Goals, Affects, and Empathy in Games

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Mette Hjort and Sue Laver notes:

> It is generally assumed that art and emotion are inextricably linked, as is shown by even the most cursory account of the history of critical thinking about music, painting, literature, or theatre.[1]

The same goes with games, whether one see games as art or not: aesthetics and affective experience of a game are connected. Affects are the basic building block of experience. Furthermore, the important function of affects in games is to guide decision-making and attention.[2] In this sense, goals are vital part of games as they give basis for decision-making: The goals give means to reason and decide which outcome is more advantageous in a given situation. Without preferred outcome, the decisions are meaningless. Affects are also important in social domain—when we are interacting with others.[3] It seems that affects, especially

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[1] Mette Hjort and Sue Laver, "Introduction," in *Emotion and the Art* (Oxford: Oxford University Press, 1997), 3-19.

[2] Antonio Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain,* (New York: Penguin Books, 2005), 165–201. Paul Ekman, "Basic Emotions," in *Handbook of Cognition and Emotion* (Sussex: John Wiley & Sons, 1999), 45-60.

[3] Gregory Currie, *Arts & Minds,* pbk.d ed. (Oxford: Oxford University Press, 2004), 179–183. Damasio, "Descartes' Error: Emotion, Reason, and the Human Brain," 165–201. Joseph P. Forgas, "The Role of Emotion in Social Judgment: An Introductory Review and Affect Infusion Model," *European Journal of Social Psychology* 24 (1994): 1-24. Paula M. Niedenthal et al., "Embodiment in Attitudes, Social Perception, and Emotion," *Personality and Social Psychology Review* 9, no. 3 (2005): 184-211. EBSCOhost,

empathy with characters, are also crucial in engaging with film and literary fiction.[4] As a starting point, I assume that this is also a case with games with anthropomorphic characters, entities that get categorized as persons. (Typical features that trigger categorizations as a person include: discrete human body, intentional states like goals, affects, persistent attributes or traits, self-impelled actions, and self-awareness and self-interpretation.)[5]

In this paper I will study affects and their relation to above-mentioned game structures: goals and game characters. I will show that bases of affects in games are goal status evaluations and link affects to empathic relation between game characters and a player based on models and theories in cognitive sciences. Theories propose that the affects that a player experiences while playing are real; we can, for example, be afraid of something, which exists only in a game in contrast to for example, quasi emotions proposed by Kendal Walton (he argues that we cannot *really* be afraid of something if we know it does not exist).[6]

On Goals

Before proceeding to affects there are some point I need to make about the goals. A game proposes goals to a player. In some games, like *Tetris* (Pazhitnov. 1985) the player needs to accept proposed goal in order to keep playing; ignoring the goal will lead to a prompt game over. On the other hand, a game can have a goal structure, which regulates progress in the game: in order to get to a next game level a player needs to complete a goal.

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[4] Currie, "Arts & Minds," 183–188. Murray Smith, *Engaging Characters: Fiction, Emotion, and the Cinema,* (New York: Oxford University Press, 1995), 73–106.

[5] Ibid., 18–35.

[6] Kendall Walton, *Mimesis as make-Believe: On Foundations of the Representational Arts,* (Cambridge: Harvard University Press, 1990), 195–204. Kendall Walton, "Spelunking, Simulation, and Slime," in *Emotion and the Arts* (Oxford: Oxford University Press, 1997), 37-49.

In some games like *Grand Theft Auto: Vice City* (Rockstar North. 2002) players can choose to ignore the regulating goal structure without much penalty and generate their own goals. The players have a rich game world to explore with potential challenges even without following the goal structure. Below, to simplify the argument, I consider only situations in which players accepts the goals made explicit by a game: *in order to keep playing do A* or *in order to progress do B*. In any case there are also the player's goals for playing a game, which can influence the generation of sub-goals.

The sub-goals are goals inferred from the more generic goals (of a game and game level) in relation to a specific situation: for example, in Tetris, a player needs to generate sub-goal for placing a tile. Sometimes sub-goals generated are impossible; it is not possible to complete the sub-goal, or the sub-goal does not lead to progression toward a main goal. Then the player needs to change his hypothesis of how to reach the main goal and generate new sub-goals.[7]

In some games, like *Deus Ex* (Ion Storm. 2002), there are multiple ways to complete game levels, which requires different sub-goal generation. Usually a player can choose, for example, whether to shoot her way through a level or sneak past enemies. Therefore, player's goals, skills, and preferences can have great impact on sub-goal generation (choices will require different breakdown of the sub-goal to sub-goals). Also, failure in sneaking past the enemy will change the situation and trigger new evaluation of the situation, which possible requires new set of sub-goals (or replaying from a game save).

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[7] I am basing this discussion on ideas presented by Walton, "Mimesis as make-Believe: On Foundations of the Representational Arts," 138–187; and Shaun Nichols and Stephen Stich, "A Cognitive Theory of Pretense," *Cognition* 74 (2000): 80–81. However, my argument here does not rely on their theoretical premises.

Affects

I use term affect as an inclusive term to refer emotions, feelings, moods, and emotions combined with additional cognitive complexity. Antonio Damasio[8] distinguishes primary and secondary emotions. *Primary emotions* are preorganized speedy evaluation of a situation where body state and cognitive processing is altered in the manner that fits to a situation, for example, fear triggered by entity X includes physical reactions and preparation to action (or some cases freezing in fear). One not needs to recognize entity X as, for example, a bear or snake in order to fear X, all that is required is that early sensory cortices detect and categorize key features of the entity. However, with speed comes possible inaccuracies such as categorizing a picture of a snake as a real snake. The responses can be innate or based on one's history of interaction with the environment. Later on, inferences will shape people's responses of a situation, but the emotions including body responses and changes in cognitive processing have already triggered before that.[9]

Secondary emotions are triggered by conscious and intentional consideration of a (hypothetical) situation. The as if consideration triggers the automatic and involuntary changes in body state and cognitive processing. For example, fear is triggered when considering risky option or encountering a wolf.[10]

Mick Power and Tim Dalghleish proposes an emotion model where different *basic emotions* are linked with different goal status evaluations:

- *happiness* relates to progression towards or completion of a goal;

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[8] Damasio, "Descartes' Error: Emotion, Reason, and the Human Brain," 131–139. For comparison, Ekman distinguishes automatic and extended appraisal mechanisms; Power and Dalgleish talks about two routes to emotion. Ekman, "Basic Emotions," 45-60. Mick Power and Tim Dalgleish, *Cognition and Emotion: From Order to Disorder,* (Hove: Psychology Press Ltd, 1997), 421–425.

[9] Damasio, "Descartes' Error: Emotion, Reason, and the Human Brain," 125–164.

[10] Ibid., 134–139.

- *fear* relates to situations where there is a physical or social threat to a self or were a current goal is in danger;

- *sadness* relates loss or failure of a valued goal;

- *anger* relates to situations where a goal is blocked or frustrated;

- *disgust* is a refusal of a concrete or abstract thing that is repulsive in relation to a goal, as the refusal seems to cause physical or psychological contamination.[11]

Interestingly, basic emotions and mechanisms that trigger them seem to be intercultural.[12] Thus, in some degree discussion in this paper should be applicable across cultural borders.

Complex emotions are derived from basic emotions with the additional cognitional complexity like appraisal of context or they combine different basic emotions. For example, worry is about unwanted outcome that might happen in the future.[13] In these terms, horror genre draws more from disgust than fear.[14]

How this relates to games? Abstract games like *Tetris* (Pazhitnov. 1985) operate predominantly with basic emotions. The structure of *Tetris* implies following emotion sequence: Fear is experienced when a dropping tile threatens a goal. The fear is followed with happiness if the tile is placed as planned or sadness if action was failed. This series is repeated until a final failure, which subsequently is evaluated as success resulting happiness, failure resulting sadness depending on whether a player's goal of playing was fulfilled of failed, or possible frustration

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[11] Power and Dalgleish, "Cognition and Emotion: From Order to Disorder," 413–421.

[12] Ekman, "Basic Emotions," 45-60.

[13] Ibid., 413–421.

[14] About role of monsters in horror, see Noël Carroll, *The Philosophy of Horror Or Paradoxes of the Heart,* pbk.d ed. (New York: Routledge, 1990), 13–42. About disgust, refer to Power and Dalgleish, "Cognition and Emotion: From Order to Disorder," 345–355.

when the game is evaluated to be too hard. In *Tetris,* the high score list have important role in the final evaluation: it offers concrete grounds for appraisal one's performance in relation of the history of the playing performances.

Horror games, for example, seek affective effects like disgust, which requires that players will consider something as contaminating. In this they often trust above-described mechanism behind primary emotions: for instance, rotten food relates to disgust, whether it is representation or not. (Notably, Power and Dalgleish remarks that "the avoidance of disgust-related objects and situation are often be confused with fear-based avoidance", like situation involving spiders or snakes.[15]) In addition to threatening goals, monsters role is to generate disgust; they are presented contaminating, like in *Silent Hill 3* (Team Silent. 2003). Monsters are filthy, decayed, or exploit disgust relating insects. In addition to digestion related effect, *Silent Hill 3* presents more abstract form of contamination: A non-player character tells at the last part of the game that the monsters are humans beings and Heather, the player character, is only seeing them as monsters. With this the game tries to contaminate the action of killing monsters.

Empathy

Games with anthropomorphic characters can widen the range of means to infect affects to players: they can employ empathy. With *empathy* I mean processes that puts ones affects in relation to another's affects, regardless if another is person or character from film or game.[16]

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[15] Power and Dalgleish, "Cognition and Emotion: From Order to Disorder," 347.

[16] See India Morrison and Tom Ziemke, "Empathy with Computer Game Characters: A Cognitive Neuroscience Perspective," (2005): 73-79. Power and Dalgleish posits empathy to appraisals relating to the goals of others, which will lead to affects Power and Dalgleish, "Cognition and Emotion: From Order to Disorder," 194.

Empathy can be divided in to the affective mimicry and character simulation. *Affective mimicry* refers to involuntary automatic reactions to emotional expressions. There are evidence that this mapping happens at least with disgust, fear, happiness, and anger.[17] In addition to the above-mentioned affective mapping, visual to somatic mapping have been demonstrated with touch and pain.[18] *Character simulations* means as if reasoning where one tries to figure out what the other would do in a situation. This kind of simulation is used, for example, when we try to predict what others will do in our daily encounter.[19] Simulation can have a role on understanding the behavior and affects of non-player characters just like understanding other people, film, or literary character.

There is also a role for affective simulation in understanding a player character: when players are suppressed from controlling a character or the cognitive load of playing the game is low, the players may start to affectively simulate the character (especially if affects are implicated by expressions or voice of the player character and the process is thus started with affective mimicry). However, taking control from players may block player's sub-goals thus causing anger or frustration.

A more prominent form of empathic relation between a player and player character in games is when a players goals are derived form the goals of a player character; the affects are result from goal status evaluation, like discussed above, but the affects while playing relates to affects of the character because of the shared goals. This is not traditionally a part of empathy although this is closely

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[17] Ulf Dimberg, Monica Thunberg, and Kurt Elmehed, "Unconscious Facial Reactions to Emotional Facial Expressions," *Psychological Science* 11, no. 1 (2000): 86-89. EBSCOhost, Morrison and Ziemke, "Empathy with Computer Game Characters: A Cognitive Neuroscience Perspective," 73-79.

[18] See Ibid.

[19] Gregory Currie, *Image and Mind: Film, Philosophy, and Cognitive Science,* (Cambridge: Cambridge University Press, 1995), 235–237.

related to the affective simulation discussed above. Here affects do not originate from simulation or appraisal relating to other's goals, but the goals status evaluations of one's own goals; the relation between goals of a player character and player is a component of the process that puts the affects of the character and player in relation. In *Thief 2: The Metal Age* (Looking Glass Studios. 2000) goals are primary form to create affective connection between Garret, the player character, and a player. For example, a goal in the *Shipping… and Receiving* mission is to steal at least loot forth of 850. Guards in the mission puts the goal (of a player and player character) in danger and thus their presence implies fear, finding loot relates to pleasure, failure to steal loot implies sadness, and guards blocking (making impossible) a goal suggest anger. There are also obvious disparities like guards are physical threat to the character but not to the player; notably player's goal (keep the character alive) and imaginary physical threat would both relate to fear.

Conclusions

In this paper I have proposed that affects in computer games can be understood in relation to goal status evaluation and empathy with game characters. All games exploit emotions that relates to goals status evaluation and reasoning future options. Games with characters can infect affects using characters affective expressions and affective simulation where the inferred goals have important role. By analyzing the goal and event structure of a game (including all kinds of affective expressions), it is possible to see how the game aims to manipulate player's affects and how it creates affective impact.

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