Videogame Visions of Climate Futures: *ARMA 3* and Implications for Games and Persuasion

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Abstract: This paper discusses *ARMA 3* (2013), a military simulation game from Bohemia Interactive. Through the placement of prominent visual representations of renewable power generation in *ARMA 3*'s islands, the game offers a compelling vision of the future in which current resistance to low-carbon and renewable economies has been overcome. I argue that the potential of this vision to challenge existing cultural futures and imaginaries is dependent on its presentation aesthetically and *not*, as is often suggested by current games literature, on game mechanics operating in a 'persuasive' or didactic mode. Instead, I argue that *ARMA 3*'s 'aesthetic vision' possesses the ability to skirt around the ideological resistances players may have about accepting more explicit or direct modes of addressing the highly charged and ideologically contested reality of anthropogenic climate change. In this way I suggest *ARMA 3* offers a compelling challenge to current theories about games ability to influence players.

Keywords: videogame aesthetics, climate change, ideology, persuasive games, game design

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Introduction - *ARMA 3*

ARMA 3 (2013) is a military first person shooter simulation game, touted by its developers

Bohemia Interactive as 'a massive military sandbox.' Initially launched without a single player

campaign but with tools for fans to create numerous scripted scenarios and mods, the game is

primarily a multiplayer sandbox with scope for a range of gameplay types within the limits of the

ARMA engine's infantry and vehicular focus. The game takes place on one of two large islands,

with no set levels, checkpoints, or invisible walls, giving the game a sense of existing in one

massive connected space. Added sometime after release, a single player campaign takes the

player through a series of difficult scripted missions, which impose some structure on the

player's movement through the freeform environment. These missions contain some passable

voice acting and mixed dialogue and plotting, and were clearly not a primary focus of

development. Instead, *ARMA 3* is often described as more akin to a 'platform' than a typical

game. YouTuber and occasional Bohemia Interactive consultant Andrew 'Dslyecxi' Gluck

(2013) describes it as 'the *Minecraft* of military-sim games… this entire island is a canvas.'

Players spending significant time with the game will inevitably discover that the main island on

which *ARMA 3* is set, and which is modelled on the terrain of the real Greek island of Lemnos

(referred to in-game as 'Altis'), features numerous renewable energy installations strewn across

its 270 km^2 terrain. An aerial tour of the island reveals wind farms dotted along several

prominent hills, with their lazy blades chopping the air; industrial scale solar-thermal

installations near the island's main airfield (a common starting location) which focus the sun's

rays onto a central tower in order to power a steam turbine; fields of solar photovoltaic panels

that abound in numerous areas; and, if one knows where to look, tidal-power generating buoys submerged off the coast of the southern beaches, with the occasional stray hauled up on land. The whole island is noticeably missing the familiar structures one associates with 20th Century fossil fuel power generation, and the iconic cooling towers of coal or nuclear fired power stations with plumes of rising steam. Instead, there are only bright, shining solar panels, thermal towers and an impressive number of wind farms. The landscape-architectural aesthetic of the island of Altis is dominated by the visible presence of renewable power generation.

Figure 1 – One of several prominent wind farms located in the southern part of Altis

Set in the near-future period of the 2030s, *ARMA 3's* designers have devoted much time to evoking a very particular near-future feel, particularly through weapons and vehicle designs. It introduces camouflage patterns plausibly extrapolated from contemporary 'pixel based' military

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uniforms, as well as weapons and vehicle technologies that appear perfectly logical future-oriented extensions of current designs. The prominent and repeated use of hexagonal shapes and visual motifs give many vehicles the angular look reminiscent of contemporary stealth technology – a technology that remains even now relatively 'futuristic' despite its familiarity. These visual design choices evoke a plausible yet still unfamiliar near-future feel.

The overall effect of this is that it locates the player within a particular vision or idea of the future, one that is not necessarily consciously engaged with, but which is nevertheless sensibly or cognitively apprehend. The aesthetic presentation of future oriented military hardware, coupled with the aesthetic presence of renewable energy power generation, assembles a particular vision or argument for a possible future. Most importantly of all, the future that *ARMA 3* is presenting as its gameplay's backdrop is a future in which a full-scale transition to renewable energy in domestic power generation *has already occurred*. The prospect of this, and of players encountering, becoming acquainted with, and even accustomed to this, when examined in light of contemporary national and international political inertia on the issue, is highly exciting. For in spite of all its militarism, by presenting this image of a future filled with renewable energy the game actually presents in some sense a *politically optimistic* vision of the future. *ARMA 3* says aesthetically that a world of renewable energy is possible, and *crucially* it does not say this either in so many words or through the typical contraction of meaning through mechanics approach to game design. In fact, *ARMA 3*'s vision is far more arresting precisely because it is conveyed aesthetically, through this projection of a particular vision of the future.

[Figure 2 – A large-scale solar installation near Altis' main airfield]

Informed by this perspective, this paper departs from existing game studies consensus on the nature and efficacy of games' persuasive powers, which has commonly seen an emphasis on the mechanics of gameplay and what is seen as their potential to provoke player reflection, introspection and attendant changes in attitudes, opinions and behaviours. Instead, I will argue that this persuasion through mechanics approach faces significant barriers when dealing with highly contentious (even *ideological*) issues. I argue for the power of aesthetic visions in games, and the power of these to more effectively perform ideological critique, by readily getting 'under the skin' of the player, bypassing the typical rational reasoning that is involved with simulatory mechanics that seek to interrogate. In the remainder of this paper I do three things: firstly, I seek to establish the importance of cultural visions of the future and their political impact on our conceptions of what's possible. Secondly, I argue that the nature of the problem of convincing or

persuading individuals to acknowledge the seriousness and importance of climate change is highly ideological, presenting challenges for existing theories about games potential for persuasion. This leads to the final task of this paper, which is to argue for the critical importance of the *aesthetic* nature of *ARMA 3*'s vision of a climate future, as it is far more likely to enable ideological critique by eschewing persuasion via mechanics or simulation techniques, which are likely to be consciously rejected. This suggests a challenging conclusion for games aspiring to climate and environmental activism, and for existing ideas about best approaches to designing games with these ends in mind – current approaches having thus far largely failed to engage with the problems posed by ideology.

'The slow cancellation of the future'

Italian autonomist Franco 'Bifo' Berardi has described the political project of neoliberalism as 'the slow cancellation of the future,' (Berardi, 2011: 18) an outcome of the political project that has been underway since the 1970s. Berardi (2009, 2011) frequently returns to the importance of the idea of the future, and the changing relationships we have had with the future under different historical periods: 'In the modern era, the future was imagined thanks to metaphors of progress' (Berardi, 2009: 121) but as the institutions and ideological formations of left political progress broke down under neoliberalism, Berardi claims, 'what… disappeared, more than anything else, is the credibility of a progressive model for the future.' (Ibid: 122) In a way, the future itself, or at least a certain cultural and imagined relation to it, has disappeared.

Contemporary material and political conditions, according to Berardi and a growing number of others, have been transformed as a result of the neoliberal project. (Crary, 2014; Mitropoulos, 2012; Fisher, 2014) This political project has brought with it increasing precarity, risk and insecurity for workers, and for many an undermining of the material conditions of life previously guaranteed through the welfare state of the 20th Century. (Harvey, 2005; Hall, 2011; Hamilton, 2012; Davies, 2014) The result is our collective and cultural expectations, even our very ability to conceive of certain kinds of futures, have been seriously altered. It is only a small step from this instability and uncertainty to the looming threat of global climate change, which further threatens to wipe out our future entirely. (Collings, 2014)

Alvin Toffler's (1970) famous work *Future Shock* introduced the notion that the future was a place of change and uncertainty, experienced as a series of shocks precipitated by the increasing rate of change in society. But for British cultural critic and philosopher Mark Fisher, the shock of the future is less pertinent than the surprising 'persistence of recognizable forms' (Fisher, 2014: 7). As he explains,

> It was through the mutations of popular music that many of those who grew up in the 1960s, 70s and 80s learned to measure the passage of cultural time. But faced with 21st century music, it is the very sense of future shock which has disappeared. (Fisher, 2014: 7)

Fisher (2014) extends Berardi's line of thinking about the loss or disavowal of the future, combining it with an analysis of the sense of cultural time in the present, drawing attention to the particular emphasis placed upon nostalgia and the return of familiar forms:

> In 1981, the 1960s seemed much further away than they do today. Since then, cultural time has folded back on itself, and the impression of linear development has given way to a strange simultaneity. (Fisher, 2014: 9)

Like Berardi (2009, 2011), Fisher (2014) locates his explanation for this shift in a change to modes of cultural development and renewal. Similarly, he finds the neoliberal mode of late capitalism responsible for contemporary culture becoming locked in what Fredric Jameson called a 'nostalgia mode,' with the eternal return of older cultural forms and styles, and an inability to generate the truly 'new'. Fisher (2014: 15) notes that, 'despite all its rhetoric of novelty and innovation, neoliberal capitalism has gradually but systematically deprived artists of the resources necessary to produce the new.'

Fisher has also coined a term to describe the way capitalism has colonized the minds and imaginations of Western citizens, making capitalism seem both natural and inevitable. (Fisher, 2009) He describes 'capitalist realism' as the abiding ideology of our age, after Margaret Thatcher's famous slogan 'There is no alternative.' Capitalist realism captures this sense of inevitability, the impossibility of difference or contingency, and of lacking a *future* that is significantly different from the present. Instead, what is laid out before us is an elongated, prolonged and exacerbated *now*. This is again a conception of the future not as chronological

time but as cultural idea, existing within and operating on the collective imaginary. The future is by necessity a space of possibility-to-be-otherwise, and it is this dimension that is foreclosed by the modern developments of neoliberal capitalism, and capitalist realism's claim that the way things are now is simply how things must always be. Needless to say, this 'capitalist realism' is a highly ideological vision, even as history has time and again shown just how incredibly fragile and fleeting any one particular socio-political arrangement is. And yet, imagining a different future outside of the coordinates set by capital and its unsustainable focus on growth, even such that it begins to threaten our very existence on the planet, is incredibly difficult to envisage.

In light of this, the value of *ARMA 3*'s positive projection of a renewable energy future becomes clear. We can perhaps trace its alternative 'realism' (*contra*-'capitalist realism') to the game's adherence to a kind of *military* realism, which has undoubtedly inspired much of the game's design and hence its particular vision of the future. Consider the fact that the US Military's top planners in the Pentagon have contingency plans in place for US naval bases likely to be inundated by climate change, as well as long-range strategic plans that incorporate climate change considerations in other ways. (Pellerin, 2013) This kind of military realism is more closely aligned with a materialist analysis than with capitalist realism, despite the military's frequent alignment with some of the worst capitalist tendencies in the form of the military-industrial complex. The presence of 'climate realism' is perhaps more due to the fact that, as part of its conservative threat-analysis mission, the military needs to acknowledge real risks to security (which includes future risks from climate change).

When the cultural sphere has imagined 'the end' of present sets of socio-political arrangements it has often taken the form of the imagined apocalypse, and of which there is no shortage of examples in games. Since the landmark title *Wasteland* (1988) and the various series it has inspired, including the contemporary *Fallout* series (1997-2010), games have long drawn on the potent cultural imaginings around cold war fears of nuclear annihilation. Similarly, there is no shortage of viral and other 'zombie' apocalypses in gaming.

But as Berardi (2009: 132) notes, these cultural visions of disaster and the end of civilization have not always been so ascendant:

> only today, at the beginning of the twenty first century, does dystopia take centre stage and conquers the whole field of the artistic imagination, thus drawing the narrative horizon of the century with no future.

Evan Calder Williams (2011), Marxist author and poet, has written about the History Channel's popular series 'Life After People' (2008-10) that imagines a post-apocalypse where human beings have disappeared completely from the face of the earth leaving behind all their urban developments to be slowly reclaimed by nature. He argues that the real 'libidinal surge' and pleasure of viewing this type of imaginary comes in asking

> what would happen if we were gone, what would the built world of capital be without us, its constant attendants and hand-servants, what would happen if the dialectic of nature and capital became a battle the latter was doomed to lose? (Williams, 2011: 175)

But for Williams, this surface level exercise is not by itself productive of an alternative future, posing no challenge to the present. Instead, a more substantial apocalyptic imagining consists of envisaging the end of the construct that is "time" and its particular role in structuring the human life:

> the series in all its doom and gloom and overblown aesthetics of digital decay… nails the distinction between the end of the world and the end of days. It's the latter which is *properly* apocalyptic… the sense of the end of "day" as a unit of time measure: the work day, with its corollary equal segments of play and sleep. Not an end of history per se, but an end of our pseudo-cycles of history that consist of interlocking, unhalting 8-hour blocks. (Calder Williams, 2011: 178. My emphasis.)

Fisher (2009) himself has a great phrase describing the horizon of our best collective expectations for the future as a hope for 'managed decline' – with capitalist realism asserting that such is the best we can expect: averting disaster while things slowly deteriorate. Once again, I find great value in *ARMA 3*'s vision of a renewable future, one in which climate change is implicitly being addressed through renewable energy, presenting a compelling counterpoint to the hopelessness that surrounds capitalist realist visions of the future.

Games, Ecology, Climate Change

Before proceeding it is important to engage with existing literature's suggestions for games productive engagement with the issue of climate change. Various attempts have been made to describe or argue for the persuasive efficacy of games, and their capacity to advocate for real world changes through engaging players directly. Typically this is articulated as prompting players to interrogate or question their various attitudes and beliefs about either climate change or related environmental concerns.

In conference proceedings of the GLS game summit, Kearny Bell-Gawne (2013: 94) has argued for the ability of the power of games' simulations to change or influence player beliefs about environmental policy. She argues for games utility as 'a tool to better inform policy and research around environmental issues such as sustainability, food, and climate change.' (Bell-Gawne, 2013: 94) Her conclusions, however, are fairly provisional and rest upon one small case study. Kelly and Nardi (2014) argue more forcefully that games in the 'survival/crafting' genre (such as *Minecraft* (2011-15), *Rust* (2013), and *7 Days to Die* (2013)) can lead players through 'imaginative visions of situational potentials and solutions to problems'. Kelly and Nardi (2014) here approach the same analysis that I am arguing for, namely the imaginative power of cultural visions. However, their argument largely falls back upon mechanic-centric approaches to games' power to persuade. Kelly and Nardi (2014) argue that games can have players engage with problems like resource scarcity and the necessary social changes these situations suggest. A particular excellent example of a game designed explicitly with resource scarcity in mind is Ken Eklund and Jane McGonigal's *World Without Oil*, (2007) which encouraged players to envision creative solutions to problems arising from 'peak oil.' Of course, as climate activists like Bill McKibben (2012) and Naomi Klein (2014) have begun pointing out, the earth has more than

enough existing reserves of oil, coal and other fossil fuels to well and truly ensure the global climate can be changed beyond recognisability or any hope of recovery should their use continue unabated.

Kelly and Nardi (2014) however go further than simply arguing for games' powers to provoke reflection or conscious engagement with resource scarcity scenarios, arguing the importance of *specific mechanics* in effecting these reflections: 'good game mechanics can cultivate imaginative visions of situational potentials and solutions to problems.' (2014) They argue game elements that simulate or represent sustainable practices 'could provide material for the thematic and aesthetic design elements of new games. Global futures games can make visible the possibility of low/no growth as a challenging and achievable goal.' (Ibid.)

Matt Barton (2008) has discussed the history of games simulation of weather. Like the previous authors, he argues for more consideration and inclusion of environmental simulations in contemporary games, asking rhetorically: 'how can games acknowledge the threat of global warming when game characters fail to take notice of a torrential downpour on their heads?' (Barton, 2008) Likewise, Alenda Chang (2011) largely concurs with Barton's perspective and makes a similar implicit call for greater development of complexity in the relationships between player and game environment. Chang (2011: 60) states that 'game designers have yet to develop more sophisticated rules for interaction between players and game environments' repeating the focus on mechanics largely to the exclusion of other considerations around how games might impact significant cultural issues. Chang suggests the current problem is that 'games naively reproduce a whole range of instrumental relations that we must reimagine' (Chang, 2011: 60)

and in the same vein as both Kelly and Nardi (2014) and Bell-Gawne (2013), adds that 'more environmentally realistic games could affect our understanding of real-world environmental issues, either by implicitly or explicitly modelling different forms of our individual and collective environmental agency.' (Chang, 2011: 60)

This idea of greater player engagement with a complex environment is taken up by Kyle Bohunicky (2014) who argues in 'Ecocomposition: Writing ecologies in Digital Games' that in *Minecraft* (2011-2015), players experience and act out greater environmental agency than is typical. This includes engaging in the writing of terms like 'shelter' or 'transportation' onto the environment, arranging different block materials into buildings and other structures. (Bohunicky, 2014) The primary claim Bohunicky (2014) makes is that the survival/crafting genre has a unique relationship with nature and ecologies; in other genres these concepts are often 'situated at the game's margins as scenic backdrops for grand conflicts between players and other humans/technology,' while survival/crafting games embed players within 'a nature and ecosystem.' (Bohunicky, 2014: 225) The effects of player development upon the procedurally generated "natural" landscape 'leaves sizeable scars on the game's terrain.' (Bohunicky, 2014: 231) Like Barton (2008) earlier, Chang (2011) asks why games must,

> replicate the same kind of costly obliviousness we see every day in the nonvirtual world—the refusal to acknowledge or even attempt to understand our role in climate change, environmental degradation, and species loss—when they could instead take such factors into account, with very interesting results? (Chang, 2011: 61)

Yet it is not entirely clear what is entailed by this observation – should Minecraft present players with protesting environmentalists who chain themselves to trees? It appears that it is not enough to present players with the consequences of their actions on the landscape itself.

Approaching this problem with more nuance is Nick Dyer-Witheford and Greg de Peuter's (2009) work on games' entanglement with processes of global capital and empire. They evaluate the genre of "policy simulator" citing at least seven games by name. Variously these are about faming, climate, weather, business, capitalism, etc., however they note these games' questionable environmentalist credentials:

> Most code neoliberal assumptions: Food Force, for example, engages players with issues of global famine but never really probes the structure of the world market. Other serious games are sponsored by flagrantly hypocritical corporate philanthropy. (Dyer-Witheford and de Peuter, 2009: 201)

Whether these games teach their players' neoliberal assumptions, and indeed whether there is any clear or obvious relationship between the assumptions games "code" into their systems and changes in player attitudes or behaviours, are incredibly difficult questions to answer. In the following section, I engage with these issues and their entanglement with the issue of ideology specifically and the problems this entanglement produces for existing literature on games.

Games Persuasion and Ideological Entanglement

There is no shortage of theoretical approaches seeking to explain games' persuasive, activist, or even pedagogical potential, with many of the contributions mentioned in the previous section drawing upon one or another framework for understanding this question. James Paul Gee has done some of the earliest foundational work on games potential to teach and influence players. (2003) His work primarily focuses on players and the contexts in which they engage in "learning" – for a definition of learning that is active, critical and engaged (a far cry from the passive reception of facts or the accumulation of knowledge). For Gee (2003: 46), 'video games have the potential to lead to active and critical learning' but he importantly also acknowledges the active role of the player themselves in this process, asking quite aptly: 'what ensures that a person plays video games in a way that involves active and critical learning and thinking? Nothing, of course, can ensure such a thing.' (Gee, 2003: 46) This is an important caveat often critically lacking from some of the more evangelical theories of how games create meaning and can effect change. It underscores the individual's active engagement, while crucially leaving room for the mystifying operation of ideology – an essential point for the topic of climate change, which I shall return to in a moment.

In her introduction to *The Ecology of Games*, a collection of work on games' ability to facilitate change or learning in players, Katie Salen offers the following summary of the existing discourse in this area, which 'has been, to date, overly polemic and surprisingly shallow.' (Salen, 2008: 2) Indeed, the 'value' of games and their ability to challenge cultural and ideological constructions has been mired by extremes of both panegyric defensiveness and the (itself highly ideological) 'neutral tools' discourses ported over from much of the culture around science and technology,

which has itself been widely interrogated in other fields (Winner, 1986; Latour, 1988; Haraway, 1991)

In Stevens et al.'s (2008) chapter in *The Ecology of Games* the authors contribute an important framework for understanding the assumptions of much research into the effects of games on players, rejecting what they describe as a 'separate worlds view' of games and their impact on players. They offer a research method influenced by 'situated, everyday, or distributed cognition' (Stevens et al., 2008: 42) that looks at ordinary everyday situations in order to have a 'basis to credibly claim that our research accounts are about how and what people do, learn, and think in daily life, and not simply about what they do within the context of contrived laboratory tasks' (Stevens et al., 2008: 42). Their goal is interrogating this 'separate worlds view', drawing upon the concept of 'transference', itself a contentious term describing the application in one domain of skills and/or knowledge gained from another (e.g.: skills learned in games applied in "the real world"). Stevens et al.'s (2008) concern is to account for the fact that 'the culture of game play is one that is quite tangled up with other cultural practices, which include relations with siblings and parents, patterns of learning at home and school, as well as imagined futures for oneself.' (Stevens et al., 2008: 43) Their conclusions offer no simple answers as to the 'effects' of games on their players:

> an "answer" to the question of how media consuming and repurposing has affected these
> young people is complicated and contingent; it depends on differing dispositions and
> purposes that people bring to play, who they play with, and perhaps more importantly

what people make of these experiences in other times and places in their lives. (Stevens et al., 2008: 63)

This focus on contingent dimensions of individual players is often missing from some accounts, and Stevens et al. (2008) note that with their conclusions they are deliberately 'stepping quite far away from any simple generalizations about effects of video game play.' (Stevens et al., 2008: 63) A similar lacuna in much of the related literature on games and the "learning" opportunities they present to players is any account for the problems and barriers that *ideology* presents. Namely, the efficiency with which games' persuasive powers are *presumed* to be able to offer ideological critique is insufficient when faced with a more comprehensive understanding of ideology and its effects, especially when it comes to the critically important yet highly resisted issue of climate change.

In his landmark text *Persuasive Games* Ian Bogost addresses the question of games performing ideological critique and more general forms of persuasion. (Bogost, 2007) Bogost notes that, 'hidden procedural systems that drive social, political, or cultural behaviour are often called ideology' (2007: 72) and this formulation of ideology crucially connects to his overall argument about games efficacy in enabling players to grapple meaningfully, even critically, with systems or procedures. Bogost traces a short history of the term 'ideology' across a number of not always entirely reconcilable thinkers and traditions. He begins with its etymological origins with Antoine Destutt de Tracy as a 'science of the origin of ideas' (Bogost, 2007: 73), to Marx's implications for ideology (that 'ideology entails the delusion that ideas are material' (Ibid.)) to Althusser's modification of Gramscian ideology. Bogost finally settles on Žižek's approach to

ideology, which is largely a materialist perspective. In Bogost's estimation, 'Althusser essentially collapses the realm of ideas completely into material practice' (Ibid.: 74) with his focus on ideology's instantiation in apparatuses, while for Žižek

'Ideology remains material… but this material reality is distorted and malignant. Ideology is not just a false representation of reality, it has become a part of reality itself, disfiguring it.' (Ibid.: 74)

As a consequence of this, Bogost concludes that for games, as in other forms of political-rhetorical persuasion, 'the challenge that faces political critique, then, is to identify the distortion in material practice.' (Ibid.: 74) Ultimately then his argument is undermined by a rather limited conception of ideology, treating it more like an engineering problem to be overcome rather than a problem involving *humans*, personal beliefs, and often a deep abiding struggle over questions of great personal significance. Nevertheless, Bogost's procedural rhetoric retains a valuable awareness of the space for individual resistance to persuasion (as might occur when a player discounts an idea ideologically opposed to their own views) through the term 'simulation fever':

The disparity between the simulation and the player's understanding of the source system it models creates a crisis in the player; I named this crisis simulation fever, a madness through which an interrogation of the rules that drive both systems begins. (Bogost, 2007: 332-3)

Though Bogost only envisages simulation fever occurring when a player resists the procedural instantiation of a real world system unfaithfully reproduced, I want to suggest that it may be more usefully conceptualized as resistance to a particular procedural implementation for any reason whatsoever. Simulation fever does not need to be constrained to inaccurate pictures of the world, instead usefully encompassing any resistance to the way a procedure operates. After all, how could we evaluate the faithfulness of a procedure to the real world without involving our own ideological predispositions – or without invoking a naïve and just as ideological vision of the world in itself?

Within Bogost's brief history of ideology, however, we can find the traces of a more developed analysis of the concept. Terry Eagleton (1991) describes in much more detail two distinct, but not entirely separate, traditions of thought regarding ideology that clarifies this problem of ideology:

> One central lineage, from Hegel and Marx to Georg Lukacs and some later Marxist thinkers, has been much preoccupied with ideas of true and false cognition, with ideology as illusion, distortion and mystification; whereas an alternative tradition of thought has been less epistemological than sociological, concerned more with the function of ideas within social life than with their reality or unreality. (Eagleton, 1991: 3)

Eagleton (1991: 3) finds that everyday uses of the term 'ideology' have more in common with the former 'mystified' perspective than the latter, noting that to claim something or someone as 'speaking ideologically is surely to hold that they are judging a particular issue through some

rigid framework of preconceived ideas which distorts their understanding. I view things as they really are; you squint at them though a tunnel vision imposed by some extraneous system of doctrine.' Yet it is inconceivable anyone could successfully claim to say that anything is ever *entirely* free from distortion (and thus ideology). Additionally, Eagleton (1991: xiv) notes, when attempting ideological critique, 'it is important to see that… only those interventions will work which make sense to the mystified subject itself.' This is worth emphasising, as it underscores the nature of the problem as one that cannot be solved automatically through the simple presentation of 'reality' in given state of affairs. And yet a significant problem remains within the concept of ideology since,

> if there is nothing which is not ideological, then the term cancels all the way through and drops out of sight. To say this does not commit one to believing that there is a kind of discourse which is inherently non-ideological; it just means that in any particular situation you must be able to point to what counts as non-ideological for the term to have meaning. (Eagleton, 1991: 9)

These last two points are perhaps Eagleton's most salient contributions, highlighting that ideology involves struggles over meaning and belief systems, but that these are struggles *both* with individuals with preferences, tastes and sensibilities, and a question of social formations and the exercise of power. On this last point Eagleton (1991: 5) elaborates that often 'ideology has to do with legitimating the power of a dominant social group or class' and capitalist realism, as discussed earlier, demonstrates this clearly, as it is self-sustaining and self-legitimating: *there is no alternative but more of the same*.

When it comes to games, then, the idea of a game performing ideological critique remains plausible, with the proviso that it must appeal to, or makes sense for the 'mystified' player themselves (even those who reject climate change outright). If the player rejects the 'reality' of a climate change simulation then they are experiencing simulation fever, and if they are ideologically predisposed to reject belief in the phenomenon, then it is hard to see how they could be convinced by any number of simulations, no matter how great their degree of fidelity to the real world. But there is an alternative to this kind of direct assault on the mystified player's beliefs and sensibilities, and keeping this in mind I now to turn to describe some of the characteristics of the issue of climate change as particularly ideological in nature, before discussing how ideological critique can occur without relying upon the fidelity of a simulation.

Climate Change, Ideology and *ARMA 3*

One of the foremost thinkers of climate change and its implications for human life and meaning (beyond simply environmental and material considerations) is David Collings (2014) who, in a landmark work, has offered a crucial intervention in our everyday understandings of climate change and its implications for both the present and the future. Climate change itself becomes a problem that defies the very political and ideological frames with which we have previously addressed issues throughout the twentieth century. Collings argues that climate change has stolen the future – in the sense that any sober and realistic assessment of our changed climactic future is one that sees a rapidly closing window of opportunity to prevent the disastrous, and likely

irreversible, effects of global climate change. As a result of this closure of the future, Collings argues that:

> Climate change does not just melt the ice caps and glaciers; it melts the narrative in which we still participate, the purpose of the present day. In this sense, too, we are already living in the ruins of the future. (Collings, 2014: 116)

This traumatic observation makes it easier to comprehend why the broader public responds to climate change with (highly ideological) forms of denial and, perhaps more appositely, even more common forms of unconscious neglect. In Collings' assessment

> climate change is nothing less than an assault on who we think we are: it exposes the fact that the economies of the developed world are founded on a lie, that our way of life takes for granted the eventual destruction of the Earth, and that persisting with it makes us complicit in a great crime. (Collings, 2014: 17)

Collings also notes, similar to Fisher's (2014) cultural time of simultaneity discussed earlier, that 'without a future, there is no present and not much of a past. Climate change isn't just about our obligation to others. It's about our own lives, too.' (Collings, 2014: 19) The serious impact that climate change has on our own sense of the future has important cultural effects, with Collings (2014: 19) noting that 'the future is never just for the people of the future; without that future, what we do now loses its force.' The threat of climate change and its impact, 'too awful' to even

consider without damaging a sense of present and future, would seem to suggest grounds for rejections of simulations with high degrees of fidelity.

Perhaps counter intuitively for a 'sandbox' game *ARMA 3* makes no attempt to 'model' or actually 'simulate' power generation in its world. Nor does it simulate the political process required to get from 'here' to 'there' in the struggle to decarbonize whole economies, a significant omission given the real political problems which face many climate change measures like building renewable energy facilities at the scale needed for Western economies. Nor does *ARMA 3* model the resistance to change and political lobbying of the huge vested interests arrayed against such a transition. It does not model the more sensational and spectacular impacts of climate change – the background of increased risk of devastating climactic events, rising sea levels, unstable changes in local environments, etc. No mechanics or appreciable 'gameplay' is directly concerned with any of these issues in *ARMA 3*. Instead, it simply presents the player with the visual and aesthetic presence of renewable power generation, with no added text explanation or narrative context. It presents the player with a vision of the future that runs dramatically counter to the current 'closure' of the future as Berardi (2009, 2011) and Fisher (2014) have described. Indeed, it is quite likely that these renewable power generation methods present in the game were not even chosen to make a political point as such – more likely they are present so as to evoke a near-future technological feel. Indeed, Mediterranean states take-up of renewable energy and the modelling of *ARMA 3*'s terrain on a real Greek island likely contributed more to this dimension than any concerted aims to 'convince' players of the importance of addressing climate change.

But the point I am arguing is that a lack of mechanics or 'gameplay' elements engaging with climate change is in fact a preferable mode of engagement with the issue of climate change. By engaging solely on an aesthetic level, through the presentation of a particular vision of the future with significant renewable energy production, *ARMA 3* bypasses the problem that Bogost identified in simulation fever – offering no simulation or 'argument' about the way the world works for the player to reject. To underscore how and why this is preferable, I want to briefly compare *ARMA 3*'s aesthetic vision with the approach taken by two other games that engage with climate change in a more traditional manner: *Fate of the World* (2011) and *Anno 2070* (2011).

The ominously titled *Fate of the World* offers a more classically 'persuasive' engagement with climate change through 'simulation' of the effects of climate change. The player is placed at the head of a world-spanning United Nations tasked with mitigating the worst effects of climate change while also trying to meet goals like encouraging third world development. Gameplay involves decisions about limited resources (in line with Kelly and Nardi's (2014) suggestions) while maintaining the delicate balance of pleasing member nations while also keeping carbon emissions in check. The game sufficiently models the anthropogenic nature of climate change, in what seems to be the way Chang (2011) called for. Yet the average player finds out incredibly quickly that stemming the tide of rising emissions *and* maintaining world development goals is a nearly impossible task, and the game takes on a certain air of despair. It's by no means an enjoyable experience, and does nothing to address the problem that Collings (2014) identifies around the reluctance to engage with the harrowing implications of climate change. Players are just as likely to turn away from the game, overwhelmed by its unforgiving difficulty and reject it

in another case of simulation fever. According to publicly available statistics on the Steam platform on which the game is distributed, only just over half of players have even completed the first tutorial-style mission "Rise of Africa", and while there does not appear to be an equivalent achievement for other missions, the drop off in completions for other achievements is precipitous. This may partially be due to the same dynamics present in other games, with a high degree of incompletions across games and genres, but surely a component of this is due to its difficulty and the harrowing, bleak nature of the experience.

As Michael Ziser and Julie Zse (2007) have noted, outside of games, Western activism and artistic engagement with climate change has often invoked "the sublime" in order to impress upon us the massively distributed nature and scale of the issue. However they reject these appeals to the magnitude of scale, and the overwhelming aesthetic of the sublime, arguing instead that 'environmental justice aesthetics ought to reject the sublime scale invoked by some [Global Climate Change] narratives and instead remain focused on the human, ecological, and social justice dimensions of environmental change.' (Ziser and Zse, 2007: 407) Their argument reflects a sensitivity to the problem of simulation fever – rejecting a vision of the problem of climate change as incomprehensible, impossible to act upon or do anything about. 'Sublime' depictions of climate change can be paralysing.

Unlike *Fate of the World*'s invocation of the sublime dimension of climate change futurity, *Anno 2070*, which pits two main rival ideological factions against one another, avoids this pitfall, in the process encountering others. In a review of the game for the website *Rock, Paper, Shotgun*, Jim Rossignol (2011) describes the two rival factions as cartoonish caricatures, 'Eco Dudes and

Smoke Belchers' unreflective of the attitudes of either environmentalists or industrialists. Rossignol (2011) found its engagement with a climate changed future similarly shallow: 'there is almost no real difference between choosing the dirty industrialists over the eco dudes, and no palpable reward for being "green" over eating the planet.' Along with its narrative setting of a flooded earth, cosmetic differences between factions are the extent of its engagement with climate change.

The problems these two games face, with their various responses to the sublime horrors of climate change, can be usefully contrasted with *ARMA 3*'s aesthetic vision, which I argue suggests the typical analysis of games powers to persuade is incomplete – particularly with respect to ideologically charged issues. *ARMA 3* suggests another approach is possible, by engaging the issues almost indirectly, through the aesthetic realm.

Terry Eagleton (1988) has written extensively on what he calls 'The Ideology of the Aesthetic,' claiming the invention of the aesthetic 'marks an historic shift from… coercion to hegemony, ruling and informing our sensuous life from within while allowing it to thrive in all its relative autonomy.' (Eagleton, 1988: 328). As a result, he adds,

> moral-ideological imperatives no longer impose themselves with the leaden weight of some Kantian Ought but infiltrate the very textures of lived experience as tact and know-how, intuitive good sense or inbred decorum. (Eagleton, 1988: 329)

In other words, its application became more effective than earlier forms of domination and control, and Eagleton is ambivalent about the powers of the aesthetic precisely because of this. Politics and aesthetics then become deeply intertwined concerns, and Eagleton (1988: 330) notes:

> it is because pleasurable conduct is the true index of successful social hegemony, self-delight the very mark of social submission. What matters in aesthetics is not art but this whole project of reconstructing the human subject from the inside, informing its subtlest affections and bodily responses with this law which is not a law.

The aesthetic, then, is not just simply a matter of taste and opinion but rather a case of "reconstructing" the human being in a certain image – and we can see how this applies to *ARMA 3*. Having already established the importance of cultural visions of the future, and their significance for human lives, both in the grand scheme of human cultural narratives and also in a very intimate personal sense – through the importance of having a future for oneself to give meaning to actions today – I want to make explicit the work that *ARMA 3* is doing. *ARMA 3*, with its use of renewable energy production, envisages a particular future for technology and humanity – one which has engaged (and is engaging with) climate change. Importantly, this future is signified simply via the aesthetic appearance of wind farms, solar panels, and so on.

ARMA 3 presents a more exciting and optimistic vision of the future than innumerable other games which either portray dystopian visions or simply extend the present into the future, replicating capitalist realism's time of cultural simultaneity and closure of imagination –

imagination, which as we saw earlier, Stevens et al. (2008) affirm the importance of for the entangled cultural sphere which games occupy. By sheer dint of its deployment via aesthetic dimension, rather than either of *Fate of the World* or *Anno 2070's* mechanical, gameplay focused engagements, *ARMA 3* offers the player the opportunity to perform what Eagleton described as the 'self-delight' of social submission to an aesthetic regime of renewables. This submission consists of a particular vision of the future, and happens below the level of conscious engagement (unlike typical engagement with mechanics), and which suggests a more seductive approach appealing to a different aspect of a player's inner life, and a potential avoidance of simulation fever's outright rejection. However, *ARMA 3*'s particular aesthetic depiction also has the further advantage of avoiding invocation of the sublime, the scale of which may cause players to turn away from the problems associated with the issue, overwhelmed. In this way, I find an aesthetic engagement such as found in *ARMA 3* and it's rather subtle aesthetic engagement with the highly ideological issue of climate change to be much more likely to have an enduring cultural impact than conventional attempts to persuade players in a more didactic manner via mechanics.

Conclusion

This paper has sought to establish a significant lacuna in extant theories of games generative and persuasive social powers regarding the function of ideology, and the question of whether games may lead players to change views, behaviours, opinions, etc. Significantly, this lacuna arises largely from a limited engagement with the problems that arise from highly ideological subjects or themes – such as climate change. Existing work on games and climate change have suggested

fairly uncontroversially that games might have some power to guide players to consider, variously; 'future scenarios' of scarcity; the actions that might be rationally required to stave off climate change; the way game/player interactions might inform environmental policy; and more general problems associated with the worsening of climate change (once sufficiently 'accurate' simulations can be reproduced in a gaming environment).

Climate change, however, attracts highly ideological attitudes, beliefs and responses, and cannot be accounted for simply by models in which individuals are persuaded by 'the facts themselves' in the form of systems faithful to the operation of the real world. This is because these simulations are at best likely to trigger a 'simulation fever' type rejection of these systems. Moreover, this approach is further complicated by the observation that no simulation could ever be said to be *entirely* free from the distorting effects of ideology itself. Clearly then, some form of ideological critique is required, and as Terry Eagleton (1991) has suggested, such a critique must be made amenable to the individuals to be persuaded – a perspective affirmed by the existing literature on effects of games in the daily lives of their players. Thus, this article suggested that in all likelihood the aesthetic dimension and its ability to sidestep the problems that ideology presents to rational engagement might give non-mechanical, particularly *aesthetic* representations of imaginative political and material alternatives to present conditions a greater cultural purchase, avoiding more conscious barriers to resistance that occur when a user experiences simulation fever. This paper has not sought to prove definitively that *ARMA 3* will persuade each and every player that engages with it – or even, in fact, whether it has definitively persuaded any, for as Stevens et al. (2008: 63-4) remind us, learning from and responding to games 'is best understood as an action that a person actively *does* rather than an automatic

process that *happens* to a person's mind under appropriate conditions.' Future researchers may wish to engage with *ARMA 3*'s playerbase to identify practical outcomes from exposure to the game, however a more fruitful line of research is likely to emerge from consideration of the ongoing and broad cultural effects of aesthetic depictions of renewable energy across multiple games and media, with a growing number of examples making use of the visual aesthetic of renewables.

Through the placement of prominent visual representations of renewable power generation across *ARMA 3*'s main island of Altis, the game paints a picture of a possible future in which existing political resistance to low-carbon and renewable economies has been overcome – an important feature to note given the importance of cultural visions of the future, as Berardi (2009, 2011) and Fisher (2014) have both emphasised. For these reasons, I find the aesthetic vision of *ARMA 3* suggests important implications for current understandings of games' persuasive potential, showing how important interventions can be made through aesthetics in ways not necessarily limited in the same way as more typical mechanical engagements.

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