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Grinding for War: Authenticity and Experience in WWII MMOs

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WORLD WAR II IN GAMES

World War II is undoubtedly the most thoroughly covered historical theme in the medium of digital games.^[1] The popularity of WWII manifested itself in a host of generic creations in the 2000s. These games oversaturated the markets, and eventually exhausted the subject matter.^[2] In recent years, major game developers and publishers have mostly shunned the topic. The more popular wargame genres have almost completely deserted the theme, while the niche genres have continued to draw from this well-trodden source of inspiration. However, trends are cyclical and the current hiatus suggests that WWII may make a return to mainstream in the near future. We are now witnessing a similar situation with modern and futuristic military shooters that we saw in the last decade with the WWII-themed shooters. What once was considered innovative for a gaming genre is now growing stale and becoming a sign of stagnation. Smaller developers have adopted new business models and cooperated with modding communities to reinvigorate the interest to WWII.^[3] There are also certain obstacles and challenges, stemming from the gaming culture itself, which impede design of historical wargames. For instance, rigid faithfulness to historicity will surely clash with the current gaming tropes and trends.

The game industry's fascination with WWII precedes the era of digital gaming. The earliest games about the war were published, when the global conflict was still ongoing and undecided. Germany was particularly prolific in producing propaganda games, which disseminated explicit political and national messages to boost the war effort. These titles were based on actual events or educated children through jingoistic perspectives.^[4] Most of these games belonged to race game category. Some were militarised variations of existing designs.^[5] War and patriotism were also common themes in American board games.^[6] Games were also used as propaganda tools in German-occupied Europe.^[7]

WWII-themed games matured into a more sophisticated genre of wargames in the early-1960s.^[8] Harbinger of this change was a new line of tactical and strategic board games that had more serious approach to their subject matter, compared to many of their predecessors. The conception of wargames as historical simulations was constructed through complex game design and assertive marketing rhetoric. Avalon Hill, one of the pioneering wargame companies, endorsed its products as "thinking man's games", in which the outcomes were determined by intellect and strategy rather than luck. These hex-and-counter wargames were integral in disassociating games from toys and rebranding gaming as a hobby enjoyed also by adult audiences. The emergence of personal computers in the late 1970s and early-1980s brought the genre into digital platform.^[9] This transition was a logical evolutionary step for wargaming. It offered a solution to the problem of hypercomplexity, which had partly contributed to the decline of board wargaming in the early-1980s.^[10] A computer handled the necessary calculations considerably quicker than a human player. Many of these early games were text-based, and they were designed and published by the companies that produced board wargames.

As the digital game technology evolved, various sub-genres adopted the theme. To generalise, historical games have two prevalent conventions to simulate history: they either recreate historical events or offer alternate histories. Grand strategy games^[11] enable historical revisionism. The genre invites players to change history and challenge established historical narratives, or, conversely, attempt to recreate history as it happened. In turn, real-time strategy games^[12] (RTS) portray specific historical episodes and campaigns. They are more combat-oriented and concentrate on the tactical aspect of warfare. Tactical shooters,^[13] in accordance with its name, have similar focus, but they depict combat from the first- or third-person perspective of infantry men. Vehicle simulation games^[14] aim to provide realistic experiences of manoeuvring historical military vehicles in battle.

The massively multiplayer online games^[15] – henceforth abbreviated as MMOs – are a more recent game category to handle WWII. MMOs usually incorporate elements of different game sub-genres, such as those of strategy games and first-person shooters, introducing a host of specific gaming conventions. As a result, their approaches in presenting history are not uniform. Compared to many other wargame genres, MMOs enable large scale battles, where thousands of players simultaneously partake on the same, persistent theatre of war. The multiplayer mode also adds a layer of complexity that, for instance, challenges construction of established metanarratives. These factors pose interesting questions to historicity. Grinding is one of the definite mechanic and characteristic of MMOs.^[16] This activity refers to performing repetitive actions and tasks to progress in the game. The motivating factor behind grinding is levelling up characters, earning/collecting in-game rewards and gaining access to all parts of the game.

The present article examines generation of historicity in free-to-play WWII MMOs, *War Thunder*^[17] and *Heroes & Generals (H&G)*.^[18] These games have adopted different approaches in depicting WWII: the former game creates historicity through simulation, whereas the latter constructs authenticity through experience. As multiplayer games, *War Thunder* and *H&G* represent history as shared collective experience. This position poses both challenges and opportunities in maintaining a sense of historicity, which emerge from the inherent clash between entertainment, cultural conventions and authenticity. The theoretical framework of the article addresses more generally the meaning of historical authenticity in digital games. The concept of game realism – an intrinsic constituent of historical games – is also explicated. Furthermore, implicit and explicit restrictions set by cultural sensitivities and national legislation, which influence historical representations, are discussed.

THE NOTION OF REAL

The notion of realism is central to historical games, as the genre attempts to imitate and interpret real-world events, phenomena or conditions.^[19] The tactical and strategic board wargames established this connection in the 1950s.^[20] Realism is unquestionably one of the most ambiguous, malleable and widespread terms in the history of Western arts and media. The concept of game realism, which can be perceived as a subcategory of artistic realism, is governed by the laws of aesthetics and science, as it takes into consideration theories of art, but also focuses on the technological aspects that are specific to the medium of games. Game realism is highly nebulous and inherently problematic concept, and it has been widely conversed in the field game studies. This discussion has encompassed both the "entertainment-only" and "serious" gaming applications.

Ribbens and Maillet^[21] divide perceived game realism into six overlapping constituents: 1) factuality (correspondence between the game world and the real-world); 2) authenticity (plausibility and veracity of the game experience); 3) social realism (congruency between the game and the social reality of the player); 4) character involvement (identification with the avatar and/or immersion with the game world); 5) perceptual pervasiveness (degree of audiovisual verisimilitude); and 6) simulational realism (fidelity of the simulation and complexity of the game system). In addition to these factors, the concept of realism has been discussed, for instance, in the context of ideology,^[22] numerical quantification,^[23] documentary^[24] and journalism.^[25]

To summarise, game realism is a multifaceted, relative concept, which is inherently influenced by artistic conventions and sociocultural contexts.^[26] The term does not just stand for audiovisual sensorium constructed of formal game elements, but can also include a host of non-sensory cues, such as historicity of the subject matter, teleology (the objective and purpose of gaming), or equifinality of goals (the possibility to reach the given goals by many potential means). Furthermore, we consider an artistic rendition a realistic one if it is in accordance with our expectations and impressions of the thing being represented. Thus, realism is ultimately a subjective interpretation, and its perception is based on prior knowledge, schemata or media frames adopted by the interpreter. One may also examine the concept as a discursive construction. Hence, realism becomes a rhetorical device used to persuade certain ontological propositions about the nature of digital games. These claims are often idealistic, and precede the actual technological or cultural development of the game medium.

AUTHENTICITY/EXPERIENCE

The potential of digital games as vehicles for rethinking history has been widely acknowledged.^[27] This perception is based primarily on the interactive nature of the medium. Games require active participation, retaining an exigency that the players must be able to influence the outcomes, or even the game content itself, in a meaningful manner. In the context of historical games, the above-mentioned notion also suggests that players adopt the role of historians, who have the capacity to shape, or at least influence, the course of history.^[28] Regardless of the user-centric, post-structuralist prospect, this potential has been only deficiently realised. Instead of counternarratives or alternate histories, historical games have often relayed dominant metanarratives in a new form.^[29]

In some instances, historical wargames have been dubbed as a virtual form of reenactment.^[30] This definition is not perhaps the most precise characterisation, as reenactments of historical battles tend to be extremely scripted events, whereas recreation of historical battles in games – depending on the genre and game mode – are more spontaneous and disorganised. Chapman^[31] divides this "digital-ludic re-enactment" into exploratory and performatory historical challenges. The former refers to imitation of functions and activities performed by historical agents, whereas the latter refers to the similarity of the in-game information and the information in the historical environment. Chapman notes that contemporary gaming interfaces are not capable of realistically mimicking performatory challenges. Instead, representational techniques are used to remind of their existence.

Digital games are experience-driven media. The aforementioned quality dictates that experience outweighs rigid historical accuracy. Games practice selective authenticity by omitting and/or adding historical details and fictive elements. Historical games are not critical analyses of the past events, but immersive gameplay experiences that aim to satisfy audience expectations.^[32] These expectations are also influenced by other mediations, such as film and literature. De Groot^[33] argues that in historical wargames "the consumption of history is both academic and fictional [...] The player is engaging in re-enactment, simulation, a game and history all at the same time [...] This type of experience suggests an investment in dynamic models of history, and economy of historical desire drawn inexorably towards the tension between 'experience' and 'authenticity'. 'Play' and variously controlled models of interaction frame contemporary consumption of history-as-experience as cultural product and economic experience."

Generating a satisfactory sense of authenticity is unquestionably the most pivotal objective for historical games to be considered as plausible historical representations. Visual verisimilitude and fidelity of simulation are more genre-specific aspects. In addition to subject matter expertise, utilisation of archival material has been perhaps the most common practise to achieve this. Baron calls this historiographic strategy as production of archive effect.^[34] This effect is essential in transferring players into historical spatial and temporal location created by the game.^[35]

The archive effect inevitably highlights the question of indexicality i.e., the causal relation between the image and its referent.^[36] Indexicality is one of the central truth claims in photography and documentary. In principle, digital games do not possess the indexical status, as they are computer-generated simulations, not mechanical reproductions of reality. On the other hand, the process of digitalization has contested the whole formal notion of indexicality.^[37] Game scholars have suggested that certain techniques, such as rotoscoping, motion capture and simulation,^[38] can result in a phenomenological shift through which non-indexical material can be perceived as indexical.^[39] Rotoscoped still images of iconic historic photographs have been used, for instance, in the loading screens of the grand strategy game *Hearts of Iron III*.^[40] This artistic solution creates a sense of indexicality and archive effect without disrupting the overall visual aesthetic of the game. Furthermore, the constant development of game technology has increased the plausibility of computer-generated imagery (CGI). Today, the use of CGI is a common practice in war documentaries.^[41] This material is primarily produced with proprietary game engines.

One alternative method to approach historicity is to imitate previous mediations of reality. The aim is not just to reproduce historical events, but to draw association with other, more recognised works of art or culturally established forms of media. *Medal of Honor: Allied Assault*^[42] and *Call of Duty 2*^[43] are prime exhibits of this tendency. These seminal WWII shooters remediate^[44] the opening battle scene from the film *Saving Private Ryan*,^[45] which in turn drew inspiration from an iconic photograph, *Taxis to Hell – And Back – Into the Jaws of Death*, taken by Robert F. Sargent at Omaha Beach in 6 June 1944.^[46]



Examples of the techniques and methods that WWII games employ in their attempts to create historical authenticity: roto-scoping (above) and remediation (below).

CULTURAL AND LEGISLATIVE BARRIERS OF REPRESENTATION

One could assume that the inescapable presence of violence would be a source of controversy in games depicting one of the bloodiest conflicts in human history. However, this has been rarely the case. Nor have WWII-themed games been widely associated with the discourses of Baudrillardian nightmare, in which the players confuse reality with simulations of reality.^[47] This type of debate is reserved mainly for modern military shooters.^[48] World War II remains a convenient theme for the medium of digital games to explore. The war is not recent or ongoing, and its metanarrative is well established. There is a clear division between "good" and "evil", albeit some aspects surrounding this mythology have been debunked. The six-year conflict falls into the category of just war, without the moral ambiguity of the Cold War era or modern asymmetrical warfare.

Nevertheless, WWII games are not free of controversy. Historical games are retrospective representations of recorded real-world events, phenomena and conditions. They are also unavoidably infused with belief systems, prone to reflect the interpretations and biases of their designers and publishers. Thus, historical games should not be perceived as pure historiographic simulations, but as also their ideological approaches should be acknowledged.^[49]

Transgression of cultural sensitivities has been a typical cause of public contention. However, mere offence is not sufficient enough to generate controversy, as they are manufactured through social interaction.^[50] Arguably these cases have most likely been about cultural discrepancy than about intentional ill will. Game developers relay myths, tropes and narratives familiar in their cultural sphere, which are subsequently perceived as exaggerated or false by audiences with different conception of history.

There are also matters of national legislation at play.^[51] Perhaps the most known example is the German criminal code, which prohibits the use and distribution of symbols of unconstitutional organisations. This definition naturally includes Nazi symbolism. The section 86a does not apply to acts and mediations that, for instance, serve educational purposes or promote art and science.^[52] However, the medium of digital games does not meet the aforementioned criteria in the eyes of German legislation. Thus, publishers censor the German versions of historical games that feature such imagery to gain access to Europe's biggest game markets.^[53]

The narratives of heroism, patriotism and good war dominate WWII games, whereas the narratives of victimhood remain absent. One major explanatory reason for this can be traced to the cultural status of digital gaming, which was still being negotiated during the heyday of historical shooters in 2000s. These are relatively safe themes for a medium that was being accused of desensitising players to real-life violence, or even transforming some of them into mass murderers. There have been few failed endeavours to design digital games about the Holocaust, but these projects have been quickly cancelled due to public pressure from various interest groups. The overarching reasoning for their cancellation has been that the Holocaust is not a suitable subject matter for the medium of games to handle.^[54] This line of argumentation underlines the rhetoric of playfulness and frivolity, which remains integral for the normative debate about games as historical representations. Much because of this, the game developers have practised self-censorship or willingly avoided the theme.^[55] Consequently, the Holocaust has been almost exclusively treated in neo-Nazi and white supremacist propaganda games.^[56]

German single-player campaigns have been mostly absent in WWII tactical shooters, whereas the Germans have been a playable faction in multiplayer mode since the emergence of the genre in the late-1990s. Reciprocally, German campaign is a norm in other genres, such as real-time or grand strategy games, which offer more distanced perspectives into the simulated warfare. Perhaps the most evident explanation to this disparity is the absence of traditional narrative in the multiplayer mode. However, the viscerality of the first- and third-person perspectives is also a factor that should be taken into consideration. *Red Orchestra 2: Heroes of Stalingrad*^[57] and *Iron Front: Liberation 1944*^[58] are rare exceptions in the tactical shooter genre. These games implement a set of artistic decisions that curb insinuations to Nazi sympathising or glorification. In this context, the differentiation between the Wehrmacht soldiers and the political soldiers of the Waffen-SS is essential.^[59] The premise also has great importance, as it creates the atmosphere of the narrative. Both games are set in the later stages of WWII when the German war machine was stalling.^[60]

WAR THUNDER: HISTORICITY THROUGH SIMULATION

War Thunder^[61] focuses on aviation and armoured warfare in historical locations. The naval battles are at the moment in closed beta phase. The roots of *War Thunder* are deeply embedded in historical vehicle simulation games. The game creates a historical model that players experience by operating various kinds of tanks and aircrafts. This cultural background creates a horizon of expectations concerning perceived game realism in terms of modelling, simulation, visual verisimilitude, and historical accuracy. The bulk of vehicles in the game's technology tree are from the WWII period, but the vast arsenal also includes tanks and planes from previous and later eras.^[62] The five belligerent factions represent the two main alliances of WWII: the United States, the United Kingdom and the USSR of the Allied nations, and Germany and Japan of the Axis powers.

The most prevalent and popular gameplay component is the random multiplayer matches, which simulate well-known historical battles to a varying degree. These battles are isolated, as there is no continuation between them. *War Thunder* also features cooperative missions and dynamic campaigns. Regularly changing community events and tournaments also recreate historical battles. In addition to free-to-play content, there are two premium single-player campaigns, based on the key events of the Pacific theatre.^[63] Gaijin is also developing World War Mode, which brings the battles to the global scale.

War Thunder remains true to the conventions of MMO. The main objective is to grind research points, in-game currency and experience points. These resources are received by damaging/destroying enemy vehicles, accomplishing given objectives and winning the matches. Grinding has two phases: first players grind for research points and in-game currency to unlock and purchase new vehicles. Then players need to grind research points for modifications. Researching and purchasing modifications is not mandatory, but these modules give significant performance boost, compared to stock vehicles. The accumulated experience point can be used to train crew members. The players can also buy special currency with real money, which can be used for premium accounts, premium vehicles or to speed up the research.

War Thunder has three game modes: arcade, realistic and simulator battles. These modes cater both casual and hard core gaming audience. The separating factor between the modes is the scalable fidelity of simulation. The damage, flight and physic models, which are based on archive data and real world parameters, become increasingly more complex and true-to-life as the modes progress. Thus, the archive material is not only used as visual reference, but also in the underlying level of code. However, Gaijin has exercised artistic freedom, when it comes to certain attributes. The fidelity of simulation has an impact on tactics and strategy, as well on gameplay tempo. Realistic and simulator modes, for instance, remove visual aids, enforce historically accurate team compositions, and limit the number of maps and available vehicles per battle. Simulator mode also restricts the player perspective to first-person viewpoint.



Aerial combat and armoured warfare in different game modes: arcade (above) and simulation mode (below). The main differences between the modes are physical models, visual cues and available player perspectives.

The second central constituent of generating historicity relates to mission and map design. The gameplay takes place in virtual environments that bear resemblance to historical battle locations. These places are made recognisable through visual cues, modelled by utilising archival material as frame of reference.^[64] The single-player campaigns convey historical information and details that contribute to the sense of authenticity, but do not affect the gameplay itself. Each mission starts with an introductory cutscene, which explain the historical background of the battle. The cutscenes mix archival footage with in-game graphics. Players control renditions of real wartime pilots, who participated to the actual battles. The missions end with cinematic cutscenes accompanied with voice-over of citations from published memoirs and reports of action, compiled by military personnel who eye witnessed the events. This adds a layer of history-as-reflection to the game narrative. The mission descriptions for multiplayer battles are considerably briefer.

 This is a screenshot of the 'Modifications (Fw 190 A-5)' menu in the game War Thunder. The menu is organized into several sections:

- Vehicle Info:** Shows the aircraft 'Fw 190 A-5' with a level of 5.3, a 'Backup vehicle' with 30 gold, and a 'Talisman' with 1200 gold.
- Offensive Armament:** Includes 'cannon x4' and 'MG x2'.
- Secondary Weapons:** Includes '2xWfr.Gr.21'.
- Offensive 7.92 mm:** Includes 'Universal'.
- Offensive 20 mm:** Includes 'Air targets' (two instances).
- Flight performance:** Includes 'Fuselage repair', 'Wings repair', 'Radiator', 'Compressor', and 'Engine'.
- Survivability:** Includes 'Airframe' and 'Cover'.
- Weaponry:** Includes 'Offensive 7 mm', 'New 7 mm MGs', 'Offensive 20 mm' (two instances), and 'New 20 mm cannons' (two instances, one costing 3100 gold).
- Autopurchase modifications:** A section at the bottom with a checkmark icon.

Upgrading and purchasing modifications is one of the main motives for grinding in War Thunder.

The aim to provide historically accurate simulation conflicts with certain fundamental elements of multiplayer gaming, such as gameplay balance. *War Thunder* cannot escape these realities, which tend to favour experience/playability over authenticity/realism. Adjusting shell penetration and reload time for the sake of balance, or combining hostile factions under the same team to decrease matchmaking time, are examples of this tendency. Furthermore, the battle rating system used in the matchmaking is not always historically accurate, as it is based on the vehicle statistics, not on their production period. The predictable calls for nerfing^[65] also highlight the tension between authenticity and experience.

Gaijin has been accused of instilling ideology to its game design. According to the critics within the gamer community, this ideology manifests itself in the so-called Russian bias, which refers to intentional boosting of the attributes of the USSR vehicles. The alleged motives vary from rewriting history to nationalistic favouritism to pleasing the Russian gamer demography. The perceived bias includes, for instance, map design choices, ammunition boosting, undertiered vehicles and selective use of modifiers. Gaijin has naturally denied implementation of such policies.^[66] Most of these claims are anecdotal, based on players' subjective gameplay preferences and combat results, which often depend on employed tactics and strategies. However, some arguments are based on more concrete evidence, such as datamining.^[67]

The claim is plausible to a certain extent, but it can be partly explained, for instance, with the scalability of simulation. In the arcade mode, certain Soviet vehicles appear overpowered contrasted to their counterparts in the same tier, but their advantage is reduced with the introduction of more complex simulation models in the realistic and simulator modes.^[68] This reading is partially supported by the in-game leaderboards^[69] and vehicle statistics.^[70] In the end, without extensive analyses of player statistics and vehicle parameters, the claim of Russian bias remains a speculation. However, it can be argued with certainty that some tanks and planes have been initially allocated into wrong tiers, their battle ratings are undervalued or their attributes have been boosted.^[71] The intention behind these choices is unclear.

HEROES & GENERALS: AUTHENTICITY THROUGH EXPERIENCE

Heroes & Generals (H&G) is a combined arms game – integrating tanks, planes and infantry – which draws inspiration from the traditions of first-person shooter and strategy game genres. The game has currently three factions: the United States, Germany and the USSR. The central tenet of the game is the creation of alternate histories. *H&G* is not a straightforward historical game, although it is being marketed as "the ultimate WWII game". The setting is recognisable from the history, but *H&G* does not have a historical starting point, nor does it recreate specific events or faithfully follow the course of history.^[72] This inherent unpredictability of the simulated conflict creates a notion of realism as equifinality. The end state of the game is not predestined. The absence of historical alliances is another example of divergence. All belligerents battle against each other for the domination of Europe. This creative choice, which enables simultaneous combat between all the factions on a single map, enriches and balances the gameplay. The American-Soviet coalition would make Germany an overwhelming underdog in the campaign.

The gameplay consists of action and strategy components, depicted from the first-person viewpoint and top down perspective, respectively. There are two game modes: staged battles and war. The staged battles are balanced matches with equal resources. These matches are isolated clashes, and do not impact the course of war. The war mode is more dynamic and consists of three types of battles: skirmish, assault and defend. Every battle has an impact on the grand campaign. The war is won when either of the two victory conditions is met: 1) the faction captures or holds 15 capital cities; or 2) other factions lose all their major cities. The order of battle and the composition of troops depend on available resources the generals are willing to commit on specific battles. This prioritisation can result in highly unbalanced battles, pitting smaller infantry units with minimal resources against larger motorised forces. Consequently, this aspect makes the experience of war seem more authentic.^[73] Albeit the strategic component is central to the outcome of the war, it can be considered as a browser minigame for experienced players, which revolves around simplistic mechanics of deploying, reinforcing and

upgrading of assault squads.

H&G has primary and secondary objectives, which revolve around grinding. The principal aim is develop a character or additional characters, from privates to generals. Experience to do this is earned by dispatching enemy troops, destroying vehicles and capturing/defending control points. Players receive in-game currency,^[74] by participating into the battles. The amount depends on the character rank and battle performance. The credits are used to purchase or upgrade weapons, vehicles, camouflage or new characters. There are six available careers: infantry, paratrooper, recon, tankier, fighter pilot and general. New players usually start with regular infantry, as academy trained or higher tier soldiers require considerable sums of credits or investment of real money. The strategy mode can be accessed when the characters reach the rank 12 (lieutenant) and receive command points. Characters become generals at rank 18. The second goal is to participate to the war campaign. The war mode is reserved for rank 3 or higher characters.



Screenshots of the action game mode (above) and the strategic gameplay with assault teams (below).

H&G adopts an arcade approach to modelling and simulation. Albeit the battle locations in the strategic map are actual cities and regions, the mission maps themselves are generic representations of military, industrial, urban and rural areas. The game lacks maps of larger cities, which means that the battles for metropolises and capitals are fought in smaller towns or rural areas. This is for the most part a technical impasse. The sheer size of the strategic map makes it challenging to recognisably model all 23 major cities or other battlegrounds on the theatre of war. The weapons and vehicles are more accurately modelled, according to their real world referents. The weapon physics are perhaps the most important aspect of simulation for a first-person shooter, as they are the main tools for player-to-player interaction. *H&G* incorporates elements of basic ballistics, such as bullet drop, muzzle velocity and bullet penetration, but these effects are not rigorously simulated.



The main motivators for grinding in *H&G* are soldier rank, weapon upgrades and ribbons. Players gain access to additional weapons, vehicles and items by completing ribbon levels.

Traditions of first-person shooters become apparent through different contours of game design. The battles are conquest-type contests that are won by capturing and defending objectives. The linear maps follow the conventional lane structure, which concentrates combat on specific points in the map. This is reinforced with static objective locations, which must be captured in particular order. The weapon modifications and ribbon system also adheres to the contemporary gaming trends, popularised by modern military shooters. The modifications are upgrades that include internal and external parts, which can be used to alter the performance of weapons. Ribbons unlock combat badges, weapons and other items. Combat badges are passive modifiers that offer various perks, which can be used to specialise characters to different combat roles. They also offer versatility between close quarters combat and longer range engagements. As expected, conforming to audience expectations inevitably interferes with historical accuracy and authenticity. For instance, in high ranking matches, majority of the infantry has scoped firearms instead of general issue weapons. This has significant impact on the nature of combat.

CONCLUSIONS: TWO APPROACHES

Historical games incorporate several interdependent and overlapping constituents that influence their sense of historicity. The base element is the genre, which largely determines the formal elements of realism, such as visual verisimilitude or fidelity of simulation, and also introduces a set of cultural conventions, which in turn are directly linked to audience expectations. Sub-genres include their own distinctive traditions and gameplay styles, varying from game to game.

War Thunder depicts World War II as modern, technology-oriented warfare. It is an armed contest of engineering. However, history is just a backdrop in the multiplayer mode, utilised to create a setting for incessant vehicular combat. World War II is never-ending. Random battles are inconsequential in the grand scheme of things, as there is no persistent campaign to be fought. The upcoming World War Mode likely changes this. *War Thunder* generates historicity by simulating military vehicles and creating playable scenarios of well-known historical battles and campaigns, situating them into virtual environments that bear resemblance to actual battle sites. The game warrants the claims of realism and historicity by employing models and simulation that are based on archive material and historical data. This rigorous approach to simulation asserts the notion of digital indexicality. The aim towards realistic representation, coupled with scalable simulation, is the most prominent innovation that *War Thunder* provides, as the MMOs usually favour more arcade style gaming. The game also leverages challenges concerning performatory actions, as the complex flight models in simulator mode demands the use of joystick, which can be perceived as a simplified imitation of centre stick of a real aircraft.

Heroes & Generals, in turn, depicts World War II through the perspectives of frontline infantry. Other military branches (armour and aviation) have more supportive roles. The game has a postmodern approach to history, as it does not imitate specific historical scenarios or relay metanarratives, but creates a plausible experience (in terms of contemporary gaming conventions) of large scale warfare. The simulation of war is dynamic with varying outcomes. Instead of rigid historical accuracy, *H&G* aims to provide an entertaining arcade shooter, infused with strategic and pseudorealistic^[75] elements. This framework incorporates historical details, such as weapons, vehicles and belligerent nations, but lacks others, such as political conditions or specific events that were decisive for the war. The game does not aim to construct indexical relations to real world data. *H&G* harnesses the potential of the MMO genre by offering a shared experience that allows simultaneous participation of thousands of players in a persistent game world. This is realised in a meaningful way. In addition to soldiering, players can influence the outcome of the war by commanding assault squads, instead of being mere pawns on the

battlefield. One of the most interesting aspects of *H&G* is the shared storytelling experience, which emerges from social interaction. It is quite rare approach in WWII-themed games.

Explicit ideological layers are absent, as both games are non-political representations of WWII. There is only a speculation of such in form of the alleged Russian bias. This is perhaps, because the games focus on the continuation of politics by other means. Concentration on the combat also has an effect on otherness. There is no clear cut division between good and evil. This is a significant distinction to some narrative-driven single-player games. The non-political representation also curbs controversies and legislative problems that would ensue, for instance, from the inclusion of National Socialist symbols and insignia.

It is evident that the historical and alternate history settings of the games analysed in this article do not surpass the common mechanics or conventions of MMOs, or their respective sub-genres. *War Thunder* and *H&G* portray war as an anarchic ordeal. The rank system implemented in *H&G* is meaningless, as there is no real chain of command. Rank is a mere representation of experience, not of authority. Each player can conduct warfare as they see fit, fulfilling their own individual goals or collective objectives. This observation concerns mainly random or staged matches, as online battles involving clans usually have more tactical and organised approaches to virtual warfare. The ludic attitude, in which players willingly surrender their decision-making power to a virtual hierarchy of authority, is not a pervasive convention in wargames. It is reserved mainly for specific gaming niches, such as tactical realism.^[76]

War Thunder and *H&G* revolve heavily around grinding. It is mandatory in terms of progression, accessibility and control. Through repetition players learn, for instance, about tactics, teamwork, vehicle attributes, weapon mechanics, map geography and pathing. Furthermore, in the case of *H&G*, grinding can be perceived as ludic equivalent of attrition warfare. This crude and simplified mediation of form of warfare, where the enemy is defeated by inflicting losses to its material and personnel, adds a layer of authenticity to gameplay. Neither of the analysed games are so-called pay-to-win games, i.e., players do not necessarily need to spend real money to be successful in them. Nevertheless, premium accounts and vehicles influence the gameplay, as they significantly limit the time spent on grinding by granting additional experience points and in-game currency.

Another common trope is the implementation of selective authenticity, which balances between historicity and entertainment. For instance, *Gaijin* has added a modifier for the armour of Tiger II to simulate the deteriorating quality of German steel during the last years of the war. This is done in the name of historical accuracy. Consecutively, the 1944 modification of IS-2 heavy tank can be equipped with post-WWII ammunition. This is most likely done in the name of balance.

The accusations of faction biases and overpowered in-game items are common grievances in online gaming communities. These assertions exemplify the audience expectations of balance, as well as the highly competitive nature of online wargames. These claims are often groundless, sentimental gut reactions, but there are also more justifiable complains, as the constant tweaking of in-game items and gameplay properties demonstrate. Unwarranted or not, these perceived advantages affect the player behaviour. The unwritten logic of online multiplayer games dictates that if a faction, weapon or vehicle is perceived overpowered by the community, a large number of players will strive to exploit the unbalancing factor to gain upper hand on their opponents. This type of behaviour becomes apparent, when new items or factions are introduced to the game and their impact on gameplay is still unknown. New elements can sometimes introduce significant changes to balance. Faithfulness to historical accuracy can become problematic in these types of situations. In the entertainment context, the desiderata of experience and playability usually trump over authenticity and realism. Imbalance does not necessarily pose such problems in an educational setting with extrinsic gameplay purposes, as the telic (serious) context has divergent premises from the paratelic (playful) context.

War Thunder and *Heroes & Generals* exhibit the challenges and opportunities in generating and maintaining historicity in online multiplayer games. The multiplayer setting retains requirements of balance, open-endedness and narrative. These exigencies have pivotal implications on historical accuracy. The games analysed in this article have resolved these challenges in aforementioned ways, mainly by focusing on certain key aspects of WWII. They are visceral historical experiences. Their objective is not to convey a comprehensive account of the war, but to use WWII as a setting for entertainment. In this context, the concept of entertainment does not only include elements of fun, but also moments of frustration and tediousness, as exemplified by grinding.

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1. The digital game database MobyGames, lists 833 historical WWII titles from 1978 to 2016. See, <<http://www.mobygames.com/game-group/historical-conflict-world-war-ii>> [Takaisin]
2. In his book *Consuming History*, Jerome de Groot (2016, 156) suggests that "the FPS historical games have seemingly lost their allure precisely because they are wed to a concrete version of the past, not something manipulable and changeable." This is unquestionably an accurate observation of WWII shooters that focus heavily on single-player campaigns, but cannot comprehensively explain the decline from the perspective of multiplayer gaming, which is arguably the most popular game mode in FPS games. The modern military shooters (MMS) superseded historical shooters, because they introduced innovations, such as weapon accessories, perks and personal rewards, to a stagnating genre. MMS also brought recentness to the genre by capturing the zeitgeist of the

- post-911 politics. [Takaisin]
3. Bulthead Interactive and Driven Arts have crowdfunded their upcoming WWII shooter projects, *Battalion 1944* and *Days of War*, respectively. These games will be one of the first WWII games to harness the power of contemporary game engines. New World Interactive developed *Day of Infamy* (2016), a game based on *Insurgency* (2014) modification, in cooperation with the modding community. [Takaisin]
 4. *Mit "Prien" Gegen England* (Franz Schmidt 1940) was based on the patrols of a decorated submarine commander Günther Prien. His submarine was sunk a year after the game's release. The air defence game *Adler Luftverteidigungsspiel* (Hugo Gräfe Verlag 1941) was marketed as an educational game, designed by a Luftwaffe officer. [Takaisin]
 5. *Stukas Greifen An* (Brücker Spiele 1940) was a variation of checkers and *Fallschirmjägerspiel* (Haufe-Druck 1940) was a reskinned version of Flying Hats. [Takaisin]
 6. Whitehill 1999. [Takaisin]
 7. The Belgian resistance distributed *V-Game* (1944), in which the objective was to shoot V1 rockets into German cities and on high ranking Nazi officials (Antique Trade Gazette, 28.8.2007). [Takaisin]
 8. *D-Day* (Avalon Hill 1961) was the first historical wargame situated to WWII. The cover's blurb reads: "Now you change World War II history in this realistic invasion game." [Takaisin]
 9. *Tanktics: Computer Game of Armored Combat on the Eastern Front* (Crawford 1978), *North Atlantic Convoy Raider* (Avalon Hill 1980), *Computer Ambush* (SSI 1980) and *Eastern Front 1941* (Atari 1981) were one of the earliest historical computer games with WWII setting. *Tanktics* was quite an interesting exhibit, as it was a hybrid of computer and board wargame. The computer handled the calculations and the player moved the counters on the game board. [Takaisin]
 10. Vanore 1988. [Takaisin]
 11. Grand strategy games are either turn-based or real-time, depicted from top-down or isometric perspectives. The genre is a direct descendant of tabletop wargames. Players command nations or large armed forces in pursuit of strategic goals. These games portray warfare from higher strategic level, focusing, for instance, on problem solving, resource management, scientific development and politics. The genre includes games, such as *Stom Across Europe* (SSI 1989), *Axis & Allies* (Hasbro 1998), the *Hearts of Iron* series (Paradox Interactive 2002-2016) and the *Making History* series (Strategy First 2007-2010). [Takaisin]
 12. RTS games handle operational level warfare, depicted from top-down or isometric perspectives. The players command smaller military units. Base building and accumulation of resources are some of the central tropes of the genre. WWII RTS markets are dominated by well-established franchises, such as the *Close Combat* (Microsoft 1996-2014), *Blitzkrieg* (1C Company 2003-2015), *Company of Heroes* (Sega 2006-2013), *Men of War* (1C Company 2004-2014) and *Theatre of War* (1C Company 2007-2010). [Takaisin]
 13. Tactical shooters are squad-based and combat-oriented wargames, favouring visual realism. This genre was central in transforming digital gaming into a mainstream hobby, and had huge impact on the cultural development of online multiplayer gaming. Similarly to RTS, the tactical WWII shooters are defined by few reputed franchises, such as *Medal of Honor* (EA 1999-2007), *Battlefield* (EA 2002-2007), *Call of Duty* (Activision 2003-2008), *Brothers in Arms* (Ubisoft 2005-2010) and *Red Orchestra* (Bold Games 2006-2010). [Takaisin]
 14. Vehicle simulation games were the first historical games depicted from the first-person perspective. They focus heavily on the fidelity of simulation. The genre includes games, such as *Hellcat Ace* (MicroProse 1982), *Silent Service* series (MicroProse 1985-1990), *Secret Weapons of the Luftwaffe* (Lucasfilm Games 1991), *Combat Flight Simulator: WWII Europe Series* (Microsoft 1998), *Steel Fury: Kharkov 1942* (Graviteam 2008) and *Steel Armor: Blaze of War* (Graviteam 2013). [Takaisin]
 15. MMOS are large-scale multiplayer games that are played on persistent game worlds or servers. Their rising popularity has been concurrent with the rise of free-to-play (F2P) economic model. The first MMO situated into the WWII setting was *World War II Online* (Strategy First 2001). The rebranded version *WWII Online: Battlegroup Europe* was released in 2006. [Takaisin]
 16. Today grinding is not limited only to MMOs. It became a common feature in contemporary games with the pervasiveness of character levelling. However, MMOs are currently the only genre that allows players to shorten or skip the need for grinding through microtransactions. [Takaisin]
 17. Gaijin Entertainment 2013. [Takaisin]
 18. Reto-Moto 2014. [Takaisin]
 19. According to James F. Dunnigan (1992, 1) "to be a wargame, in our sense of the word, the game must be realistic. And in some cases, they are extremely realistic, realistic to the point where some of the wargames are actually used for professional purposes (primarily the military, but also business and teaching)." [Takaisin]
 20. The relationship between gaming and realism is centuries-old. Its roots extend into the seventeenth-century war chess systems and the nineteenth-century Prussian professional wargames. For a more comprehensive account, see Smith (2010). [Takaisin]
 21. Ribbens & Maillet 2010. [Takaisin]
 22. Bogost 2007. [Takaisin]
 23. Baerg 2008. [Takaisin]
 24. Poremba 2011. [Takaisin]
 25. Bogost, Ferrari & Schweizer 2010. [Takaisin]
 26. See Goodman (1968). [Takaisin]
 27. E.g. Uricchio 2005; Gish 2010. [Takaisin]
 28. At the moment, single-player campaigns are the only practical method in representing history as recorded sequence of events. This stems from their controllability. The multiplayer mode introduces a host of variables that render such depictions extremely challenging. However, the campaigns feature an illusion of control in relation to unfolding of historical events. The narratives are typically written in such a way that the players cannot change the course of history, for instance, by situating the players into roles that are not decisive to the outcome of the overall battle. This is done to maintain historical accuracy without removing the winning condition. In multiplayer mode, the narrative structure is based on emergence, resulting from the interaction between the game system and the players. [Takaisin]
 29. Concentration on combat allows designers to omit the less heroic aspects of warfare, such as politics and suffering of civilians. There are no equivalents to titles such as *This War Of Mine* (11 bit studios 2014) in the historical wargame genre. The game is a rare exception, as it depicts warfare from civilian perspective. *This War Of Mine* was inspired by the Siege of Sarajevo. [Takaisin]
 30. E.g. Rejack 2007; de Groot 2016. [Takaisin]
 31. Chapman 2016, 183-186. [Takaisin]
 32. Salvati & Bullinger 2013, 157-161. [Takaisin]
 33. De Groot 2016, 154-155. [Takaisin]
 34. According to Baron (2010, 304), the archive effect is "an experience [...] that certain elements of the text are 'archival'. This experience is generated through [...] 'temporal disparity' and 'intentional disparity.'" The former refers to the "phenomenological experience of a difference between the 'then' of the original production of the archival footage and the 'now' of the production of the text that incorporates this footage", whereas the latter to "a difference between what we read as the original intended purpose of the footage and its later actual use". [Takaisin]
 35. Kingsepp 2006, 66-75. [Takaisin]
 36. Peirce 1991, 239-240. [Takaisin]
 37. Raessens 2006, 218-219. [Takaisin]
 38. Rotoscoping is a technique in which the image or animation is traced over photographs or live-action footage, whereas motion capture refers to process of recording live movement to animate/simulate virtual characters. [Takaisin]
 39. E.g. Poremba 2011, 51-57, 81-83. [Takaisin]
 40. Paradox Interactive 2009. [Takaisin]
 41. For instance, National Geographic's series *WWII's Greatest Raids* (2014) utilises the same game engine and graphic library as *Rising Storm* (Tripwire Entertainment 2013). [Takaisin]
 42. Electronic Arts 2003. [Takaisin]
 43. Activision 2005. [Takaisin]
 44. Jay David Bolter and Richard Grusin (2000) argue that new media forms repurpose and refashion characteristics and attributes of older media forms, and vice versa. They call this process as remediation. This allows new media to define itself in relation to earlier technologies of representation. [Takaisin]
 45. Spielberg 1998. [Takaisin]
 46. Steven Spielberg's role as the creator of the *Medal of Honor* series explains the similarities between the film and the game. [Takaisin]
 47. Kingsepp (2007) is one of the few authors who have examined historical wargames from this perspective. [Takaisin]
 48. These discourses, proposed theorists such as James Der Derian (2001), relate to fears concerning representational similarities between digital games and modern military technology. There are of course exceptions to this rule. Neitzel and Weizer (2012, 56) associate aesthetics of FPS games with accounts of WWII aerial warfare: "victims never have personal attributers. Their role in the anecdotes of German airmen is much the same as that of enemies in video games, particularly of the ego-shooter variety, a half century later." [Takaisin]
 49. Galloway (2006) and Mir & Owens (2013) critique *Civilization* (1991) series for stereotypical depiction of races and lack of cultural diversity, whereas Schut (2007) argues that representation of history in digital games is masculine, systematic and spatially oriented. [Takaisin]
 50. For instance, the stereotypical representation of the Soviet war effort in *Company of Heroes 2* (Sega 2013) stirred ire in parts of the Russian gamer community. The game was interpreted as anti-Soviet/Russian propaganda. Inclusion of Stalin's Order No. 227, which prohibited retreat without orders, is one detail that was considered offensive. The order comes into effect in the Stalingrad mission, in which positioned machine gunstar to execute retreating soldiers. [Takaisin]
 51. Historical games have been fallen under the ban hammer for political reasons. China has strict censorship laws, and the country has been adamant in banning Western digital games. For instance, *Hearts of Iron* (2002-) series was banned for "distorting history and damaging China's sovereignty and territorial integrity." (*China Daily*, 29 May 2004) The series contains historical details that are considered as politically insensitive for the Chinese government. The games portray, among other things, certain autonomous regions, such as Xinjiang and Tibet, as independent states. [Takaisin]
 52. For actual wording, aims, and constitutional background of the law, see Stegbauer (2007). [Takaisin]
 53. Paradox Interactive censored the image of Adolf Hitler and renamed him as "Ammand Hiller" in the German version of *Hearts of Iron III* (2009) and *IV* (2016) to comply with the law. [Takaisin]
 54. Few titles, such as *I Have No Mouth, and I Must Scream* (Acclaim 1995) and *Wolfenstein: The New Order* (Bethesda 2014), have indirectly touched upon the subject matter, but in a science fiction context. [Takaisin]
 55. This cultural sensitivity has been extended beyond in-game content. For instance, the rules on the official forums of *Hearts of Iron III* forbid any discussion on the Holocaust, death camps or gulags. [Takaisin]
 56. Pasanen 2014, 12-14. [Takaisin]
 57. Tripwire Interactive 2011. [Takaisin]
 58. Deep Silver 2012. [Takaisin]
 59. The Wehrmacht was acquitted as being a criminal organisation at the Nuremberg trials by the International Military Tribunal (IMT), although some of its elements perpetrated war crimes, especially at the Eastern Front (Wette 2006). [Takaisin]
 60. *Red Orchestra* is situated into the Battle of Stalingrad. In its cutscenes, the slogans of propaganda posters are contrasted to disillusioned diary accounts of real soldiers who participated in the battle. *Iron Front*, whose title is derived from an anti-fascist and -communist paramilitary organization, depicts the Soviet summer offensive of 1944, which inflicted more losses on the Wehrmacht than the destruction of the 6th Army at Stalingrad. [Takaisin]
 61. *War Thunder* can be played across the gaming platform, allowing PC and PlayStation 4 players join the same servers. [Takaisin]
 62. The player community has contributed a host of user-made historical vehicles that are playable in user missions. Furthermore, players can design their own custom skins and camouflages, but as local files they are not visible to other players. [Takaisin]
 63. The Battles of Pearl Harbor, Wake Island, the Coral Sea, Midway, and Guadalcanal are depicted from either American or Japanese perspective. [Takaisin]
 64. For instance, the Berlin mission for ground forces takes place on the devastated landscape of Königsplatz (Platz der Republik), which includes many famous landmarks, such as the Kroll Opera House, the Brandenburg Gate, the Reichstag building, and the Moltke and Kronprinzen bridges. [Takaisin]
 65. Nerfing refers to the common practice of developers to change, adjust or increase the effectivity of in-game items for the sake of better balance. [Takaisin]
 66. War Thunder Forums. The Great Big Balance Discussion – play nice and stay on topic. [Takaisin]
 67. War Thunder Forums. T-10m APHEBC a bit too powerful?, <https://forum.warthunder.com/index.php?topic/256401-t-10m-aphebc-a-bit-too-powerful/>. [Takaisin]
 68. For instance, Yak-9s lose their edge over planes equipped with smaller calibre weapons, because the latter have more ammo. The ammo is unlimited in arcade mode, whereas in other modes the planes must be reamed at base. It should also be noted that vehicles belonging to other factions, among others the American M-18 Hellcat tank destroyer, have been accused of being overpowered. [Takaisin]
 69. *War Thunder* in-game leaderboards (top 10 players): 1) highest winning percent: 7/10 players in arcade mode, 5/10 players in realistic mode, and 7/10 players in simulator mode preferred Soviet vehicles; 2) number of air targets destroyed: 8/10 players in arcade mode, 4/10 players in realistic mode, and 6/10 players in simulator mode favoured Soviet aircrafts; and 3) number of ground forces destroyed: 9/10 players in arcade mode, 5/10 players in realistic mode, and 6/10 players in simulator mode favoured Soviet tanks. Note that this small sampling is not conclusive by any means, as it consists only of fraction of total number of players. Furthermore, the majority of top 10 players had versatile arsenals, which included vehicles from all the factions. They did not exclusively research the Russian line. Rather, this sampling demonstrates that the USSR is perhaps the most popular faction. [Takaisin]
 70. German and Soviet tanks dominate the ground forces leaderboards in all modes, although there is some variation between different classes (light, medium, heavy, tank destroyers and SPAA). Aviation leaderboards are more diverse, leaning slightly towards German and Soviet aircrafts. American aircrafts have been effective in arcade and realistic modes. See Thunder Skills. Vehicles,

<http://thunderskills.com/en/vehicles>. [Takaisin]

71. Battle rating is a value that is used to determine the matchmaking and balance the game. The better and more effective the vehicle is, the higher the battle rating. [Takaisin]
72. Wehrmacht can invade the Great Britain or thwart the collapse of the Eastern Front. The USSR can keep advancing towards west after the fall of Berlin. The United States can fail in its landing to Normandy and be forced to defend London from the impending invasion. [Takaisin]
73. The ongoing, real-time war on a persistent server is not a novel innovation for the FPS MMOs. The concept was already introduced in the early-2000s by *World War II Online*. However, this feature has been seldomly utilised since. [Takaisin]
74. *H&G* has three currencies: credits, warfunds and gold. Credits are the basic in-game currency. Warfunds are used to purchase, deploy and supply assault teams. Gold is bought through microtransactions. Gold can be used to buy, for instance, veteran membership, camouflages and boost ribbon progression. The players earn free gold by completing the first match of the day. [Takaisin]
75. In this context, the term "pseudorealism" refers to both the synthesis of dramatic/playful and authentic/realistic elements to meet the audience expectations, as well to the exaggerated/imprecise simulation. Exaggerated bullet drop of submachine guns is an example of this tendency. It gives a hint of realism to operating a weapon, but the actual simulation is notably inaccurate. [Takaisin]
76. The term "tactical realism" refers to gaming, which imitates real military organisations from chain of command to tactics. [Takaisin]

