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Critical Essay--Models of Agency in Game Studies
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Critical Essay--Models of Agency in Game Studies

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Abstract:

This essay discusses three views of agency that appear in game studies. One of the most common, as well as the most problematic, is determinism. Determinism is characterized by a weak view of player autonomy that does not accurately represent players' capacity to judge the games they play and to resist the influence of new information. Although determinism appears in many different types of game studies, it is especially prevalent in studies of game ideology, violence in games, and experimental studies of games' effects on players. Voluntarism is guilty of the opposite fault: overestimating players' autonomy and their imperviousness to new information. The voluntarist viewpoint fails to account for how in-game experiences may affect players. Research on belief formation reveals the faults of determinism and voluntarism and suggests that a more accurate model of player agency must take an intermediary position. I argue that such a middle position can be formulated by drawing on the insights of the determinist and voluntarist perspectives while acknowledging and avoiding some of the mistaken assumptions that are associated with these positions. Although there may be no single correct model of agency given the enormous variety of games and diversity of players, it is nevertheless possible and desirable to refocus research on games toward a more plausible centrist view, or range of centrist views, of player agency.

Introduction

Among the most serious shortcomings of the video game studies literature is the inconsistent treatment of player agency. Agency is an individual's capacity for independent thought and action. This includes a person's cognitive style, critical thinking ability, and the extent to which a person is affected by external influences. The power of agency relative to structural or cultural influences is one of the central debates in the philosophy of social science. In game studies, views of player agency describe the extent to which players are passive receivers of information or actively involved in constructing their experiences. While it may not be possible or even desirable to formulate a uniform view of what gamers are like as individuals, how they think, or what level of autonomy they have, game studies often make assumptions about what the average gamer's psychology in order to conduct research. Many studies of video games assume an ideal type of "the video game player" and describe

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the psychological consequences of play for this player, yet this concept is rarely subjected to critical analysis. It is usually defined in terms of demographic characteristics, such as age, location, sex, and education level. These characteristics provide some insight into what players are like, but they fail to address the question of player agency. Clarifying player agency is not only a conceptual question. It may also help to resolve some of the substantive questions in game studies. As this essay will show many debates about video games, such as whether they make players violent and what role they play in learning, are shaped by assumptions about the ways in which games affect players. Because assumptions about agency play a significant role in shaping video game research, it is important to take a closer look at what level of agency players have.

There are, broadly speaking, three ways of characterizing player agency. First, there is the determinist view, according to which players are largely passive receivers of information from games. Much of the research that assumes a deterministic relationship between games and players focuses on the effects games have on players. Studies that take a determinist view often fail to credit players with the power of interpreting their experiences, analyzing meanings, and filtering game content. Instead, players simply receive data and are transformed by it. Moreover, deterministic studies tend to argue that players are transformed in uniform, predictable ways. The second way of understanding agency, voluntarism, is the opposite of determinism. Voluntarist studies describe players as being active and capable of standing apart from games and their experience of them. From this perspective, a game's message and the player's actions in the game have little or no effect on the player as a person in the real world. This perspective tends to underestimate or even ignore the influence that games may have on players by describing players as being unchanged by their experiences.

I will argue that it is essential to mediate these two positions with a third model of agency. Such a position has been employed in some studies of video game players, but usually without much direct attention to what this view of agency assumes about players and players' experiences of video games. This middle position must borrow from both the determinist and voluntarist views, as each of these more extreme perspectives reaches important insights that are only mistaken because they are too strong. A middle view of agency must not assume players are simply passive recipients of information or that they are unaffected by their experiences. Rather, it should treat players as being largely autonomous agents who may nevertheless learn and change based on their experiences of games. This view of agency is much stronger, theoretically and empirically, than determinism or voluntarism because it can account for how players are both influenced by games and also capable of interpreting games and reacting to them in different ways. Moreover, a middle view of agency can contribute to ongoing debates about video games by offering a stronger account of how games may influence players.

It is important to remember that the three forms of agency are ideal types. Some game studies take a single view of agency, while others shift among perspectives and

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may describe players from two or three different viewpoints. None of the passages that are quoted as examples of the three views of agency are meant as claims that authors consistently adhere to a single view or that any method is necessarily connected to a single view of agency. However, there are strong tendencies for certain methods or forms of analysis to favor one view of agency over others. Determinism is far more common than other views of agency in experimental studies and research on video game violence. By contrast, voluntarism is common in ethnographic studies.

The first section of this essay will explain why the issue of agency matters in game studies, how it has been addressed, and why it deserves greater attention. The second section will describe the determinist position and identify two of the most prominent types of determinism. The third section will discuss some limitations of determinism and argue that existing research on cognition shows that players must have a greater ability to interpret and critically assess their in-game experiences than determinism implies. The fourth section will describe the voluntarist position and show that it assumes an unrealistically strong view of player agency. Finally, the last section will argue that a centrist view of agency can borrow from the insights of the determinist and voluntarist views of player agency, while moderating the core assumptions of the more extreme views.

Why Agency Matters

The problem of agency in games is difficult to decisively resolve because it raises deep metatheoretical problems that have plagued the social sciences since their inception. In the social sciences, there are strong traditions of cultural and structural determinism, agent-centric voluntarist research, and attempts to mediate these positions, (Delanty 1997; Archer 1995; Sayer 2000). Contemporary research on the philosophy of social science continues to address with these competing perspectives, without any consensus on which is the most accurate. To some extent, game studies have resisted being caught up in this metatheoretical debate. There are good reasons for this reticence. As Eskelinen correctly argues, game studies need relative independence and cannot simply mirror other disciplines if it is to develop a distinct perspective appropriate to its subject matter (Eskelinen 2001). Borrowing heavily from other disciplines raises the possibility that game studies could become too reliant on theories and methods developed to address other social science research problems.

Nevertheless, game studies cannot overlook the significance of metatheoretical debates that affect all social sciences. Some issues, including that of agency, are so important to any type social science research that they must be addressed. It is possible to draw on work done in other fields without compromising game studies, which is, after all, a highly interdisciplinary subject that is naturally inclined to borrowing from other fields and that has managed to do so while still maintaining its own identity. Given the centrality of assumptions about agency in game studies, refusing to address agency would put the entire field on a potentially unstable foundation. Even worse, doing research without giving some attention to this

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metatheoretical problem runs the risk of doing lasting harm by perpetuating incorrect views.

If anything, agency is an even more important issue in game studies than in other fields. In political science and sociology, for example, the unit of analysis is often large entities like organizations or states. At these levels, structural and cultural characteristics may outweigh the influence of any single individual. Even rational choice studies, which are interested in the strategic action of individuals, tend to put so much emphasis on mechanisms of reward and punishment that individuals' actions are largely pre-determined (Acemoglu & Robinson 2006; Olson 1971). By contrast, a plausible view of player agency is essential to game studies because so many of the field's core debates depend on resolving the effect of games on players.

The lack of definitive answers to metatheoretical questions in other fields of social science research need not lead to quietism in game studies. These complex questions have not been resolved after centuries of debate, and it appears unlikely that they will be resolved in the near future. Nevertheless, even without definitive explanations of human agency, it is possible to assess the plausibility of various models of agency and to eliminate the least plausible explanations. This process of culling the weakest theories of agency may not lead to a single definitive explanation of how players think and act, but it can strengthen game studies and direct researchers toward the most promising views of agency. As this essay argues, an analysis of the strengths and weaknesses of determinism and voluntarism help to demonstrate the need for a middle position.

The subject of agency has been taken up in some game studies, most notably by Ken McAllister. McAllister raises the importance of agency in game studies and explores the multiple sites at which agency matter. As he correctly points out, "every computer game begins with an agent: someone – or some collective – is always behind the management of meaning" (McAllister 2006: 45). He argues that there are four types of agents involved in constituting the meaning of games: developers, marketers, virtual agents, and players. Although McAllister discusses each of these sites of agency, his focus is on how these various agents show unique perspectives on gaming. He does not address the different assumptions about the extent to which players control or are influenced by the games they play. Thus, while McAllister does discuss agency, he does not address agency in the same way as it is taken up in this essay.

The goal in a search for stronger conceptions of agency should be improving the concepts with which game studies are conducted. Studies of video games should employ more consistent characterizations of agency. At times, studies seem to shift their assumptions about agency. This can be troublesome, as the viewpoints make fundamental assumptions that are incompatible. Game studies as a field would benefit from greater awareness of what different ways of describing players assume about player agency and of assessing the plausibility of these assumptions. Such clarification would help to locate weak assumptions that need to be reassessed, which in turn might help to solve some debates about how games affect players.

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Determinism

Deterministic theories have had a strong influence on the development of social sciences and some continue to have a prominent place in contemporary research. There are many different varieties of determinism. Among the most common type is determinism about agency. Strong determinism is characterized by the belief that certain causal conditions necessarily lead people to think or act in particular ways. There are also weaker variants of determinism that claim that a set of causal conditions do not always produce the same outcome, but that nevertheless maintain that these conditions have a very strong influence on how individuals think and act. Thus, the most important characteristic of determinism about agency is a limited view individual autonomy. Strong determinism denies individual autonomy, while weaker forms of determinism severely constrain autonomy. Exactly what conditions have a deterministic influence vary according to which theory one applies. These conditions may be institutional constraints, economic conditions, or, in the case of game studies, the influence of the video games that players experience.

Some of the clearest examples of deterministic views of agency in game research come from studies of video game violence. Studies that linking games to an increased propensity for violence seem to assume the premise that players do not have the capacity to judge games and to resist whatever harmful influences they might have (Barrett 2006; Grossman 2001; Grossman & DeGaetano 1999; Hartmann 2010; Waddington 2007; Wonderly 2007). This point is rarely made explicitly, but is implied by the types of arguments that appear in these studies. Consider the argument that games encourage players to behave violently—one of the most common criticisms of violent games. Critics do not accuse relatively peaceful games of encouraging violence. Rather, they target games with the most violent content, like *Grand Theft Auto* and *Manhunt* (Waddington 2007). The argument is that because these games expose players to extremely violent content they will cause players' attitudes about violence to change. Specific games are considered harmful because of the effects of their content. This much is obvious and hardly needs to be mentioned, but there is another step in this argument that often goes unstated.

For the violent content to be problematical, players must be highly responsive to messages they receive from games. If games are to blame for causing players to act in certain ways, then they must have a strong influence on players. Moreover, players must have a relatively limited capacity to interpret games or to resist harmful game messages, otherwise violent games would not be capable of influencing players in any strong negative ways. The unstated step in many arguments against violent games, and the defining feature of the determinist position in game studies, is the assumption of player passivity. This is the assumption that players act as uncritical mirrors for whatever content a game projects on them. Determinists ignore or downplay the role of players' existing dispositions, character traits, identities, and ways of thinking. If the assumptions about agency were reversed, and these studies credited players with a

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high capacity for critically interpreting their in-game experiences, then the argument that violent games harm players would become much weaker. Violent content would be far less objectionable if it were incapable of having an influence on players.

Whatever the subject matter or the specific arguments being made, deterministic studies of video games share the assumption of player passivity. Nevertheless, there are different varieties of determinism. Different elements of video games are credited with having a strong influence over players. It is important to distinguish several of the types of determinism in order to appreciate how this position is manifest in different types of research and how it directs research questions and results.

One form of determinism, which is especially common in experimental studies, is behavioral determinism. This is characterized by the assumption that games train players in certain behaviors and that players tend to learn these behaviors in uniform ways that are unaffected by their existing beliefs, attitudes, and values. This view is most evident in studies that search for physiological responses to video game play and take these as indications of an attitude change (Bartholow, Bushman, & Sestir 2006; Carnagey, Anderson & Bushman 2007; Mathiak & Weber 2006; Hummer, Wang, Kronenberger, Mosier, Kalnin, Dunn, & Mathews 2010; Wang Mathews, Kalnin, Mosier, Dunn, Saykin, & Kronenberger 2009). One study, typical of this research strategy attempts to measure the effects of violent video games by measuring subjects' heart rate and galvanic skin response during a ten minute video showing scenes of real violence (Carnagey, Anderson, & Bushman 2007). The study concludes that violent video games desensitize players because those who enjoyed violent games showed lower distress on these scales than other participants. Thus, the assumption is that the physiological responses to play indicate a clear pattern of desensitization that affects players without players' being conscious of the change or being able to resist it.

Video games certainly do have an effect on players, but it seems simplistic to reduce these effects to these physiological indicators, as these give no indication of the subjects' subjective responses or of how they interpreted the stimuli. Changes in heart rate or galvanic skin response do not necessarily indicate that playing games have altered players' views on violence or caused any behavioral effects. The same is true of many other physiological cues that are used to demonstrate that violent video games have adverse psychological costs. Behavioral determinism commits the fault of assuming that understanding human behavior is a matter of understanding physiological responses, rather than thought. Moreover, by focusing on physiological reactions, researchers confuse the brief, involuntary physiological responses with long-term changes in the way players think and act (Bensley & Van Eenwyk 2001).

An alternate form of determinism is evident in studies that credit games with having a powerful effect on the player's beliefs or perceptions because of their ideological content. Military games are widely considered a threat to players because of the ideology or ideologies they promote. A number of scholars advocate viewing games like *America's Army*, *Full Spectrum Warrior*, and others designed by the military or with its assistance as propaganda (Herbst 2005; Crogan 2003; Ottosen 2009, 2009;

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Power 2007). This argument has some merit, especially with respect to *America's Army*. *America's Army* is explicitly designed as recruiting tools and presents a strong pro-American perspective on war. However, problems arise when the argument that games present propaganda is stated in a determinist form fails to account for players' capacity to interpret their experience.

Crocco's description of *America's Army* offers a prime example of the assumption of ideological determinism, as Crocco considers the game's message to be so strong that it can overwhelm and transform players.

While the gamer is immersed in the thrill of play, the game is busy imparting basic military training and the ideology of benevolent imperialism. The successful player thus masters the game, but not before adopting its intrinsic values, attitudes, and beliefs. (Crocco 2011: 27)

This passage characterizes the game's ideology as having a strong effect on players and implies that this effect is uniform for successful players. The scope of player agency is therefore severely restricted. The constraint on agency is imposed by a game ideology that is described as being extremely powerful, almost to the extent that the ideology seems to be a more autonomous and powerful actor than the player.

A common claim about ideological messages is that military games build support for war and encourage militancy. Although military games may do this to some extent, studies that credit these games with that power tend to portray military games as having a high degree of control over players that players are almost powerless to defend against. For example, Payne argues that these games are responsible for indoctrinating players into a "militarized worldview" (Payne 2009: 241). They do this, he says, by blurring the line between fantasy and reality and between entertainment and war in order to create the impression that war is fun. This is a more plausible claim than the strong determinist view, as the shift proposed is not a complete transformation in the players' values and beliefs but a more subtle change of perspective. This view can be best characterized as a weak determinism about agency, as it suggests that the game will generally have a strong transformative effect on players, but does not claim that every player will succumb to this experience. However, even this more moderate thesis overlooks the way players may be able to interpret the ideological messages of military games and ignore them. Some may be affected by the game messages, but probably not to the extent that the game can override their existing feelings. Implicit in the ideological unmasking approach is a view of gamers as passive recipients of the propaganda. The analysis often rests on the assumption that a single message –the pro-military message – is the only one that players receive from military games. There is no concern for the players' ability to interpret the games, nor is there any attention to the possibility of resisting intended messages while still using the medium.

Both variants of determinism reach some important insights about how games may affect players. In the last section I will argue, determinism is correct to an extent, as

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games do impose constraints on how players act and may plausibly influence players. However, as the next section will show, determinist claims underestimate players' capacities for interpreting and judging their experience.

Cognition and Experience

Deterministic characterizations of player agency underestimate the extent to which players may interpret or filter new experiences. The dominant position in psychology and cognitive science is that people assimilate new information through familiar classificatory schemes (Rosen 2005; Boyer 2001; Sperber 1996; Tooby & Cosmides 1992). These researchers disagree about how these cognitive abilities work and about their strength, but there is nevertheless agreement that human agency is stronger than what is assumed by determinism. This is evident from studies of how people process new information.

When players experience video games, they are exposed to new information and new ways of acting, but they see these with the help of existing beliefs and attitudes. This is for two reasons. First, people process new information in biased ways that make the new information fit with existing beliefs (Jones & Sugden 2001; Nickerson 1998). Second, it is also difficult to make people change deeply held beliefs when contradictory evidence is presented (Taber, Cann, & Kucsova 2009; Marcus, Sullivan, Theiss-Morse, & Stevens 2005, Marcus & MacKuen 1993, 2001; Redlawsk Civettini, & Emmerson 2010). These two prejudicial ways of processing information, called confirmation and disconfirmation bias respectively, show that people are not simply acted on when they are presented with new information. As Redlawsk et al. (2010: 563) say, "people are psychologically motivated to maintain and support existing evaluations." There is much debate about where the schemas used for interpreting the world come from and whether they are based in human biology (Pinker 2003), culture (Rorty 1979; Goodman 1978), institutional structures (Searle 1995; Archer 1995), or some combination of these influences, but this should not detract from the point that new information is shaped by existing knowledge and beliefs. Research into the confirmation and disconfirmation biases has shown that it is very difficult to penetrate belief schemas. It seems to take a strong emotional response to cause even minor disruptions of these interpretive schemas (Civettini & Redlawsk 2009; Druckman & McDermott 2008; Marcus & MacKuen 1993, Marcus, Sullivan, Theiss-Morse, Stevens 2005; Redlawsk, Civettini, & Emmerson 2010). The fact that people have strong belief schemas that are relatively difficult to change through ordinary experiences of media provides grounds for rejecting any theory that holds that gamers are passive recipients of information.

Some game scholars have also challenged deterministic accounts of player agency by showing that players process information in much different ways and that they are capable of critically examining their in-game experiences. For example, Malliet, Thysen, and Poels question the popular argument made by Crocco, Payne, and others that *America's Army* is psychologically harmful to players with a study of players'

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reactions to the game (2011). They argue that players are actually adept at noticing ideological content in the game. Based on the results of an experimental study they find that *America's Army* players "demonstrated a large awareness of the intention of the developers to create a persuasive game and to influence their beliefs" (Malliet, Thysen, & Poels 2011: 259). This awareness allows players to critically evaluate the game and to critique its ideological messages. Similarly, Shook and Fazio find that ways in which players interact with games are influenced by their beliefs. They argue that conservative and liberal players of a computer game pursued much different strategies when interacting with the environment and responding to stimuli (Shook & Fazio 2009). This leads players' existing dispositions to shape what effects games can have on them.

Voluntarism

Voluntarism is characterized by crediting agents with the power to observe from a detached perspective, without being affected by new experiences. It is a very strong view of agency and a weak view of the power of games to affect players. From this perspective, games are a realm of self-expression in which players are free to create and act without the in-game experience exerting any influence on players. This is reductionism in the opposite direction from determinism. Rather than reducing the agent to something passive and crediting games with the deterministic power, voluntarism portrays players as monads who are free to explore game worlds while being impervious to any influence from the game.

Voluntarism is a more difficult position to identify than determinism. Scholars who seem to assume that agents are completely autonomous and unaffected by new experiences are usually those who are engaged in interpretive or ethnographic work. Because these research methods are often used to explicate subjective experiences, the model of agency assumed in these studies tends to be loosely defined. This is especially true when studies avoid generalizing from players' experiences, as the ideal type of player agency tends to be clearest in generalizations. Interpretive and ethnographic methods, such as interviews and detailed case studies, often focus on the player experience. These first-person investigations of gaming are valuable and yield many insights about how players construe their own actions. Nevertheless, when players take the central position in a study, and all actions are traced back to players' intentions, then there is a risk of overlooking the power of the medium to affect players.

When players are characterized by having a high degree of autonomy, games are correspondingly described as exerting weak influences or having no influence at all. They are reduced to fields of experience in which players may act without consequence. Miroslaw Filiciak describes players and games in this way. He argues that Massively Multiplayer Online Role-Playing Games give players open worlds in which to construct their own identities. This makes virtual worlds into a kind of laboratory for experimentation and self-creation (Filiciak 2003). He describes games as

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simulations for postmodern identity creation that allow for unprecedented freedom of experimentation. This raises an important point about the extent to which video games may be reshaped by players. However, it may be misleading to take this point to mean that games have no effect on players.

Although voluntarism seems to be a much less common position in the literature on game studies than determinism, it offers a useful counterpoint from which to assess the strengths and limitations of the determinist view. Moreover, it the limitations of voluntarism show that it is wrong to respond to determinism's shortcomings by taking an equally strong opposite view of agency. The clearest shortcoming of the voluntarist view of player agency is that it tends to idealize the interactivity of the medium, and, consequently, that it overlooks the ways in which games constrain experience. Although games are often described as the epitome of interactive entertainment (Klimmt & Hartmann 2006: 162; Lee, Park, & Seung-A-Jin 2006: 317), it is important to remember that players are also passive in some of their experiences of games. Even the most open games place some constraints on how players can move, where they can go, and who they can interact with (Frasca 2001; Prügl & Schreier 2006; Berger 2002). Story driven games must direct players' actions to maintain the narrative flow, and this even requires occasionally taking control of the player's character in cut-scenes in order to direct players along the right path. These constraints shape the game experience and limit players' capacity to be the completely autonomous in the game world. Game worlds are spaces that often give players a great deal of freedom, but they always set limits on what actions are permissible, thereby limiting what experiences one can have. As Newman points out, there are degrees of player control (Newman 2002). The ability to change what happens in the game or even the range of interpretations depends on characteristics of the game. It is therefore inaccurate to characterize player agency as completely unrestrained by video games.

A second problem with the volutarist view of agency is that games do seem to have lasting influence on players. This influence goes beyond simply constraining their actions on the game world. This is evident in many of the studies of game-based learning. These studies tend to find that players undergo measurable developmental improvements as they work through a game's problems (Kutner & Olson 2008; Gee 2007). The changes are not the sweeping transformations that determinists find; they are relatively small, incremental, and involve the development of skills rather than changes in beliefs or values. Nevertheless, they are real affects that show players changing in response to their in-game experience. These studies of games producing small educative transformations in players fit well with the larger body of evidence showing that most experiences tend to produce gradual changes. Aside from events that cause serious emotional trauma, experiences tend to have subtle effects that reinforce our ways of thinking and acting, or lead us toward small changes, without producing any radical changes of character (Bereiter 2002; National Research Council 2000). Games may be able to produce transformative experiences for some, but it seems likely that for most players they will be among the numerous experiences that only have weak influence that falls far short of the causal power determinists associate with games.

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Perhaps the great insight from the voluntarist position is that there are many different ways of playing the same game. As the sections on determinism showed, this insight is one of the strongest reasons for objecting to determinist studies of gaming. While Filiciak, and others may overstate the player's autonomy, they also reach important insights about the way players act in the virtual world. The literature on self-creation may give players too much credit for freedom of action, but these studies also fill a gap in our understanding of subjective experiences. In other words, the voluntarist view yields insights that contribute to the progress of game studies, but these must be tempered by a slightly more limited view of player autonomy.

Despite its flaws, the determinist position still offers a strong counterpoint to voluntarism. Even though the determinist view of agency is too restrictive, it raises important concerns about how games shape players' experiences and how they may influence players. As the discussion of determinism showed, the error of determinism is not in the claim that games influence players but in how strong this influence is relative the players' own capacities for independent thought and action. Games may have a less powerful effect on players than determinism assumes, yet games still play an important role in constraining how players may act, exposing them to certain types of information, and framing players' actions. For this reason, it is essential to formulate an alternative view of player agency that overcomes the problems of determinism and voluntarism, while still drawing on the strengths of each position.

Taking a Centrist View of Agency

As the preceding sections have shown, the determinist and voluntarist views of player agency suffer from serious limitations. However, the limitations are largely the result of the positions being one-sided. Either players are passive receivers of information or they are totally free from the influence of the games they play. Game studies demand a more nuanced way of understanding agency than the deterministic or voluntaristic models offer. It is important to account for player agency while also acknowledging the complexity of interactions between players and games are especially strong. Devoting more attention to the competing assumptions about agency can clarify some of the seemingly intractable debates in game studies, such as those over the effects of violent video games or of ideological messages in games, which are heavily shaped by competing views of agency. Resolving disagreement about agency and developing a view that mediates between the two more extreme positions may help to answer these research questions by allowing them to be reassessed with a more sophisticated understanding of how players are influenced by the games they play.

A centrist view of agency should borrow from the insights of the determinist and voluntarist positions without attempting to mix these in a way that produces an incoherent mixture of these contradictory positions. Same game scholars have relied on characterizations of agency that fit this description, although these studies rarely reflect on what their views of agency mean and how they compare to determinist or

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voluntarist positions. For example, Salen and Zimmerman say that "playing a game means making choices and taking actions. All of this activity occurs within a game-system designed to support meaningful kinds of choice-making" (Salen & Zimmerman 2004: 33). This way of characterizing play acknowledges that players have an active role in constructing their experiences, but that the game is a necessary part of realizing these experiences and part of what constitutes them. Other studies acknowledge that this open space has limits and can lead the player in certain ways without exerting control over them. Mateas and Stern's description of games as "constrained freedom" captures this very well (Mateas & Stern 2006: 22). Gee shows the same nuanced view of the player's interaction with the game (Gee 2003). He argues that players think critically about games as they play, and that they understand them on an even deeper level than just moments in an entertaining narrative. Players work with the game to produce the narrative. They are participants, to a greater or lesser extent depending on the openness of the game, in the construction of the world they encounter. The change of emotional state that games produce illustrates this. Games do have real effects on the player's emotions, and although they may linger for a short time, they are usually not permanent changes (Tavinor 2009). Moreover, the emotions may be largely controlled by the players, since they can deliberately seek out games that will lead to a particular experience (Jansz 2006).

Studies of morality in gaming are often the best at capturing the interplay of cause and effect between players and games. Sicart argues that "To play a computer game is a cultural process in which we grow up and mature as players" (Sicart 2009: 89). He gives the example of the different ways that players might experience the controversial game *Manhunt*. A gaming novice might have difficulty with the controls and be shocked by the brutal killing while an experienced player would have a better grasp of what is being depicted and understand that the actions are immoral. As Sicart explains, "the player of *Manhunt* will go through an ethical experience, unless her own ethical values, her cultural embodied being, despises the game so much that the subjectivization process breaks down" (Sicart 2009: 89). This is a promising analysis of player agency since Sicart is sensitive to the different ways that one might interpret a game. He assumes that whoever is playing is a moral agent, capable of some level of critical thinking and judgment based on prior experience. The game has an effect on this player, but one that is mediated by all of this background information.

Each of the preceding descriptions are examples of a centrist view of agency that can serve as the basis for arriving at a general description of how to mediate between the determinist and voluntarist positions. They characterize player agency in terms of free choices made within a system that constrains and attaches meaning to those choices and that can shape the players that experience the game. However, these studies take this perspective without examining this view of agency and its implications from a metatheoretical perspective. Doing this can clarify why a centrist view is a stronger position on player agency than the determinist or voluntarist positions.

Players must make choices within a context created by the games they play. They may be fully autonomous, as voluntarism assumes, yet their autonomous choices are

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still situated in the game world, as determinists maintain. The key to reconciling these competing views is recognizing the players are more autonomous and more capable of judging their game experiences than determinists assume, while also seeing the way autonomous agents are always constrained by their circumstances. As Korsgaard points out, autonomy is always limited because "something must make it occur to us that we might perform a certain action" (Korsgaard 2008). This is especially true in game worlds, which include numerous constraints on how players may interact with the game world.

Many of the activities players perform in games are heavily scripted. Players must carry out routinized tasks that are the same for all players and that are often similar between games. Games also require players to act in certain ways in order to progress. Players may have to defeat opponents using a certain combination of moves, reach their destination along a determinate path, and are limited in the range of choices they can make. Even sandbox games, which permit greater freedom of action than more linear games, constrain players' freedom action in these ways. This limits the extent to which players may express their autonomy in the game world. These constraints show that the voluntarist assumptions about agency are too strong. Nevertheless, the constraints that games impose, the actions they lead players to carry out, and the ideological messages they show players are not sufficiently strong to support claims that games cause players to dramatically change their thoughts or actions.

Games constrain players' actions and may influence how players think and act. However, as the studies of cognition showed, the influence new experiences on players is always mediated by players' past experiences, values, beliefs, and attitudes. Thus, rather than maintaining that games train players in certain types of behaviors or that cause them to think in certain ways, as the behaviorist and ideological determinist views of agency do, it is better to think of the influences of things like physiological responses and ideological messages as possibilities that games introduce. However, whether this possibility is realized depends on how receptive players are to these games. In other words, the power of games to affect player agency depends on the extent to which confirmation and disconfirmation bias lead players to interpret new information. If there is some conflict between beliefs and values that one already holds and a new experience, then the latter will not be simply accepted as true; it must be judged against other information or integrated into a dissonant body of information. This is something that will vary from player to player, but that will almost always fall somewhere between the extreme views of determinism and voluntarism. Game studies should therefore treat players as autonomous actors who are capable of critical thought and interpreting their experiences, and yet still recognize that the experiences they have in games or the ideologies that they are exposed to could have some influence on them.

Conclusion

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Determinism and voluntarism tend to be connected to certain methods of studying games. The former is more common in experimental studies and ideological critiques, while the latter is most evident in ethnographic studies. This is evidence of affinities between certain ways of studying video games and assumptions about player agency. However, because there is no essential connection between views of agency and research methods, it is possible to overcome these affinities and to take a middle view of agency regardless of the research method being employed. One may study games ethnographically while still paying attention to the limits on player action or investigate military games and their ideologies without falling into determinism. The ideal types of determinism and voluntarism are ones that game scholars should be aware of and guard against in their research, whatever topic it deals with. These perspectives make the mistake of assuming excessively limited or excessively strong views of player agency that can lead to dubious claims about the relationship between players and video games.

The alternative to determinism and voluntarism is to learn from the strengths of each position while avoiding the eliminative reductionism of either of these extreme perspectives. The greatest insight of the determinist studies is that games may produce some effect on players. As with any new experience, we can expect games to have some transformative influence on those who experience them. Players may learn practical reasoning skills, develop hand-eye coordination, or come to understand current events from a different perspective. What the influences are and what power they have probably depends on both the player and the game. The strength of the voluntarist view is the insight that in the search for gaming causation we cannot overlook the players' interpretive faculties, the role of past experience in constituting new meaning, and the power to filter information. A centrist view of agency should draw on these insights, but without making the more extreme assumptions about player agency that appear in determinist and voluntarist view of agency. The models of agency employed by scholars studying games should treat players as competent, reflective participants in the gaming experience, who are nonetheless capable of experiencing subtle influences as a result of their play

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