UNCOVERING LITERACY PRACTICES IN THE GAME TOTAL WAR: SHOGUN 2 WITH A CONTRACT-AGENCY MODEL

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Abstract

This paper showcases how the Contract Agency Model can be used to uncover literacy practices in videogame's own terms as a complement to existing, more 'indirect' games literacies, using as an example the videogame Total War: Shogun 2. The paper first situates the Contract Agency Model within approaches to videogames and within approaches to media literacy. The paper then identifies three interesting literacy practices in the videogame, which also exemplify the eight levels of abstraction of the Contract Agency Model. The paper concludes by discussing the model's implications to media literacy and videogames, namely that videogames effect a second-order mutual signaling with their players – agency as a conversation of commitment to meaning – that is humanizing of those players, and that the model can uncover this as an implicit contract of bio-costs, as a 'direct' literacy of videogames, i.e. a literacy in videogames' own terms.

Keywords: Games as Communication, Game Semiotics, Media Literacy, Games Literacy, Agency in Games, Videogames

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Introduction

There are multiple approaches to media literacy and videogames. Practices both within videogame-playing and surrounding videogames have been recognized as literacy, for instance by Steinkuehler (2010), or as procedural rhetoric, by Bogost (2008). Good videogame design exemplifies a contemporary conception of learning, as pointed out by Gee (2008), and a "gaming literacy" (Zimmerman, 2009) has been proposed as a means of helping people navigate today's world. We call these approaches 'indirect' literacies of videogames. They ultimately focus on the relationship between videogames and the world. By contrast, a 'direct' literacy would deal with whether a videogame is meaningful as a game, and could help the evaluation of videogames as texts alongside the 'indirect' literacies. We aim to contribute towards a more 'direct' literacy for videogames by showing what this kind of literacy looks like, and how the Contract Agency Model proposed by Neves et al. (2018) can deliver on this kind of literacy, by uncovering literacy practices in videogames' own terms – specifically by using as an example the videogame title Total War: Shogun 2 (The Creative Assembly, 2011).

Background

What we call 'indirect' literacies can be used to carefully examine game design, and even recognize good design and deliberate, successful literacy practices. However, these 'indirect' literacies go by criteria such as learning (as in Gee, 2008), rhetoric (as in Bogost, 2008), and transferring skills from game design to other activities (as in Zimmerman, 2009). The intermediate step of a model such as Contract Agency would allow meaningfulness in games to be approached more directly.

Procedural rhetoric is concerned with analyzing both "inadvertent" and ostensive "ideological biases" (Bogost, 2008, p. 128) as well as "explicit claims about the way" material and

conceptual systems work (2008, p. 130), especially in videogames. Examining procedural rhetoric in videogames aims to empower game design, critique, and learning. Game design is held to already do rhetoric; designers simply need to be more aware of this rhetoric and more consistent in its use, and make "deliberate expressions" (Bogost, 2008, p. 119). "Gaming Literacy" as proposed by Zimmerman (2009) finds what game design already does well. In Gaming Literacy, this is systems literacy through rules, structures of human interaction through play, and the creation of meaning through design. The idea is to turn this "inward-looking focus inside-out" towards a "paradigm for understanding" literacy needs "in the coming century" (Zimmerman, 2009, p. 24). Gee finds quality in games – like Bogost (2008) and Zimmerman (2009) – and carefully examines game design in particular videogames – like Bogost (2008) – but this too is an 'indirect' literacy. Gee's position is that "learning theory and game design can enhance each other" (Gee, 2008, p. 37) and examines situated learning, distributed knowledge, embodiment, emotional attachment and emotional context, and more, in games, but this is still games literacy through learning theory instead of games literacy through a theory of videogames.

Previous work in games and literacy has stressed the importance of models in games, for instance in Zimmerman (2009), and Gee (2008). Gee makes an important distinction between videogames with a "first-person, world-internal view" or a "third-person up-close perspective", and videogames with a god's eye farther-distance top-down view", while providing for an intermediate "middle-distance top-down view" (Gee, 2008, p. 29). Gee is interested in what this means in terms of learning, but for our purposes this helps select a videogame for showcasing the Contract Agency Model's potential in contributing to games literacy. We chose the videogame title "Total War: Shogun 2" (The Creative Assembly, 2011) because it is sensitive from a media literacy standpoint, as it combines different views – different levels of abstraction – and these have to be successfully integrated together for this

videogame's distinctive play to happen. This is explained in the "Applying the Model" section of this paper.

The Contract Agency Model

For showcasing the Contract Agency Model, we present a summary of the model's overall functioning as proposed in its seminal paper (Neves et al., 2018). This will help clarify how the model adapts conversation theory and bio-costs to agency in Total War: Shogun 2 — the commercially available off-the-shelf (COTS) videogame we use for the showcase — together with three implicit conditions agreed upon by player and system in the model. Following this, the levels in the model are described, in preparation for mapping these levels to Total War: Shogun 2.

The Contract Agency Model deals with the phenomenon of play as communication, drawing from second-order cybernetics, namely Conversation Theory (Pask, 1976) and the concept of bio-cost (Pangaro, 2008). It is a model built around a redefinition of bio-cost as a unit of analysis for communication, and this bio-costs perspective together with conversation theory define the process of communication for videogames as transactional, since conversation theory explicitly deals with understanding as a "structural property of conversations" (Pask, 1976, p. 4) and with meaning through the notion of an implicit contract, as pointed out by Neves et al. (2018, p. 45). We argue that the model's emphasis on pragmatic communication and meaning through a conversational structure make it valuable to media literacy.

The Contract Agency Model follows up on the need to avoid "misconstruing agency as player freedom" (id., p. 44) following Murray (1997), Harrell & Zhu (2009), and Tanenbaum & Tanenbaum (2010). It seeks an even view of the game as a system and the player following Wardrip-Fruin et al. (2009) and emphasizes meaning and conversation following Tanenbaum & Tanenbaum (2010). It follows Upton (2018) and Aarseth (1997)

in asserting the need for triadic perspectives of communication, due to how dyadic perspectives of communication break down when applied to videogames and cybertexts, respectively.

The Contract Agency Model "consists of a nested hierarchy of eight levels of abstraction" (Neves et al., 2018, p. 45) where agency happens as mutual commitment to meaning, following the redefinition of agency in Tanenbaum & Tanenbaum (2010), through the signaling of the attainability of understandings and consequent deriving of understandings, following Pask's conversation theory (1976). These understandings are signaled and derived continuously through bio-costs. These bio-costs consist of "effort-minimization trade-offs" (Pangaro, 2008, p. 37) in the context of human activity, namely when using computers — a "second-order awareness of the toll that a task is taking", which integrates a feedback loop that helps end-users estimate the effort (their "bio-cost expenditure") that will be required for them to be successful (Dubberly et al., 2009, p. 188). In the Contract Agency model, bio-costs take the role of the "currency of agency" (Neves et al, 2018, p. 45), and thus assume two natures: they are "what is being negotiated" in the contract and also the "fuel" that lets the player and the system carry on with being parties to the contract negotiation (2018, p. 46). The Contract Agency Model deals with the player "negotiating the anxiety from having too many or too few possibilities in interpretation of the system" (Neves et al., 2018, p. 45) and considers play beyond explicit activity, which is comparable to the approaches by Carvalhais & Cardoso (2017) and Upton (2018).

In the Contract Agency Model, the game as a system and the player of the game carry out speech acts whenever play happens — the player plays in the terms of the system and the system is designed to enact those terms and to implicitly transmit what those terms are to the player. The mutual commitment to meaning in the model comes from how speech acts on the player's part consist of accepting a toll of effort and uncertainty against an implicit assurance of being free

from that particular "toll" in the future. Freedom from the toll comes from becoming better at the game or by being given greater explicitly-modelled power over the parameters of the system, e.g., by developing her character in a role-playing videogame. Being free of one particular toll by overcoming challenges in the game – or just by expressing herself in the terms of the game – lets the player take on subsequent, heavier tolls, towards even greater agency. On its part, the system receives (or rather anticipates in its design) the player's speech acts. With each new toll the player takes on, the system is relieved from having to maintain that toll – for example, if the player can only reach more advanced challenges demanding more advanced skills by overcoming preceding challenges with earlier skills, the system is relieved from having to cater to the preceding skill-set, or "is relieved of having to cater to some aspect of meaningless freedom of action" (Neves et al., 2018, p. 46), preserving agency against that meaningless freedom of action. This mutual "second-order awareness" of tolls matches the definition of bio-cost by Dubberly et al. (2009), and is how the model brings bio-costs to agency in videogames.

The feedback loops of bio-costs in videogames are negotiated through levels in the Contract Agency model. Following conversation theory, understandings are signaled to exist (are attainable) at a less abstract level, and understandings are attained (meaning is committed to), which leads to new understandings being signaled at the next, more abstract level. Successful functioning of play in the Contract Agency Model consists of "meaning happening at each and every one of these levels"; with the model, game design problems can be understood as "levels being skipped or their meaning being obfuscated by other levels" which disrupts the "flow of commitments" (Neves et al., 2018, p. 46) – offsetting these effects by "tweaking the construction of meaning in certain levels" is how the model can help understand and fix design problems (id., p. 46-47).

Per the Contract Agency Model, the player and the system implicitly agree on three conditions – "that understandings exist in the context of their conversation" so the game is "finite and non-arbitrary", that these understandings "are attainable" so the "depth and breadth of the player's range of actions has assuredly been designed to be tractable to some degree of comfort and reliability, given the conditions of play", and finally that there is "conversational parsimony from both the system and the player" so "no understandings go to waste – any understanding is valuable" in signaling "further understandings" (id., p. 47).

Levels in the Model

The model is made up of eight levels. From least abstract to most abstract these are: Controls, Tokens, Verbs, Power to Affect the Gamestate (PAG), Current Gamestate, Possibility Space, Rules, and Personal Play Narrative, as shown in Figure 1. Using the analogy of a written real-world contract between two parties provided by Neves et al. (2018, p. 47-48), Controls are more "than simply input or commands", but rather "the letter of the contract" between player and system – and set the "unit of currency to bio-costs traded at levels above Controls in the model".
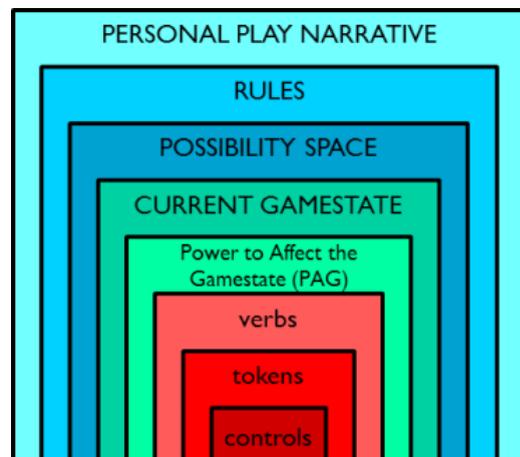

Fig. 1 The nested structure of the Contract Agency model

If the Controls are the letter of the contract, Tokens are like sub-items in the contract. The Tokens level in the model is "for objects in the gameworld that register and store quantities of bio-costs by changing state". An object needs to do more than be interactive; it needs be conversationally relevant to agency.

Continuing with the analogy with a written contract, if Tokens are sub-items in the contract, Verbs are like items – "the bio-cost transactions themselves – a control (terms for the transaction) activated on a token (quantity in the transaction)". Verbs let the player take a negotiating position and enact that position.

Written contracts are often divided into parts with roman numerals. The level of Power to Affect the Gamestate (PAG) in the model is like one part of the contract. PAG in the model is "the accrued sale of bio-cost transactions – what the player ventured and gained" in using Controls on Tokens for Verbs. This is what the player plays for, and how the system has something to bring to the negotiation.

The level of the Current Gamestate is like a particular draft or version of the contract, created during contract negotiations – "a given point in the process of contract negotiation between the system and the player" which "results from all the transactions and signaling below". This is what Verbs are for.

The level of the Possibility Space in the model "holds all the alternate potential versions for future Current Gamestates", which let the player envision her chain of commitments across the conversation. Seeing one single chain is not enough; the player needs to frame her commitments to meaning against other possible meanings. In keeping with the analogy with a traditional written contract, the Possibility Space is like a succession of drafts to the Current Gamestate's single draft.

The level of Rules is what makes "the Possibility Space finite", making it tractable for the player and the system. It makes it tractable for the system by sparing it from infinite modelling, and makes it tractable for the player by narrowing down what has happened and what it means, and what can happen. In the written contract analogy, Rules would be a stage in the contract negotiation process.

The most abstract level in the model is the Personal Play Narrative, which is "the player's mental model of the entire negotiation process" – "the stories we tell ourselves" about how playing a game went. This mental model is finished when the player is finished with a particular game, but appears before that.

In the next section of this paper – "Applying the Model" – the model will be applied to the COTS videogame title "Total War: Shogun 2" (The Creative Assembly, 2011). The model's possibilities for uncovering interesting literacy practices in games' own terms will be showcased, and how the levels in the model map to this game will be explained.

Applying the Model

The videogame "Total War: Shogun 2" (The Creative Assembly, 2011) – from now on referred to as TW: S2 – is a historically-themed management, strategy, and tactics game for personal computers. The game relies heavily on offering emergent play, with a range of variables interacting together to offer diverse, intricate challenges to the player. The title offers different kinds of single-player and multiplayer content; for purposes of the showcase in this paper, we will be referring to the main single-player campaign. This campaign is played on a 'campaign map', comprised of a number territories owned by factions. The player controls one of these factions and the computer controls the others. The player has to prevent her faction from being destroyed while amassing enough power to trigger the victory conditions. Factions extract resources

from their controlled provinces and vie for control of each other's provinces. Actions undertaken by the player and the computer on the campaign map produce events and, for the player, choices are generated with consequences, where both the choices and the consequences take into account the current state of the campaign map, as affected by the player's faction and her choices, the work of all the other factions, and the impact of certain randomized elements.

During play on the campaign map, the player has to open and dismiss a number of interface panes which track variables for the simulation. These variables include availability and value of goods being traded between provinces, population growth, taxation, religious makeup of the population, variables for unrest in the population (which harms income) and its relationship with taxation as well as religious conversion, scores for factors that make up diplomatic status such as warmongering or betrayals by other factions, and more.

The single-player campaign in TW: S2 plays over decades, with each year corresponding to four turns in the campaign map's turn-based temporal structure. The game simulates a number of characters. Their traits shape interactions with members of other factions and even within the same faction, and have a decisive impact in shaping play, forcing the player to keep track of the characters.

Taking into account all of the above, TW: S2 is a game of marked complexity. The player has all the necessary time to digest variables on the campaign map thanks to the turn-based temporal structure, but these variables exist for her faction and all other factions and across all provinces in the map, and all interact with each other directly or indirectly, across hundreds of turns. The player has to act consequently given the state of all of these variables and how they might change in the future.

Certain actions on the campaign map produce instances of a 3D battle over a different map, where the player and the computer play a complicated real-time game of tactics, handling multiple military units, adding up to thousands of troops. Here, there is also a range of variables to keep track of, such as troop morale and fatigue, their precise positioning relative to each other and terrain, and more. Instead of trending across turns, these variables shift continuously based on the players live manipulation of troop movement and behavior. Outcomes from instances of the battle map affect the state of the campaign map dramatically, and vice-versa.

TW: S2 was deemed an appropriate game to showcase the Contract Agency Model from a media literacy standpoint, as put forward at the end of the "Background" section of this paper, given the relevance of different levels of abstraction in play observed by Gee (2008). TW: S2 plays at high levels of abstraction in the trending variables of the campaign map, at intermediate levels of abstraction in how pieces interact in the campaign map, and at lower levels in the live manipulation of troops in the battle map.

TW: S2 creates interesting problems for itself – game design problems which are also problems for an 'internal' literacy of videogames as described in this paper. TW: S2 needs to breed complexity but also make this complexity tractable for the player. The complexity happens in breadth, in how variables interact directly and indirectly across the same level of abstraction over time, and in depth, in how momentary calls in live play reverb in long-term trending variables, and vice-versa.

Given the explanation of how this videogame functions, a number of interesting literacy practices in the game design of TW: S2 can be identified using the Contract Agency model. These practices are solutions for some of the problems that TW: S2 creates for itself, and are interesting from the standpoint of literacy in videogames' own terms, for example in

that they contravene interactivity and freedom of action for the sake of preserving agency. The model's contribution to media literacy and games is identifying these practices.

Literacy Practice 1: Suspending the Game

One of the interesting literacy practices that can be identified in TW: S2 using the Contract Agency model is TW: S2 suspending the game in the player's experience and temporarily replacing it with a short film, where this film is derived from meaning in the game as played (including emergent factors) and fits subsequent game meanings. This is a videogame preserving its meaningfulness by paradoxically taking away the game. This literacy practice pertains to the three most abstract levels in the model, which are the Personal Play Narrative, the Rules, and the Possibility Space. The literacy practice is brought about by the Possibility Space – due to emergent play – looming so large in the Personal Play Narrative that the Rules are not enough to make that Possibility Space conversationally parsable for the player. The literacy practice of interjecting a live-edited pre-rendered cutscene (replacing the videogame-artifact with a film-artifact) remedies this, and lets the system implicitly signal to the player that understandings remain conversationally attainable despite mounting complexity from emergent play.

The clearest equivalent in TW: S2 of the Personal Play Narrative level of the Contract Agency model is when a player attempts to finish the single-player campaign. The player starts by picking a faction to play and committing to the meaning of playing the campaign with that faction – starting position on the map, strategic advantages and disadvantages, starting characters and their traits, and more. This starting position lets the player improvise a story for her play as she plays, right up to the point she finishes the campaign. That story lets her attach meaning to her choices. Given her starting position, did she play to her strengths? Did she subvert the flavor of her chosen faction? Did she play it straight? Can difficulties

be attributed to being too guarded? To overextending herself? Was there a tipping point where she was struggling, made the effort, and got started on the road to dominance? This story is made up of feedback loops of bio-cost, of judging effort against payoff, and of uncertainty against assurances, as enabled by conversing with the system. The player experiences the history of her agency in that attempt to finish the campaign.

The interesting problem TW: S2 makes for itself at the level of the Personal Play Narrative is scaling complexity. At zero-state, the player has to keep track of relatively limited complexity. Her faction's borders are shorter. She has to interact with a limited number of factions. She has few troops, characters, and buildings, and her neighbors likewise. As she plays and succeeds, her faction gains in complexity, she gains more neighbors, and her neighbors get more complex. As turns go on, the system's emergence manifests itself more and more. In drawing from Conversation Theory, the Contract Agency Model requires that the Personal Play Narrative be explainable, and that all understandings be naturally derived from the conversation. The player needs to be able to explain to herself where she ends up, without having to stop playing

Fig. 2 An assassination pre-rendered cutscene superimposed over the normal game view

to perform an analysis of all the information in the interface panes. For this to happen, the player needs to be able to track and attach meaning to a rising number of variables and of interactions between variables. Scaling complexity creates a risk of the player having to stop playing, losing the conversation, or her Personal Play Narrative not being explainable, and losing agency.

As a sample case, we consider political assassinations in TW: S2. These actions are available to factions, including the player. Outcomes of assassination attempts are decided in an instant against a success probability stated in an interface pane. This probability is derived from a number of scores, which in turn are derived from a number of long-term factors and choices. Whether it's the player commissioning an assassination on another faction or vice-versa, the outcomes can have tremendous impact for the rest of the campaign. Instead of forcing the player to interpret and explain to herself all the delicate factors determining the success probability, TW: S2 interjects a live-edited pre-rendered cutscene in the player's view, as can be seen in Figure 2. The cutscene plays on an interface pane while the rest of the game is frozen. The first segment depicts the context of the assassination, and the last segment is seamlessly edited in to qualify the outcome. The game has a number of endings to the assassination cutscene, and selects the one that fits the outcome against the random factor. This constitutes an important form of conversational signaling to the player. Absent this pre-rendered cutscene, if the player stopped playing to analyze the factors leading to the assassination's outcome, this would be conversationally illegitimate. However, since the game suspends itself by interjecting a film-artifact (pre-rendered cutscene) over the game-artifact, the player and the system are stopping to take stock of the situation together. The conversation is going there, so the player does not have to break away from the conversation. This remedies the issue of scaling complexity, legitimizing the player in the conversation.

Literacy Practice 2: Harming Emergence

Another interesting literacy practice in TW: S2 is how the game harms its emergence. TW: S2 relies heavily on its ability to offer emergent play as part of its value proposition for the player. This literacy practice happens between the level of Power to Affect the Gamestate and the level of the Current Gamestate in the Contract Agency Model – the fourth and fifth levels of abstraction, counting from the least abstract level of Controls. Much like suspending play to interject a live-edited pre-rendered cutscene, harming emergence is a seemingly contradictory conversational move on the game's part. However, from the standpoint of the Contract Agency Model, this is done to help preserve meaningfulness in the conversation between player and system. Emergent play forces TW: S2 to signal the player constantly, since the player needs to keep track of so many variables. There is the risk of this signaling over time becoming indistinct – the player growing overly accustomed to the steady growth in the number of things she 'talks about' with the system as her empire expands and she takes on more variables that need tracking. Eventually, her play will become featureless, and she will have trouble attaching meaning to it. The system harms emergence by inserting artificial peaks in the accumulation of Power to Affect the Gamestate (PAG) per the model. These peaks become features that the player can use as reference points to build the story of her play. The system harms emergence to be more expressive in the conversation.

The appeal of emergent play in TW: S2 for the player is gaining more and more of a sense of ownership of her play as play goes on. Whenever the player launches a new single-player campaign, she is placed in control of her chosen faction on the campaign map, with certain pre-defined starting conditions for play. Turn after turn thereafter, factions spend resources on economic development to get more resources from their provinces and they spend resources on developing their military to take provinces from other factions. The player

plays to the history of that particular instance of the campaign map – the sum total of the choices and opportunity costs of each kind of development. That history also includes the player and the reactions of the computer-controlled factions to the player, in their choices in development. The sense of ownership comes from how the player sets her own goals and from how the resources she has available derive from the history of that campaign map.

The risk to agency from emergent play in TW: S2 is that factors such as population or unrest trend slowly rather than having narratively satisfying twists and turns. The system – the campaign map and its history – can start to drone on, losing the player from the conversation. The system inserts peaks of expressiveness in bio-costs by occasionally offering the player small quests, as can be seen in Figure 3. These can be e.g., taking over a specific settlement or recruiting a particular agent.

Fig. 3 An interface plane for one of the small quests in S2: TW

The quests are optional, but if completed the player will be awarded e.g., a fixed sum of resources or a free agent or troop. This is the history of the campaign map being subverted with the artificial introduction of resources in the system. The player is no longer purely defining her own intermediate goals towards the larger fixed goal of conquest; the system is introducing a peak in the conversation of tolls and acquired ease of bio-costs. Going by the Contract Agency Model, the phrasing of Power to Affect the Gamestate (PAG) is subverted in how it builds up to the level above it of the Current Gamestate – a twist of phrase of bio-costs, to keep the conversation lively.

Literary Practice 3: Suspending Interactivity

The final interesting literacy practice we identified for showcasing the Contract Agency Model in TW: S2 is how the game harms its own interactivity as a form of second-order signaling that is seemingly incongruent with what is expected of a videogame. Being second-order, this is relevant to the conversation of bio-costs in the Contract Agency Model. This practice pertains to the three least abstract levels in the model – Verbs, Tokens, and Controls. In the real-time battle maps of TW: S2, the player is giving direct commands to the army units she raised on the campaign map. She took on opportunity costs and risks in developing the infrastructure for recruitment and paying for that recruitment, she merged the units into a single piece on the campaign map representing an army, and she carefully moved that army to where she can command it onto an enemy piece, or where it will be attacked by an enemy piece. This is instanced from the campaign map into the battle map, and the player is staking all of her preceding commitments to meaning since she started playing the game in her control of her troops.

Fig. 4 The player's control being relinquished situationally
in the real-time battle map

The mouse and keyboard Controls in the battle map are more involved than in the campaign map. The battle map also is also more involved in terms of Verbs and Tokens. The verb of selecting agents and clicking on terrain or other agents is retained from the campaign map, but the battle map adds real-time clicking and dragging to define facing and rank-depth and frontage for the mass of 3D animated fighters in each unit, as well as different behavior toggles for different unit types. The player can also activate a group toggle for multiple selected units, which offers its own set of verbs. Units react to each other, and to what the opponent is doing and how it continually organizes its troops, and their situation (such as being flanked), terrain (such as fighting uphill), and more.

The fine-grained interactivity between Verbs, Tokens, and Controls on the battle map pulls the player in. Individual battle maps are even offered as separate modes of play alongside the single-player campaign. The number of battles in a campaign may not lag too far behind the number of turns the player takes in that campaign, and battles will be a fairly regular occurrence. Once committed to the real-time battle map, the player cannot save her game or exit without forfeiting the battle. The only way to inspect the larger context of the campaign map is to win or lose the battle. Depending on options selected by the player on the main menu of TW: S2, battles can be limited to 20 minutes, 40 minutes, or have no limit, in which case they can easily stretch over an hour's time. The reoccurrence of battles together with the player's deep investment in interactivity and the duration of battles risks losing the player from the rest of the conversation – from the larger meanings on the campaign map. This is compounded by how the player cannot move between a view of the battle and a view of the current campaign map; the battle must be finished first, and the player cannot check the campaign map and refresh her knowledge of the campaign map context for the battle.

TW: S2 remedies this risk of the player losing herself in interactivity on the battle map by harming that interactivity. The battle map is played by enacting precise control over a number of individual units (up to twenty units instanced onto the battle map at zero-state from one piece on the campaign map), tracking their status and that of opposing units, and reacting accordingly. The player loses the battle by losing the ability to act as her fighters get killed. However, TW: S2 complicates this with variables for fatigue and morale for each unit. Interactivity is relinquished as fighters lose their nerve and start to flee towards the edges of the battle map, taking away the player's control over those units, which is expressed in the text overhanging pane visible in Figure 4. This reaffirms the connection of the battle map to the campaign map. In an ongoing single-player campaign the morale of units is significantly tied to what the player has been doing on the campaign map. This history is also there for the opposing army, and how it factors with the player's army. The player loses freedom of action to gain agency and meaningfulness.

Conclusion

The Contract Agency Model was initially proposed as "a novel descriptive model for agency in videogames as communication" (Neves et al., 2018, p. 43). The current paper showcases the application of the Contract Agency Model to a COTS videogame – Total War: Shogun 2 (The Creative Assembly, 2011) to reveal interesting literacy practices in videogames' own terms. The game selected for the showcase is sensitive from the standpoint of media literacy and games because it deeply involves real-time control and long-term abstract manipulation of variables in the production of its meanings, where both these "views" in games have been of interest to media literacy, as argued earlier. Despite the armed struggle aspect of its representation and its nature as a commercial entertainment product, the literacy practices identified in TW: S2 through the Contract Agency Model hold for many different kinds of videogames, given that the Contract Agency Model is built to deal with the general, fundamental nature of meaningfulness in videogames as games.

All the interesting literacy practices uncovered consist of TW: S2 making conversational moves that seemingly contradict how videogames express themselves. TW: S2 harms its interactivity where it needs to be interactive the most, harms its qualities of emergent play where emergence is central to the game, and even throws away its nature as a game-artifact in favor of temporarily becoming a film-artifact. The Contract Agency Model can track and frame these practices, and explain how they help agency – as meaningfulness in games – rather than harm it. All eight levels of the Contract Agency Model are present in the uncovered practices – the three most abstract levels of the Personal Play Narrative, the Rules, and the Possibility Space for the literacy practice of suspending the game, the intermediate levels of the Current Gamestate and Power to Affect the Gamestate (PAG) in the practice of suspending emergence, and the three least-abstract levels of Verbs, Tokens, and Controls in the practice of suspending interactivity.

By framing the construction of meaning as second-order communication between system and player, the Contract Agency Model provides a standard for what can be demanded of a particular videogame if that videogame is to be considered games-literate. Media literacy focusing on games already provides standards for good learning practices, or responsibility for procedural rhetoric in the game. At the very least, games and practices surrounding them are recognized as relevant media literacies. However, this is what we call 'indirect' literacies – uncovering literacy in games with the aid of external criteria (learning, rhetoric). The Contract Agency Model is a 'direct' literacy of games – how a game is meaningful in its own terms, as a game. With such a direct literacy, people can demand a second-order literacy whereby the game underlines that the player of that game is human, in a purely disinterested fashion. The game does not tell the player she is human; the game affirms this through the kind of literacy practices it leads to by its design. It can be demanded of a game that it converses with the player and maintains agency, per the Contract Agency Model. More than responsibility for procedural rhetoric or learning, there is responsibility for a second-order literacy of bio-costs and conversational commitments to meaning – agency. This complements existing, more 'indirect' frames for media literacy and games in how videogames are created by professionals and by students, as well as discussed and analyzed.

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