination activates a light bulb indicating an outcome: Strike, Safe, Out, etc. Similar non-electronic functionality is found in *Test Match* (Hansen 1955), which uses rotating cardboard discs which act as hidden computing devices. In these games, the single action response seen in *Lichtra* and *Operation* is extended to allow the (digital) component to resolve combinations of player actions.

*Assault of the Ogroids*, a solo fantasy boardgame, was published in a magazine for aficionados of the ZX Spectrum computer. *Assault's* 75-line BASIC program<sup>1</sup> generates random numbers for combat and encounters and tracks the player's health, gold, and items as the player's token traverses a physical board. This is an early example of a game that uses equipment already owned by the player rather than a custom digital component to provide the hybrid functionality. Functionally, the game's digital component offers randomisation as well as inventory management / tracking functions.

First released in 1991, *Nightmare* was the first of a line of Video Board Games. The game's video cassette provides a timer that counts up to the game's one hour duration as well as a cheesy, horror-themed script where a character occasionally appears on screen to offer random instructions and taunts. Of course, on a video cassette, the 'random' instructions were in fact quite regular. Functionally, the *Nightmare* video provides thematic content and programmed events, and acts as a timer.

Each of these identified functions continues to be reflected in modern HDBs. For example, the app used in the *Unlock!* series (e.g. Demaegd 2017, Brand and Brand 2016) provides a source of truth for the built-in puzzles, resolves combinations of cards and objects, provides thematic content and programmed events, and acts as a timer. Additionally, the website in *Detective* tracks players' actions and the clues that they have found. Although these games also incorporate novel functions, such as touch and sound recognition and hyperlinking, they build on these early electronic and hybrid games.

This paper demonstrates the value of understanding the history and functionality of even the earliest electronic boardgames as antecedents of modern HDBs. It shows a clear link between electronic and hybrid games, demonstrates a continuity of design, and invites discussion of the functions of digital in-game tools.

## BIO

Melissa Rogerson is a lecturer in the School of Computing and Information Systems at The University of Melbourne. Her research examines the experience of playing boardgames in both physical and digital forms, as well as the characteristics and motivations of hobbyist boardgame players, designers, and developers, applying techniques from human-computer interaction to the study of games and play. She is currently researching the functions of digital tools in hybrid digital boardgames.

Martin Gibbs is an Associate Professor in the School of Computing and Information Systems at The University of Melbourne, Australia. His research interests examine

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<sup>1</sup> See an archived copy at <http://live.worldofspectrum.org/infoseek/magazines/sinclair-user/62#36>

how people use a variety of interactive technologies (video games, community networks, mobile phones; etc) for convivial and sociable purposes in a variety of situations (intimate strong-tie relationships, local neighbourhoods, work-based occupational communities, online computer games); the social dynamics of digital and board games; and digital commemoration and the use of interactive technologies at end-of-life, including the future cemetery.

## **ACKNOWLEDGMENTS**

This work is related to a grant from Game-in-Lab to explore the functions of digital tools in app- and website-linked hybrid digital boardgames.

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