

Psychology of games

Part 3: Emotions

Emotion and motivation

“To be motivated means *to be moved* to do something. A person who feels no impetus or inspiration to act is thus characterized as unmotivated, whereas someone who is energized or activated toward an end is considered motivated.”

Contents

- What are emotions?
- How do emotions relate to game design?
- Emotional challenge
- Emotion & meaning

Major emotion theories

- Categorical
- Dimensional
- (Appraisal theory)
- (Constructivist theory)

Categorical emotion theories. Ekman et al. basic cross-cultural emotions



FEAR



JOY



ANGER



DISGUST



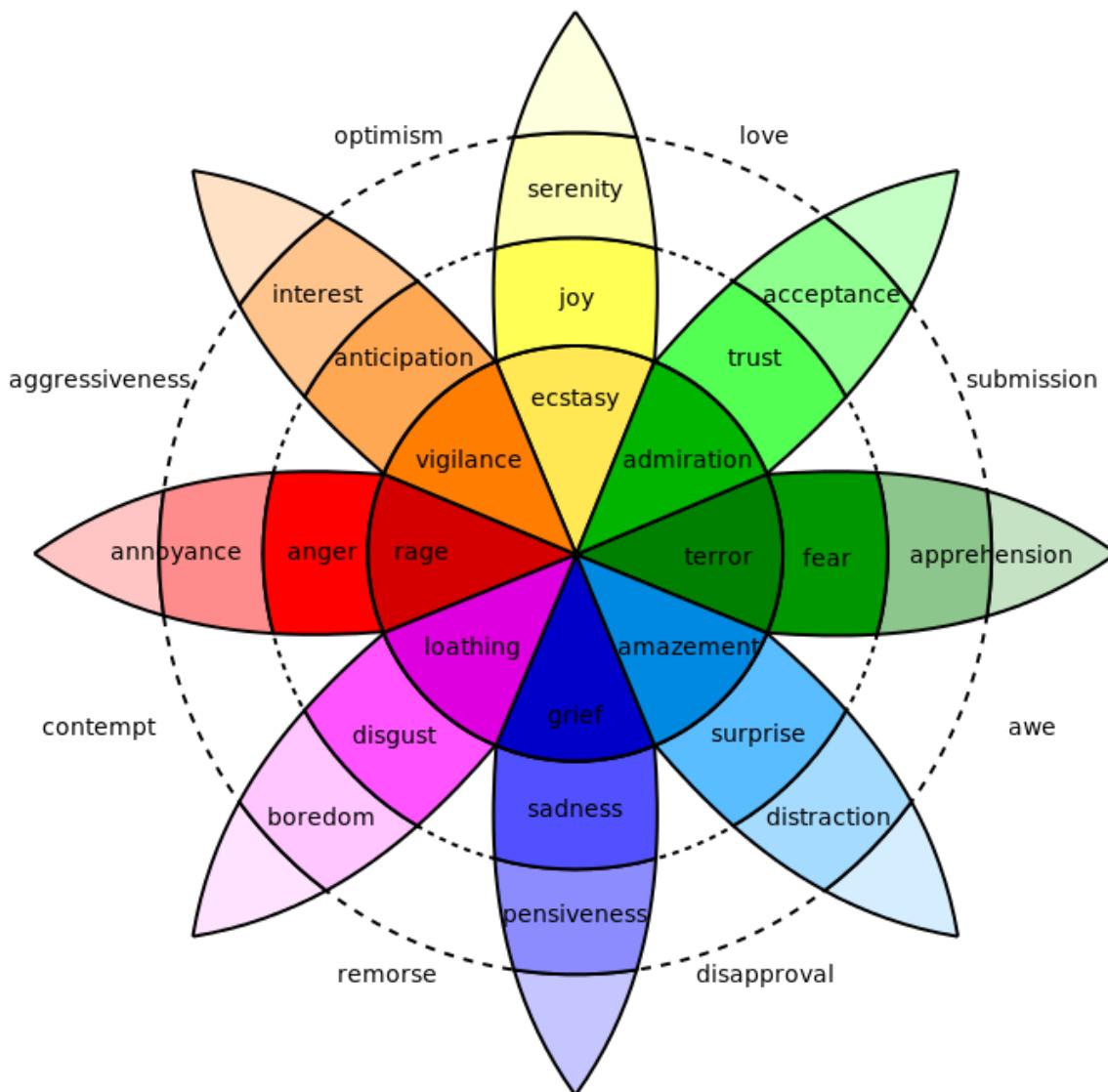
SADNESS



SURPRISE

Emotions according to Plutchik

- Fear → feeling afraid. Other words are *terror* (strong fear), *shock*, *phobia*
- Anger → feeling angry. A stronger word is *rage*.
- Sadness → feeling sad. Other words are *sorrow*, *grief* (a stronger feeling, for example when someone has died) or depression (feeling sad for a long time). Some people think depression is a different emotion.
- Joy → feeling happy. Other words are *happiness*, *gladness*.
- Disgust → feeling something is wrong or dirty
- Trust → a positive emotion; admiration is stronger; acceptance is weaker
- Anticipation → in the sense of looking forward positively to something which is going to happen. Expectation is more neutral.
- Surprise → how one feels when something unexpected happens



Dimensional emotion theories: Core affect

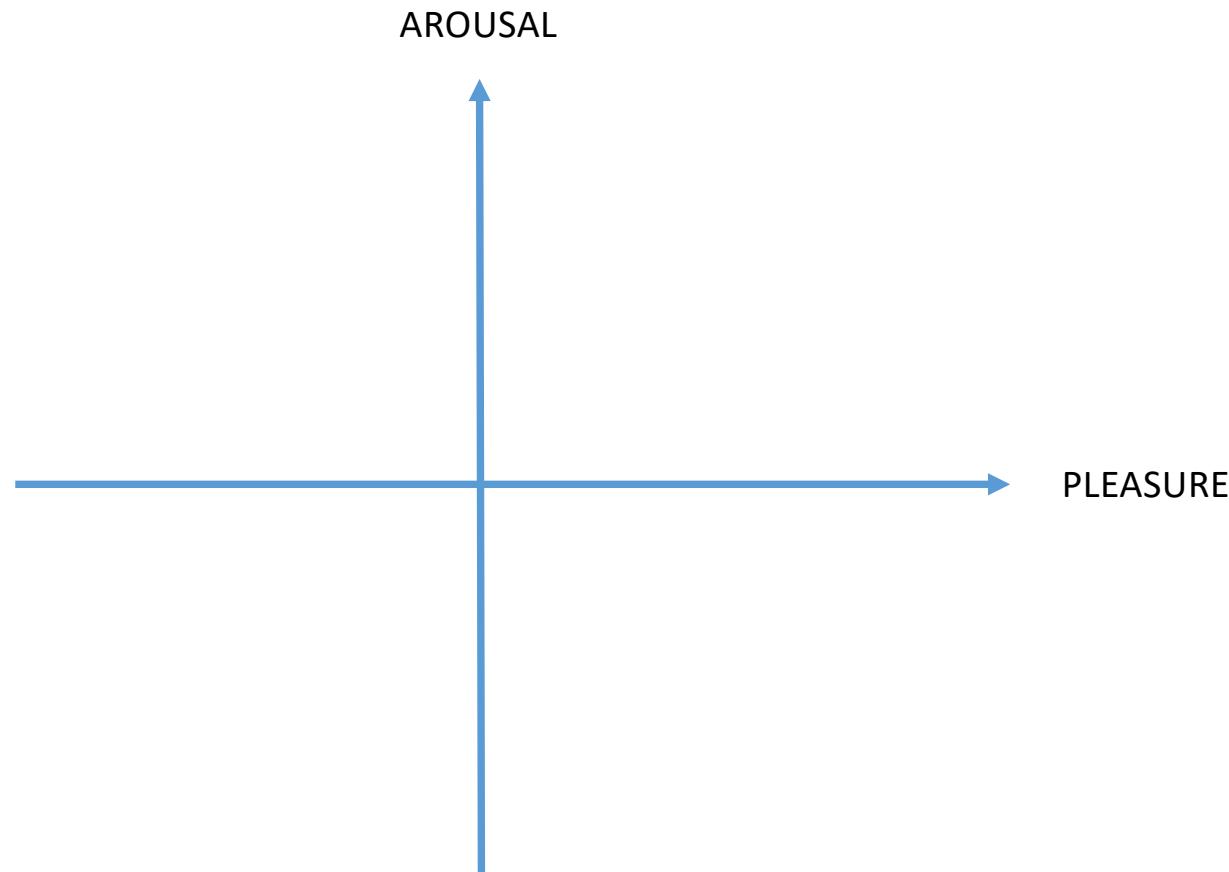
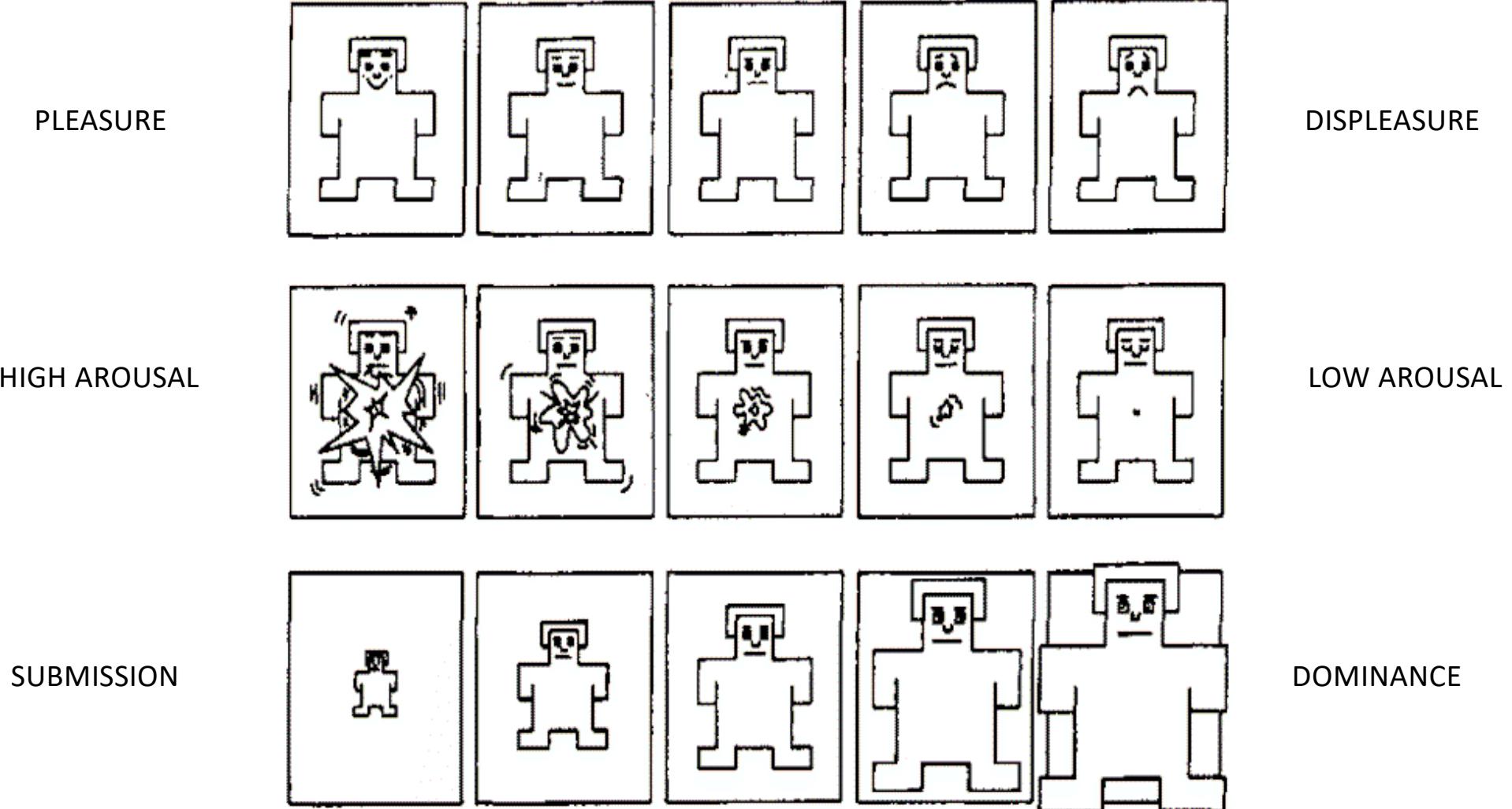


FIGURE 1
The Self-Assessment Manikin (SAM)



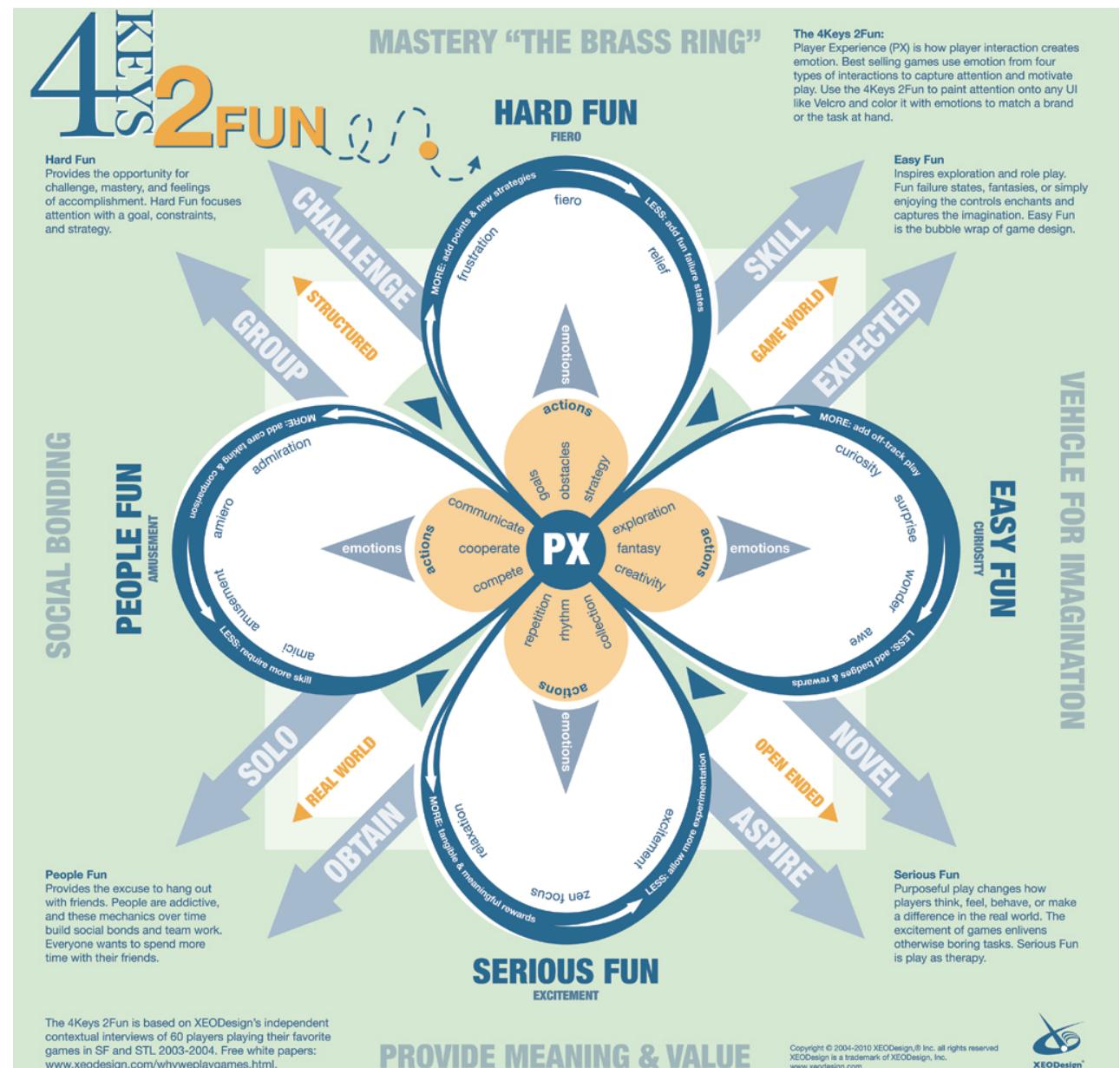
Core affect and motivation

- Positive emotions are satisfying/rewarding and thus cause motivation (at least in computational models)
- Arousal is a kind of a “volume knob” for motivation, defines how much reward-seeking behavior is elicited.
- Positive low-arousal => chilling out in bliss, don’t bother to do anything.
- Positive high-arousal => hypomania, so motivated that forgets to eat etc.

How to use?

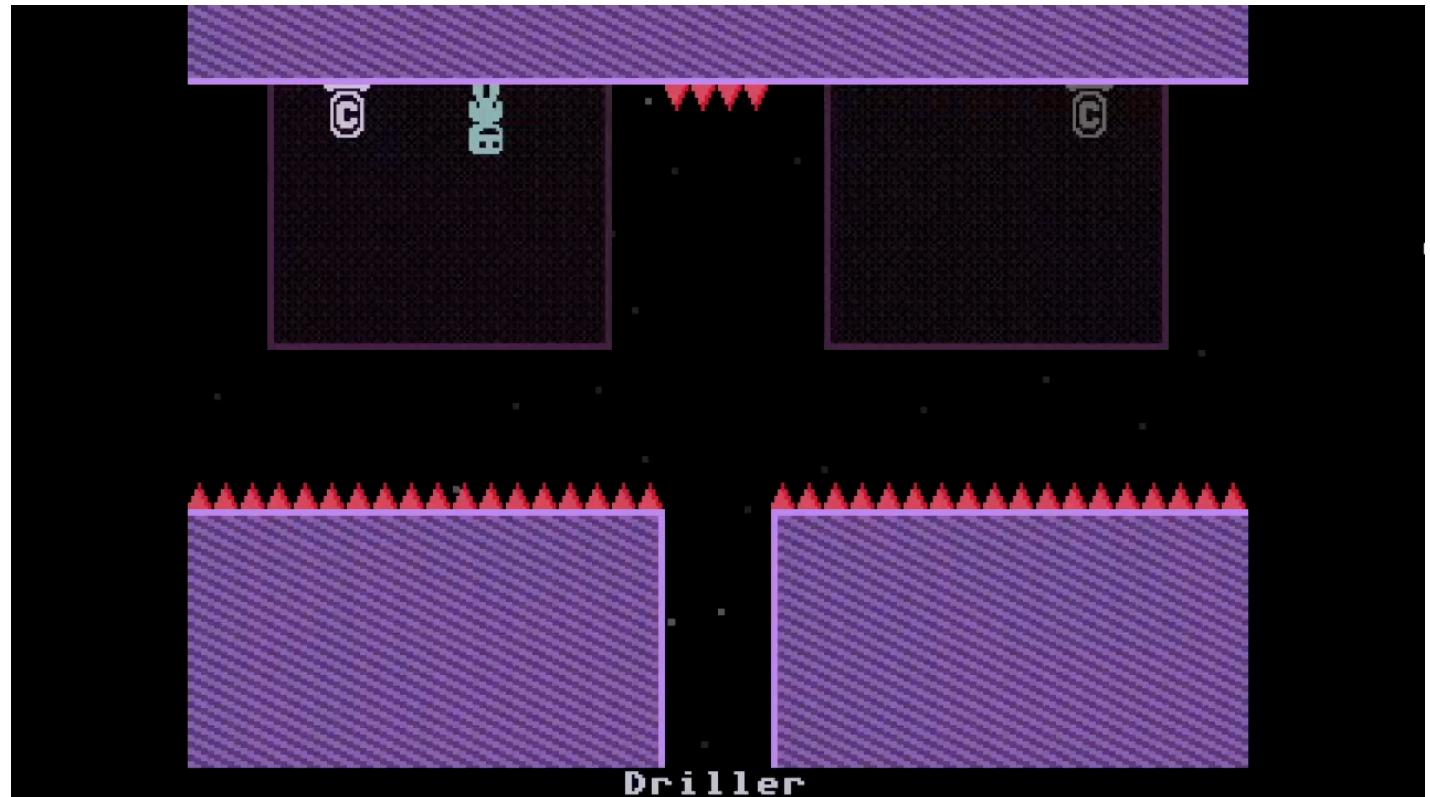
- Definitions aside, how can we design for emotion?

- Emotions are "Fun"



Hard Fun

- Pride,
frustration,
relief



Easy Fun

- Curiosity,
freedom



People Fun

- Relatedness,
- Schadenfreude



“Serious” Fun

- Learning
- Relaxation



CAN A COMPUTER MAKE YOU CRY?

■ Right now, no one knows. This is partly because many would consider the very idea frivolous. But it's also because whoever successfully answers this question must first have answered several others.

● Why do we cry? Why do we laugh, or love, or smile? What are the touchstones of our emotions?

▲ Until now, the people who asked such questions tended not to be the same people who ran software companies. Instead, they were writers, filmmakers, painters, musicians. They were, in the traditional sense, artists.

■ We're about to change that tradition. The name of our company is Electronic Arts.

SOFTWARE WORTHY OF THE MINDS THAT USE IT.

We are a new association of electronic artists united by a common goal—to fulfill the enormous potential of the personal computer.

● In the short term, this means transcending its present use as a facilitator of unimaginative tasks and a medium for blasting aliens. In the long term, however, we can expect a great deal more.

▲ These are wondrous machines we have created, and in them can be seen a bit of their makers. It is as if we had invested them with the image of our minds. And through them, we are learning more and more about ourselves.

■ We learn, for instance, that we are more entertained by the involvement of our imaginations than by passive viewing and listening. We learn that we are better taught by experience than by memorization. And we learn that the traditional

distinctions—the ones that are made between art and entertainment and education—don't always apply.

TOWARD A LANGUAGE OF DREAMS. In short, we are finding that the computer can be more than just a processor of data.

● It is a communications medium: an interactive tool that can bring people's thoughts and feelings closer together, perhaps closer than ever before. And while fifty years from now, its creation may seem no more important than the advent of motion pictures or television, there is a chance it will mean something more.

▲ Something along the lines of a universal language of ideas and emotions. Something like a smile.

■ The first publications of Electronic Arts are now available. We suspect you'll be hearing a lot about them. Some of them are games like you've never seen before, that get more out of your computer than other games ever have. Others are harder to categorize—and we like that.

WATCH US. We're providing a special environment for talented, independent software artists. It's a supportive environment, in which big ideas are given room to grow. And some of America's most respected software artists are beginning to take notice.

● We think our current work reflects this very special commitment. And though we are few in number today and apart from the mainstream of the mass software marketplace, we are confident that both time and vision are on our side.

▲ Join us.
We see farther. **ELECTRONIC ARTS™**





**“THE REAL INDICATOR
[OF GAMES BEING ART]
WILL BE WHEN
SOMEBODY
CONFESSES THAT THEY
CRIED AT LEVEL 17”**

STEVEN SPIELBERG (2004)

Games and emotions

- Visuals, sound, and music: core affect, basic emotions
- Story, characters: core affect, more complex emotions and feelings
- Mechanics and dynamics: ?
- A (single-player) game with complex emotions needs a story?

Star Wars Imperial March in major key

- <https://www.youtube.com/watch?v=B9MShtCg4fk>

Music and core affect, motivation

- Motivation: energized or activated toward an end
- Relation to core affect: a state of high arousal and positive valence.
- Music is known to boost, e.g., exercise intensity (motivation through increased arousal and positive mood)

Combining abstraction and emotion

- Human voice is also efficient in conveying emotion, but cheaper than realistic in-game faces
- Thomas was alone: Abstract visuals + good voice acting and music
- Gone home: 3d but no visible characters, excellent emotional voice acting and music
- Journey: abstract characters, no voice acting. Why does it still work as an emotional experience?



MOVEMENT KEYS - move | ESC - pause menu

KroneVideoGames

“An Odd Kind of Pleasure”: Differentiating Emotional Challenge in Digital Games

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ABSTRACT

Recent work introduced the notion of *emotional challenge* as a means to afford more unique and diverse gaming experiences. However, players’ experience of emotional challenge has received little empirical attention. It remains unclear whether players enjoy it and what exactly constitutes the challenge thereof. We surveyed 171 players about a challenging or an emotionally challenging experience, and analyzed their responses with regards to what made the experience challenging, their emotional response, and the relation to core player experience constructs. We found that emotional challenge manifested itself in different ways, by confronting players with difficult themes or decisions, as well as having them deal with intense emotions. In contrast to more ‘conventional’ challenge, emotional challenge evoked a wider range of negative emotions and was appreciated significantly more by players. Our findings showcase the appeal of uncomfortable gaming experiences, and extend current conceptualizations of challenge in games.

Author Keywords

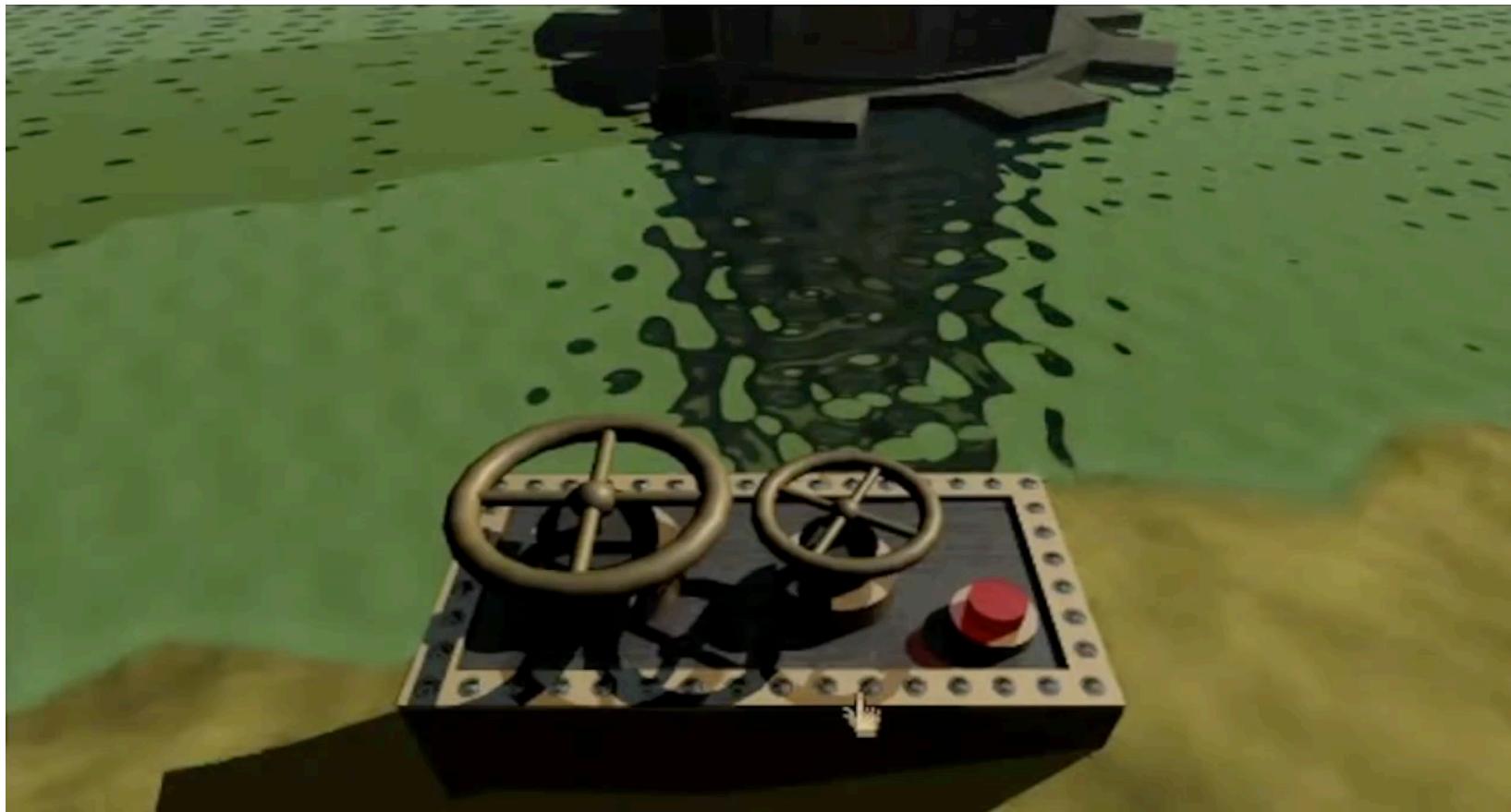
Emotional Challenge; Challenge; Emotion; Player

that emotional challenge plays a crucial role for the entertainment experience of film viewers [3]. Similarly, the notion of emotional challenge holds great promise for a better understanding of the player experience (PX). First, several scholars have emphasized the importance of exploring and understanding diverse types of game experiences [43], specifically with regards to the emotional spectrum games may evoke [16, 29, 35]. Indeed, emotional challenge was suggested to afford a wider range of emotions, beyond the frustration-fiero cycle [26] typical of more ‘conventional’ challenge [9]. Second, it may contribute to a more nuanced understanding of challenge in games, which was argued to be insufficient in current player experience research [11]. Third, as emotional challenge typically involves players confronting difficult subject matters [9], it may inspire the design of games aimed at raising awareness about real-world issues [15, 29]. Similarly, previous research has discussed the potential of games for emotional learning [27, 40]. A clearer understanding of what constitutes emotional challenge may hence inform the design and evaluation of such games. Finally, studying emotional challenge in games may provide novel insights into the nature of uncomfortable yet worthwhile interactions [5, 8].

Physical Challenge



Cognitive Challenge

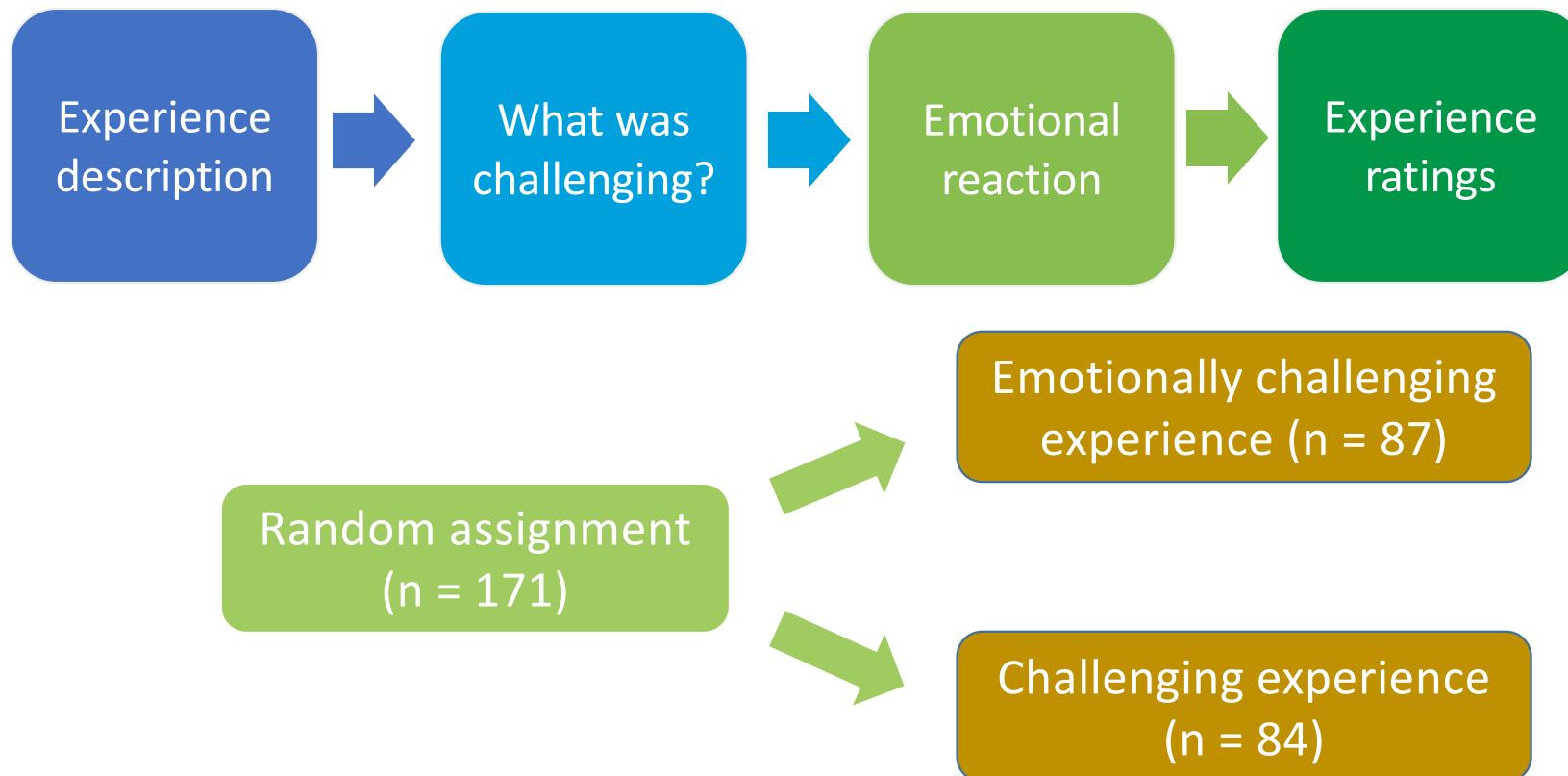


Emotional Challenge

- Confronting players with difficult themes by using strong characters and narratives
- Cannot be readily overcome by skill or dexterity
- Demand players to explore emotional and narrative ambiguities

(Cole et al., 2015; Denisova et al., 2017)

Study Procedure



A close-up of a character's face, showing a shocked or intense expression. The character has dark hair and is wearing a purple earring. The background is dark and indistinct.

*“Bring to mind
an (emotionally)
challenging
experience
you had with a
digital game.”*

No. No, that's not.... No. No. NO. NO!

Examples (both from The Witcher 3)

Emotionally Challenging experience

- „(...) Then things go wrong, you make the wrong choice. You're not perfect. A woman, the ex-wife to a Baron, is now dead. (...) And the Baron who hired you to save his wife has hung himself out of grief. That is an emotionally challenging experience.“

Challenging experience

- „To kill the monster, I first had to travel through 3 different areas, which in itself provided challenges. There I had to collect different ingredients and swords to prepare myself, so I can beat the monster's weakness with my strength.“

Coding Emotions (an excerpt) – Scherer (2005)

Affect categories and word stems of pertinent labels for category members

Affect categories	Pertinent words or word stems
Admiration/Awe	admir*, ador*, awe*, dazed, dazzl*, enrapt*, enthrall*, fascina*, marveli*, rapt*, reveren*, spellbound, wonder*, worship*
Amusement	amus*, fun*, humor*, laugh*, play*, rollick*, smil*
Anger	anger, angr*, cross*, enrag*, furious, fury, incens*, infuriat*, irate, ire*, mad*, rag*, resent*, temper , wrath*, wrought*
Anxiety	anguish*, anxi*, apprehens*, diffiden*, jitter*, nervous*, trepida*, wari*, wary, worried*, worry*
Being touched	affect*, mov*, touch*
Boredom	bor*, ennu, indifferen*, languor*, tedi*, wear*
Compassion	commiser*, compass*, empath*, pit*
Contempt	contempt*, denigr*, deprec*, deris*, despi*, disdain*, scorn*
Contentment	comfortabl*, content*, satisf*
Desperation	deject*, desolat*, despair*, desperat*, despond*, disconsolat*, hopeless*, inconsol*
Disappointment	comedown, disappoint*, discontent*, disenchant*, disgruntl*, disillusion*, frustrat*, jilt*, letdown, resign*, sour*, thwart*
Disgust	abhor*, avers*, detest*, disgust*, dislik*, disrelish, distast*, loath*, nause*, queas*, repugn*, repuls*, revolt*, sicken*
Dissatisfaction	dissatisf*, unhapp*
Envy	envious*, envy*
Fear	afraid*, aghast*, alarm*, dread*, fear*, fright*, horr*, panic*, scare*, terror*
Feeling	love, affection*, fond*, love*, friend*, tender*

- Additionally, we added categories for *frustration* and *feeling lost/lonely*

Example (both from The Witcher 3)

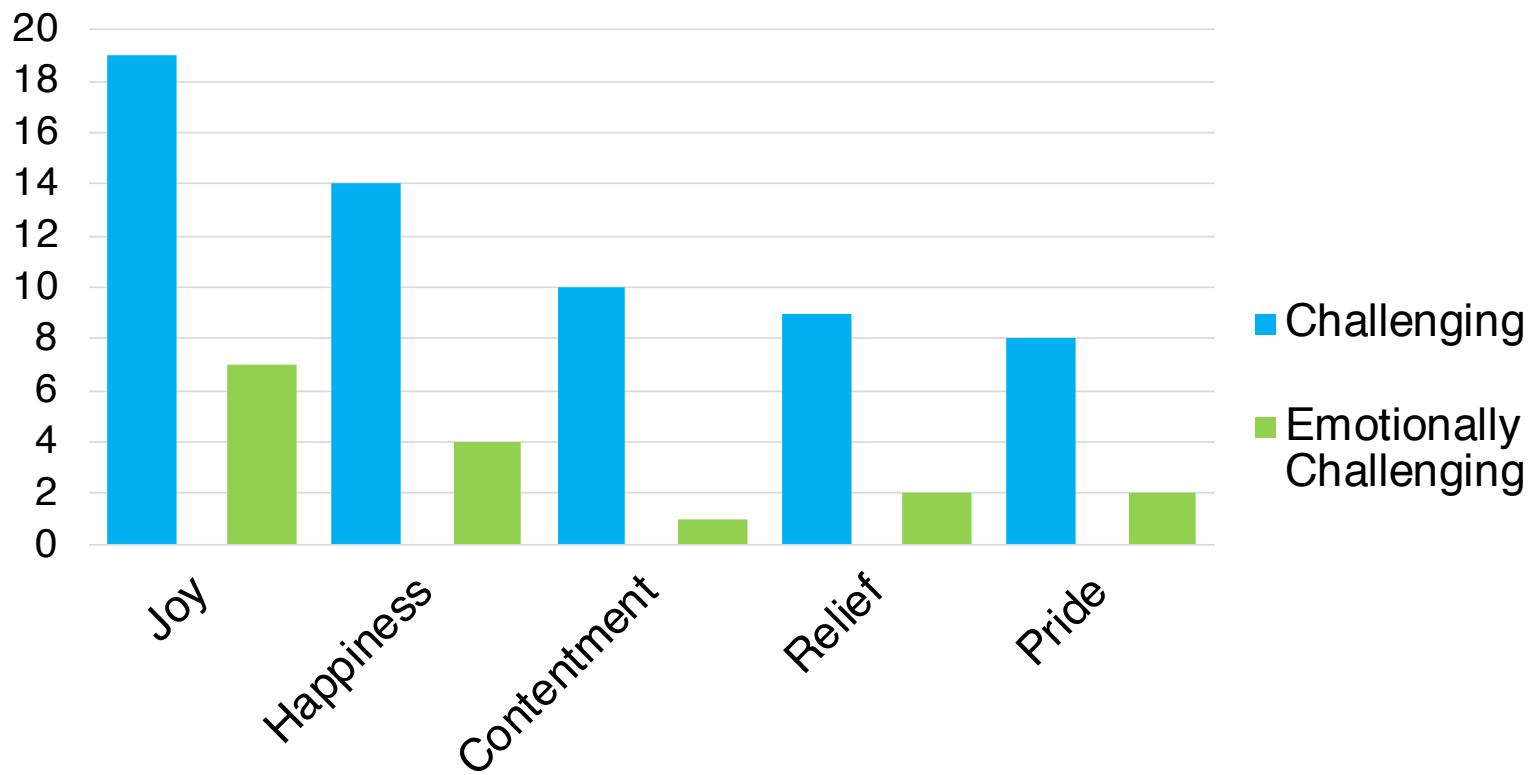
Emotionally Challenging
experience

„**Very uncomfortable**,
*actually went online to see
if there was a way to
avoid torturing the
character.*“

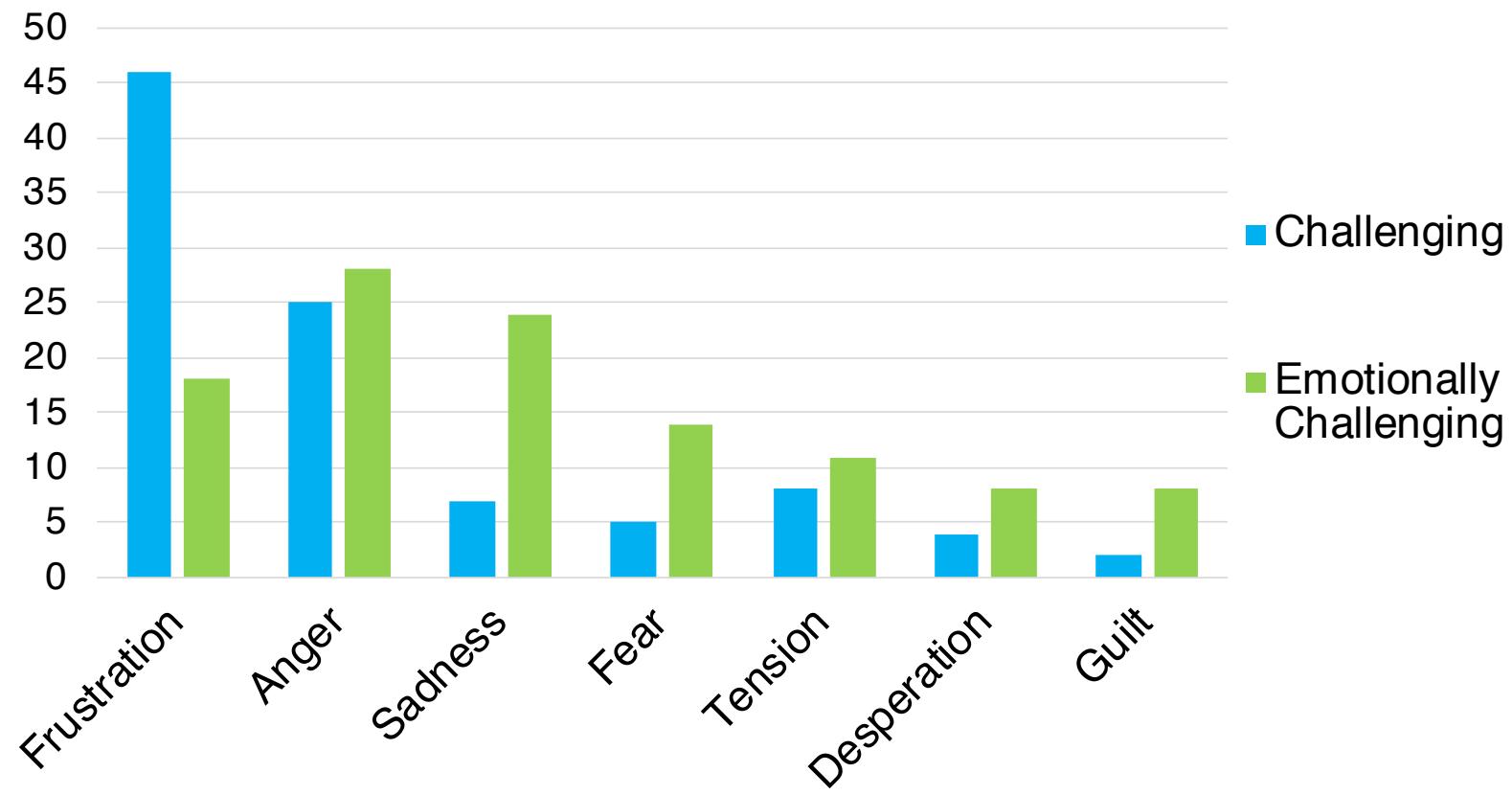
Challenging experience

„*At first I felt **hopelessness**,
because I simply couldn't even
get close, as I got closer and
closer I felt more **frustrated** than
hopeless, because I started to
believe I could do it, but I just
kept messing up. Right after
killing the boss I felt **super
relieved and happy.**“*

Challenging Experiences Evoke More Positive Emotions



Emotional Challenge Accompanied by Negative Emotions



Immersion

- Sense of being absorbed in a game
- Immersion was influenced by physical and cognitive challenge differently
- Challenging experiences were more immersive



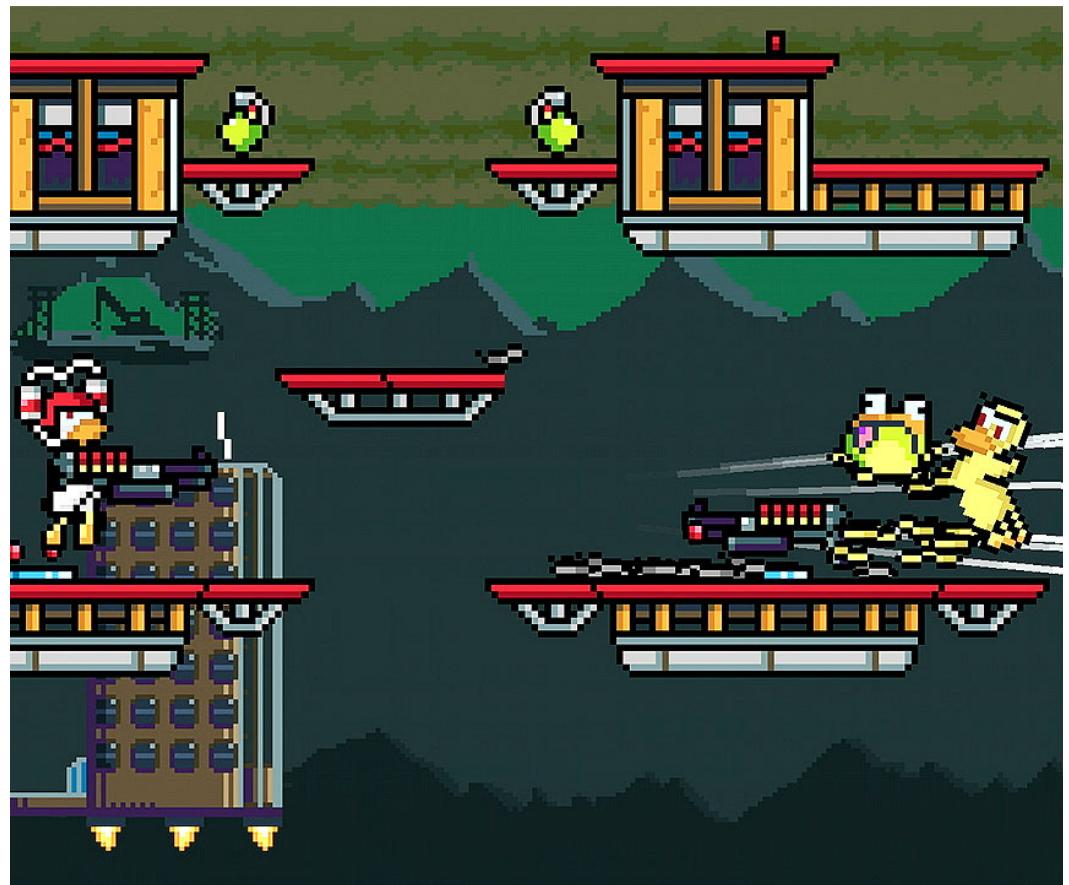
Competence

- Feeling of successfully mastering challenge
- Related to, but distinct from challenge
- No notable differences between challenging and emotionally challenging experiences



Enjoyment

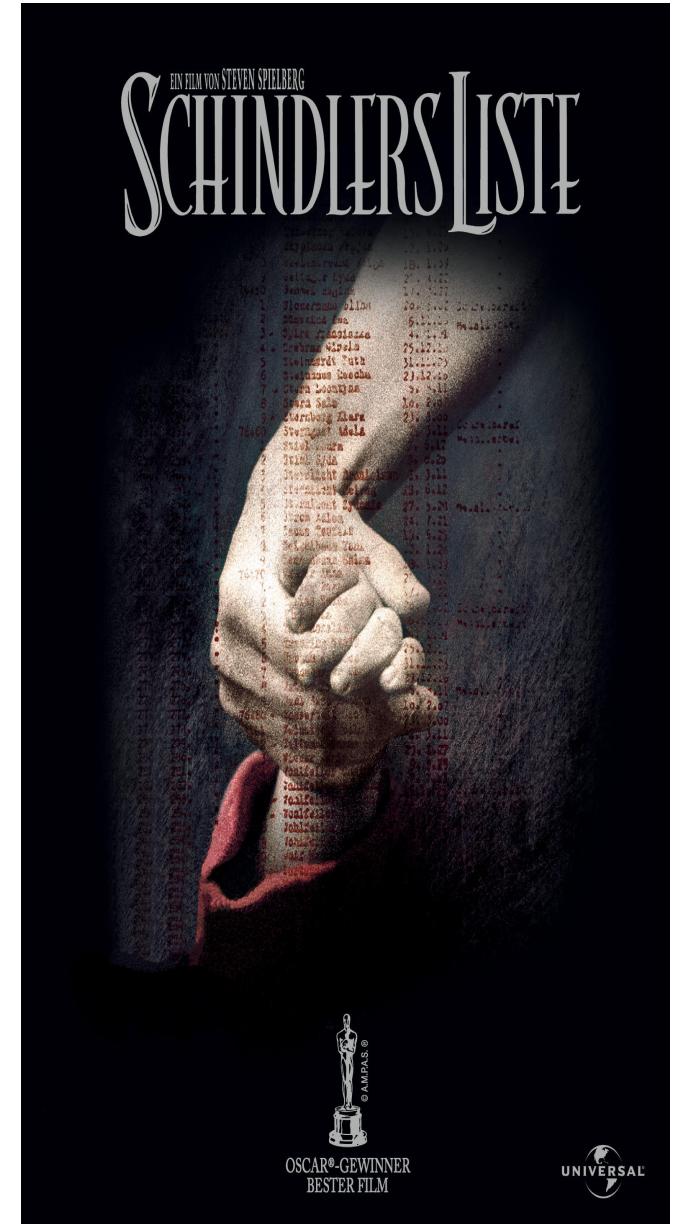
- Fun, entertaining, having a good time
- Considered a core player experience concept



Appreciation

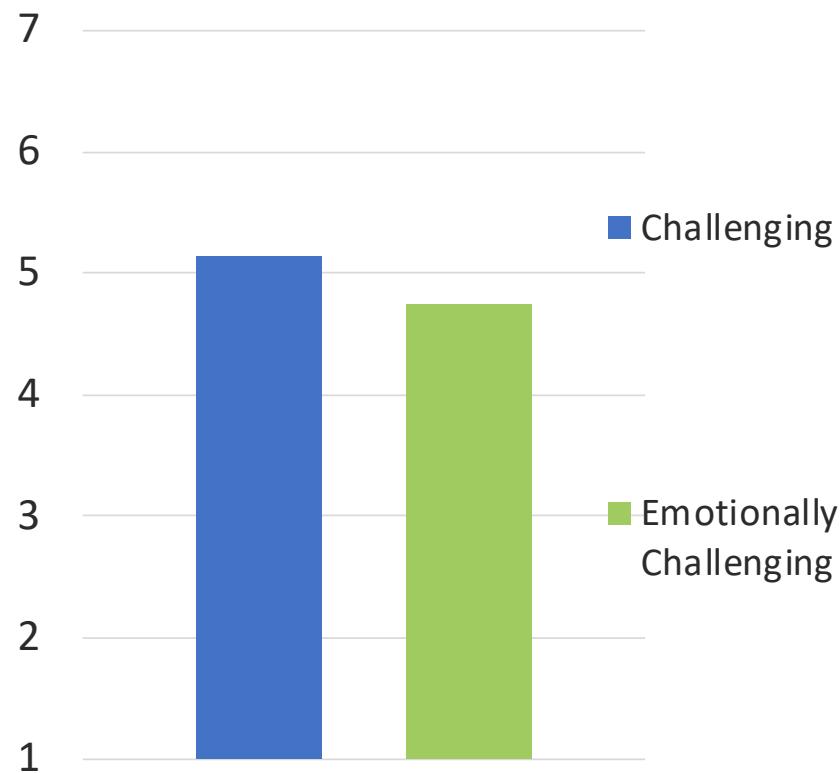
- A construct of positive experience characterized by perception of *deeper meaning*, feeling of *being moved* and *thoughtfulness*
- Linked to emotional challenge in movie experiences

(Bartsch & Hartman, 2015; Oliver & Bartsch, 2010)

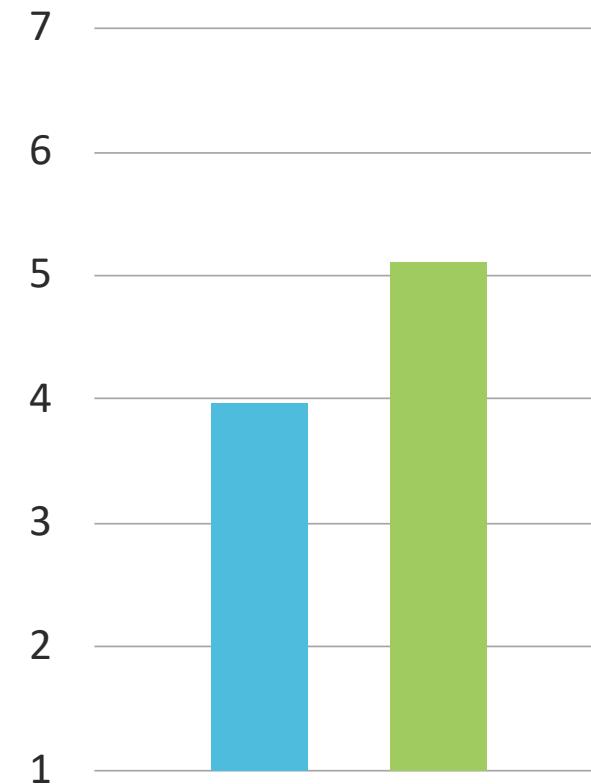


Both Enjoyed, but Emotional Challenge More Appreciated

$t = -1.33$ n. s.



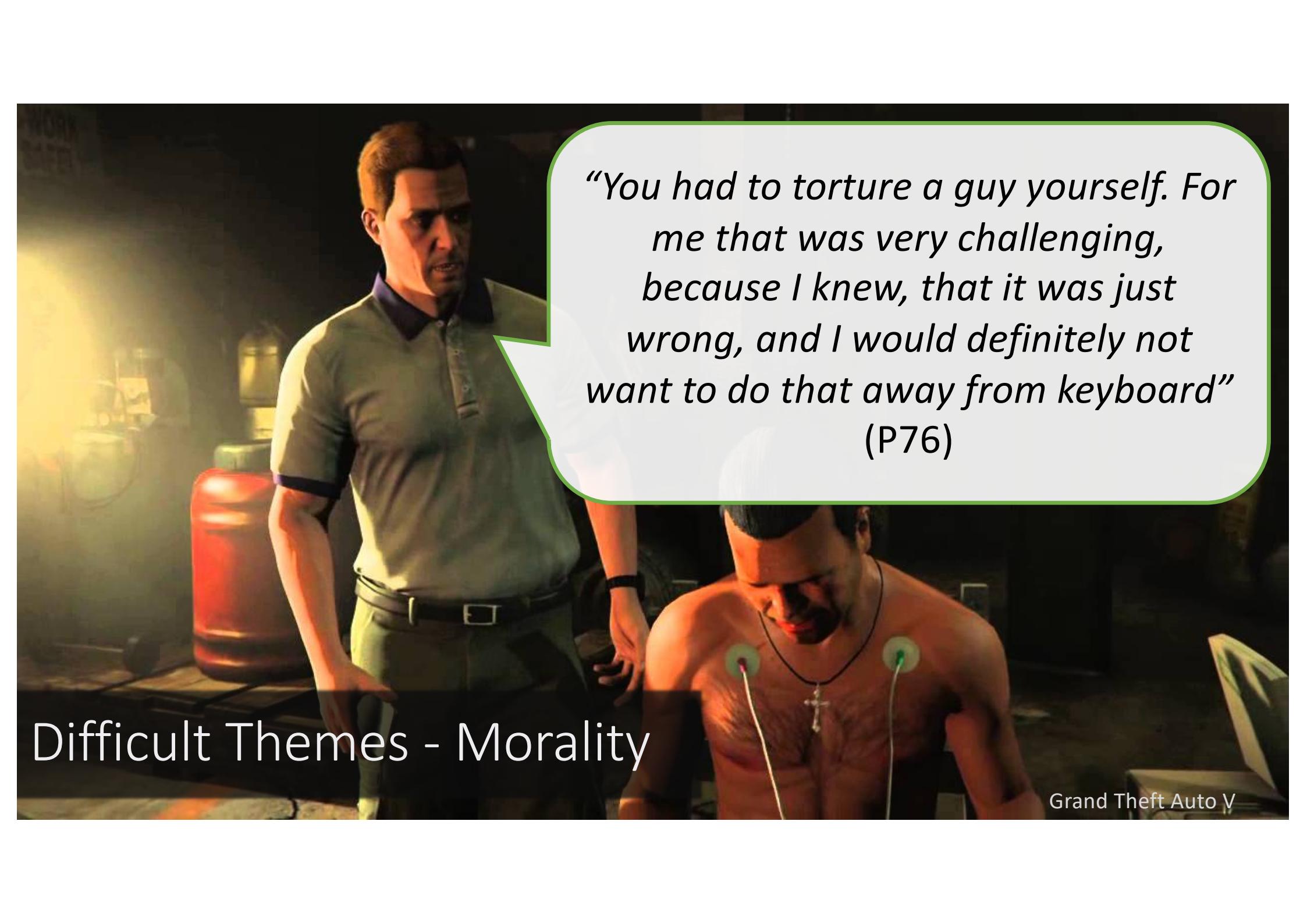
$t = 4.28$ **





What is challenging about “emotional challenge”?

Life is Strange

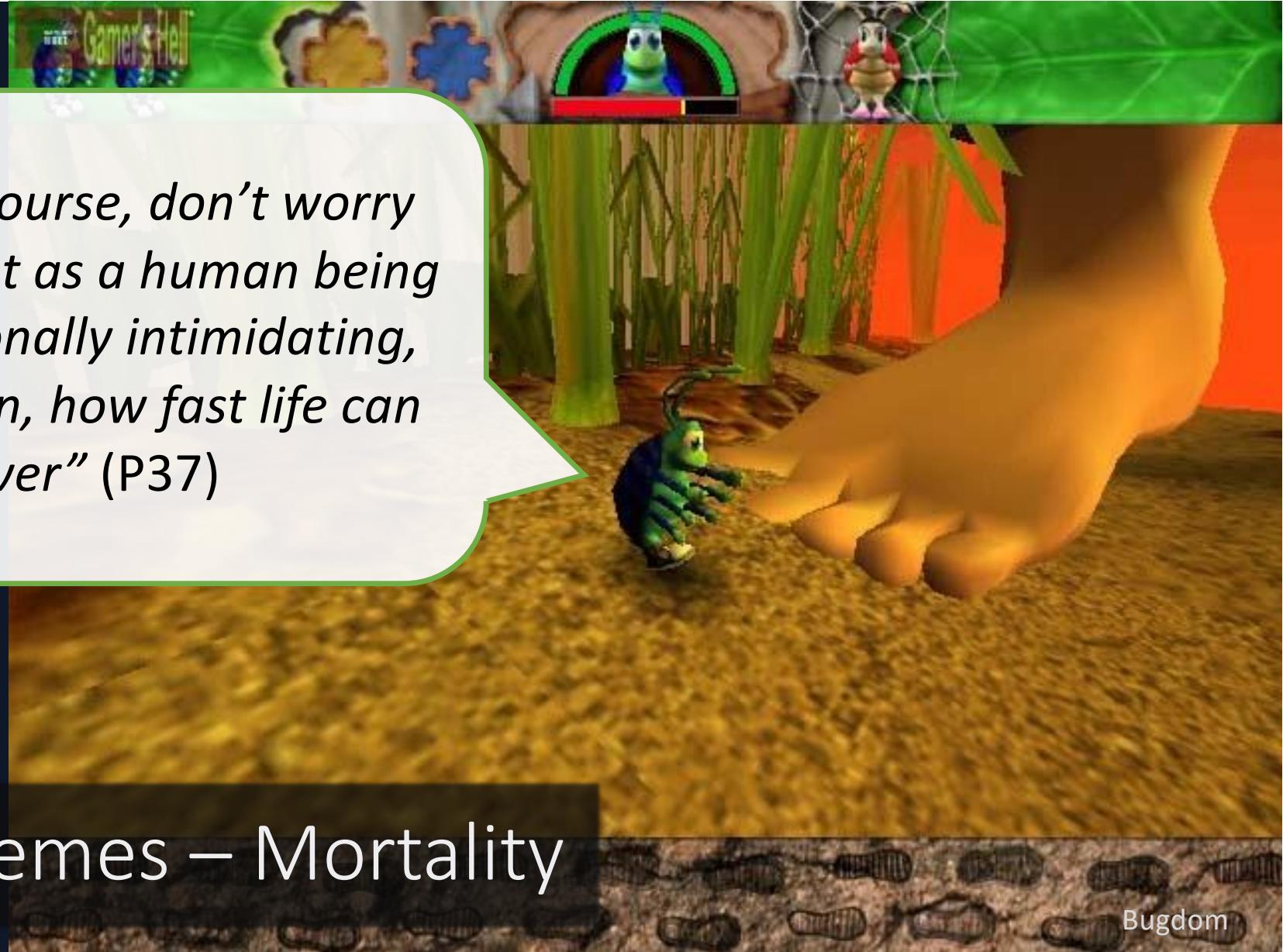


"You had to torture a guy yourself. For me that was very challenging, because I knew, that it was just wrong, and I would definitely not want to do that away from keyboard"
(P76)

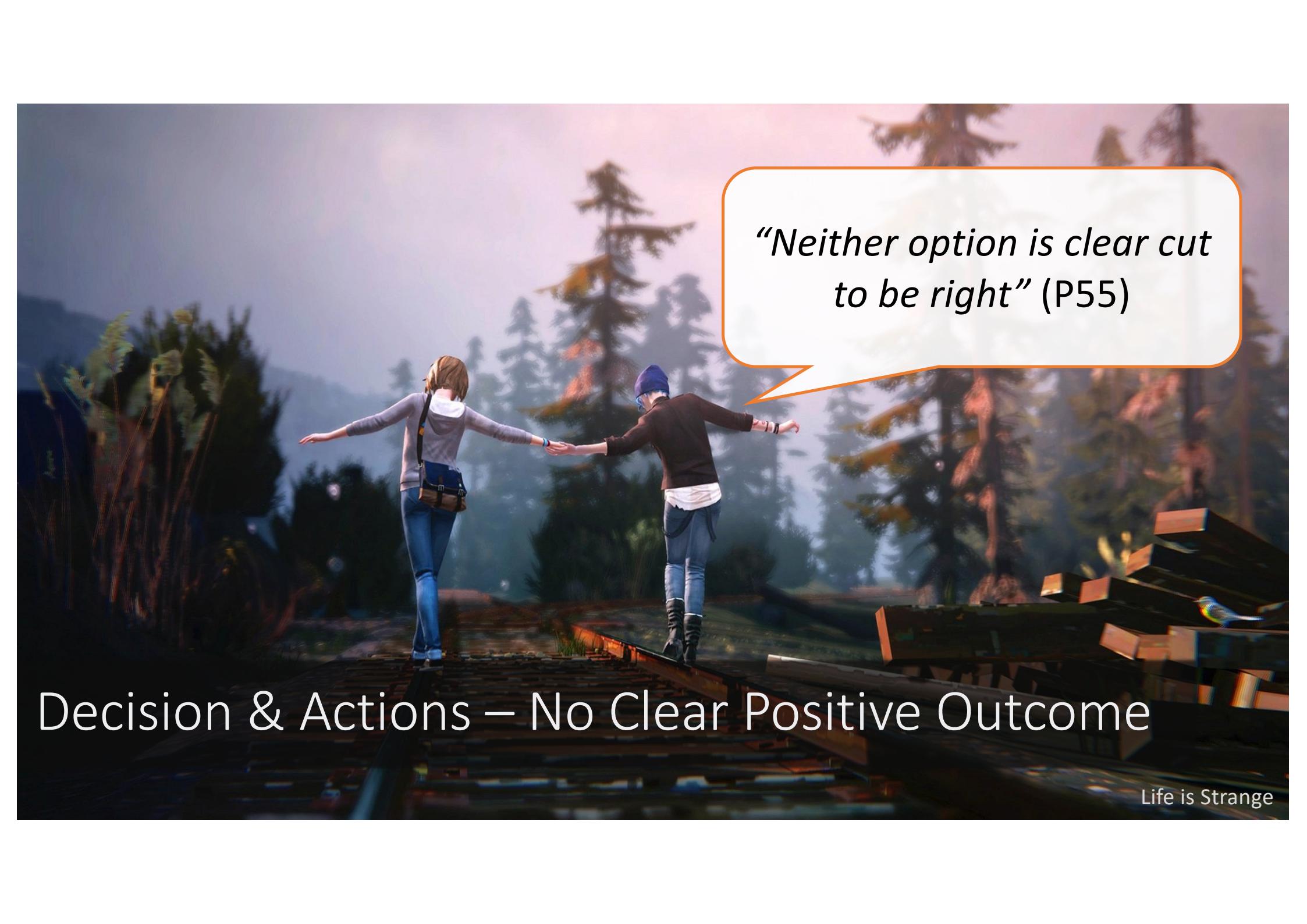
Difficult Themes - Morality

Grand Theft Auto V

“Beetles, of course, don’t worry about that, but as a human being it was emotionally intimidating, the perception, how fast life can be over” (P37)



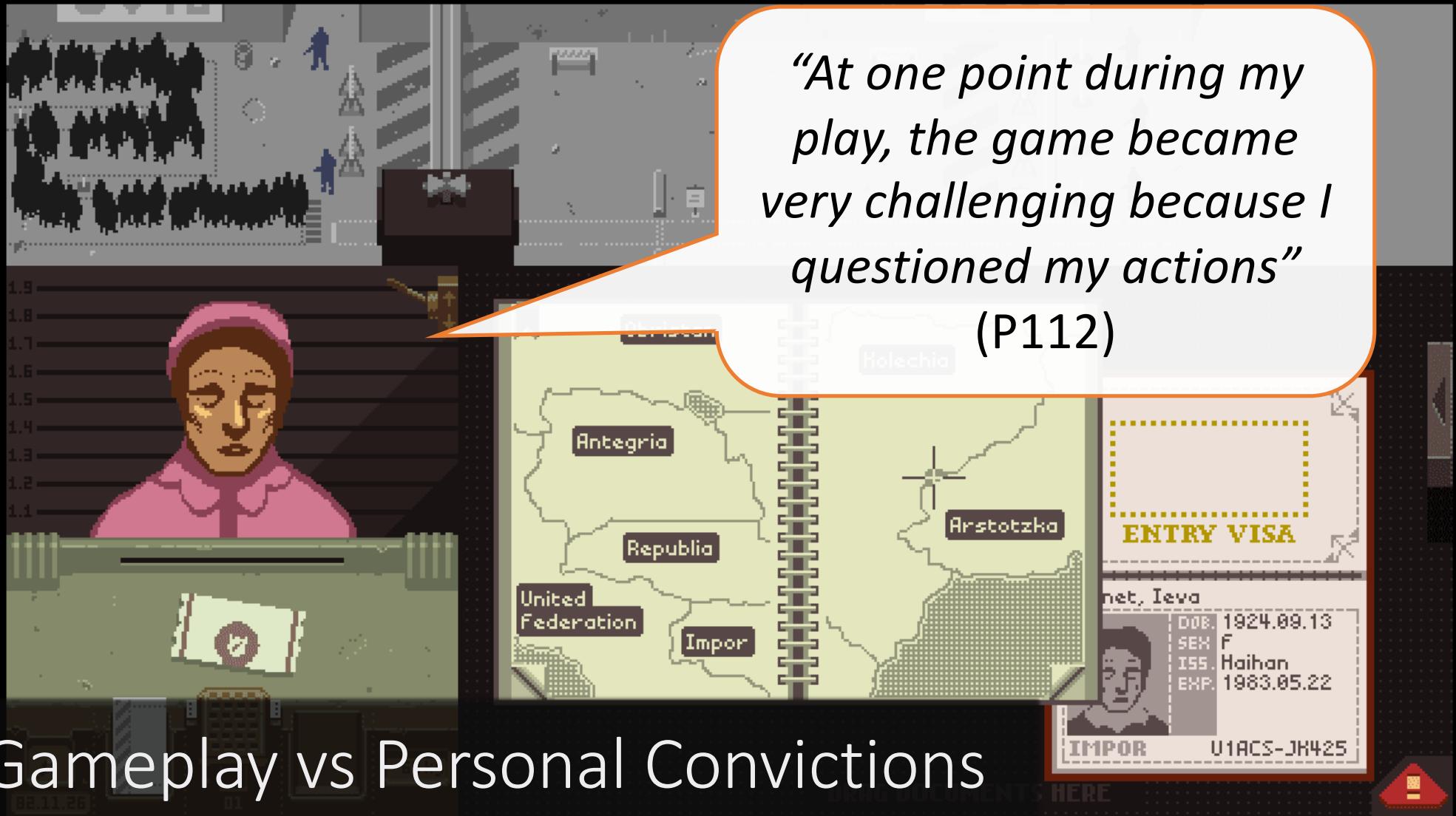
Difficult Themes – Mortality



*“Neither option is clear cut
to be right” (P55)*

Decision & Actions – No Clear Positive Outcome

Life is Strange

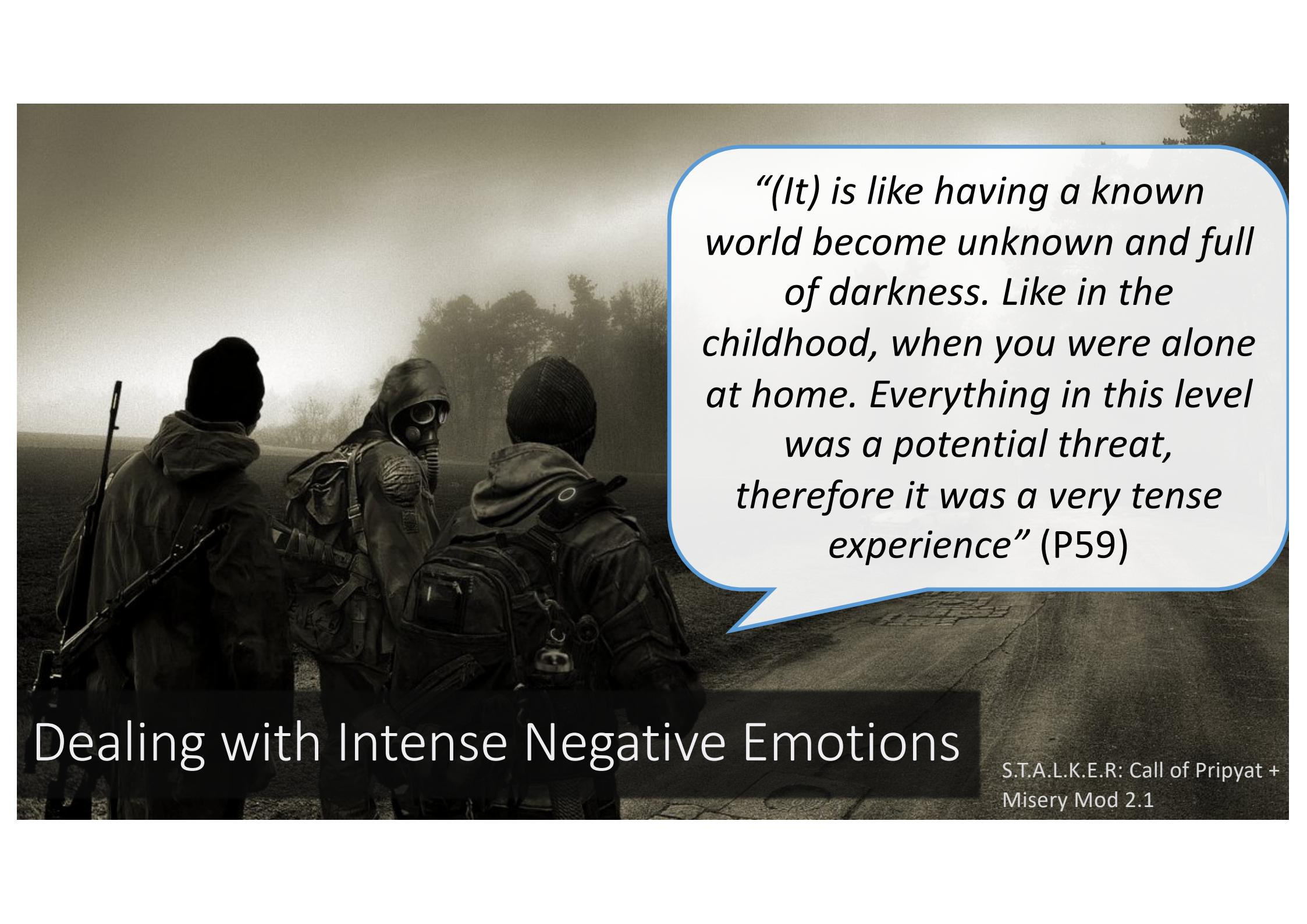


"At one point during my play, the game became very challenging because I questioned my actions"

(P112)

Gameplay vs Personal Convictions

Papers, Please



"(It) is like having a known world become unknown and full of darkness. Like in the childhood, when you were alone at home. Everything in this level was a potential threat, therefore it was a very tense experience" (P59)

Dealing with Intense Negative Emotions

S.T.A.L.K.E.R: Call of Pripyat +
Misery Mod 2.1

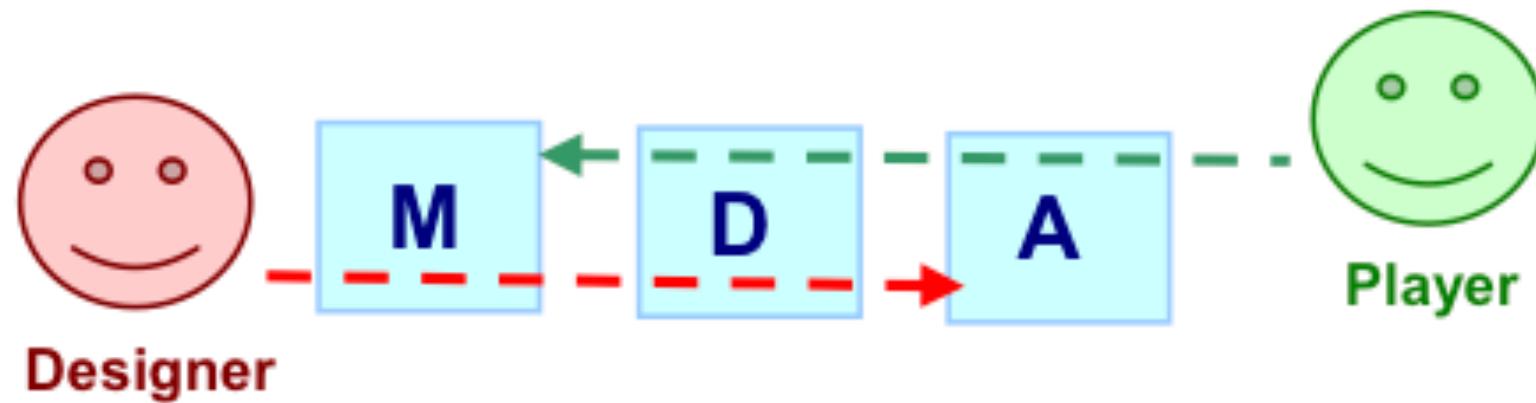


“The game kept frustrating me to an extent where I lost concentration but not the will to keep playing, leading to me getting worse and worse without any actual success” (P2)

Emotion = Challenge

Bloodborne

MDA Framework



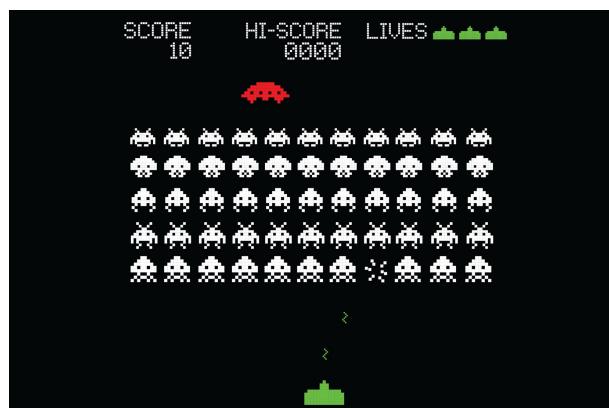
MDA Framework – Space Invader



- *Mechanics:* Move left/right, shoot, take cover, cover can be destroyed, aliens descend
- *Dynamics:* Distribute damage, duck and cover
- *Aesthetics:* «Last Stand», «Independence Day»

Exercise - Emotional Game Design

- Work in pairs:
<https://docs.google.com/presentation/d/1K9Ug8CzqQlISaYCPBPVULcNsRmc1TcRuwUGh8VZ4HQ/edit?usp=sharing>
- Randomize an emotion: <https://perchance.org/emotion>
- How would you revise the design of Space Invaders to afford that particular emotion?

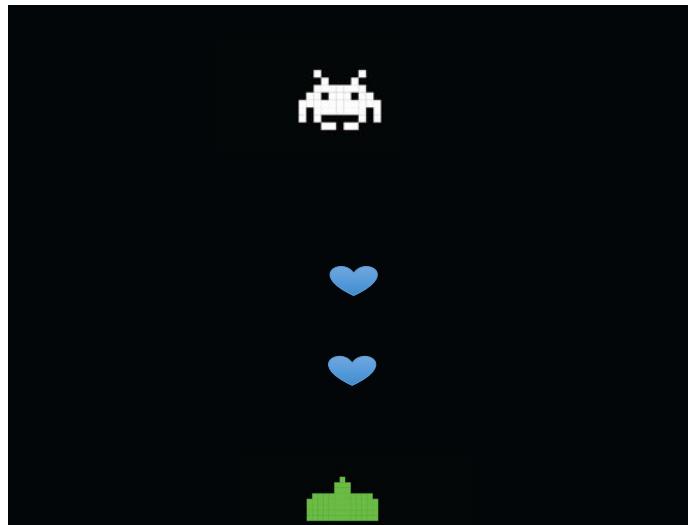


You can change mechanics and dramatic elements of the game (e.g., graphics, sound, story)

MDA Framework – Space Invader

- Did you adjust mechanics or dramatic elements?

Space Invader – Love



- *Mechanics:* Move, »shoot heart»
- *Dynamics:* «sending words of love»
- *Aesthetics:* Love

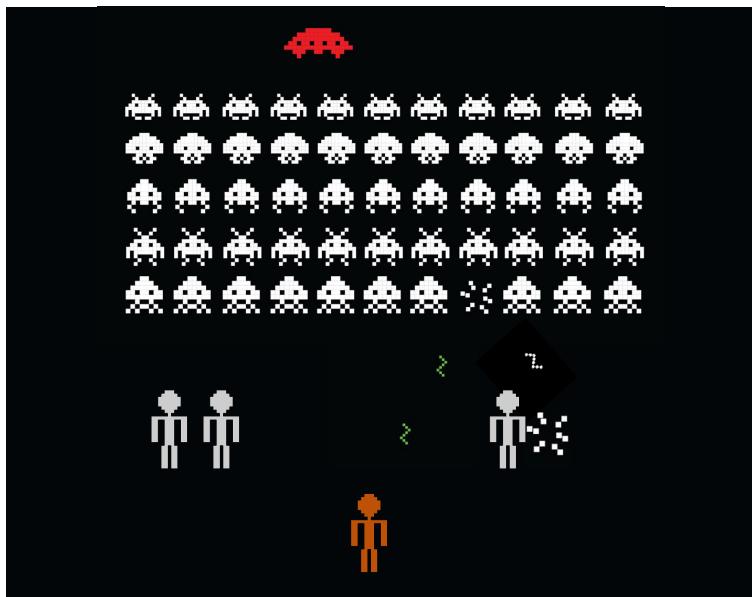
Space Invader – Remorse

- Same mechanics, but add back story for alien invaders



Space Invader – Guilt

- Same mechanics, but instead of walls -> humans



Space Invader – Going berserk



- *Mechanics:* Same, but if hit by red alien move faster and screen flashes
- *Dynamics:* *Gameplay becomes more frantic*
- *Aesthetics:* *Empowered, but losing control?*

Emotion and Meaning

- <https://www.youtube.com/watch?v=KkdPxZbUNSw>

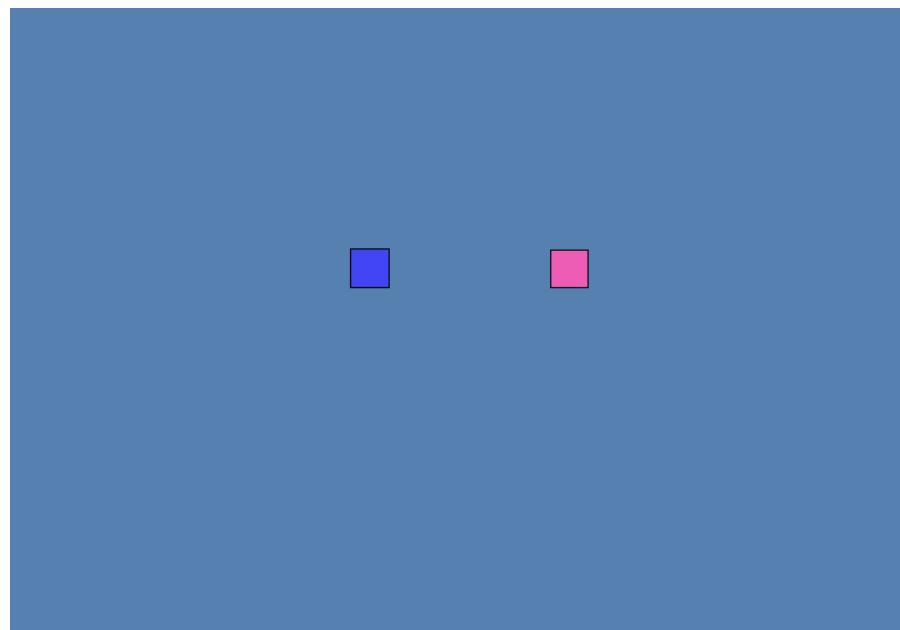


Emotion & Meaning

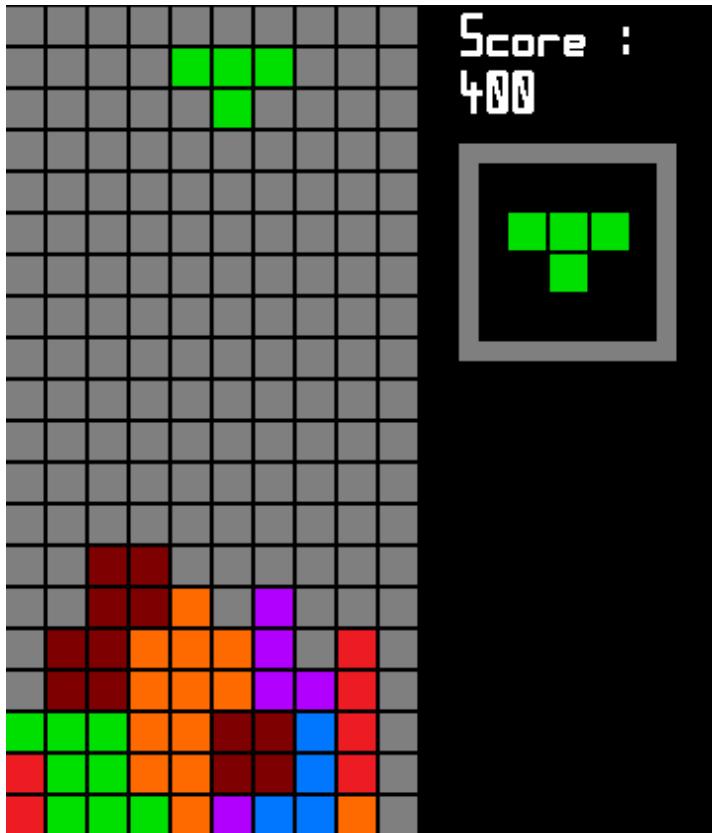
- Play: Discuss the Mechanics, Dynamics, Aesthetics and Meaning of the Game

http://kyrie.pe/the_marriage/

You can play the game
using only the mouse or
trackpad



Same Mechanics Different Meaning



Same Mechanics Yikes

