

Toys, Video Games, Platforms, and Mattel Electronics's Intellivision

Tom Boellstorff

The University of California, Irvine
Department of Anthropology
3151 Social Science Plaza
Irvine, CA 92697-5100
949-824-9944
tboellst@uci.edu

Braxton Soderman

University of California, Irvine
Department of Film and Media Studies
2000 Humanities Gateway
Irvine, California 92697-2435
949-824-3532
asoderma@uci.edu

ABSTRACT

Keywords

Platform, Platform Studies, Intellivision, Toys, Toy Industry, Video Game History, Mattel, Mattel Electronics

BODY TEXT

Intellivision was a home videogame system developed in the late 1970s by Mattel Electronics, a division of Mattel, an innovative, US-based toy company best known for Barbie and Hot Wheels. The history of toys is germane to the rise of videogames generally, but for Intellivision the context of toy production at Mattel was pivotal (Herman 1982). Why did a toy company famous for Barbie and Hot Wheels end up making Intellivision? At first glance, toys and sophisticated computer technologies might appear to be at odds. Yet from its beginnings Mattel—a company that fundamentally transformed the toy industry—integrated technology into its products (Kline 1993). Tracing Mattel's path from toys to videogame technology illuminates why, despite unprecedented challenges and expense, Mattel executives eventually supported developing Intellivision. It also reveals underappreciated connections between videogames, platforms, and toys.

While toys have been discussed in relation to the emergence of videogames (Kline et. al 2003; Newman 2017) their precise influence on this emergence remains understudied. Maaïke Lauwaert (2009) has argued that game studies scholars typically “do not focus on the long-term historical perspective of play as a cultural practice, the role of technological innovations within this history and the changing dynamics between players, toys and companies.” Moreover, recent work from Miguel Sicart (2022) opens avenues for examining a history of “playthings,” a conceptualization that allows for more nuanced ways of thinking about the historical relationship between toys and videogames. Building on such scholarship, we examine Intellivision's

Proceedings of DiGRA 2023

© 2023 Authors & Digital Games Research Association DiGRA. Personal and educational classroom use of this paper is allowed, commercial use requires specific permission from the author.

relationship to the social, economic, and technological context of its development, allowing us to analyze videogames in terms of toys, games, and play while exploring how Mattel's status as a dominant toy company fundamentally shaped Intellivision's history within the United States. A focused case study analyzing Mattel's history of toy production in relation to Intellivision thus contributes significant detail to platform studies, game studies, and the history of videogames.

In this paper, we analyze the history of toy production at Mattel Toys in terms of its technological innovations, arguing that Mattel engineers approached toy production in ways that align conceptually with the later development of videogame platforms, thus preparing Mattel to pursue similar developments in electronic game technology. From its beginnings in the 1940s, Mattel developed what toy designers came to call "principles," akin to platforms for toy production. These principles were patented mechanisms that were extended and elaborated through numerous iterations in different toys (Handler 1994). For instance, Mattel engineers created a music box mechanism that was rethemed and embedded in various toys. Another example was miniature vinyl records inserted into mechanisms which produced numerous "talking toys" such as Mattel's Chatty dolls, Instant Replay toy radio, and board games such as Talking Football. These technical structures, or "principles," were adjusted for different toy designs, leveraging a razor/razor-blade commodity model which split an underlying material structure from accessories to be "sold separately." While redressing Barbie to change her look, or inserting a miniature record into an analog device to change its output, are technically simple compared to later developments like inserting a cartridge into a digital videogame system, they align conceptually. Thus, we argue that such "principles" provide an alternative history of videogames—stemming from analog toys, not digital computation—while also explaining how videogame platforms would appear familiar to an innovative toy company like Mattel.

Further supporting this argument, our paper analyzes how Intellivision was originally conceived as an extension of the traditional toy category of "games." Our research has revealed that Mattel wanted to develop new product categories while also strengthening its market presence within the "games" category—traditionally including board and card games for both children and adults. The market for games, both analog and digital, was expanding in the mid-1970s. Thus, electronic games—including Intellivision and Mattel's toy-like, portable, handheld games—were conceptualized as extensions of the "game" category of toy production, a historical influence that shaped the kind of realistic simulations and complex videogames that came to define Intellivision's early game library.

Our focus on Mattel, toys, games, and videogames allows us to understand the nascent videogame industry within the US from a different perspective. Platform studies (and videogame history in general) has focused on digital technologies to narrate historical transition, for example, locating second-generation videogame systems (which detached cartridges from platform, software from hardware) as a rupture and paradigm shift toward programmability (Montfort and Bogost 2009). Mattel's history reveals the second generation not only as a rupture, but also as a time of continuity, teaching us that there are alternative chronologies of videogame history beyond the technological. In doing so we contribute to scholarship that seeks differing accounts of historical determination in relation to platforms, such as the economic (Deterding 2016) and material embodiment (Reynolds 2016).

Overall, this paper provides the following interventions. First, it offers a historical and conceptual account of the emergence of an important videogame platform in the US, Intellivision, and explains why a toy company like Mattel decided to produce a sophisticated videogame system. Second, it provides a specific historical examination of early videogames in the USA from the perspective of toys and games. Third, it offers an alternative history of videogames from the perspective of analog instead of digital technology. Fourth, it expands our understanding of platforms in terms of the history of videogames, providing an analysis of Mattel's toy "principles"

as proto-platforms. Fifth, it demonstrates the importance of linking game studies, toy studies, and play studies to investigate game history. Our research is based on thousands of documents from institutional, corporate, and personal employee archives. In addition, we have interviewed over 150 individuals (largely US-based, English-speaking respondents) who worked on Intellivision including engineers, programmers, managers, executives, lawyers, marketers, QA testers, and more.

BIBLIOGRAPHY

- Deterding, Sebastian. 2016. "Toward Economic Platform Studies." Paper presented at 12th Annual Game Research Lab Spring Seminar "Money and Games," Tampere, Finland.
- Handler, Ruth, and Jacqueline Shannon. *Dream Doll: The Ruth Handler Story*. Longmeadow Press, 1994.
- Herman, Joan L. 1982. "Research and Development in the Toy Industry." *Performance Improvement*, 21(4), pp. 36–38. doi.org/10.1002/pfi.4170210417.
- Kline, Steven. 1993. *Out of the Garden: Toys, TV and Children's Culture in the Age of Marketing*. Verso.
- Kline, Stephen, Nick Dyer-Witheford, and Greig de Peuter. 2003. *Digital Play: The Interaction of Technology, Culture, and Marketing*. McGill-Queen's University Press.
- Lauwaert, Maaïke. 2009. *The Place of Play: Toys and Digital Cultures*. Amsterdam University Press.
- Montfort, N, and Bogost, I. 2009. *Racing the Beam: the Atari Video Computer System*. MIT Press, Cambridge.
- Newman, Michael Z. 2017. *Atari Age: The Emergence of Video Games in America*. MIT Press.
- Reynolds, Daniel. 2016. "The Vitruvian Thumb: Embodied Branding and Lateral Thinking with the Nintendo Game Boy." *Game Studies*. 16(1). <http://gamestudies.org/1601/articles/reynolds>
- Sicart, Miguel. "Playthings" 2022. *Games and Culture*. 17 (1).