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Media Ownership from a User Perspective: Let's Get Physical

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Coming out of the 1990s, physical media production and distribution reached its defining peak. Sony Corporation took over the mass production of the compact disc media in the early 1980s, right after co-founding new technologies, standards and protocols originally based on an optical laser disc technology developed by Philips & Co (Peek, 2010).

The first commercially published audio CD album was Billy Joel's (2014) *52nd Street* – released on October 1, 1982, in Japan. On the same day, Sony also launched their first official CD-player audio system to the public (Święcicki, 2021). Not even Sony with their CDP-101 could prepare the consumers for the innovative expansion of entertainment to come later in the 1990s. Before CDs became dominant, the primary medium for electronic interaction, computation and storage was the cartridge. Cartridges are closely connected to both eras, the genesis of digital game distribution in the early days of Magnavox Odyssey in the 1970s, and later, the digital game outburst led by Nintendo's gaming consoles – Famicom in Japan and the Nintendo Entertainment System in other regions. The impact in the West was significant, namely in the United States – following Atari's game release of *E.T. the Extra-Terrestrial* (Atari, 1982) accompanied by an economy fallout, injuring the whole western market (Mago, 2020). The gaming industry was back on its tracks with additional innovative momentum thanks to Nintendo's leading strategy.

The medium carrying data and additional computational power – the NES cartridge, was now manufactured and mass produced. 8-bit games with heavier focus on narrative or action themes became the standard. A circuit board carried a program ROM, where the game program (or what we know as *game data* in today's computation) resided. There was also an additional RAM to extend memory capacity, even a battery-packed chip dedicated to the storage of player's save data (Copetti, 2025a).

Later, on December 3, 1994, Sony released their first official gaming console – the Sony PlayStation. The central component of their new technological platform was its media unit. Sony introduced support for the CD format which expanded many technical capabilities of said gaming platform. Disc-based focus continued throughout the early 2000s, with DVDs as the new formfactor among many competitors, with CDs still holding up in the realm of smaller games. Even Nintendo temporarily adopted disc media during the Wii and Wii U era, having their own optical disc variation for both respectively.

The physical games market remained competitive, largely controlled by the companies behind Blu-ray technology. Sony and Pioneer, amongst others, co-created the Blu-ray Disc Association. The Blu-ray format can store much more data than previous media formats. It quickly became the home for high-definition video and digital games, with Sony's new console – PlayStation 3 – leading the market. Games were now read directly from disc drives: DVDs on Xbox 360 and Blu-rays on PlayStation 3. Slow discs read speeds carried an inventible complication for the future of physical media consumption. Since most seventh-generation gaming consoles included a pre-installed hard drive (except for Nintendo Wii's 512 MB of flash memory) (Copetti, 2025b), a progression towards streamlined data readability from a console's HDD was expected.

We experienced the beginning of a new standard. Direction-changing steps came later, bringing a new paradigm of media consumption. First was PlayStation 3, with improvement of loading speed with certain games, the console allowed for a partial game installation on the hard drive to improve loading speeds. Microsoft's Xbox 360 let users fully back up their physical games on the console's storage, and load-times decreased significantly. Digital game disc still needed to be in the optical mechanic drive, as a confirmation to the operating system to boot up installed files and startup a game.

The next important influence during the seventh generation was the commercial introduction of online storefronts. Xbox 360 offered a service named Xbox Live, offering two different subscriptions models. Xbox Live Silver membership (default, free) and

Xbox Live Gold (premium, paid) which extended standard features with an online multiplayer capability. However, PlayStation Network provided online multiplayer for free, during the whole PlayStation 3 lifecycle, adding a subscription service named PlayStation Plus much later. Monthly-based subscription models experienced a rivalry – offering free games, extra discounts and other premium features.

During the process of integration, consoles' graphical user interfaces became fully integrated with the storefronts and media applications. The term *gaming console* turned towards a new concept – *entertainment system*. Adding support for broadcasting services such as Last.fm on Xbox 360 in 2009 marked the continuation of platform development. Starting earlier (in November 2005) with Xbox Live Arcade, a selection of smaller games was open for digital purchase. Later, followed by the opening of the market in limited PSN titles via PlayStation Network, the AAA market was coming close to the final destination of media distribution – online licencing.

Starting in the early 2010's, the logistics for complete online distribution were in place. Platform providers offered many AAA titles and indie games on either Xbox Live or PlayStation Network. Users, at this point, were already buying the digital licences of games, now linked with the account owner, accessing their own digital library. Digital game licences, gained through the premium subscription system, were the symptom of a new digital-based era where owning means renting (Pravdová et al., 2023). Gamers could only access these titles if they were an active member of a premium service, just as we see today with the Xbox Game Pass. The described problem was part of a much larger discourse around the concept of digital licence ownership vs. physical media ownership. Since the Digital Rights Management (DRM) owner could revoke the licence at any time, the preservation of digital games was traded for the convenience and expansion of market share.

At the time of publishing this reflection, which will be distributed both digitally and physically in the current volume of *Acta Ludologica*, the foundational economic principles for the distribution of digital games are still in play – demand and supply for both physical game enthusiasts and digital-only consumers. Currently, other factors in play seem to discourage the lively passion of many.

One of the most contemporary is a new digital-physical hybrid cartridge format by Nintendo. The official launch of Nintendo Switch 2 in July 2025 marked a new retail trend in the development of retail games distribution. Consumers were already familiar with poor physical game boxes, with only a download code inside from the original Nintendo Switch's lifecycle. Game-key cards now act as the licence subject, the same way physical games usually do. Unlike digital distribution tied to a user account, the game-key card can be borrowed or resold without any digital rights violation. The problem for many lies in the nature of data accessibility. Said format does not store the game itself; it only works as an affirmation for the server to download the game file onto the console's internal hard drive or an external microSD card.

Whilst creating problems for game preservation, customer satisfaction and collector interest, the trend is yet to be stabilized. Nintendo still offers most of their first-party games on a 64 GB cartridge. The Sony PlayStation 5 arrived with its two latest iterations, presenting the slim model on November 2023, and the pro variant in the same month of 2024. A controversial change came in the way that the disc reading unit was handled. For the first time in Sony's gaming history, the mechanical drive was sold separately, with the exception of the PlayStation 5 Slim Bundle.

Yet, Sony continues with their long-lasting support for physical game distribution, counting regular premium products or extended versions (complete editions) with all DLCs in the form of new releases. Players can still access most of the games via installation from disc onto the gaming platform, without continuous connection to the internet (apart from updates). One-time internet installation and verification is needed in the case of external media drive for both PlayStation 5 Slim and PlayStation 5 Pro models, respectively.

Even though the physical formfactor seems to be in decline, there is still enough opportunity for collecting purposes. People can build their physical game collections for years of gaming to come. The good news is that backwards compatibility for both PlayStation 5 and Nintendo Switch 2 fully work for eighth-generation titles. In the case of Nintendo's new hardware, collectors can buy the original Switch version of the game for archival purposes. Some releases offer a free upgrade to the Switch 2 version, yet some are locked behind a paywall.

There is a tendency for physical media to return, which is already happening with movies and music. We have seen the case with vinyl records in the 2010s, now CDs are regaining popularity (as a contra-cultural standpoint to streaming platforms). The world of digital games has yet to wait for such reemergence. Even if we lose certain aspects of popular culture to the market, there is always a space for an antithesis to dominant power structures, which we can utilize for media preservation, appreciation and enjoyment.

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