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# The Political Economy of Cultural Memory in the Videogames Industry

Emil Lundedal Hammar

## Abstract

*Following the materialist approaches to contemporary digital memory-making, this article explores how unequal access to memory production in videogames is determined along economic and cultural lines. Based on semi-structured qualitative interviews with different European, Asian and North American historical game developers, I make the case for how materialist and cultural aspects of videogame development reinforce existing mnemonic hegemony and in turn how this mnemonic hegemony determines access to the production of memory-making potentials that players of videogames activate and negotiate. My interview findings illustrate how individual workers do not necessarily intend to reproduce received systems of power and hegemony, and instead how certain cultural and material relations tacitly motivate and/or marginalise workers in the videogame industries to reproduce hegemonic power relations in cultural memory across race, class and gender. Finally, I develop the argument that access to cultural production networks such as the games industry constitutes important factors that need to be taken seriously in research on cultural memory and game studies. Thus, my article investigates global power relationships, political economy, colonial legacies and cultural hegemony within the videogame industry, and how these are instantiated in individual instances of game developers.*

## Introduction

The production of modern historical videogames requires tens if not hundreds millions of dollars in investment that in turn motivate videogame producers to resort to dominant visions of the past (Hammar 2017b). With the more unique example of *Battlefield V* (DICE 2018), a historical videogame set during World War II, the Swedish developer DICE and their multinational publisher EA chose to feature what they marketed as “The Untold Tales of WW II,” where players fight, for example, as a North-Norwegian resistance female soldier and the French-colonised Senegalese Tirailleur. Somehow, these “untold tales” prompted a sizeable contingent of videogame consumers to react with disdain and venom (Farokhmanesh

2018), in this case towards the audiovisual presence of a female soldier that the collective remembering of WWII does not usually feature. In return, the developers of *Battlefield V* had to publically address this organised opposition in order to quell this conflict over cultural memory. This example and comparable cases<sup>1</sup> indicate how different stakeholders produce and contest the remembrance of the past in popular culture across the divide between production, distribution and consumption. In turn, the producers of culture, such as videogame developers, partly decide how the past should be represented in their cultural product depending on a number of structural factors, such as working conditions, financial risk, player feedback and internal power hierarchies. As such, I very much follow Anna Reading's observation that "a political economy of memory and digital memory" (2014: 750) is needed. Here, the field of cultural memory studies has considered how media as texts carry certain memory-making potentials that individuals and collectives activate and negotiate (Erl 2011: 9; Rigney 2016: 69). Among these artefacts of remembering, historical videogames have gained cultural and commercial prominence, enabling consumers of differing ages to play with the past (Kapell & Elliott 2013; Chapman 2016: 49). These games allow those consumers who have access to digital technologies such as mobile phones, personal computers or dedicated game consoles to execute software that enables them to play with audiovisual representations of the past, which are structured by the game's mechanical system on the level of code (Bogost 2007; Aarseth & Calleja 2015)<sup>2</sup>. This process of playing with the past is therefore possible due to what Chapman (2012) refers to as "the particular audio-visual-ludic structures of the game" that "produce meaning and allow the player to playfully explore/configure discourses about the past" (42). These historical games are naturally wedded to the activity of play, which allows people to participate in and create

- 1 We find similar controversies surrounding remembrances of the past in popular culture such as film – from the commodification of the Holocaust in *Schindler's List* to the glorification of the US army in *Saving Private Ryan* to the white-saviour-complex in the Danish colonial film *Guldskysten* to the Norwegian trauma in the film adaptation of *July 22*. The contestations over what appears to be naturalised mythologies of collective memory are clearly important and evident.
- 2 On a semiotic level, meaning-making potentials via games thereby operate on two levels – the signifying level of audiovisual representation and the system level of mechanics and rules executed by the procedural nature of videogames as software (Shaw, 2017). By combining audiovisual representation with ludic elements, they enable players to activate their agency in the context of past settings (Uricchio, 2005; Pötzsch and Šisler, 2016). For example, the videogame *Assassin's Creed: Freedom Cry* (Ubisoft Québec 2013) situates players in eighteenth-century Caribbean to fight French colonial power as the black ex-slave Adewalè (Hammar 2017a); and the famous *Civilization* (MPS Labs, 1991–present) series (Uricchio 2005: 328; Galloway 2006; Carr 2007; Ford 2016) enables players to play with a "conceptual simulation" of history (Chapman 2016: 69 f.).

culture (Henricks 2006), and thereby enable a negotiation and contestation in collective memory discourses as the example of *Battlefield V* above highlights. In that sense, historical games not only allow people to play with the past, but also inform broader collective memory discourses in which players affirm or contest the ways they remember the past. It is thus of crucial importance to understand how these games come about and are circulated in a global consumer industry, since, as Aphra Kerr (2017) writes,

The commodification of games and play is an example of how capitalism expands into all areas of everyday life and changes things that we do and use into things which we exchange for money. Since the early 1970s the videogames industry has explored ways to commodify children's game and play time, and is increasingly a part of adult leisure too. It has developed links with existing cultural industries and practices as well as developing new ones. (29)

Videogames are designed objects that encourage play (Sicart 2014), and they are by and large commodified and encoded by the cultural producers in the games industry, where large networks of production with different actors situated in their own material and ideological context determine how sign and system are meant to be played with. Inspired by Stuart Hall's Encoding/Decoding (1973) model, I conducted semi-structured qualitative interviews with historical videogame in order to ascertain how these cultural mnemonic objects are *encoded* with meaning potentials, i.e. created using the technology available, the discourses that inform the game and the relations of production and consumption. In turn, players *decode*, i.e. interpret, within the context of discourses, technologies and relations of production and consumption. As such, this article focuses on the hegemonic memory-making in historical videogames by investigating multiple levels in the form of production, distribution and consumption. I pay special attention to videogame-related problems of memory-making against these levels in relation to the divide between production and reception. I then provide interview data as additional supporting material in the discussion and an indication for further interview-based work. First, I first look to the knowledge established in the political economy of communication to qualify the approach of my qualitative study of historical game developers.

## The Political Economy of Videogames

Vincent Mosco (2009) defines the political economy of communication as “the study of the social relations, particularly the power relations, that mutually constitute the production, distribution, and consumption of resources, including communication resources” (2). Such an approach helps uncover the power hierarchies in the production of media, including videogames, which in turn partly determine the meaning potentials that audiences or players activate and negotiate.

This focus on power hierarchies of media was addressed by Horkheimer and Adorno (2002: 94f.) as the so-called “culture industry,” where mass culture’s domination and “sameness” derives from its economic production logic – i. e. that mass culture is homogenised by factory-like commodification and its purpose of generating profits. Hall (1986) similarly wrote that ownership and control of media is sufficiently important that it “gives the whole machinery of representation its fundamental orientation in the value-system of property and profit” (11). As such, if games and play are subservient to contemporary power hierarchies as indicated in Kerr’s quote above, it is pertinent to pinpoint how they motivate producers towards the encoding of particular meaning potentials. This serves as my primary motivation for conducting interviews with producers of historical games as to how they navigate and reflect on their encoding of cultural memory within said games. The upshot of these observations is in my view not to posit an entirely deterministic relationship between production and meaning, but “to map the limits within which the production of mediated culture can operate” (Golding & Murdock 1979: 226–227). It is for these reasons that I find it important to explore the explicit and implicit reasons for why historical game development “factories” (as one informant put it) end up reproducing the ongoing rearticulation of hegemonic visions of the past. Questions such as why does the historical setting have to be in Europe or the United States? Why does the protagonist have to be white, male and Anglophone? Why is the primary engagement with the gameworld through violence and domination of others? And why does such a hegemony of perspectives manifest itself repeatedly? Or in the words of Hall (1992): “the problem about the mass media is that old movies keep being made” (10).

These initial questions underscore the importance of exploring videogame production and its resulting reproduction of mnemonic hegemony. Molden defines this as, “Access to and control over the means of communication and diffusion of historical narratives are of utmost importance for the establishment and maintenance of mnemonic hegemony” (2016: 134). I argue that the political economy of videogames potentially leads to unequal forms of memory-making that, in this case, players negotiate and activate differently (Apperley 2010). Joanne Garde-Hansen (2011) states that:

powerful media and cultural institutions whose business it is to record, archive and make accessible the everyday life, major events and social and cultural heritage of nations and communities, invariably write those narratives in ways that glorify not only themselves but the cultural hegemony of the societies they serve. (50)

As such, I mainly stress the importance of a political economy of historical videogame production, and, in turn, I highlight a potential research area of interest to media scholars alike to “situate these readings within the specific power geometry or map of power identified by the coordinates of commodification, spatialization, and structuration” (Mosco 2009: 225).

## Player Negotiations

However, I do feel the need to address the often-mentioned objection against the top-down approach of political economy also seen in my choice to only interview videogame producers. This relates to player negotiations, “consumption” or the aforementioned “decoding” (Hall 1973). Chapman writes that “the player is both narrator and audience. In historical games, *doing* also means *writing*. [...] Players [...] configure the story space and produce particular narratives” (2016: 34). Mukherjee (2017) takes this point of player negotiations further by arguing that previous research on historical videogames fail

[...] to consider the millions of players from the Indian subcontinent, Africa, and the Middle East for whom these empire-building games actually provide a more direct experience of engaging with their colonial history. These games’ portrayal of the colonies is often simplistic and contains inaccuracies that are immediately obvious to players from these regions. (5)

As such, the point of who is activating and negotiating the encoded memory-making potentials of historical videogames is a crucial one if we are to identify the limits of production on the level of meaning. Mukherjee’s point serves well to illustrate how meaning depends on the positionality of audiences. Stephanie Boluk’s and Patrick LeMieux’s work on “Metagaming” (2017) provides insight into the many ways that “diverse practices and material discontinuities that emerge between the human experience of playing videogames and their nonhuman operations” (4) independent from the game developer’s intention. Kristine Jørgensen (2012) has similarly proposed the importance of player studies that help capture the full range of meaning potentials of games that other previous approaches (Aarseth 2014) arguably fall short of. These questions are not necessarily new, where for example literary studies have extensively debated and covered the question of author intentionality contrasted with reader responses (Mitchell 2008).

In turn, this emphasis on reception does not mean an infinite multiplicity of interpretations exist, which would negate the limited meaning potentials of historical videogames. As Mosco argues, a political economy of communication on one hand does concern itself or at the very least acknowledge the multiplicity of interpretations by audiences. He writes, “As Murray (2004) has demonstrated in her research on fan cultures, audience resistance is inscribed within limits established by the media industries” (2009: 224). Elsewhere, Kevin Schut (2007) uses the metaphor of a steep slope to illustrate how players often follow the bias in media: “many, if not most, will take the path of least resistance and go with the slope – and even if they do not, it will take extra effort to climb. [...] Media [...] have biases that encourage certain kinds of uses or certain kinds of interpretations” (218). It is thus wise to consider to what extent players of historical games regardless of their positionality are similarly confined within the encoded frames (Shaw

2017).<sup>3</sup> It is precisely also through the nature of videogames as software code that questions of algorithms, structure and platforms intrude themselves on matters of agency and active users (Nieborg & Poell 2018) – and vice versa (cf. Apperley 2010: 132). As Mosco (2009) goes on to state regarding the relation between production and form in the political economy of communication:

Media power, which gives those with control over markets the ability to fill screens with material embodying their interests, tends to structure the substance and form of polysemy, thereby limiting the diversity of interpretations to certain repeated central tendencies that stand out among the range of possibilities, including those marginalized few that diverge substantially from the norm. (224)

## Bridging Production and Reception as “Memory-Making Potentials”

In order to bridge the questions posed by both political economy and reception studies and thereby qualify the importance of my interviews, I propose the following: text (in all its forms) constrains audiences and is itself constrained by relations of production and cultural hegemony. These textual frames invite meaning potentials that are then actively negotiated – if not subverted<sup>4</sup> – by situated audiences. These meaning potentials in videogames can, I argue, to many extents be traced back to the context in which they are produced. Thus, my primary motivation in this article revolves around the significance of these contexts of memory production and their materialist underpinnings in order to predispose what memory-making potentials are offered to players to activate and negotiate. Below, I briefly review the political-economic conditions that structure contemporary videogame production as a backdrop to my interview findings.

## How Political Economy Predispose Games’ Memory-Making Potentials

Videogames as a mass cultural form are structured by the unequal power hierarchies of the societies they are produced in. From the slave labour of mining minerals in the Democratic Republic of Congo (Sinclair 2015, 2016, 2017; Valentine

3 Chapman offers the term “(hi)story-play-spaces” to account for this tension between both the producer and the player in the formulation of historical narratives via videogames (2016: 34).

4 Tom Apperley defines this relation between production and play as *resonance* (Apperley 2010: 134) where the *global* game with its mass-produced meaning potentials is adopted in the *local*, i.e. the cultural, social and geographical context in which players play.

2018), to the exploited wage slaves in Chinese tech-factories assembling the media devices (Fuchs 2017; Qiu 2017), to the precarious working conditions of software developers in North America and Europe (Consalvo 2008; Williams 2013; O'Donnell 2014; Woodcock 2016) and cheaply outsourced countries like Malaysia and Vietnam (Thomsen 2018), to the e-waste dumps in Nigeria and China (Maxwell, Raundalen, & Vestberg 2014; Nguyen 2017), the materialist aspects of game production follows contemporary global capitalist production networks that exploit the environments and workers in the periphery, while circulating capital toward the economic centre. It is from here, the centre of power located within this global network, that “a one-way flow of culture and information from centre to periphery” (Mosco 2009: 73) is enacted. Thus, in exercising power over cultural memory, the decision-makers are primarily white, male, heterosexual in their 20s to 30s (Edwards, Weststar, & Meloni 2014; Weststar & Legault 2015), with most major companies operating from United States, Canada and Western Europe (Kerr 2017). Across a general overview of the game industry, developer statements indicate that they rely on hegemonic articulations of race (Young 2016; Srauy 2017), gender (Johnson 2013) and a “one-dimensionality of creativity” due to profit maximisation (Bulut 2018). Not only does the game industry cultivate a mutually beneficial relationship to the US military industrial complex (Dyer-Witheford & De Peuter 2009; Allen 2017) and gun manufacturers (Parkin 2013), but it also has adopted the “platformisation of culture” (Nieborg & Poell 2018) to capture and increase power over the cultural landscape that players as consumers operate in (Joseph 2017, 2018).

When access to game development largely follows what Patricia Hill Collins terms as the matrix of domination (2002: 221–238), and if the economic structures of game development cultivate certain playful visions of the past, then it is pertinent to ask what possible mnemonic objects of play are made available to those who decode them. I claim that this context of production surfaces in the meaning potentials of historical games as well as evidenced in my interviews. Although no quantitative study has to my knowledge been published on the dominant forms of memory-making in games, this genre of videogames relies on colonial logics with Eurocentric visions in both their narratives, gameworlds and mechanical systems (Mukherjee & Hammar 2018). Historical videogames, according to Sybille Lammes, “all share a strong fascination with colonial history, including its militaristic, economic and technoscientific dimensions. Through employing colonial techniques of domination like exploring, trading, map-making and military manoeuvring, players create their personal colonial pasts and futures” (2010: 2). For example, in reiterating Michel Foucault's power analysis of the archive, Adrienne Shaw (2015) argues that historical games similarly rely on conventional understandings of history, especially with an emphasis on the so-called authenticity of the material cultures of history (Köstlbauer 2013; Salvati & Bullinger 2013), which in turn is mostly predicated on what sells (Copplestone 2017). Indeed, Adam Chapman, Foka, & Westin (2018) write that:

As have been shown on numerous occasions [...], the representations we are creating of the past often follows [sic] well established conventions that are outdated, homogenous, and highly problematic, and may feed into contemporary political conflict. (283)

Previous contestations over hegemony in game culture bring to the surface the overriding logic that predisposes the meaning potentials of a game and its surrounding discourse. The representation of women in games is perhaps the most common phenomenon, where player-grassroots and feminist organisations push for more and better representation of women, yet are met with dismissals by the industry and harassment by reactionary male consumers. Whether it is the exploitative or erasing marketing of marginalised groups in games (Smith et al. 2005; Dietrich 2013; Kirkpatrick 2017), or the unwillingness to fund projects featuring these groups as protagonists (Kuchera 2012), or the industry's silence and implicit support of reactionary hate movements (Massanari 2017; Salter 2017; Keogh 2018), most rationalisations in the industry seem to derive from heteropatriarchal, white supremacist, colonialist and capitalist logics. As a consequence, on the level of text, female characters are erased from the marketing; protagonists of colour will not get funding by game publishers; women protagonists are changed into male protagonists at the request of game publishers; historical narratives featuring under-represented groups are met with organised consumer backlash as being "historically inaccurate" (Farokhmanesh 2018) and studies show that male-identifying players do not care about women protagonists in games (Yee 2017). In sum, there are plenty of examples of cultural struggles and contestations within current hegemony, which provide insight into an otherwise hermetically sealed industry. Here, matters of race, ethnicity, gender, sexuality, language and class intersect in the maintenance and reproduction of a cultural and economic domination by those in power positions of the game industry (Fron et al. 2007). Given this political economy of videogames and the qualified relation between production and form, I now move to outlining my interviews and the data gathered from them.

## Methodology

In the period between May 2015 and June 2017, I conducted a series of semi-structured qualitative interviews (May 2011: 123; Brinkmann 2014) with nine game industry professionals out of 35 requests for interviews. The two women and seven men hailed from Norway, Denmark, Portugal, Scotland, Canada, USA and Taiwan and were between 21 and 48 years of age. The selection process was incredibly broad where anyone affiliated with the development of a historical videogame was considered acceptable for interview. The majority of my informants worked in mid-sized companies and ranged from student to lead game designer, to lead writer, to project lead, to CEO of the entire company in question. Interviews were

conducted and recorded via Microsoft's Skype with the consent of the informants. The data were stored locally, with only myself treating and analysing the data in compliance with the Norwegian Center for Data Research's (NSD) formal approval. After data collection, I transcribed and anonymised the interviews and coded the data into key statements. This relatively low number of informants, coupled with the broad range of age, job position, gender distribution and geographical bias, make the dataset less reliable and generalizable. Instead, the dataset allows for a preliminary direction of analysis, which is reflected through what I map out as four identified "themes." (May 2011: 150). These themes are *self-reflections* that motivated my respondents to reflect on their own position in society and history when producing cultural memory via videogames; *mnemonic reinforcements and contestations*, a theme that draw out the ways that my respondents engaged with the memory politics of their cultural expressions; *techno-ludic constraints*, which shows the material and cultural perception of videogames and how this limits cultural memory and finally *economic axioms*, which highlights the materialist conditions of game production. These themes help structure my data analysis to draw out overarching tendencies in the responses and how they relate to the memory-making potentials that my respondents encode into their products.

My data gathering has a series of weaknesses: low response rates, an emphasis on European and North American respondents and most of all the non-disclosure agreements that encouraged potential informants to decline being interviewed. The latter refers to the contracts that workers in the game industry often sign when hired, which serve as a legal gag-mouth to prevent internal knowledge, capital and controversy to leak out to the public. This results in an opaque, impenetrable wall of higher-budget studios, which is an often encountered and researched phenomenon for previous researchers (O'Donnell 2014; Woodcock 2016; Srauy 2017). For the consented informants, I also inquired about other people who might be relevant for my research, but most people did not send me further connections, possibly due to fear of getting identified or simply because time is precious for those precariously developing commercial games.

My own position as both a critical enthusiast of videogames and as a white, male academic meant that the white male informants I met possibly felt more comfortable with me by virtue of my identity, thereby revealing more uncomfortable statements to me. However, my previous critical work on the production of racial, gendered and economic power in videogames did not prove to be a hindrance, as far as I have gathered, since all of them were self-admittedly unfamiliar with my research project and my background before the interviews. I now proceed to outline the findings according to each theme.

## Findings

### Theme 1 – Self-Reflections

At the end of each interview, I explicitly asked the informants to reflect on their own position in society as cultural producers. I wanted them to tease out their thoughts on the status of their own games on memory and society, with an emphasis on the political and ethical nature of memory, games and play. Only Tumelo gave the motivation reason for making their particular game set in Taiwan: “Why can’t I find any game out there that could represent our culture and share with the world the place I grow up in?” Moreover, for their non-English game, Tumelo stressed that “localization is essential,” because they did not just want to make a game for themselves and the people in their country, but “in order to let the world know about our culture, we have to publish our game worldwide. [...] To break the barrier, we tried to seek for a message that’s universal for everyone.”

Most other informants unfortunately had not given much thought to it. Farai simply stated that “it’s really rewarding to be able to develop something and then see others have fun playing it.” Keaton found that “political correctness” and “self-censorship” had run amok when political topics are treated in games, so they found it difficult to include sensitive historical traumas in their productions. Alternatively, Doron happily welcomed whatever controversy if it would lead to more sales of their historical game. In that sense, they did not appear to be actively conscious about their situatedness within the already hegemonic mass culture. If they received criticisms stemming from how their games were distributed and consumed in society, they mostly were hesitant or nervous. However, this lack of awareness was nuanced by their statements on how they viewed history and memory as seen in the subsequent theme.

### Theme 2 – Mnemonic Reinforcements and Contestations

The theme of reinforcement and contestations over memory illustrate on one hand the sources the informants relied on and how they encoded their understandings of history to a videogame, while on the other, it also shows how each informant positioned themselves in relation to contemporary mnemonic hegemony. Most sources did not approach sources in a critical way; they simply consulted online articles on Wikipedia or at their local libraries, save for those few who were critical of typical historical sources. Informant Doron revealed that they used the Hollywood film *Apocalypse* as a “good source of inspiration for that period and that setting, in order to get the South American culture right.” Gili stated that their experience working in big-budget productions meant that people “will have seen a lot of science fiction and action movies, so [their] references [...] are very pertinent and always on the forefront, [...] anything you want to do has to be able to work with those people who only have those references to make them see

beyond [...] an action movie.” This reliance on broader cultural memories within game production teams indicates the influence of even fictional historical narratives. Taking a different stance to historical sources, Tumelo stated that since they “are not scholars nor historians, we simply felt that it wouldn’t be right to discuss the history and facts from our own narrow perspective.” In their specific production, Tumelo said that the team members had “many personal stories about [the historical trauma] from our grandparents. We knew that the trauma was real,” thereby echoing the mnemonic trauma between generations according to Marianne Hirsch’s concept of postmemory (2012), but they still relied on “old footage, newspaper, articles” as well as folklore, fiction literature and film as inspiration for the historical setting.

Here, Gili also took an active stand about listening to those in the margins rather than “stuffy historical sources” as they put it. They saw their “role within the team to find what’s uncomfortable in history and raise the question and push for its representation [...] and decolonization.” Keaton revealed that the often-mentioned refrain of using “historians” for a game project was mostly about consultancy in reference to dates, while Gili claimed that historians were mostly used as a point to market their multimillion product. Just as well, creative licenses seemed to be the *modus operandi* when it came to depicting history – each informant revealed that the importance was engagement and creativity to entice players rather than so-called “historical authenticity” – in the end, as Keaton put it, “it is us who decide [on what is important to depict], but not usually the historians.” This is in line with Copplestone’s (2017: 430) research that corroborates developer’s prioritisation of “fun” and “sales” over cultural heritage.

Two of the student informants stated that they approached history as a means to counter mnemonic hegemony – i. e. going against a dominant historical narrative of a former slave nation where the informants revealed that they never learned about colonial history in school so their games were challenges to such collective memory writing. Two of the small-scale informants stated that they also saw their memory products as a way for people to reflect on their own position today via a historical narrative. As Farai said, “So I really wanted to kind of get onto the project more and more about it and hopefully deliver something that would educate other people about the sugar trade in Scotland,” a history that they did not recall being taught about in school or via popular culture. Chi made similar remarks about their upbringing, where “I was not told that Portugal was the country that pioneered the transatlantic slave trade [...] We do not talk about the crimes in our collective past; what is taught is how Portugal was great, a glorious country, because it ‘found’ this or that country before all other Europeans, and because it held the first overseas empire in history.” In contrast to Farai’s and Chi’s active stance towards collective memory discourses, Merrik revealed that their team remained “relatively as neutral as possible regarding the reason for [the U. S. civil war]. Our goal is to depict how it is to be a soldier in the 1860s and not politics.”

Meanwhile, the rest of the informants simply used history as a way to stand out in the marketplace or where dominant tales of colonialism is seen as “the potential for exploration and discovery” as Doron put it. They further stated that “the whole European discovery of America is one of the most central journeys of discovery ever [...]. Those are some of the first things you think about when you’re talking about history and tales of exploration.” Doron saw this rarely seen historical setting as “something that stood out in the market/industry, something that could have an identity that clearly separated itself from other games.” Here, Doron views colonial history both as a white-washed tale of exploration and discovery and as a way to stand out in the marketplace. Conversely, Chi stated that “[...] part of the reason was I just wanted to make something different. [...] I mean videogame landscape in terms of representation is very uniform. It’s always about like an angry Anglo-Saxon dudes.” As such, there appears to be differing motivations for producing counter-hegemonic memory.

### **Theme 3 – Technoludic Constraints**

The respondents also revealed some of the particularities with developing games. For instance, Farah stated that the development method of white-boxing meant that signifying elements such as narrative, characters, objects, etc. were secondary to the actual playtesting of the game design that they had in mind for their historical game project.

This crude way of testing out game design also speaks to the incredibly complicated nature of game development that require lots of highly skilled labour in order to produce polished play experiences. Chi stated that “the very nature of the kind makes it difficult to do something highly polished and commercially viable.” Developing videogames is an incredibly complex process with multiple pressures on what priorities to make, that most of the informants found it very difficult to make something up to expected standards – as Keaton put it, “it is highly limited what historical points we want to convey” given “the bandwidth and complexity” at their studio. From animating objects and characters, to creating art assets, to establishing the game design, to programming, to placing sound triggers in the environment, to creating the actual sounds, and to make it all come together for players to find it an engaging experience that they want to play with. As such, the amount of work required to make games and the required economics speak to how the informants found making games challenging, complex and costly. To make their historical games believable for their audiences, Merrick stated that it “requires many, many resources and time in order to get right.” Doron added that access to hardware and software makes the work they have put into the game difficult or inaccessible to be widely played among consumers. Thus, there is a double bind of having complex software being constructed via highly skilled labour contrasted with the relative privilege or inac-

cessibility of this software via the hardware platforms that only a select few have access to.

In the same sense regarding the nature of game development, many informants revealed their own inclinations to why they thought games were important for history and memory. Several of the informants reiterated the notion that “games are unique” and their “interactivity” allows players to experience history differently and “better” with “reactive stories.” Just as well, the common refrain of historical games as gateways for an interest into learning more about “history” (“if you wanted to you could really go and learn a lot more about the subject” as Farai stated). Tumelo mentioned that

since [historical period] is seldom mentioned in the history textbook nor emphasized in the educational system, young generation nowadays isn't quite familiar with this part of history. After the game came out, [it] somehow provided them a channel to learn more about the past incident they were unaware of before. Some players even became intrigued and did their own research about [it].

While the uniqueness of videogames has been criticised by several scholars, the informants' perspectives nevertheless reveal their own justifications and value-systems of making games and what their products are able to do for the people who play them. This echoes Ian Bogost's (2007) concept of procedural rhetoric, where videogames form certain messages on the level of mechanical system and sign to e.g. produce “serious games.” The mechanical nature of games was also highlighted in the way that one of the developers emphasised that visual marketing had to signify what players are able to do in the game – so that for example Doron wanted tools and weapons to be prominent in the marketing of their game about construction and combat. In this sense, it appears significant that paratextual elements also have to clarify or denote not only what the game is about, but also what players *are able to do* in the game.

Finally, the cultural perception of “games being unique” also had drawbacks for whenever some of my informants engaged with people who considered games to be frivolous and incapable of tackling “serious” topics. For instance, Chi was met with dismissals when they pitched their game idea about slavery, because “due to the stigma attached to the interactive medium, and a lingering notion that videogames cannot discuss serious subject matter.” They were “often immediately asked why I am telling this story, and approaching this topic, through a videogame, instead of using literature or film.” This speaks to what Chapman & Linderöth (2015: 137) argues with the “limits of play” where the perception of ludic aspects clash with more serious historical topics. As such, the informants also faced challenges by the so-called “uniqueness of games.”

## Theme 4 – Economic Axiom

Finally, and perhaps most importantly, the informants were all very much occupied with the question of economic and funding – i.e. almost everyone stated that they need to earn money to keep the lights on in their offices and put food on the table. For example, Tumelo stated that in order for their smaller company to survive, “there were times we had to take outsourcing cases to keep the studio running” and towards the end “we encountered financial difficulty” that only was overcome, thanks to a public funding pool. As a consequence, this concern continuously impacted their creative decisions on what type of game to produce. This was a recurring phenomenon across the different scales of productions, where small-scale developers to those working within multimillion projects were first and foremost concerned with how much their product would sell. As Doron put it, “[our creative planning] would exclusively be about what can we get funding for. [...] the only thing that matters is if you can prove there’s a market for it,” while Erin felt that game developers “should be a lot more cynical [...] and think about how can I make the most profit of the games that we’re making.” Thus, when asked about their creative choices for which pasts to include, the overriding concern was always that it had to earn money. Chi revealed that any funding from publishers require evidence of a secure return of investment, and therefore Chi had to prove what had sold before, thus ensuring that only sequels of what had already proved profitable is produced – i.e. the production of cultural memory is backwards looking and self-referential. What was successful before will be successful again seems to be the operating principle. This meant that hegemonic narratives of history were easier to get funding for, so already well-known historical periods and perspectives were more likely to sell – e.g. one informant stated that they chose to depict the Viking era instead of a Chinese explorer in the 11th century simply due to using “safer historical settings until we have established a customerbase.” Informant Chi revealed that sensitive or seemingly controversial topics such as slavery are denied funding by those in power, while the same informant revealed that people in economic power positions and funding were “Anglo-Saxon Nordic [...] So like what you see outputted to the big markets are things that are products that reflect that culture.” Here, Chi is pinpointing who is giving money to these games, who is making them and how this influences the production of memory in videogames. The economic precarity caused by including sensitive or controversial historical topics also made it difficult to balance pragmatism versus idealism – in Tumelo’s case, their team ended up siding with the latter:

Since our game dealt with a serious topic, we were once afraid of the players’ reception. Yet on a second thought, even if the sales didn’t turn out to be good, we would still be content, for at least we were able to share our perspectives to the world in the form of game.

Informant Gili revealed that working on larger big-budget projects also meant that it was harder to push back against preconceived hegemonic notions of history and representation, simply because the amount was that much bigger. As they put it,

[the larger the team,] the more likely you are to find people who just not have pre-existing ideas about how things, its about a nest of pre-existing ideas, how things are in history, how things have to be in games, what is going to sell, and there's a cautiousness with having to protect a large budget that makes it harder for people to embrace larger ideas.

This meant that not only does return of investment impact the production of cultural memory in historical games, but the scale of production and the amount of workers also increases the likelihood of mnemonic hegemony.

Several informants revealed that they knew what audiences to target and their preferences, and therefore they were motivated or forced to produce what such audiences found appealing. As Chi put it "They are more likely to give money to something that they know will work or that they can estimate better that it will work to something that they've never seen before." Doron revealed that they wanted to target 20- to 35-year American men if they wanted to sell, since "I want to live or survive making games that I'm talking about the market," as they argued.

The informants who revealed their audience conceptualisations did not provide evidence or explanation of where or how they constructed them. The informant Gili said that they were not privy to how the multibillion publisher gathered data about audience preferences. Gaining insight into the epistemology of such capitalist logics would otherwise prove useful in understanding the continuous reproduction of mnemonic hegemony in games.

## Challenges and Limitations

In addition to the weaknesses mentioned earlier, there are other limitations to my study. As Rigney (2016: 3) writes, memory is more akin to process than a product. What gets encoded by developers and how they think about memory based on their own convictions and economical context, the formation of memory is still reliant on the constant, iterative process of individuals and collectives.

Similarly, my limited qualitative interview dataset does not address the day-to-day practices in each studio that would otherwise reveal more about the implicit assemblages of actors within the studio itself. Just as well, I do not conduct an institutional or structural analysis that would further reveal how memory production organisations and networks form memory-making potentials in their games – especially on a macro-level. Neither does my method account for the responses that my informants would not admit or did not consider important for the interview. This drawback is made more apparent when one considers the fact that my infor-

ments were mostly people who are the face and leaders of their studios, and so my interviews did not give voice to other workers who may or may not contest the statements by those in charge.

My research also forgoes the other, usually silenced or hidden workers of the games industry, namely the hardware assemblers and outsourcing studios that do much of the legwork for contemporary videogame production. Additionally, I did not ask my informants how they utilised the labour of players to increase the value of their product, since that is one way of capturing and commodifying play as seen in the example of hidden data-harvesting and general “playbour” that exploits players to increase profits of the studios or publishers who make these games.

## Discussion

Linking back to the initial discussion on the political economy of videogames, the production, distribution and consumption of historical videogames are highly conditioned by the social and economic power hierarchies in which producers operate. As my informants revealed, their working conditions, their positioning and negotiation of collective memory discourses and their privileged access to games production result in an unequal distribution of communication resources across the divide between production and consumption. The four themes each reveal the underlying conditions of producing cultural memory in historical games. Primarily, their continued refrain of concerning themselves with the economic conditions they work under means that their precarious situation results in reproducing tried-and-true formula. Although few explicitly reflected on their position as producers of cultural memory, their positioning towards reinforcing or contesting mnemonic hegemony revealed each informants’ implicit negotiations of cultural memory. Yet whether it was student informants or the CEO of a mid-sized company, the overriding logic was always economic.

However, at the same time, I would also state that there is something more going on than simply an overriding economic logic that drives their “one-dimensionality of creativity” (Bulut 2018). Some of the informants relied on assumptions about their target audiences, their preferences and what is appealing at the level of consumption. Yet they did not suggest or explain how they knew these preferences. As such, I propose that their assumptions rest on implicit notions about identity cultivated by the hegemonic values of the society they live in. This means that my informants reproduced their own biases about gender, race, sexuality, ethnicity, age and social class, and how these categories influenced who would be “the target market,” i.e. those with purchasing power. In that sense, the economic axiom is inadequate in accounting for the other ways that mnemonic hegemony is maintained and reinforced.

Overall, the data indicate the conditions in which the production of historical games as part of a global production network motivate the commodification of play

and games. Echoing the existing work on the political economy of the videogame industry, historical videogames are structured by the hegemonic mass culture in which they are produced.

## Conclusion

This article has established the significance of the relation between production and form in cultural memory. My qualitative interviews form one part of mapping and illuminating how game developers encode memory-making potentials into historical videogames and in turn, what explicit conditions they operate under. Specifically, the themes that I established drew out the economic axiom of memory production, the individual contestations over memory, the technoludic constraints of game development and finally their own mnemonic role in society. As I argue, these results highlight on one hand the system in which these individuals are embedded that motivate them to churn out specific hegemonic memory-making potentials in their games, and at the same time rely on assumptions and notions that go beyond the economic axiom. Historical game developers are, like the rest of the games industry, enveloped in deep economic precarity with engrained notions about what games can be and who buys them. This holds true across the economic spectrum where both student developers as well as workers within medium- to big-budget productions both operate under similar working conditions. Regardless of whether it is a commercial or a subversive avant-garde production, the capitalist, heteropatriarchal, racialised, Western-centric nature of the videogame industry motivates the reproduction of mnemonic hegemony. As such, my limited data indicates how cultural memory is very much predisposed by the material as well as the hegemonic conditions that structure individuals into reinforcing mnemonic hegemony via their encoding practices. Future research that analyses the institutional, structural and geographical relationships between producers, distributors and consumers is needed. Additionally, a full-scale analysis of the unequal distribution of global communication resources in videogames with special attention to the so-called Global South and the hoarding of wealth by multinational companies would prove especially insightful in determining how contemporary mass media such as videogames reproduce mnemonic hegemony.

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