

# Moral Dilemmas in Role Playing Digital Games

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## ABSTRACT

Inspired by Pen&Paper Role Playing principles, I intend to design and formalize a Conflict Manager for generating moral dilemmas in digital games, with the aim of intensifying the emotional-involvement of players. Based on previous work, where I formalized a character model endowed with moral values and driven by moral emotions, in this paper I sketch my proposal for a Conflict Manager.

## Categories and Subject Descriptors

I.2.m [ARTIFICIAL INTELLIGENCE]: Miscellaneous;  
I.2.1 [ARTIFICIAL INTELLIGENCE]: Knowledge Representation Formalisms and Methods

## General Terms

Theory, Model, Design

## Keywords

BDI Agent, Moral Values, Conflict Manager, Emotions, Narrative

## 1. INTRODUCTION

Identification with characters has been pointed out by contemporary aesthetics as a primary element of audience engagement in narratives [8]; more recently, the same claim has been made about digital games [10]. The paradigm of emergent narrative, where the story emerges from the interactions among the user and a set of autonomous characters, is particularly suitable to engage the user, since her choice can affect the unfolding of the story. Experimental systems such as *Façade* [11] have proven the possibility of designing and implementing such systems.

Here, I focus on conflict, and moral conflict in particular, as a way to create compelling stories in digital games, through the interaction of the player with Non Player Characters. According to narratologist [1] and researchers in Interactive

Storytelling [15, 16], conflict is an essential requisite of interesting stories. As stated by [4] “*the interactive medium of videogames allows the dilemma to become a potentially powerful instrument capable of greatly enriching the gameplay experience and engaging the player in a meaningful way.*”

Using the power of dilemma can increase the player’s feeling of affecting the unfolding of the story in the game and, consequently, increase the immersive experience with moral emotions. I propose a Drama Manager, called Conflict Manager, able to trigger moral dilemmas and manage the development of the story until a “moral ending” is reached.

## 2. MOTIVATIONS

My focus is on games where a single human player performs actions in the game world. In Adventure Games as *Zork*, *Monkey Island* and *Limbo* or in RPG games as *Mass Effect* series, the user is engaged by challenges (e.g overcome obstacles, solving puzzles, etc.). However, the growth of Internet and the availability of search engines have made the compute game solutions available much easily. This facts makes the challenges an insufficient instrument to engage the player. Also, the interaction with NPCs are stilted and not compelling [10]. Video games players ask for more elaborated scenarios and for more freedom to act [7]. They want to affect game’s story through their avatar and see a concrete change in the evolution of the story. Recent games as *Walking Dead* or *Mass Effect* start to engage the player with a first attempt of changing the game story through the player choices.

I argue that using the power of dilemma can increase the player’s sensation of affecting the unfolding story during the game. While in most games conflicts are created at the design time or crafted by hand in an implicit way, the paradigm of emergent narrative, borrowed from interactive storytelling and drama [11], can bring more interactivity to videogames and allow the creation of conflicts at run-time. I propose a model in which moral conflict is modeled in an explicit way: NPCs and the user have moral values and the Conflict Manager forces them to make difficult choices that can lead to different courses of actions.

### 2.1 Related Work

As noted by [16], concerning narrative conflict, most narrative systems don’t model conflict in a explicit way but they craft them at hand. In GADIN [2] dilemmas are based on soap opera clichés. The user interacts by making decisions on relevant dilemmas and the system adapts future story lines. In [16] conflict is seen as a threat between two actions.

Their system relies on the COCPL planner that permits the creation of plans in conflict to sustain it and the dramatic tension. In IDTension [15] story actions are annotated with a “conflict value” based on the degree to which a character was forced to act against its moral principles.

### 3. CONFLICT MANAGER

In a Pen&Paper Role Playing games, people take the role of a character and describe what the character does in an imaginary fiction. The Game Master (GM) creates the fiction world, acts as a storyteller and checks if the other players respect the rules of the game. The CM is inspired by the role that the GM takes in new Pen&Paper RPG games as Apocalypse World [9] where the game mechanics are less relevant and the main task of the GM is understanding which values are important to the players’ characters. The CM is formed by three different modules. The **User Model** collects information about the user’s interaction to understand her preferences and values through the games. This module presents to the player the actions that she can perform at each step of the game. The set of actions available to the player are selected by the **Conflict Generator** module (CG). This module has the task of putting at stake the values of the NPC characters and the player, in order to generate a dramatic tension. The dramatic tension is measured considering the intensity of the player’s expected emotions generated by the value at stake. Inspired by the work on the emotions and mood in films [14], the CM maintains a certain level of mood in the player to engage her in the gameplay experience. Emotions decay with time, so it has to foment emotions in the player through the generation of conflicts. The CG views the story as a sequent of events in which every event has preconditions and effects. Using an AI planner, the CG finds a sequence of events (i.e. a plan) that brings the game world in a state of affairs where NPCs and player’s values are put at stake. To reach a climax in the story, the CG module can create a chiasm conflict, following the work in [3]. In a chiasm conflict, the player is involved in a dilemma: she has to choice what values to rebalance because the values in conflict are mutually exclusive. For example, in the tragedy Iphigenia in Aulis, Agamemnon has to choose between the life of his daughter or the victory of the war against Troy. In order to generate a chiasm conflict, when the user is trying to bring a value back to balance, the CG finds another plan that puts at stake another value of the player, selecting it so as to make the compliance with both values impossible. Moreover, the CG can manipulate the scale of values of the NPC’s characters to make pressure on the user’s choices. The NPCs, modeled as BDI agent with emotions and values, can feel emotions toward the player and understand the consequences of their and user’s actions and react consequently. For example, by helping or not helping the player, depending on the values they share. Finally, it is necessary the presence of a **Director** module that owns the necessary knowledge about the ongoing of the story in order to ensure a story direction and an end closure.

### 4. CHARACTERS WITH MORAL VALUES

The CM is able of creating moral dilemmas if characters own moral values. Characters need a rational component and an emotional component in order to react to a conflict and to understand the consequences of their actions. As Noel Carroll said [6], “emotions are not a ‘nice have’ compo-

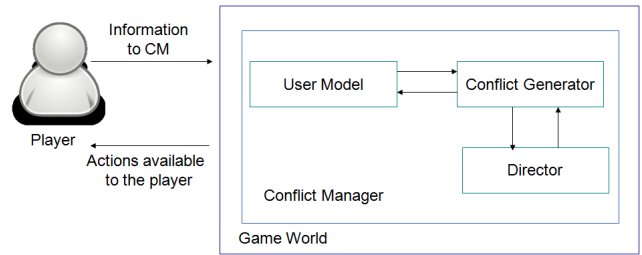


Figure 1: The Conflict Manager

nent of narrative, but it is a ‘condition of comprehension’”. So, emotions play a central role to focus the attention of the audience and the engagement [15].

In previous work [3, 5] we introduced a model of character where emotions guide the character in the choice between different goals and values. A character is modeled as a BDI agent, augmented with the notion of moral values and emotions. Emotions arise as a consequence of compliance of actors with values (or moral goals) and achievement goals. Each value is associated with a set of conditions: when one or more conditions hold in the state of the world, the agent’s value is put at stake. When the agent realizes that some value is at stake she forms a moral goal to re-establishing the value at stake. So, the agent’s goals can be moral goals or achievement goals .

#### 4.1 Emotions appraisal rules

A set of domain-independent rules generate the agent’s emotions based on the OCC model of emotions [12]. In our model we consider moral emotions (Pride, Self-Reproach, Admiration, Reproach), Joy and Distress emotions, Compound Emotions.

Moral emotions arise from the appraisal of actions. The role of values is relevant for the appraisal of an agent’s own actions, and also for the appraisal of other agents’ behavior (e.g. the player’s actions). Agents appraise an action as praiseworthy when it brings a value at stake back to balance. Conversely, if an action puts at stake a moral value, it is considered blameworthy. An agent feels Pride emotion when she performs a praiseworthy action (i.e. an action that satisfies the moral goal of bringing the value at stake back to balance); if an action that the agent appraises as praiseworthy is performed by another agent, she feels Admiration emotion towards the other agent. We defined rules also for the Joy and Distress emotions and Compound emotions. Following an established line in emotion modeling [13], a Joy emotion arises if an agent’s achievement goal is satisfied while a Distress emotion arises if an agent’s achievement goal becomes unachievable. Compound emotions (Gratification, Remorse, Gratitude, Anger) arises with respect to both achievement and moral goals. For example, an agent feels a Gratification emotion (Pride emotion and Joy emotion at the same time) when she performs a praiseworthy action that satisfies a moral goals and also one of her achievement goals.

#### 4.2 Character’s reasoning cycle

The CM relies on the human capability of reacting to moral dilemmas. In order to make a NPC able to face a moral dilemma, we extend the classical BDI reasoning cycle with prospect-reasoning emotions in the deliberation phase. In

the deliberation phase, the agent feels “anticipatory” emotions: moral emotions work in favour of the compliance with values; conversely, Joy and Distress emotions tend to privilege achievement goals. Since the OCC model acknowledges a distinction between positive and negative emotional states, the agent will tend to prefer the lines of behavior that are more likely to make positive emotional states arise in her. Emotional appraisal is conducted by expanding the agent’s plans (to a limited degree, for cognitive and computational reasons) and by assessing the consequences of these plans on the agent’s goals and values in order to foresee possible interference.

Since the model of emotional appraisal we propose relies on the evaluation of the plans the agent forms to achieve her goals (both achievement and moral ones), some relevant qualities of these plans are accounted for, such as the *probability of success*, the *effort* required and their *importance* for the achievement of the agent’s goals. Notice that this mechanism is necessary to deal with the paradigmatic case of moral dilemmas, where an agent is faced with values which, although not ideally in contrast, in the given context mutually exclude each other since any possible way to attain one makes impossible the attainment of the other. For example, Max has the goal to eat a chocolate candy. In order to satisfy his goal, the chocolate candy must be stolen from Mary but the ‘steal’ action makes the violation condition of the value ‘honesty’ true. So, if Max executes his plan, the emotional reward utility is derived from the Joy intensity and the Self-reproach intensity. If the value ‘honesty’ is very important for Max, he will choose another course of actions. Finally, after the execution of actions, the agent monitors the environment and updates her mental and emotional states. The emotional state is updated with respect to actions executed and emotions appraisal rules. In addition to the rules for Joy, Distress and moral emotions, in this phase we consider also Compound emotions rules.

### 4.3 Future Work

The character model needs still of some improvements. I have to integrate yet the coping component by which emotions that the character feels affect behavioral aspects such as the tendency to act or the cognitive state of the agent. Future work also includes the extension of the agent architecture to include different model of emotions and decay functions. I plan to validate this model empirically and implement it in a usable prototype.

## 5. CONCLUSION

Conflict is an essential element for the creation of interesting stories. In previous work, we defined a character being able to face a moral dilemmas [3]. In this paper i propose a further line of extension: the creation of a Conflict Manager which generates moral dilemmas. The CM understands what values are important for the player through the games, so it can put them at stake to generate an emergent story. This line of work is in a preliminary phase, i have to decide how the CM modules integrate all together and how the CM can communicate with the game world. An important aspect is the definition of the Director module that has to check the meaning of the sequence of events generated by the Conflict Generator in order to keep the consistency of the story and instill a story direction in it. In conclusion, I

argue that video games with adaptive plots such as *Walking Dead*, *Heavy Rain*, *Fable*, *Mass Effect* series, stand to benefit from this work by permitting to the players a more personalized experience.

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