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GOVT 296: Politics in Japan

18 May 2017

An Industry in Flux: The Confluence of Technology, Culture, and Marketing for Video Games

Nintendo announced their discontinuation of the Wii U on 10 November 2016 with an underwhelming total of 13.56 million consoles sold worldwide.[1] The Japanese developer, publisher, and manufacturer of video game software and hardware quietly made the announcement on their Japanese website, later confirming with journalistic outlet *Kotaku* the validity of the claim.[2] Although *Kotaku* reports that Nintendo made previous discontinuation announcements in a similar fashion,[3] this incident places particular stress on the newly released Nintendo Switch, which serves as the Wii U's successor and will ultimately determine the company's financial fate. The Switch enters a market that Nintendo no longer dominates, as the Wii U did not perform well despite numerous critically acclaimed titles and unique modes of play. At the end of 2016's fourth quarter, both major competitors to the Wii U, namely Sony's PlayStation 4 (PS4) and the Microsoft's Xbox One, sold an estimated 53.4 and 26 million consoles respectively.[4] While unit sales are not directly indicative of success (especially in cases when consoles are sold at a loss),[5] we can clearly see a lack of popularity and thus potential for the Wii U to drive software sales. Furthermore, the Wii U released a full year prior to its competitors and suffered despite a temporarily uncompetitive market. With Nintendo's previous success with the Wii, which sold a groundbreaking 84.64 million units in the same span as the Wii U's life,[6] why did the Wii U fail, and will the Switch prosper in a market Nintendo no longer dominates?

Due to Nintendo's prominence in the video game industry, the Wii U's failure is a popular discussion amongst enthusiasts, journalists, and developers. Websites cite uncompetitive specifications, idiosyncratic design choices, lack of third-party titles, and ineffective marketing as explanations for the console's demise. *Forbes* specifically criticizes the Wii U's "lack of graphical power," "refusal to deal with western developers," and "difficulty in advertising and convincing the general public" amongst other issues.[7] Meanwhile, *The Guardian* expresses confusion about the console's intention,[8] including a quote from the late Nintendo CEO Satoru Iwata who states, "Because we put so much emphasis on the controller, there appeared to be some misunderstanding." Numerous developers reverberate the same concerns within the article, many of whom express simultaneous excitement and frustration with the console's controllers. In a statement to *Fortune*, Mario-creator and industry superstar Shigeru Miyamoto blames exterior competition from the tablet industry, which he claims dampened the allure of the Wii U's technology.[9] The same criticisms mentioned here are well discussed on social forums such as *Reddit* and *YouTube*, and this discussion is also evident on video game media outlets such as *IGN* and *Giant Bomb*.

Accordingly, there is a general consensus on the factors that led to the Wii U's failure, but much of the journalism is informal and speculative. Rather than perform scholarly studies, the aforementioned news sites cite insider quotes that exhibit sentimentality towards the console's unrealized potential. Additionally, the video game industry is still unstable due to new technologies such as smartphones and virtual reality that introduce horizontal competitors to the home and mobile console markets. Hence, it is difficult to quantify what leads to a successful industry venture. We can establish some guidelines by briefly analyzing Nintendo's first home console success with the Famicom (known as the Nintendo Entertainment System, or NES, internationally). Martin Picard, a post-doctorate scholar and recipient of a Japan Foundation

Research Fellowship on Japanese video game culture at Wako University in Tokyo, writes about Japanese video game history and early accomplishments. He explains that the Famicom dominated the market because of its "confluence of the three circuits of technology, culture, and marketing."[10] This analytical paradigm derives from another scholar, Stephen Kline, who conducted a holistic study of the video and computer game industry in his book, *Digital Play: The Interaction of Technology, Culture, and Marketing*. I propose that we can use the confluence of technology, culture, and marketing to holistically analyze the driving factors for video game venture success.

We can study each parameter individually, but we will end up with many overlapping observations. This is easily seen if we respectively classify each parameter as a question: (1) What product is the company selling? (2) Who is the company selling the product to? and (3) How is the company selling the product? Clearly, the type of the product determines the audience and the likewise is true in certain cases, while the marketing must reflect the previous two factors. Thus, I analyze the Wii's success, the Wii U's failure, and the Switch's potential as studies of the confluence of each console's technology, culture, and marketing.

Before I begin my core analyses, I will provide some background for the contemporary video game industry. Following this, I argue that the Wii succeeded due to its focus on expanding into a more "casual" market, with the inclusion of idiosyncratic but easily accessible motion controls coupled with an iconic advertising campaign. I then use this precedent to describe how the Wii U lacked a clear target market by focusing neither on "casual" or "hardcore" gamers, wherein the console employed a multitude of non-cohesive input methods that Nintendo had difficulty advertising and thus could not effectively exploit for profit. Finally, I analyze the early results for the Switch and conclude that the console has potential to succeed due to its adherence

to industry standards for input controls, albeit with a distinct twist that is easily understood and therefore effectively marketable.

JAPANESE DOMINANCE OF THE VIDEO GAME INDUSTRY

Through my analysis of Nintendo's home consoles, I am effectively discussing a pivotal point within the video game industry. This analysis is partly driven by Japanese Prime Minister Shinzo Abe, who appeared dressed as Mario when he announced the 2020 Japanese Olympics.[11] Abe's costume marks video games as a vital element of Japanese culture, and yet the company behind Mario (i.e. Nintendo) is evidently struggling to retain relevance in a bourgeoning industry. For instance, with the advent of the iPhone and the App Store, American technology giant Apple introduced a new genre of software experiences that focus on cheap entry costs and microtransactions, which are small payments made for specific in-app services. The current top grossing title in the App Store is *Clash Royale*, which has a free entry price but features numerous in-app purchases.[12] Meanwhile, Nintendo's first Mario title for smartphones, which released with a public endorsement by Apple,[13] is no longer on the Top Grossing iPhone Apps chart although it is still ranked fifty-fifth on the Top Free iPhone Apps chart.[14] The game's release even coincided with a significant drop in Nintendo share values due to poor reviews and high entry price, since a bulk of the game's features required a one-time ten-dollar purchase that is uncommonly high for smartphone applications.[15] Thus, consoles only signify part of Nintendo's current economic and industry struggles, since horizontal markets are emerging with prominent audiences that compete with traditional home and mobile consoles.

With Apple's success and Nintendo's inability to succeed, is Japan ceding its dominance in the video game industry to the United States? We need to take a more general perspective on the industry to answer this. Although Abe's Mario costume demonstrates that Nintendo

characters and franchises are integrated into Japanese culture, other Japanese companies have significant economic clout within the industry. The most prominent of these corporations is Sony, whose video game division is currently the most successful in the home console market, beating Microsoft's video game division by a significant margin.[16] Microsoft is an American corporation, so Japan retains dominance in this regard. Meanwhile, Sony's mobile consoles have floundered most likely due to competition from Apple and Nintendo, whose current generation of mobile devices are especially popular in Japan. We should also note that Nintendo and Sony's mobile consoles are primarily video game devices, while Apple products serve as media consumption and communication devices. Even if Apple's products affect the sales of Nintendo and Sony's mobile devices, Apple is introducing a new market adjacent to the dedicated video game market without consuming sales of traditional consoles.

To make this last claim, we need to ask if devices intended primarily for video game consumption are dwindling due to external competition. In practice, large-scale video game successes support the longevity of dedicated devices. Popular franchise *Grand Theft Auto* has consistently sold well, but its most recent iteration *Grand Theft Auto V* is a landmark title due to its unprecedented commercial performance. The title's original release on 17 September 2013 holds the world records for "Best-selling videogame in 24 hours," "Fastest entertainment property to gross $1 billion," and "Highest revenue generated by an entertainment product in 24 hours."[17] Thus, the economic potential for video game titles on consoles currently surpasses that of any entertainment product, including any app on the adjacent smartphone market. Furthermore, Forbes reports that the title is only the fourth best-selling game in history, losing to *Wii Sports* (an exclusive Nintendo title), *Minecraft* (which was purchased by Microsoft), and *Tetris*.[18] Only one title on this list is developed by a Japanese company, namely *Wii Sports*, but titles like *Grand Theft Auto V* are reliant on distributive platforms such as Sony's PS4 and Microsoft's Xbox One. (It is

worth noting that *Grand Theft Auto V* never released on a Nintendo console.) The American publishers Rockstar Games and Take-Two Interactive own the development of *Grand Theft Auto V*, but the game's cumulative sales on Japanese hardware are higher than on American hardware due to more Japanese (i.e. Sony) consoles sold despite Nintendo's lack of involvement.[19] This example represents one of many cases where cross-released titles profit more on consoles with more users, and how the wide availability of dedicated consumers transcends competition from Apple's App Store.

We can begin to see that Sony and Microsoft's console strategies rely on third-party titles, which are games developed independently from the hardware manufacturer, to push long-term software profit. In this sense, hardware pushes software sales since console lifecycles usually last at least four years and manufacturers need to maintain revenue beyond hardware sales. In an empirical study of early Nintendo consoles, Masayoshi Maruyama and Kenichi Ohkita, both of whom are Professors of Business in Japan, conclude that software development profits while hardware consoles are "loss leaders."[20] This is especially clear when considering Sony's net loss for every PS4 sold at the console's initial release.[21] Therefore, Sony sells consoles to establish a marketplace that the corporation then controls and can profit from. While this is superior from an economic standpoint, it discourages consistent quality of released titles since Sony places few limits on the curation of software. Apple's App Store suffers the same risk of overwhelming consumers with mediocre software. Meanwhile, every title in the ten best-selling software releases on the Wii U were first-party titles published by Nintendo.[22] The same is true for nine of the ten best-selling titles for the Wii.[23] Hence, Nintendo's success is strategically independent from the company's competitors.

If we consider all of these points, the answer to which nation has video game industry dominance is slightly obtuse. Although Sony is currently the most successful manufacturer and

publisher of dedicated home consoles, its market is predominately external to Japan since no titles on either of Sony's most recent consoles sold more than one million units in Japan.[24] Furthermore, the company's first-party developers consist mainly of international studios purchased by Sony, including the North American company Naughty Dog and the European company Media Molecule.[25] Meanwhile, Nintendo has a large Japanese audience (especially on mobile consoles),[26] a central roster of first-party Japanese developers, and a slew of mascots ingrained in Japanese culture such as Mario. Sony's dominance of the industry is much different than Nintendo's because Sony only occupies the peak of a vertical production chain that exists almost entirely exterior to Japan. Nintendo differs in this regard, since the company's vertical strategy of video game development relies heavily on high-quality titles produced in-house. Nintendo's strategy worked for the Wii but could not bolster Wii U sales, so Sony ended up leading the international sector and Nintendo's foundational market remained in Japan. The companies in conjunction represent Japan's domination of the video game industry.

Why did Nintendo's strategy for curation of high-quality first-party titles succeed on the Wii but fail on the Wii U, and what is the fate of the Switch in regard to title availability from third-party developers? These questions require the independent analyses of the following sections, but it is pertinent we recognize that this stringent curation strategy led to Nintendo's initial success with Nintendo's American release of the NES in 1985. Mark J. P. Wolf, a professor in the Communication Department at Concordia University Wisconsin, assembled a collection of essays on elements of the video game industry prior to the North American video game crash of 1983. In his introduction to the book, Wolf describes how American video game companies such as Atari overestimated their popularity and gains during a period of exponential growth and thus oversaturated the market with cheap titles and no way for consumers to confidently make worthwhile purchases.[27] Subsequent efforts to rejuvenate the industry failed due to misaligned

focuses on games with advanced technology but poor gameplay.[28] Thus, when Nintendo brought the NES to America (it was already successful in Japan as the Famicom), the company emphasized a selection of high-quality titles enumerated by an official "Nintendo Seal of Quality," which ultimately led to the console's success and Nintendo's reputation as a provider of superior software.[29] This strategy continues today, most clearly seen in the lack of top-selling or critically acclaimed third-party titles for Nintendo consoles. In the following sections, I aim to justify that this pattern for curation is still effective, and Nintendo's failures are mostly due to unpopular hardware that fails to drive software sales.

NINTENDO WII & CASUAL APPEAL

The Nintendo Wii launched in 2006, a few months before the original iPhone announcement. This release coincided almost simultaneously with the release of Sony's PlayStation 3 (PS3) and a year after the launch of Microsoft's Xbox 360. Of these three home consoles, Nintendo's product featured the most dramatic change from the previous generation. This change focused on a new mode of motion-based input, with a controller meant to naturally fit one hand instead of two (see fig. 1). Meanwhile, the Xbox 360 and PS3's respective controllers featured a nearly identical set of twin analog sticks, a pair of analog shoulder bumpers alongside another pair of digital ones, four primary buttons, a directional pad, and three centered button. The differences involved alternate placements of analog sticks, alternate labels of the primary and centered buttons, and slightly adjusted ergonomics. Meanwhile, the Wii's "Wiimote" featured no analog sticks and instead opted for a vertical arrangement of digital inputs. To compensate for the lack of analog input, the Wiimote incorporated motion controls and a port for peripherals, such as the "Nunchuck," which added several possibilities for additional motion inputs as well as an analog stick.

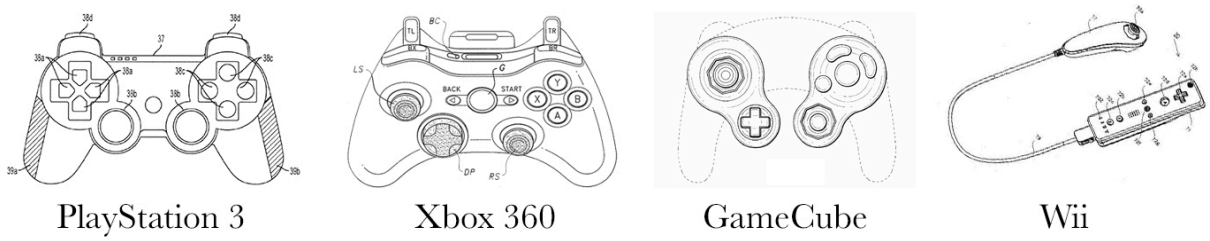

Fig. 1 Controller Patents for Seventh-Generation Consoles (excluding the GameCube, which is a sixth-generation console)

Nintendo's previous home console, the GameCube, featured controllers very similar to its competitors. Nevertheless, the catalog of GameCube games differed greatly from those on the PlayStation 2 (PS2) and the original Xbox. This is primarily because the GameCube's top-selling software releases consist mostly of Nintendo-developed or published exclusives.[30] Relative to global sales for Nintendo's preceding console, the Nintendo 64 (N64), as well as the subsequent Wii, the GameCube was an economic disappointment.[31] This upset is regardless of the numerous highly-acclaimed titles for the GameCube, and consequently in spite of Nintendo's well-practiced curatorial software development strategy. Based on these observations, we can again see that software does not drive hardware sales, but instead hardware must drive software sales.

There are opposing positions to this theory. Hongju Liu, an associate professor of marketing at the University of Connecticut's School of Business, discusses the competition between the N64 and original PlayStation (PS). Liu observes that before the GameCube, the N64 caused Nintendo to lose its dominant position in the market to Sony. He then approaches the issue with an empirical perspective, analyzing several factors such as the effects of releasing a console prior to a competitor's, employing a curatorial software strategy that optimizes quantity of titles, and utilizing a different form of storage media.[32] Liu concludes that Nintendo could have retained dominance if the N64 had 10% more titles or if the console had an initial user base of one million units prior to the PS's launch.[33]

I disagree with Liu's conclusions because they ignore historical factors relevant to the video game industry in favor of traditional economic algorithms. Liu's supposition that 10% more titles would have led to greater console sales ignores the importance of product quality, which was the primary factor towards Nintendo's dominance with the NES after the North American video game crash of 1983. To dispute Liu's latter conclusion, we can simply observe that the Wii U had an entire year to garner sales prior to the release of the PS4 and the Xbox One but the Nintendo console still failed. We can extrapolate from Liu's study that factors such as software abundance and early releases can positively affect hardware sales, but the industry's volatile nature makes individual cases difficult to predict.

Nintendo consoles, starting with the Wii, demonstrate this volatility through consumer experiences that competitors' devices cannot replicate. While the Wiimote simplified the number of button inputs relative to competing controllers, its addition of motion-based gameplay proved to be a popular alternative to traditional input methods. We can see this most clearly by looking at the console's best-selling titles. Of the top eleven releases (ten of which breached ten million sales), eight games utilized motion controls in a significant way.[34] I include eleven games because the best-selling Wii game, *Wii Sports*, came bundled with the console as a free title and the sales figures do not distinguish between bundled and individual purchases. We can also see the success of motion controls through the actions of Sony and Microsoft, since Sony released the PlayStation Move, another motion-based controller, and Microsoft released the Kinect, a motion input system that utilizes[35] a camera instead of a controller, both in 2010. Nintendo's financial success with the Wii directly led the company's competitors to follow with similar hardware.

Was the Wii successful because it allowed richer gameplay experiences? Looking at the same list of best-selling titles for the Wii, the games that utilized motion controls sold better overall but received lower critical scores. (Please note that I am utilizing a small set of titles due to

estimated sales figures from *VGChartz* and subjective analysis of which games predominately utilize motion controls. Instead of a proper correlation, we can analyze trends in data.) The sales for motion-based games in this list total 161.37 million (excluding *Wii Sports*), while the remaining three games sum to 52.63 million.[36] We get approximately 23.05 million sales per motion-based game and 17.54 million sales per traditional game, which means motion-based games sell 31% more copies on average. Meanwhile, if we add up the total *MetaCritic* scores for each subset, we get 530 out of 700 potential points for motion-based games and 277 out of 300 potential points for the others. I exclude *Wii Sports* because its sales figure is an outlier and its *MetaCritic* score is only 74 out of 100, which would unfairly help my argument when most people did not consciously purchase the title. We can reduce the *MetaCritic* scores to a denominator of ten and get 7.57 and 9.23 for each respective game category. For motion-based titles, the trend discourages a correlation between critical and commercial performance since the best-selling motion-based games receive lower scores than the traditional games do.

If we define the "hardcore" audience as individuals who value critical ratings and artistically rich (or "heavy") experiences, then the Wii succeeded in attracting a "casual" audience of individuals who are either less familiar with video games or play primarily as a pastime. The Wiimote's construction attracts the casual userbase since its controls mimic familiar "real world" activities. For instance, the player holds and maneuvers the Wiimote to mimic golf, bowling, tennis, baseball, and boxing in *Wii Sports*. Meanwhile, the PS3, Xbox 360, and GameCube controllers (see fig. 1) require the user to learn a specific set of inputs that may not be consistent across titles. In this sense, we can define "casual games" as titles that eliminate barriers between the user and the experience. Jesper Juul, an associate professor specializing in game design at the Danish Design School, writes about the expansion of the video game industry into the casual market. Juul states, "We can now see how mistaken assumptions have held video

games back by focusing on emotionally negative situations, by presupposing encyclopedic video game knowledge, by requiring intensive time investments…"[37] Juul's criticisms define "hardcore games" as eclectic and consequently subdued in market potential. Therefore, *Wii Sports'* focus on the casual accounts for its commercial success, since the game features simplistic gameplay, short play sessions, and positive social interactions.

Traditional hardcore games defined and isolated the video game industry, so how did Nintendo effectively introduce a friendlier system to unfamiliar consumers? The Wii's release hearkens to Nintendo's marketing tactics for the Famicom, which Nintendo portrayed as a device for play in the home. Stephen Kline states, "Promoting the Nintendo brand as a family-oriented entertainment industry was central to the company's thinking about product and market development…"[38] This is clear in the Famicom's name, which is an amalgamation of "Family Computer." Similarly, the Wii's name and its advertising campaign humored the play on words "Wii Would Like to Play," for which Leo Burnett won the Grand Effie marketing award.[39] Dong-Il Oh, a scholar at Hang Sung University's Department of Interactive Entertainment in Seoul, emphasizes the chemistry between *play* in Japanese culture and video games. His research explores existential connections to games, although I am unfamiliar with the subject and cannot verify the tenacity of his assertions.[40] Instead, his research enforces that *play* is intimately and universally understood, which further hearkens to video games' roots in Japanese toy manufacturing and arcades.[41] The Wiimote's unconventional shape thus redefines the controller as a toy, which Nintendo conveyed to an unfamiliar audience alongside an effective advertising campaign.

NINTENDO WII U & CONVERGENT HARDWARE

Nintendo dominated the video game industry with the Wii, but the company complicated their direction with the Wii U. The Wii U introduced a new controller designated the "GamePad" (see fig. 2, B.) that featured tablet-like functionality alongside backwards compatibility for Wiimotes. Depending on the game, the player could play with a Wiimote and use either the GamePad or the TV as the display (A.), or use the GamePad as the predominant input device and have other players use Wiimotes (C.). The GamePad is completely wireless, but requires the user to stay within a short distance of the console in order to function. Unlike the Wiimote, the GamePad features a traditional set of inputs alongside a touchscreen, with additional gyroscopic controls that give limited motion functionally such as tilt-steering controls in a racing game (e.g. *Mario Kart 8*). Each Wii U allows only one GamePad, which comes included with the console and cannot function with any other Wii U console. This means each GamePad is permanently digitally tethered to a specific Wii U. Since the GamePad's inputs are completely distinct from the Wiimote's, users can buy additional "Pro Controllers" that feature layouts similar to the GamePad's, as well as the Xbox 360, PS3, and GameCube controllers' (see fig. 1). To summarize, the Wii U introduces the GamePad and Pro Controllers, while perpetuating the use Wiimotes and all Wiimote peripherals.

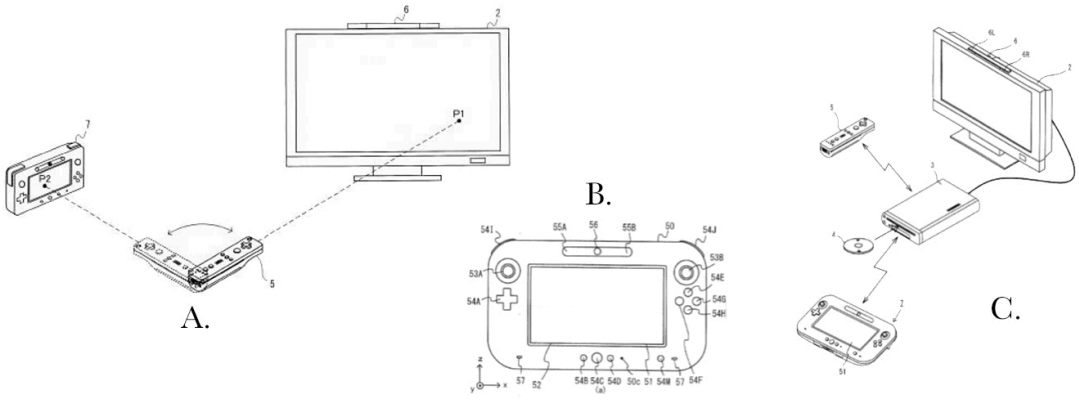

Fig. 2 Nintendo patents denoting Wii U functionality

Late Nintendo CEO Satoru Iwata conducted extensive interviews with Wii and Wii U developers in the *Iwata Asks* series, which give firsthand insight into the hardware developers' intentions for both consoles. Iwata's interviews reveal that the Wii U's developers wanted the console to simultaneously serve as a gaming and living room device with inputs to reflect both of these functions. The development of the GamePad underwent several phases, evolving from an "extremely uncluttered" surface that proved unsuitable for gaming to a more traditional layout.[42] Mario creator and core Nintendo developer Shigeru Miyamoto reveals the intention behind these changes, stating, "…as a device in people's living rooms, I think I fundamentally wanted to have Wii become a more fulfilling device."[43] Miyamoto explains that he wanted the Wii to be a system for the "household" and "entire families," such that the device would be synonymous with living room entertainment. Nintendo released many titles for the Wii under this agenda, such as the best-selling exercise games *Wii Fit* and *Wii Fit Plus*, and the console included numerous built-in "channels" for weather and other limited functions.[44] Also, Nintendo did not incorporate television into a console until the Wii U with Nintendo TVii, a limited streaming service that shut down early in the console's lifecycle.[45] The Wii penetrated the casual video game market, but Nintendo wanted the Wii U to function as a set-top device with tertiary functions other than the ability to play games.

Nintendo's direction with the Wii U emphasizes the technological trend of convergence. Dimitri Williams, a Ph.D. candidate in Communication Studies at the University of Michigan, defines "convergence" as the incorporation of several previously separate functions into one device.[46] As previously stated, Nintendo intended for the Wii U to fulfil enough functions to serve as an everyday-use device for the room. Regardless, Nintendo faced significant competition from tablets in this regard. Nintendo first devised the Wii U prior to the launch of tablets, but the console released two years after the original iPad.[47] Additionally, Apple's App Store matured

since its inauguration in 2008, and Apple devices such as the newly released iPhone 5 could entertain a variety of functions like stream content from most providers, browse the internet, play games, or even communicate with Apple's set-top box, the Apple TV. The iPad prospered on the iPhone's popularity, since the tablet could run apps designed for iPhones due to a shared touchscreen interface. Additionally, the number of native apps for the iPad (i.e. developed exclusively for the iPad) reached 140,000 by November 2011,[48] a full year before the Wii U's launch. Thus, Nintendo's objective to compete with "TV" as revealed in the *Iwata Asks* series ignores the significant competition from Apple's flourishing products that already exercise the Wii U's intended functions.

The Wii U's hardware, including its extensive line of peripherals, confused consumers and developers of video game software. With the Wii, Nintendo developed the simple and accessible Wiimote, which the Wii U perpetuated. However, the Wii U's GamePad necessitated more complex inputs than the Wiimote allowed. Therefore, the Wii U could simultaneously utilize several controllers with incongruent input options, resulting in complex asymmetric gameplay under the guise of the Wii's casual focus. We can define "asymmetric gameplay" as multiplayer games in which players operate under a different set of controls. Asymmetric games on the Wii U are especially prevalent to do the console's support of only one GamePad at a time. Sony and Microsoft's consoles typically do not allow asymmetric gameplay since only one type of controller is widely available for each console. Meanwhile, games developed for the Wii U had to balance between motion controls, traditional inputs, two independent screens, and asymmetric player inputs.

The Wii U's bundled title, *Nintendo Land*, demonstrates exciting potentials for asymmetric gameplay, but developer and consumer consensus points towards a dissatisfaction with the new technology. Of the top ten best-selling Wii U titles,[49] only two titles use asymmetric gameplay to

a significant degree, namely *Nintendo Land* and *Wii Party U*. Several other games use GamePad features to a lesser degree, such as *Super Mario Maker's* use of the touchscreen and *Splatoon's* use of gyroscopic controls. Nevertheless, these features do not necessitate the technologies specific to Wii U controllers and the player does not need to use them. The lack of necessity for additional controls meant developers progressively incorporated them less frequently, and thus consumers purchased more games on the Wii U that could hypothetically function properly on any other home console (although Nintendo exclusives disallow cross-platform releases). The top eight Wii U games that used traditional inputs sold a total of 34.64 million copies for an average of 4.33 million sales per title.[50] The top two games that used new Wii U mechanics in a significant way sold 6.23 million copies for an average of 3.11 million sales per copy. Thus, games that used traditional controls accounted for 39% per sales than games that didn't. According to *MetaCritic*, traditional titles scored a total of 693 out of 800 possible points for an average of 8.66 out of 10 points per game, while the non-traditional titles scored 142 out of 200 possible points for an average of 7.10 points per game. Furthermore, I discredited *Wii Sports* for the Wii since the game came bundled with the console, while I am including *Nintendo Land* in my analysis for the Wii U despite its bundling with the console. The data demonstrates a lack of commercial and critical interest in titles that utilized new modes of play.

Nintendo alienated its casual and hardcore audiences with a controller that lacked the Wiimote's accessibility and complicated the experience of a traditional controller, but the company remained relatively uncontested in the Japanese market. Mia Consalvo, a professor at Concord University's Department of Communication Studies, writes about Japanese developers' needs to globalize due to diminishing domestic market returns. Consalvo explains that while Japanese developers have predictable success in Japan, the declining birth rate or "graying of Japan" creates an inevitable need to appeal to global audiences since the number of domestic

consumers is dwindling.[51] As the video game industry expands, Japan's market sees little or no growth. Consalvo further explains that companies therefore must exploit the convergence of cultures to profit internationally. (Please note that Consalvo's definition for "convergence" is distinct from my previous use of the term.) She observes, "Scholars have begun to map [converged culture], pointing to how anime fans see that material as more complex and thought-provoking than most Western media, as well as how 'all things Japan' come to be seen as 'cool' in the West."[52] Following this logic, we can define "converged culture" as the cosmopolitan dissemination of Asian culture in the West. Anne Allison, a Professor of Cultural Anthropology at Duke University, reaffirms this by stating, "As I learned from fieldwork over the last decade, there is a veritable boom these days in Japanese fantasy goods among American youth."[53] This intensifies the importance of Shinzo Abe's Mario costume, since Abe's appearance reaffirms Nintendo's backlog of prominent cultural icons that persevere in Japan and pose great potential for international economic gain.

If Nintendo's franchises and brand identity are so renowned, why could they not sustain Wii U sales? I have established that the Wii U's technology failed to market the console as effectively as the Wii's, which led to ineffectual advertising campaigns. As *Polygon* reports, the Wii U name also impeded effective advertising, with journalistic outlet *CNN* misreporting the console as "a solid accessory that will bring a fresh element to Nintendo gaming."[54] Perhaps most detrimental to the console's success was the scarcity of software over time. With the advent of higher resolution and more graphically intensive games, development cost and duration rose steeply. For instance, the Wii U was the first Nintendo home console to not receive an exclusive release in *The Legend of Zelda* series. The series, created by Shigeru Miyamoto, is one of Nintendo's strongest intellectual properties (IP), with best-selling installments on the N64, GameCube, and Wii.[55] Instead, Nintendo "remastered" two previous titles from the series and released the newest

installment simultaneously on the Wii U and its successor, the Switch, due to a five-year development period.[56] Nintendo's lack of first-party titles coincided with a lack of third-party titles, with only three releases selling greater than one million copies. One release is port of *Minecraft* that occurred late in the Wii U's lifecycle and another is a second-party release under the *Pokémon* brand. Nintendo failed to develop titles within its culturally significant IPs in a timely manner, and the Wii U accordingly failed to garner any commercial success.

NINTENDO SWITCH & RETURN TO FORM

The Nintendo Switch released on 3 March 2017, featuring a new console-controller hybrid that reincorporated the Wii U's tablet concept. I use the term "console-controller" because unlike the Wii U, the Switch's tablet interface requires no additional hardware and runs untethered from a console box. This demonstrates a dramatic shift from Nintendo's previous emphasis on convergent technology for the home, since the Switch is a completely portable device that features an additional "Dock" for video output to larger displays like televisions (see fig. 3, F.). Thus, its function as a mobile device is incongruent to Nintendo's previous efforts for creating an all-inclusive home entertainment hub. Furthermore, the dock does not add any additional computational power and instead serves as a charger for the tablet and as a video output adaptor. The tablet (hereinafter referred to as the Switch) slides into the dock vertically, which establishes a sliding motif we can also see with two independent side controllers, known as "Joy-Con." These controllers slide onto the Switch for mobile play (A. & C.), and when the Switch is either docked or supported via its built-in kickstand, the Joy-Con (plural) can slide into a "Joy-Con Grip" (C.), serve as two separate controllers (E.), or function in conjunction for one player (F.).[57] If we consider the Wii's "gimmick" as its motion controls and the Wii U's as its secondary

screen and variable modes of play, then the Switch's gimmick involves similar modes of play suited for various environments.

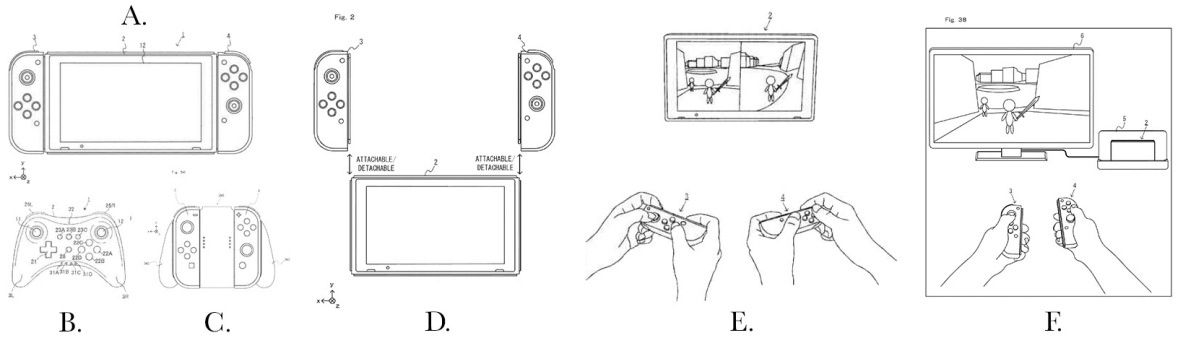

Fig. 3 Nintendo patents denoting Switch functionality

We can only make predictions for the Switch's success since the console is still early in its lifecycle, but preliminary results illustrate an optimistic future. The Switch is on track to greatly outsell the Wii U, with a unit sales forecast of ten million consoles by the end of this fiscal year.[58] Nintendo also seems to be loosening their restrictions on third-party titles, especially with the announcement of *The Elder Scrolls V: Skyrim* for the Switch. *Skyrim*, a mature title developed by American studio Betheseda, is one of the best-selling and critically acclaimed titles of the previous generation of video game consoles.[59] While *Skyrim* is not a new title, its future release on the Switch sets precedent for more internationally-developed mature titles such as installments in the *Grand Theft Auto* series. Nevertheless, the Wii U promised similar mature titles with early ports like *Assassin's Creed 3*, but the console's poor sales led to fewer future releases. Although these details are exciting, the next several fiscal years will determine if the Switch succeeds.

In a final note, we should consider early consumer reactions to the console. Unlike Nintendo's previous home consoles, the Switch features no backwards compatibility. This exacerbates the extremely small quantity of launch titles for the device. [60] One of these releases is *The Legend of Zelda: Breath of the Wild*, which is the Switch's first new installment in the *Zelda* series

and the Wii U's first and last new installment in the series (since the title was cross-released on both consoles). The early sales figures for this game are unprecedented, with a *MetaCritic* score of 97 out of 100[61] and 2.76 million units sold for the Switch.[62] The sales for *Breath of the Wild* actually eclipse the 2.74 million Switch consoles sold within the same period, marking an attach rate of over 100% for the title. We can possibly attribute this resounding success to the Switch's hardware, since the game is selling at over a 2.5:1 ratio for Switch vs. Wii U sales.[63] Perhaps then the addition of portability for AAA (i.e. high budget) games attracts new consumers, or perhaps *Breath of the Wild* is a one-time phenomenon. These two hypotheses most likely operate in conjunction with each other, and Nintendo needs to continue advertising the Switch and releasing appealing software to retain and grow the console's user base.

CONCLUSION

In this paper, I explored the current state of the video game industry and analyzed the evolution of Nintendo's home console strategy. I revealed that Japan technically still dominates the industry, although non-Japanese software developers usually end up selling more titles due to large consumer bases on non-Nintendo home consoles. To address why Microsoft and Sony's consoles currently attract more gamers, I studied the confluence of technology, culture, and marketing for the Nintendo Wii and Wii U, and I touched upon several predictions for the future of the newly released Switch. Finally, I would like to reiterate that the parameters of technology, culture, and marketing are well understood by consumers, developers, and businessmen alike. To quote late Nintendo CEO Satoru Iwata, "On my business card, I am a corporate president. In my mind, I am a game developer. But in my heart, I am a gamer."[64]

Notes

[1] This is the official sales number as reported by Nintendo for the quarter ending on 31 December 2016.

[2] The full statement from Nintendo of America stated, "We can confirm that as of today, all Wii U hardware that will be made available in the North American market for this fiscal year has already been shipped to our retail partners. We encourage anyone who wants Wii U to communicate with their preferred retail outlet to monitor availability."

[3] As reported by *Kotaku*, Nintendo originally announced the discontinuation of the company's original 3DS XL models through their Japanese website.

[44] The PS4's sales figures are official estimates as of January 2017. Microsoft stopped releasing sales figures for the Xbox One in 2015, and the most recent official number is ten million units as of November 2014. *GameSpot* estimates 26 million Xbox One sales as of January 18, 2017 based on a report from research group SuperData.

[5] Sony sold both the PS3 and PS4 at a loss, while Nintendo and Microsoft typically make profit on each sale (although the Wii U sold at a loss according to *Forbes*).

[6] Official sales figures for sixteen quarters (four years) as reported by Nintendo.

[7] See *Forbes* article "Why Is The Wii U A Failure?" by Gavin Cramblet on 5 February 2014.

[8] See *The Guardian* article "RIP Wii U: Nintendo's glorious, quirky failure" by Keith Stuart on 3 February 2017.

[9] See *Fortune* article "Shigeru Miyamoto: Why the Wii U crashed and burned" by Chris Morris on 23 June 2015. Miyamoto's full statement reads, "I feel like people never really understood the concept behind Wii U and what we were trying to do. I think the assumption is we were trying to create a game machine and a tablet and really what we were trying to do was

create a game system that gave you tablet-like functionality for controlling that system and give you two screens that would allow different people in the living room to play in different ways… Unfortunately, because tablets, at the time, were adding more and more functionality and becoming more and more prominent, this system and this approach didn't mesh well with the period in which we released it."

[10] Picard, "The Foundation of *Geemu*: A Brief History of Early Japanese Video Games."

[11] See *The New York Times* article "A Morning Surprise for Japan: Shinzo Abe as Super Mario" by Motoko Rich on 22 August 2016.

[12] Accurate as of 6 May 2017.

[13] *Super Mario Run* was first announced as an exclusive iPhone title at Apple's annual iPhone event on 7 September 2016.

[14] Accurate as of 6 May 2017.

[15] See *The Wall Street Journal* article "Nintendo Shares Fall After 'Super Mario Run' Disappoints" by Takashi Mochizuki on 19 December 2016.

[16] Sony's hardware and software sales eclipse Microsoft's, as mentioned in the first paragraph of this paper.

[17] Official Guinness World Records as original published on 8 October 2013 by Kevin Lynch.

[18] See *Forbes* article "'GTAV' Has Sold 70M Copies, Now Where's That Single Player DLC?" by Erik Kain on 2 November 2016.

[19] This conclusion is based on information from *VGChartz*. Although many sources criticize the site's accuracy, *VGChartz* addresses this question in their article "Where do VG Chartz North American Numbers Come From?" by Brett Walton on 10 November 2007.

[20] Maruyama and Ohkita, 117.

[21] *Eurogamer* reports that "Sony expects to make an approximate $60 loss per $399 unit sold." For more information, see *Eurogamer* article "Sony expects to recoup PlayStation 4 hardware loss at launch" by Tom Philips on 20 September 2013.

[22] This statement is true for the top-ten lists from *Wikipedia* and *VGChartz*.

[23] The exception is *Just Dance 3*, which Ubisoft published.

[24] Data from *VGChartz*.

[25] Naughty Dog is known for critically acclaimed titles in the *Uncharted* series, as well as for iconic mascots such as Crash Bandicoot as well as Jak from *Jak and Daxter*. Meanwhile, Media Molecule is predominately known for *Little Big Planet* and its sequels. According to *VGChartz*, these titles consistently chart in the top twenty best-sellers for their respective consoles.

[26] The total sales of Nintendo titles uniquely don't correlate directly with North American sales, since Japanese sales add a significant percentage. This information is interpreted from listings for Nintendo console software on *VGChartz*.

[27] Wolf, 4.

[28] Wolf, 4-5.

[29] Wolf, 5.

[30] Based on data from *VGChartz*.

[31] According to official statements from Nintendo, the N64 sold 32.93 million units, the Wii sold 101.63 million, and the GameCube only sold 21.72 million.

[32] Liu, 428.

[33] Liu, 441.

[34] Rankings from *VGChartz*. The titles that heavily utilize motion controls, in order of most sales to least, are *Wii Sports, Mario Kart Wii, Wii Sports Resort, Wii Play, Wii Fit, Wii Fit Plus, Just Dance 3*, and *Just Dance 2*.

[35] Please note that the use of present or past tense is difficult to consistently apply in video game discussion, since much of this hardware is still technically available and in use.

[36] Data from *VGChartz*.

[37] Juul, 152.

[38] Kline et al., 119.

[39] See *IGN* article "Nintendo's 'Wii Would Like to Play' Named Most Effective Marketing Effort at Effie Awards" on 5 June 2008.

[40] For instance, Oh states, "…for a Japanese player, the game character of the princess has the value of *kami*, and a look at *The Legend of Zelda* and *Super Mario Bros.* from the larger viewpoint will reveal that they have a common theme: '*kami* exists, so they tide over a variety of difficulties to get to *kami*'" (34). He previously defines "kami" as "the essence or soul of anything that inspires awe," and while Oh's analysis may be accurate, I am not comfortable asserting sweeping suppositions of Japanese ideals.

[41] Picard discusses this in his sections on video game history pre-1983.

[42] See *Iwata Asks*, "Wii U: 'We Gotta Make a Controller!'"

[43] See *Iwata Asks*, "Nintendo E3 2011: Looking Beyond Wii."

[44] See *Iwata Asks*, "Reggie Asks: Nintendo TVii: One Integrated Experience."

[45] See *Polygon* article "Nintendo shutting down Wii U TVii service in August" by Michael McWhertor on 24 July 2015.

[46] Williams, 50.

[47] In the *Iwata Asks* interview "Nintendo E3 2011: Looking Beyond Wii" Iwata states, "But when we were first talking about this [console], tablet devices weren't very common."

[48] See *CNET* article "iOS vs. Android: Lots of stats, little clarity" by Harry McCracken on 14 November 2011.

[49] According to *VGChartz*.

[50] These games (in order of most sales to least) are *Mario Kart 8, New Super Mario Bros. U, Super Smash Bros. for Wii U, Super Mario 3D World, Splatoon, Super Mario Maker, New Super Luigi U,* and *The Legend of Zelda: The Wind Waker*.

[51] Consalvo, 138.

[52] Consalvo, 139.

[53] Allison, 1.

[54] See *Polygon* article "The Wii U name is still hurting Nintendo" by Ben Kuchera on 5 August 2014.

[55] According to *VGChartz*, *The Legend of Zelda: Ocarina of Time* is ranked fourth for the N64, *The Legend of Zelda: The Wind Waker* is ranked fourth for the GameCube, and *The Legend of Zelda: Twilight Princess* is ranked seventeenth for the Wii alongside *The Legend of Zelda: Skyward Sword* at twenty-eighth.

[56] See *Eurogamer* article "Zelda: Breath of the Wild needs to sell 2m copies to profit" by Tom Phillips on 30 June 2016.

[57] Technical details are from Nintendo's official website for the Switch.

[58] Official forecast from Nintendo's financial outline for March 2017.

[59] According to *Wikipedia*, Skyrim received near-perfect critical scores and the game "has sold thirty million copies since its release in 2011," although this figure is accurate as of 21 November 2016.

[60] These titles are *1-2-Switch, Fast RMX, Just Dance 2017, Human Resource Machine, I Am Setsuna, The Legend of Zelda: Breath of the Wild, Little Inferno, Shovel Knight, Skylanders: Imaginators, Snipperclips, Super Bomberman R,* and *World of Goo.*

[61] This score places *The Legend of Zelda: Breath of the Wild* in the top-rated games of all time on *MetaCritic*. Additionally, every title that is ranked higher than *Breath of the Wild* has fewer critical reviews.

[62] See *GameSpot* article "Nintendo Switch Ships 2.74M Units, Zelda Rises To 3.84M Shipped" by Eddie Makuch on 27 April 2017.

[63] *Polygon* reports 1.08 million sales on the Wii U.

[64] According to *Wikiquote*, Iwata stated this at the Game Developers Conference (GDC) in 2005.

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