

Are Video Games Modern: From the Aspect of the Conception of Time

Shan-Chao Fu
Peking University

Introduction

Are video games modern? Why ask this question? Isn't it obvious, since video games are technological products of a cultural industry, born in the days that's already called "postmodern", that they should be somehow "modern" and somehow "postmodern", which is trivial? Shouldn't we then approach our problem by asking "How do video games fit into the framework of 'modernity'?", "What are the 'postmodern' characteristics that video games have?", and "How do problems pertaining to 'modernity' and 'postmodernity' also involve video games? And what are the singular presentations of these problems in video games?"?

Yet we should not take for granted that if something is born in an era then it must be "of that era". At least, not for the era that is called "modern". In his *We Have Never Been Modern*, Latour pecked from the intricate mass of discourses of modernity a grain of truth: "Being modern" means, at least partially, claiming to be "modern" (Latour 2012). The gap between what is claimed and what really is is one of the defining symptoms of this modern time. Bearing this in mind, it is thus better to carry out our reflections *ab initio*: that we assume nothing from the start and check carefully if video games are really "modern" and ask further questions after that. And I assure you, that our patience here will be paid back lucratively.

A Super Brief Review of the Discourses on Modernity

Modernity has always been a hard question to approach ever since it was incepted into our mind. We the moderns, or who thinks ourselves "modern", have always had a recurring feeling that this era is quite different, if not completely different from all other times. This is what Giddens termed as the "discontinuities" (Giddens 1990: 4). An abundance of literature has tried to treat this topic from various approaches, most of which fall into two categories: one that points out the consciousness of modernity is a consciousness of a "modern temporality"; and the other reflects upon the multi-facet concept of "rationality", its logic, its narrative, its presumptions, and its limitations. In the first category, there are the *homogene und leere Zeit* (homogeneous and empty time) that Benjamin criticized in his philosophy of history (Benjamin 1989), the change of the connotations of the word "modern" (Călinescu 1987), the politics of time (Osborne 1995). In the second, there are the classic definition of "rationalization" (Weber 2009), Heidegger's philosophy of science and technology (Heidegger 1977), governmentality and critique as defined by Foucault (1997). There are some others that combine these two aspects: Kant's enlightenment as an *Ausgang* (Kant 2013), Hegel's historical teleology (Hegel 2004), and in principle, everything that could be called a "grand narrative" as criticized by Lyotard (1984). Giddens also dealt these two aspects of modernity integrally, showing that "the emptying of time and space" and their

separation from each other enable profounder reflexivity, and this reflexivity moves the “shifting sand” upon which our modern world is built (Giddens 1990).

We can tell from the extremely concise review above that: although the various aspects of “rationality” attracted more reflections in which a more thoughtful literature have been produced, “the consciousness of time”, or to be more accurate, “the consciousness of the making of a time” is both the prerequisite and the driving force to institutionalize these “rationalities”. It seems, it would be more efficient to first delve into the “temporal aspect” of modernity. Our question thus becomes: do video games assume a modern conception of time?

The Modern “Standard Model” of Time

Here we take the “homogeneous and empty time”, proposed by Benjamin and confirmed by Giddens, as the “standard model” of modern temporality. The reason of this labelling is simple: it is the prerequisite of a series of significant modern phenomena. Benjamin coined this term in order to criticize “historicism” that envisions a very linear picture of historical “development” (Benjamin 1989), an accusation few modern grand narratives (such as developmentalism (Pieterse 1991) and Kant’s enlightenment (Kant 2013)) can escape from. Benedict Anderson pointed out that it laid foundation for modern nation-states to be imagined (Anderson 2006). According to Giddens, the “emptying of time” enables the process of “disembedding”, and the disembedding of tradition amplifies the magnitude and expand the range of reflexivity in a modern society (Giddens 1990). And for Osborne’s “the politics of time” which objectifies various time structures in social practices to suit certain discourses of development or preservation (Osborne 1995), the homogeneity and emptiness of time again provide the possibility for this objectification to even happen.

Our task now seems pretty straightforward: compare the temporality of video games with the modern “standard model”. Yet, we shall meet a difficulty if we compare directly. First of all, video games in themselves are not representations of some external reality in which “time” could be one of the topics. Video games are simulations in which “time” may or may not be directly simulated. Even if time is simulated by the coded game engine, it may not be simulated consistently. For example, saving and loading the game will usually interrupt the continuum of a physical time simulated in it. It would be quite vague if we first inductively build a structural model of temporality for some given games and then compare this one with the modern “standard model”. What is on the left of the balance and what is on the right might not be very comparable: The former might have a much more complicated form than the latter do!

It is thus necessary to find a way to circumvent this incomparability. What could be done here is that we break down the “standard model” into not a whole model, but a few properties. It is not hard to find that the “homogeneity” and “emptiness” are independent properties and thus separable. We can then paraphrase the model of a “homogeneous and empty time” to be holding two assumptions: one supposes a transcendental and universal isochrony, the other supposes a transcendental and universal synchrony. The former means that, if we have two accurate clocks, no matter when and where we put them, their time scale would always be the same. A corollary of this former assumption reads: If we have two events, no matter what kind of events they are, whenever and wherever in space-time, we can always measure their time with one universal time scale. The latter means that, if we have two events, no matter

what kind of events they are, whenever and wherever in space-time, we can always find a single consistent and accurate answer to the question “which of them happens first”¹.

Now we are able to check in any given game if the time structures in it are compatible with the modern “standard model”, and maybe even to check to what extent are they compatible. However, before expounding selected examples, we should first clarify the concept of “video games”, since there are more than one kind of “video games” of which not all are suitable for our temporal analysis.

Abstract Games and Simulative Games

Jesper Juul first pointed out and analysed carefully the dual structure of game temporality. The most essential property of game time, as is underlined by Juul, lies in its “basic duality of *play time* (the time the player takes to play) and *event time* (the time taken in the game world)”. Juul further mentioned that, the relationship between play time and event time is “highly variable between games and game genres. And for “abstract games”, they “do not project a game world at all, and therefore do not have a separate event time.” (Juul 2004) Juul did not name those that are not “abstract games”, but since they must all project a game world, which must be in some way simulated², I would like to call them “simulative games”.

Juul discussed in various cases (especially genres) the structural relationship between play time and event time with nice illustrations. Starting from the almost trivial case of abstract games in which play time and event time always coincide and by adding more factors one at a time, Juul covered almost every factor that has something to do with the objective structure of time in games. Yet when moving on to the “subjective time”, he omitted without much discussion all other aspects but focused on the question “what kinds of subjective time are enjoyable?” which he found an answer in flow theory.

We start from where Juul left blanks. First of all, it seems still necessary to give a more accurate definition to “subjective time”. Since both the play time and the event time have a subjective dimension (play time usually differs from player to player; event time, although much more objective, still need to be understood by the player and hence are theoretically open to explanations), it is better to define “subjective time” as the player’s conception on how play time and event time are associated in a meaningful way. Since for abstract games, there is seldom any non-trivial way of associating play time and event time, we shall focus on simulative games.

Yet not every mechanics related to simulation in simulative games is producing a meaningful subjective time. For example, in a turn-based strategy RPG, the event time changes only when the game state is changed, while the play time between each player’s move could be indefinitely long. Under Juul’s criterion, a turn-based strategy RPG might lie on the border between abstract games and simulative games, yet for real time RPGs that has a pause function³, this indefinite synchronizing mechanics is still, to some extent, disentangling the play time and the event time, making no meaningful associations unless combined with other mechanics. Based on this observation, we can focus more with an even shallower depth of

¹ “They happen at the same time” will also be taken as one of the legitimate answers.

² To be more accurate, “virtualized”. See Karhulahti 2014. But I will still use “simulation”, just for convenience.

³ For example, RPGs built on BioWare’s Infinity Engine like *Baldur’s Gate* and *Planescape: Torment*.

field: We only analyse game mechanics that are able to produce a meaningful subjective time, rather than whole games.

The Violations of Universal Isochrony

After all the theoretical manoeuvres, it is about time for us to finally get down to case studies. Before presenting the analysis, however, I feel imperative to procrastinate again and have a few words on methodology.

Since we are analysing game mechanics, it would not be very hard for us to find both a mechanics that produce a subjective time that is compatible with the modern “standard model” and one that violates it. It is thus necessary to add to the pure structural analysis the reason why they are designed as such and how salient these mechanics are to the genre(s) if we are to draw any meaningful conclusion on our question. To put it another way: We shall reflect upon some basic game mechanics, using a few examples to clarify what is behind these mechanics.

First we would like to re-approach what Juul called “mapping”, in which play time is mapped to event time with a certain ratio (Juul 2004). Or to make it more specific, we here choose mappings with variable ratios, or say the mechanics of time compression and time dilation.

Let us start from some simple sentences from *Euro Truck Simulator*’s manual:

*“Euro Truck Simulator has its own time cycle which runs considerably faster than real time. Also, the time compression ratio is different depending on whether you are driving outside or inside the cities.”*⁴

This description tells us that, first, *Euro Truck Simulator* is compressing time, and second, the compression ratio is variable. The reason behind this time compression is pretty straightforward: To make the long distance shipping less an ordeal but more enjoyable. The typical event time of an in-game long distance shipping is usually more than 10 hours, while the corresponding play time will be less than an hour. Moreover, when player is inside a city, the compression ratio will be significantly lower in order for the player to take her/his time to decide which job to take. The high compression ratio when on the highway and the comparatively lower ratio in cities finally serve one single object: to adjust the level of challenge to be always moderate. It is exactly these moderately pressuring and time consuming tasks that have created the unique experience of the *Euro Truck Simulator* franchise.

Besides time compression, there is also time dilation, among which the mechanics of “bullet time” might be the most famous. “Bullet time”, as in games like the *Max Payne* franchise, is an ability of the player character, when activated, slows event time considerably and thus enables the player to aim much more accurately than when event time flows normally. The purpose of this mechanics is also not hard to explain. It empowers the player character and thus enables her/him to face more challenging levels⁵ in which the player could feel more pressure and thus feel the game to be more rewarding aftermath.

⁴ “Euro Truck Simulator Manual”. Euro Truck Simulator Official Site. http://www.eurotrucksimulator.com/download/manual_en_gb_high.pdf. Retrieved on Jul 27 2017.

⁵ And more non-linear usually. With this mechanics, levels might feel more “rhythmic”.

The mechanics in *Euro Truck Simulator* is quite unique, yet variations of “bullet time” have already been not uncommon in the action adventure and action RPG genres⁶. No matter their popularity, it is very clear that these time mechanics both serve directly the purpose of game design to create better, if not unique, game experiences. And what is more, even in games where these time compression/dilation mechanics serve not as the core mechanics, they are also quite common as tweaks to improve game experience⁷. It is thus fair to draw this conclusion: Video games care more about specific game experiences than the transcendental notion of universal isochrony. They may have some kind of isochrony which depends on specific game mechanics, and thus might be transcendental but never universal.

A Weird Synchrony

As for the question of synchrony, we would like here to consider what kind(s) of subjective time the save/load mechanics (or its variation such as checkpoints as an auto-save mechanics) is able to produce. Since save/load mechanics is extremely common, I thereby choose a somehow special example—*Batman: Arkham Knight*, in which the meaning of the subjective time pertaining to save/load mechanics is made more explicit.

In *Batman: Arkham Knight*, there is an extra animation after player’s failure on a mission. For most of the cases, it is when batman dies, the major villain in this mission shows up and taunts or simply make some comments. This imagined conversation could be taken as demonstrating what is inside the villain’s mind or what is in batman’s speculation that if he ever fails, what would happen. In the mission of the assault on GCPD (Gotham City Police Department), the failure animation will be a cut-scene showing, with batman’s total absence, the Arkham Knights Militia slaughtering GCPD with Barbara Gordon there, suggesting the brutal fact of what would happen if the player fails. Besides this strong emotional effect, an interesting aspect of this failure cut-scene is that, if the player fails multiple times, each trial and this repeated cut-scene will be jointed as if by cross-cutting. Since in cross-cutting, a synchrony between two events at different locations is constructed, a typical game session on this mission could be taken as a montage which suggests an unreal synchrony between multiple incompatible possibilities!

And there are more to be explained. Since the salience of save/load mechanics, this unconscious and unreal synchrony is pertaining to a large number of games. However, besides this kind of weird synchrony, we can hardly find any other kind of synchrony in simulative games⁸. Within this montaged synchrony, each failure in principle is different, since for a complex enough simulation, the number of possible game states usually exceeds the times a player could possibly bear to retry. Yet all these trials are not all different worldlines. As in the case mentioned in the previous paragraph, the narrative only leaves room for two worldlines: one that batman succeeds and one that he fails. Thus, we can conclude as follows: video games could have a synchrony in some sense, which might be universal but never transcendental, generated by the save/load mechanics and depends both on level design and the narrative of the game.

⁶ To name a few recent examples: *Horizon: Zero Dawn*, *The Legend of Zelda: Breath of the Wild*, and *Nier: Automata*.

⁷ For example, a quasi pause menu, when activated, slows down event time considerably.

⁸ Unless that which is not simulated but narrated.

Postmodern or Amodern? The Principle of Unsimulability

After the previous two sections, it seems of less and less doubt that video games in themselves are not quite compatible with the modern “standard model” of temporality. There immediately rises one further question: if, considering the temporality aspect of modernity, video games are not really modern, are they “postmodern”, “pre-modern”, or as suggested by Latour (2012), “amodern”?

Judging from the strange structures of the subjective times mentioned above, it is very tempting to claim that video games are “postmodern”. Such similarity between the weird synchrony and the forking paths of Borges (1999), as if Borges has already played an adventure game! Yet there is one crucial difference: Borges depicted, according to his postmodern philosophy and aesthetics, the fictional time structure as something possible but transcendental; However, in video games, all the “strange” things happen naturally, justified either by some given mechanics or the specific level design or the narrative. In video games, these seemingly strange structures, if not disembedded, hardly give players any strange feeling.

To explain this paradox, I would like to introduce a principle: the principle of unsimulability. Inspired by the principle of uncertainty in quantum physics⁹, the formula of the principle of unsimulability reads:

$$\text{playability} \times \text{fidelity of simulation} \leq \text{some constant}$$

It means, for a given simulative game, the part of game that is for playing must not have a simulation that feels very real, and the part of game that is simulated to be very real cannot be of a lot of fun.

According to this principle, the way time is simulated in a game depends on how the game is designed to be played. As for the part of the simulation that is not “real”, players will take it to be the price paid for playability and naturalize the structure in their mind not matter how weird it is. Thus, though structurally similar, aesthetically, the time structure in video games and that in Borges’s fiction are far from the same. Plus, they serve different functions in their original contexts. Based on this observation, we can at most claim that video games’ temporality is just unconsciously postmodern.

What is more, no matter this claim be true or not, there is always a mirror version of it: That every postmodern theory relies unconsciously on the concept of “games”. Take Lyotard as an example: It would not take too long for one to find out that, in order counter what he termed as “grand narratives”, Lyotard turned to Wittgenstein’s “language games” (Lyotard 1984). Therefore, if the definition of “postmodernity” depends on the concept of “games” while “games” are themselves “postmodern”, what is in that definition of “postmodernity” will only be a tautology.

It then seems, with the ridiculous answer “pre-modern” out of question, the only option left for us is to label video games, at least from its temporality, as “amodern”. Are they really? Judging from what is behind the principle of unsimulability, we can safely say “Yes”. Video

⁹ Which, in a simplified version, reads: the uncertainty of the momentum of a particle times the uncertainty of the position of that particle must be no less than a certain constant.

games are designed around gameplays that are local, specific, though might be abstract but never transcendental. They can be consciously indifferent to the modern temporality if they want.

Video Games Made Modern

In *We Have Never Been Modern*, Latour argues, from his “amodern” perspective, that “Time is not a general framework but a provisional result of the connection among entities.” (Latour 2012) From the analyses of the violations of universal isochrony and the weird synchrony, we can see video games are doing exactly as what Latour says. If we take video games themselves also as a “provisional” connection between the general concept of “game” and computer technologies, it is not hard to find that, since computer technologies make simulative games possible, this “provisional” connection is exactly the reason why games, when computerized, contradict with the modern conception of time.

Let us paraphrase in a latourian way how computerized games interact with modernity: 1. What games, by their nature, do is reassembling various things according to the logic of “gameplay”. 2. Computerized games utilize modern technologies—thanks to the exploding evolution of the technology of simulation, to augment this reassembling and thus producing a hybrid that on one hand, is pertinent to various topics that concern us, and on the other hand, operates on a specific logic that is in principle indifferent to modernity and could be designed. It seems, in this picture, that video games could be consciously turned against modernity.

Yet there is still the other half of modernity: rationality. For this other half, video games are not so innocent and defiant. Though we can still argue that, in principle and in a philosophical sense, video games can still be indifferent to all kinds of modern rationalities, there is no point ignoring the fact that anything amodern can be made modern, which means, to include them into and/or colonize them with modern rationality.

There are three ways of making video games modern, from what I know:

1. Design gameplays according to the modern rationalities. There has been since the birth of video games an effort to colonize them with modern rationalities. This effort is quite “unconscious” because few people realize that video games are in themselves quite a stranger to modernity. People are simply bringing what they are familiar with into video games—Grand narratives? Sure. Makes better stories. Rational calculations? Makes games more addictive. Micro-physics of power? No problem, we have our newest inventions: micro-transactions, in-app-purchases, free-to-play, gacha.
2. “Serious games”. Though usually only vaguely defined, “serious game” means to utilize video games' form as a means to serve some practical ends. By doing so, serious games are also producing hybrids: They reassemble the formal elements of video games under some external logic where games are only taken as one of the modern technologies. It seems, the concept of “serious games” praise the ability of games to change the world, yet never sees its real strangeness. The very concept of “serious games” already rationalizes (and thus, “modernizes”) video games.
3. Integrate video games into the reflexivity of modernity. Here I would like illustrate with an example how video games could be “reflexive” to our modern world.

Recently, under the supervision and support of a professor in our department of Chinese language and literature, a team of graduate students carried out a preliminary project studying the languages of Chinese internet sub-cultures. As an outcome, a “dictionary” explaining more than a hundred keywords pertaining to Chinese internet sub-cultures is produced, with me in charge of the chapter on video games. When editing the entries, I found one thing to be quite interesting. In other sub-cultures, new terms are new terms; if not explained, there is no way to make any educated guess on their meaning based only on the constituting characters¹⁰. Yet in the chapter of video games, we found quite a lot of common words, borrowed from everyday language, some of which are even borrowed back to everyday language with refreshed denotations and/or connotations. For example, now for the young people, to say “someone is beautiful” literally means “someone has a high countenance-point”; “world view” now means the setting of a fictional world rather than *die Weltanschauung*; “immersion” means the same thing but has become one of the key criteria to judge if a story, in the form of a game or a fiction or a film, is good or not. It seems, by this borrowing back and forth, the philosophy of video games is percolating, though to a limited scale, into the “real world”. Since, according to the latourian picture, video games are a kind of reassembling of our modern world, this process can only be made more conscious and more efficient.

Conclusion

After such a theoretical journey with detours and surprises, it seems the initial question, “are video games modern?”, are no longer that important. What is important is that we found, on a macroscopic level, the way how video games interact with our modern world. The existence of such interaction suggests that “game” as such is an understated, if not repressed, concept in our modern world.

By claiming “we have never been modern”, Latour overstates to make a point. Yet this one is no exaggerating: Have we been modern ever or not, we have always been gaming.

Games

BALDUR’S GATE. BioWare, PC, 1998.

BATMAN: ARKHAM KNIGHT. Rocksteady Studios, PC, PlayStation 4, and Xbox One, 2015.

EURO TRUCK SIMULATOR. SCS Software, PC, 2008.

HORIZON: ZERO DAWN. Guerrilla Games, PlayStation 4, 2017.

THE LEGEND OF ZELDA: BREATH OF THE WILD. Nintendo, Nintendo Switch, 2017.

MAX PAYNE. Remedy Entertainment, PC, PlayStation 2, Xbox, 2001.

NIER: AUTOMATA. PlatinumGames, PC, PlayStation 4, 2017.

PLANESCAPE: TORMENT. Black Isle Studios, PC, 1999.

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¹⁰ I have to explain that, since Chinese tends to make compound words, it is not uncommon for one to be able to guess the meaning of an unfamiliar word only based on its constituting characters.

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