

Figure 3.5
My morality, according to *The Walking Dead* (Telltale Games 2012)

Some games—such as *Fallout* (Interplay Entertainment 1997), *Far Cry 2* (Ubisoft Montreal 2008), *Call of Duty 4: Modern Warfare* (Infinity Ward 2007), and *S.T.A.L.K.E.R.: Shadow of Chernobyl* (GSC Game World 2007)—have detailed, nonabstract worlds in which actions happen that trigger ethical gameplay. They do so with complex scaffoldings of narrative, world design, character, dialogue writing, and gameplay progression. But those examples are created by massive corporations using millions of dollars and years of effort. Ethical gameplay benefits from that degree of detail but does not demand it. Players can be engaged morally with a hint, a subtle metaphor, and a relative opening for interpretation of the events and the actions that the player is engaged with.

Ethical gameplay is the consequence of an interpretative, appropriative move. Players create the meaning of the play experience by completing what is semiotically suggested by the game. The aesthetics of games are the opening through which players can creatively contribute to the interpretation of the game via the activity of play. In that creative appropriation, the

crucial attributes are values, politics, personal histories, and the context and company of play.

Playing games means becoming involved with a system of signs that are designed to engage players emotionally. Playing gives meaning to a game by establishing a dialogue between system, signs, and users in which players are ultimately in charge of making sense of the activity and making it worthwhile.

The Elusiveness of Games

Game studies research has often suggested that games have a somewhat dual nature (Juul 2005). To understand better how games can be designed to convey ethical experiences, we need to focus on the implications of this dual nature for design. I argue for an informational approach to game design. Unlike previous approaches in design theory that proposed a relationship between information theory and games (Rowe 1987), the philosophy of information provides a robust ontological framework for understanding the design of technological systems.

Here I introduce just one of the main methodological approaches of the philosophy of information and apply it to the design of games. My intention is to illustrate how design is the process of joining the procedural and the semiotic domains of a game by applying the method of abstraction. Players apply an interpretive variation of this method. Therefore, I argue that designing a game involves designing the levels of abstraction and the ways that they are connected, and experiencing a game involves actively reconstructing the meaning of those levels of abstraction.

This is easier to understand if we return to the example of the toy car. Designing a toy car means abstracting the actual car into elements that can be easily replicated on a different scale while retaining both functional and (audio)visual similarities. These similarities are communicated via affordances and signifiers.²⁹ Users identify these signifiers and interact with the car according to their own playing wishes and the context of play. In the case of the Kennedy car, however, the interesting aspect is how that toy affects users' play—how the visual element displaces the signifiers and affordances and leads users to question the very act of play. The key question is, How would you play with this car?

A game is a system that is designed for the interaction of agents with an environment and with each other. These agents are encouraged to pursue predefined goals by means of interaction methods that are allowed by the system. A game system can be described as a state machine (Turing 1937; Audi 1999, 933–934): “Briefly stated, a state machine is a machine that has an initial state, accepts a specific amount of input events, changes state in response to inputs using a state transition function (i.e., rules), and produces specific outputs using an output function” (Juul 2005, 61).

Any game has a number of different states. There is always an initial state, which is prior to any agent interaction, and an end state when the game halts. The end state of a game needs to be distinguished from the winning condition: *Grand Theft Auto IV* (Rockstar North 2008) has a number of winning conditions but no apparent end state. The player can keep interacting with the system even after the goals proposed by the game are achieved. The end state is reached only when the player exits the game. In most games, the end state is determined by the winning condition: when players win or lose, the game is over. But some games decouple winning from ending the game to suggest ethical and political interpretations. The newsgame *September 12th* (Frasca 2003) bases its moral discourse on the absence of a winning condition.³⁰

Any game has rules that determine the properties of a state or a game object and the ways that it will react to input. Rules can be translated to algorithms (such as “if(player_life = 0) {player.death();}”), constants, variables, and other properties of a state (for example, “int player_life = 100;”). This constitutes the procedural domain of the game and can be used to analyze how some rules create processes that may convey meaning through player agency (that is, procedures that make sense in play).

Agency is designed, too: designers think about ways for players to experience the game. Player interaction is mediated through game mechanics—the methods for interaction by the agent with the game system (Sicart 2008). Mechanics can be described as verbs (Järvinen 2008, 263), such as *shoot* or *die*. Playing a game is interacting with a rule-bound, rule-determined system by means of a number of game mechanics. Game designers create these systems, rules, and mechanics for interaction.

But computer games also have a semiotic level that communicates game systems, rules, and mechanics through fiction and simulation (Aarseth 2007), sound and graphics, user interfaces, and the context of play and

the cultural being of the player. When players experience a game, they do so mediated by the semiotic level but conditioned by the procedural level. Players play by the rules that are explained to them by the semiotic elements. In philosophical terms, gameplay is the phenomenological process of an epistemic agent interacting with a formal system communicated through semiosis. Players are epistemic agents because they relate and interpret their experience of the game by using their previous experience as players (Juul 2005, 95–97) and their cultural, ethical, embodied being.

In less formal terminology, gameplay occurs when a player interprets and experiences rules that are communicated by semiotic elements to create a context of play. A player will play within rules and by game mechanics in a game world. Game design is the art of creating procedural systems and communicating them through the semiotics of the game. A game is not only creating systems but also communicating systems to players so that they care about them.³¹

This understanding of gameplay allows us to apply the philosophy of information's method of abstraction.³² The method's main strengths lie on the methodology that allows for the ethical scrutiny of agents, technologies, and patients in the context of information systems. From a philosophy of information perspective, two elements determine the nature of games as technologies—(1) the design of the system (understood as the properties and methods for agent interaction) and (2) the possibilities for players' interpretations of the game system and the semiotic domain.

In the final scene in *Unmanned* (Pederchini 2011), users play computer games with the son of the drone pilot. The interaction in those minigames mimics the mechanics of first-person shooters, but in the semiotic context of the game, playing them becomes a critical act that both bonds (or separates) the characters and reflects on the mediated dehumanization of interface-driven remote warfare. The procedural domain affords actions with meaning, and the semiotic cues a particular interpretation of those actions.

A game can create an ethical experience by modifying how the player engages in gameplay. The procedural level takes care of rules and mechanics, the meaning of which is provided by the semiotic level. Both are often deeply and logically interconnected: the semiotic level shows the player how to play and what the state of the game is. But if the design creates an ethical tension between them, the game will configure itself as a moral experience where the player will be challenged to complete the meaning

of the game. In the *Unmanned* example, the dissonance between players' actions and the context in which they are placed (both as a way of bonding with the players' child and a reminder of the daily tasks of drone piloting and remote warfare) cue the possible ethical experience of the game without presenting players with choices.

The philosophy of information's method of abstraction (Floridi 2010) and its concepts of level of abstraction and gradient of abstraction can be used in this formal approach to design. The method of abstraction provides an ethical framework that can be used to analyze a system and the agents in that system. This is thanks to four conceptual positions that are afforded by a philosophy of information perspective:

1. Given that the ontology is informational,³³ a game can be said to be a system composed by a procedural domain, a semiotic domain, and all the agents that populate it, both human and artificial.
2. Games can be defined as infospheres (worlds of information),³⁴ which implies that we can look at the ways in which particular choices in the design of the system or in the craft of the semiotic layer affect player experience.
3. Through the method of abstraction, these worlds of information can be decomposed into different levels that are ontologically relevant. This facilitates the analysis of system design and gameworld design, both separately and together.
4. Different levels of abstraction call for different models of agency. This allows us to understand the pleasures of instrumental play and the relevance of the creativity of players as cultural, embodied beings in the experience of ethical gameplay.

This analysis process can be applied to *Fallout 3* (Bethesda Game Studios 2008):

1. *Fallout 3* is a computer game that takes the core systems of role-playing games (progression ladders, experience points, dialogue system, narrative structure, and open world) and wraps them in a postapocalyptic fictional world with references to 1950s pulp science fiction. It is then populated by artificial intelligence agents and one human player.
2. *Fallout 3* is a gameworld in which players exist and in which their actions have meaning that sometimes is acknowledged by the game system.

3. We can look at *Fallout 3* as a branching narrative or as an action role playing game. Users can play it for the story or for the experience points or any combination of these purposes.

4. By focusing on playing the system for the experience points, users can look at the fiction as a cue for maximizing players' achievement of points. If users want to play the story, they will not necessarily care about having an optimal character build, and decisions will be made based on which type of story they want to explore or their previous experience with the game.

Philosophically, computer games have two dominant gradients of abstraction. The first one is limited to the direct interaction between agents and the state machine by means of game mechanics. This gradient is concerned with the input/output operations that are performed by and for the modification of the game state within the limitations of the rule system. This is the procedural gradient of abstraction in which the input/output processes between agents and the state machine take place.

The second gradient of abstraction adds a semiotic layer. The game system is more than a simple state machine: it comprises all the semiotic levels, giving cultural meaning to the procedural elements of the game state machine. In *Fallout 3*, the postapocalyptic pulp fiction gives a context to the role-playing systems that players engage with.

In abstract terms, the design of a computer game consists of two different levels of abstraction that communicate with each other with the use of metaphors and game-specific usability conventions such as health bars or particle effects. This abstract model of a game design is presented in figure 3.6.

Games are ethically relevant depending on how the relations between the semiotic layer and the rules are designed. Ethical gameplay design is the craft of creating experiences that invoke the players' ethical capacities by manipulating the ways in which the game system is communicated via a semiotic domain that targets the cultural being of the player.

From this design-oriented perspective, playing a game is an act of interpreting both a system (the procedural level as it is experienced by a player who focuses exclusively on rules and actions) and also the meaning of that system as communicated to a player who is interested in the interpretation of the game experience in the context of play.

In the first-person shooter game *Call of Duty 4: Modern Warfare* (Infinity Ward 2007), players are often in control of a soldier in the battlefield and

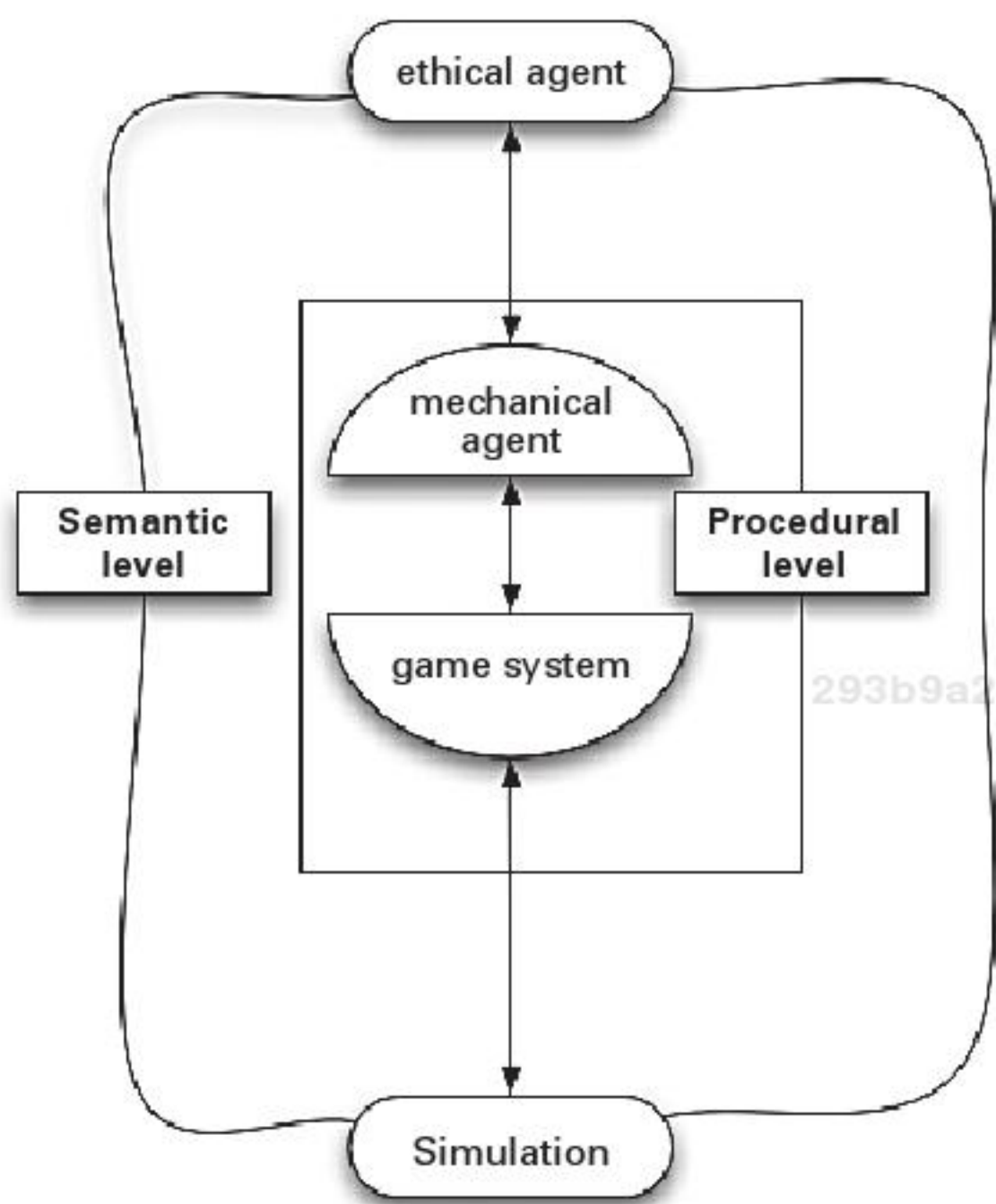


Figure 3.6
What games are

are shooting their way through different environments to achieve a number of goals that move the story forward. *Modern Warfare* is a thrilling roller coaster of action sequences and visceral tension.

There is one level in which this trip halts, however. This is a level in which players cannot “die,” do not perform a modern version of the old trenches warfare, but glimpse the true modern warfare. In the “Death from Above” mission, players are given control of the guns of an AC 130 plane. They look at the world through a screen with different zooms that allow them to better target their enemies. They know what to look for because they are familiar with the iconography from films, TV series, and news programs. Players are not used to the degree of mundanity that the sequence involves, and this makes “Death from Above” a designed ethical gameplay experience.

The procedural gameplay of that sequence is straightforward: players have to target the enemies on the ground to protect the troops that are running away from danger. They can fail only if they do not complete the



Figure 3.7

The "Death from Above" mission from *Call of Duty 4: Modern Warfare* (Infinity Ward 2007): The mundanity of modern warfare

commands on time, so it presents them with both time and skills challenges. It is a simple system, and it is successful game design because of the pleasant feedback systems that inform players about their actions with accuracy, precision, and perfect timing.

Outside the procedural core, the interface that is designed to communicate the interaction processes is similar to images that are taken from the media. These metaphors have one initial interpretation: they enhance the realism of the game and also help players engage with the actions that they are supposed to take. This uses the classic precepts of metaphorical design: refer to a well-known set of conventions to help users interact with a complex system.

After a closer look at the semiotic level, however, it is apparent that the action in the game is punctuated by dialogue that is coming from the cabin of the plane. The dialogue is an emotionless account of the actions that are happening. The dialogue makes war feel like work. It dedramatizes the action by slowing it down and focusing on the fact that people doing war for a living, which opens up the game for interpretation.

That opening might lead players to think about a crucial design element: it is not possible to die in this level. Failure is possible, but death is not. Players are detached from the action, both in the attitude of the characters and

from the lack of threat from “the enemy.” Through the design, players can question the type of experience that they are going through. “Death from above” does not give choices to players but encourages them to think about the meaning of their actions from a moral perspective. The consequences of this design are mesmerizing: players participate in the rhetoric that is used by the media to make mundane a type of warfare that detaches action from consequence, dissociating war from death and easing its justification.

“Death from Above” succeeds because of the precision with which elements of the procedural and the semiotic connect to open up a space of interpretation that challenges players’ morality. The game places players directly in that space, teasing them to think about the meanings of “modern warfare.”

A Game of Many Players

When I started this research project on the design of ethical gameplay, I was sure that it would be possible to analyze how ethical gameplay is designed by examining the cultural importance of games, their capacity to tackle complex themes, and their unique aesthetic form. However, I soon realized that I was oversimplifying the gameworld by focusing exclusively on single-player games. Designer Frank Lantz (personal communication, 2011) voiced my concerns very clearly:

This is related to the fact that we tend to think about single-player games in general. Partly it is because the single-player game might in fact be a new form entirely, and what we’re really interested in is this new form and what it can do and how it does it. A lot of the time making and studying multiplayer games feels like cheating because they are so obviously deep and rich and overflowing with human emotion and meaningful experiences and important ideas, whereas with this new form of the single-player game, we’re still not quite sure, are we?

Single-player games are a tempting resource for researchers who have been trained in the humanistic method. They are easily described formally because they avoid the complications introduced by multiple humans who are interacting together and are mediated by a system that is open for interpretative negotiations.

But the ideas presented here can be applied to multiplayer games. The board game *Risk* (Lamorrisse 2004) is a simple strategy game in which players compete to control areas of a world map according to secret cards distributed at the beginning of the game.³⁵ This is a space-occupying game

with some resource management and combat systems as part of the core gameplay. Its original release hinted at a semiotic level that corresponds to the world of the Napoleonic wars. Nothing suggests that the game was designed to convey ethical meanings.

Even so, multiplayer games demand their own interpretive framework. In *Risk*, the cards that state the winning conditions are kept secret. Victory is achieved in two ways—by conquering specific parts of the world or by eliminating one of the rival players. If played right, that particular winning condition can radically change the mood of a *Risk* game and make players engage with the game with both their strategic minds and their ethical reasoning.

In *Risk*, alliances are needed but are not formalized through any game mechanics. They are often the outcome of conversations or of relationships outside the context of the game. These alliances are tested in each game because the possibility of betrayal makes players carefully consider their alliances. *Risk* succeeds because it does not codify relationships between players but instead provides room for players to invest in the experience of the game.

In single-player games, the design of ethical gameplay takes place between the game system and the semiotic layer in the indeterminacies and ambiguities that a designer can introduce to challenge or shock the players' expectations.³⁶ In multiplayer games, a new level is added. A multiagent domain interprets the game within a particular context of play—a context that is as negotiable and flexible as the community of play.

Multiplayer games are the shared and negotiated acts of interpretation of a system and its semiotic layer. Each player in a multiplayer game can experience ethical gameplay by interacting with the game. But multiplayer games complicated this neat formal understanding. In any multiplayer game, negotiation and shared interpretation of the game are as important as the original design.

In the video game *DEFCON* (Introversion Software 2006), interesting ethical gameplay emerges from the system design and the ways that it is communicated to players. But the game is different when played in a local area network (LAN) and when it is played over the Internet. When players are in the same space, elements of embodiment feed into the game and are magnified by the mechanics. Much like the board game *Risk*, which bases its ethical gameplay design on hinting at potential traitors, *DEFCON* benefits in LAN from everything that players bring to the game.

Similarly, there are significant differences when playing the video game *Left 4 Dead 2* (Valve 2009) in LAN and over the Internet, as there are when playing with friends and with total strangers. This zombie survival game is designed to put players in difficult situations that can be managed only by balancing the inherent drive for individual survival with empathy and sympathy with players' teammates. The anxiety, exhilaration, and questionable choices that players make in the face of pressure are magnified by the gameplay mechanics and the last-survivor metaphor.

In *Left 4 Dead*, players benefit from staying together because that gives them all a better chance of staying alive and moving out of the level. However, keeping the group working together is difficult because the game evaluates player performance and modifies the challenges accordingly. The better that players play, the tougher the game becomes. This survival challenge leads to heroic sacrifices, selfish acts, or an implicit honor pact. These are almost Shakespearian lessons in honor, betrayal, and trust. In the context of a LAN game—in which the eye-to-eye contact, body language, and even personal ties between players are part of the ethical gameplay experience—that experience is enhanced.

It is not enough to understand how the procedural and the semiotic work together to analyze the design of ethical gameplay. Multiplayer games illustrate how other elements (both of the design and of the context of play) need careful attention. I have hinted that the design of ethical gameplay should focus on the spaces between the procedural and the semiotic levels of abstraction. In multiplayer games, other elements—such as the context of play, the designed player-to-player mechanics, and the shared metaphors that connect the participants in the play experience—also need to be taken into consideration.

When designing ethically relevant multiplayer games or gameplay sequences, one important issue is the context of play. Designing for playing on LAN is not the same as designing for playing online, and designing for playing with people you know or want to know is not the same as designing for people you might not know. The main questions to formulate are, How will the context of play affect the interpersonal dynamics, and how can interpersonal dynamics be brought into the game?

Context is king (Dourish 2004). Designers consider the way that an object will be used, its potential uses, and the ways that it relates to the space, place, and time in which it is going to be used. After the arcade era, computer game designers forgot this design approach until sociocultural

phenomena like the Wii became popular. Party games reminded designers of the importance of context in the design of gameplay. The design of ethical gameplay needs to take inspiration from those experiences and be conscious about the context in which the game experience should optimally take place.

Another crucial element that should be considered is the design of mechanics that build on the creation of social networks and interpersonal relations through play. Ethical gameplay can be a consequence of the tensions that are created between the procedural and the interpersonal—that is, between the fact that rules tell players to do something and that personal or emotional interests may pull them in a different direction.

A tension between metaphors and the way that they are interpreted by players can create instances of ethical gameplay, often by hiding information from players. Games that deal with traitors, such as the board game *Battlestar Galactica* (Konieczka 2008), may provide a hint to how the same metaphorical space can be interpreted differently by different players. In *Galactica*, some players may be Cylons, who live among humans with the goal of exterminating humanity. For them, the actions taken by other players and the game itself are significantly different than for human players. This kind of dissonance is an example of how the interpersonal relations that arise in the context of play in multiplayer games need to be designed.

Multiplayer games add one level of complication to the design of ethical gameplay. It is challenging to create a game system and metaphors that are interesting and appealing to many players. It is even more challenging to incorporate multiple subjectivities in the activity of play to allow them to experience moral dilemmas and ethical gameplay in a satisfactory way. One way that this goal can be achieved is by making players' interrelations part of the ethical design of the game. Playing with others has to be designed to be ethically significant.

Conclusion

Games are procedural systems of rules that create actions and behaviors for players to engage with. There is beauty and choice in this interaction with systems, and some of the pleasures of play can be found in how appealing core systems can be for players' pattern-seeking minds.

There is an emotional domain to game design—not necessarily the idea that games are created to generate emotional experiences but the idea that

game systems are communicated through semiotic elements that engage players by invoking their cultural being in the context of play. With the board game Go, the status of the board reflects the process of playing and the actions taken within the rules and also is a metaphor for the relation between the two players—as master and apprentice, as enemies, as lovers.

Ethical gameplay is the result of the ways in which different choices, dilemmas, situations, and contexts are created by the interrelation between the procedural and the semiotic in the context of play. Ethical gameplay is a function of the design of systems, metaphors, and, in the case of multiplayer games, player interrelations. Ethical gameplay is a consequence of the tension between the suspension of disbelief and what Frank Lantz (personal communication, 2011) calls the “ludic contract”:

Many videogame ethical choices take this form. But what’s going on in this situation? What exactly does this game choice mean? It’s trying to be interesting by placing a narrative/moral/emotional piece in conflict with a gameplay piece, but really what’s happening is that the two modalities of narrative and gameplay themselves are in conflict. The suspension of disbelief tells us “pretend this story is real and you will have an interesting experience.” The ludic contract tells us “pretend that you care about the goal and believe in the constraints and you will have an interesting experience.” Should I save the old man? Sure, why not? I actually don’t care about extra ammo at all. Why should I? It isn’t of actual value to me. It is only valuable within a stylized system wherein I act like I want it and as a result that leads me to all kinds of cool problem solving. Should I go for the extra ammo? Sure, why not? The old man isn’t real. He is a fictional construct a symbolic unit within a stylized system, wherein if I act like he’s real, it leads me to all kinds of cool emotional reactions. Neither side of the equation has any weight when placed in opposition to the other.

Ethics can be invoked only if designers appeal to the thinking, cultural being that plays the game. But appealing to that player exclusively through audiovisual metaphors cuts short the rhetoric potential of games and the tensions that are generated by the pleasures of following rules. Ethics are a consequence of being cultural agents, and the cultural agents need to be appealed when designing ethical gameplay.

When players encounter the being of the game, they participate in a complex interrelation of the rules and worlds in which they live. Sometimes, whether on purpose or by chance, that participation requires players to be more than just observers. The being of a game might allow players to pass through those worlds of rules and fictions, and this passage can deeply affect them. Designing that passage is the challenge that I am addressing in this book.