

Player Environmental Awareness Rules of  
Thumb for Environmental Storytelling in  
Role-Playing Games

?  
**LOOK!**

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Supervisor: Staffan Björk

# Player Environmental Awareness Rules of Thumb for Environmental Storytelling in Role-Playing Games

WARNING  
Env.  
Storytelling  
Ahead

"What do you  
mean just look at  
the environment"

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# Aim

What is our thesis about?

- Make players notice environmental storytelling
- Create guidelines for game- and level designers on attracting players' attention to environmental storytelling (ES)

Player Environmental Awareness (PEA)

- Techniques to catch player's attention

# Introduction

## Prestudy:

- Research based on articles, books and Game Developers Conference (GDC)
- Information found was useful but not sufficient, very focused on few specific domains mainly visual
- Information found was useful but couldn't find specifics about attracting players to ES

# Introduction

What our thesis provides:

- Cover multiple domains, wider scope, allows for further research based on our findings
- The collected domains related to ES grouped in one project
  - Allows for a starting point for further research into ES
- Our RoTs can be used by designers to direct players attention to different areas
- A good starting point of junior designers or people with less experience

# Initial Research Question

What should be considered when designing for supporting  
**Player Environmental Awareness?**

Assumption: Players will be more attracted to environmental storytelling if they are more aware of the environment.

# Final Research Question

What should be considered when designing for supporting  
**Environmental Storytelling?**

# Background - Don Carson

“The story element is infused into the physical space a guest walks or rides through.”

- Theme Parks
- Manipulating Expectations
- Story = “Big Picture”
- Cause and Effect
- Designing the Familiar
- Less is More
- Architectural Contrast

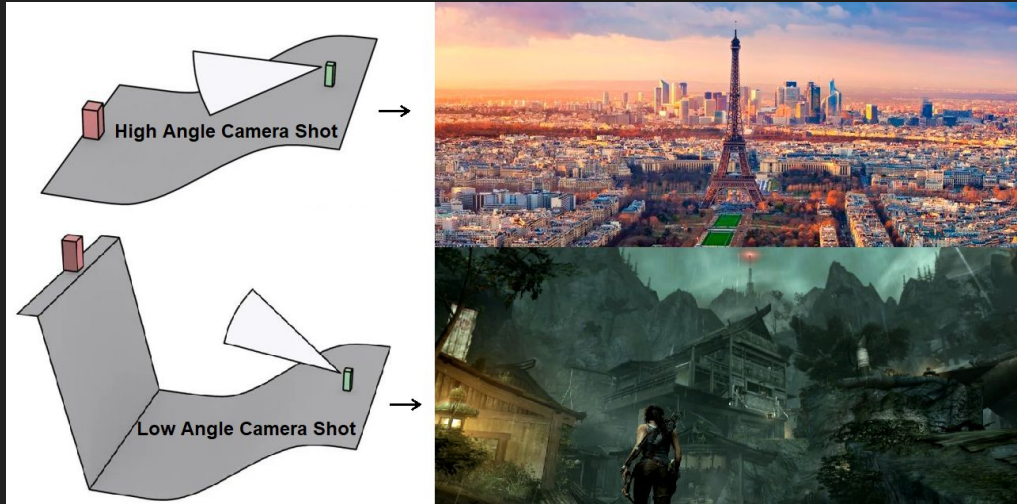




# Background - Other Domains

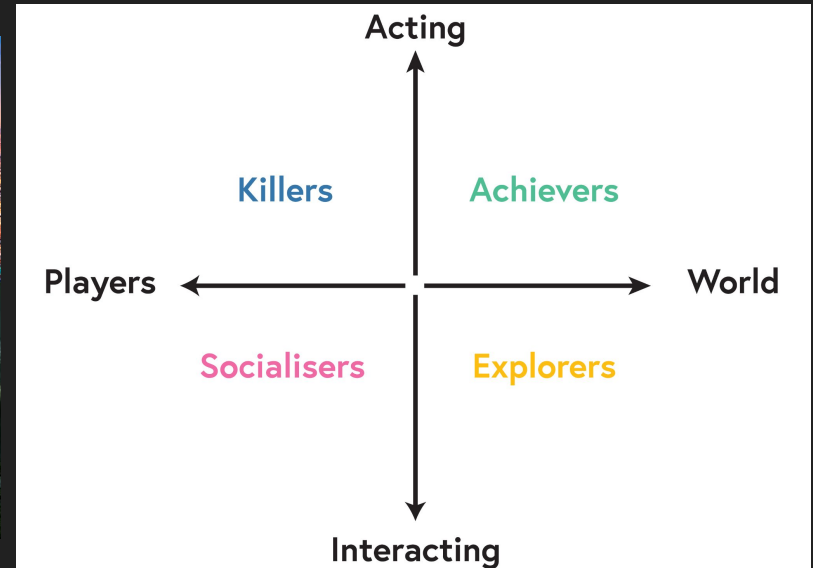
## Mise en Scene, Composition

- Spatial Cinematography (Bellard)
- Eye Catchers (Piaskiewicz)



## Player Types

- (Bartle's Taxonomy)





# Background - Other Domains

## Mechanics

- Facilitating Exploration (Linderoth)
- MDA Framework (Hunicke et al.)

## Sound

- Sound Design Patterns (Alves et al.)
- Spatial Audio



Helmskrig: The very idea is inconceivable to our Elven overlords! Sharing the heavens with us? With man? Ha! They can barely tolerate our presence on earth!

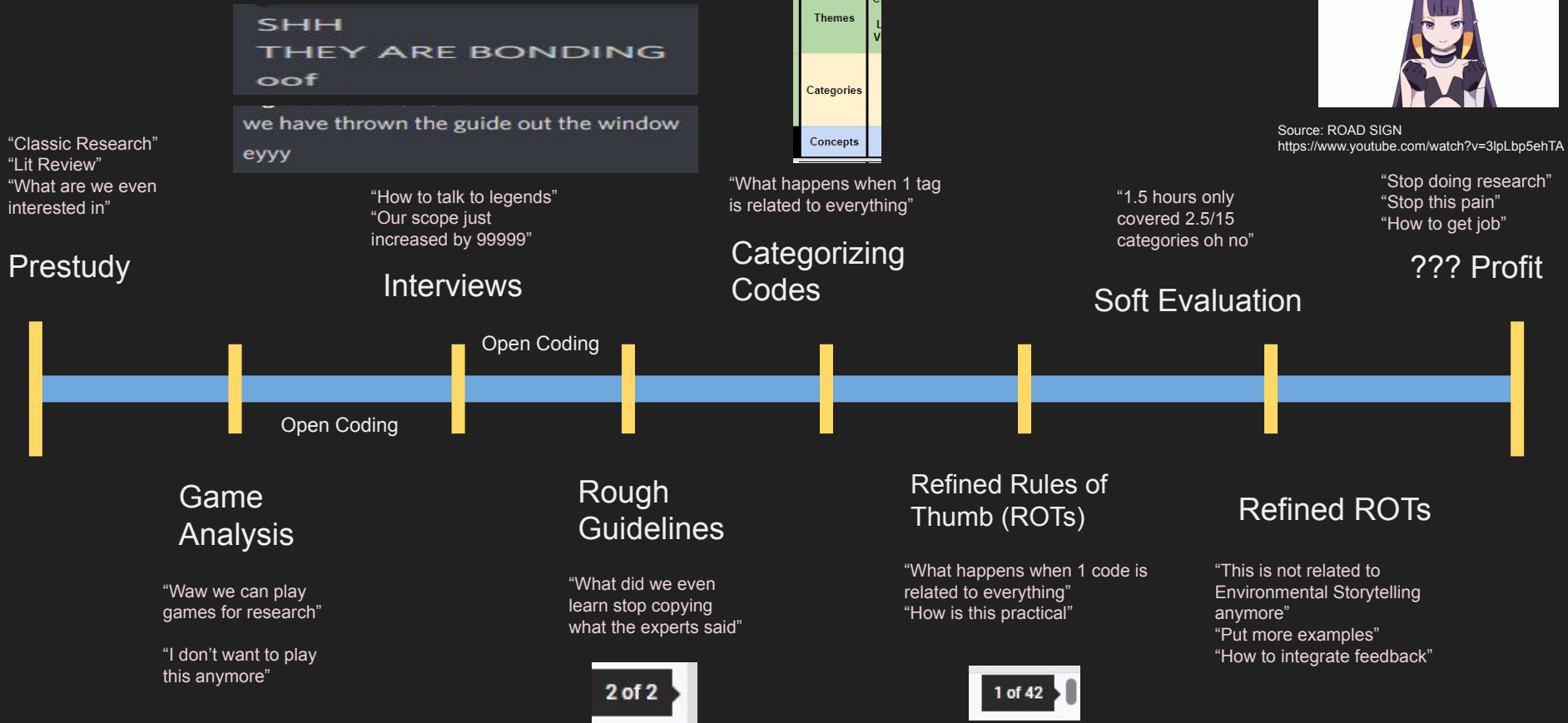
# Grounded Theory Inspired Approach

- To form new theories
- Identify area of interest
- Collect Data
- Open Coding - Creating “codes” for each data-point.
- Selective Coding
- Writing Memos
- Finding Theoretical Codes
- Literature Review

“Grounded Theory researchers expect to operate with a certain amount of creative chaos.”

(Lankoski et al., Game Research Methods)

# Process Overview

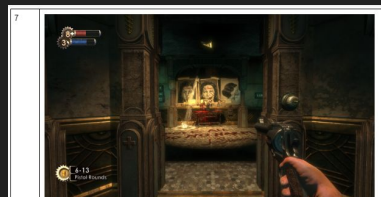


# Process - Game Analysis

- Chosen based on convenience, secondary material, research goals
  - Can save state anywhere, prepare scenarios for stimulated recall

## Light Play + Annotate

## Open Coding



- Immediate attention grabber - must go through this door to reach goal, framed
- Amount of details, lighting, gore and text on ground catch attention
- These images not shown before this area - very new
- Gore makes me on high alert - who did this? They must be near
- Why did they do this?



- These texts written in blood all over the area - foreshadows what is going to happen
- Victims who wrote this? But why? Either brainwashed or written by the villain
- Not much light, and many similar texts throughout area

6. Vikki & Vance Casino - Primm



- Payout from previous foreshadowing
- Car in focus in the center of the room, lighting on top highlighting it
- Mise en Scène:
  - Car with bullet holes tying up to the couple's cause of death
  - A broken weapon display case in front of the car with visible bullet holes signifying a break-in and the theft of the murder gun

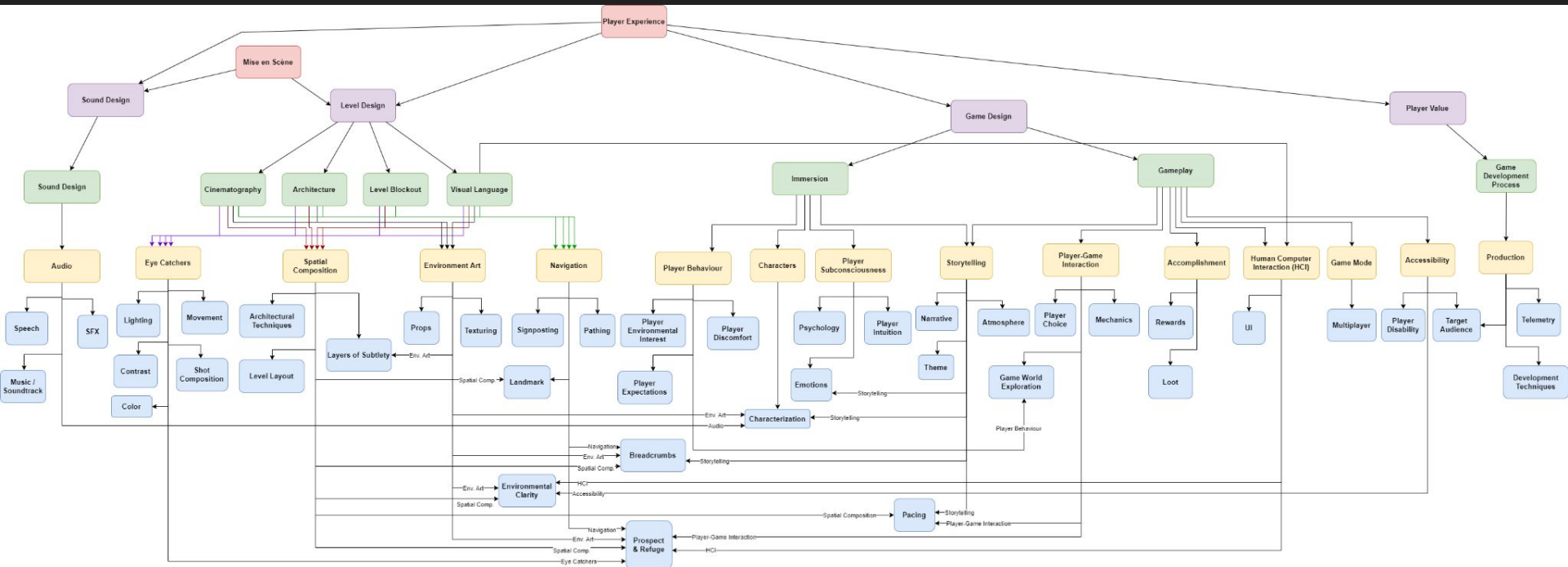
Fun fact, this is a reference to the crime duo Bonnie and Clyde and the scene of their death



ID	Game	Level / Location	Observations	Code
7	Bioshock 1 Remastered	Medical Pavilion	Immediate attention grabber - must go through this door to reach goal, framed	Framing, Door
	Bioshock 1 Remastered	Medical Pavilion	Amount of details, lighting, gore and text on ground catch attention	Relation of Player Encounters to Environmental Area, Characterization
	Bioshock 1 Remastered	Medical Pavilion	These images not shown before this area - very new	Novel Images
	Bioshock 1 Remastered	Medical Pavilion	Gore makes me on high alert - who did this? They must be near	Cautiousness, Alert
	Bioshock 1 Remastered	Medical Pavilion	Why did they do this?	Character Motivation
8	Bioshock 1 Remastered	Medical Pavilion	These texts written in blood all over the area - foreshadows what is going to happen	Environmental Text, Foreshadowing
	Bioshock 1 Remastered	Medical Pavilion	Victims who wrote this? But why? Either brainwashed or written by the villain	Character Motivation

ID	Game	Level / Location	Observations	Code
6/7	Fallout NV	Primm	Giant sign with the name of the casinos showing where the main entrance is, Vikki & Vance Casino and Bison Steve Hotel	Signposting
6	Fallout NV	Vikki & Vance Casino - Primm	The first thing the player sees when they enter is Vikki & Vances car centered in the middle of the player's FOV	Camera Composition
6	Fallout NV	Vikki & Vance Casino - Primm	Lighting Shining down on the car further highlighting it	Lighting
6	Fallout NV	Vikki & Vance Casino - Primm	The Colour palette of the car is different than anything in the room, blue vs yellow tones	Colour Contrast, Saturation
6	Fallout NV	Vikki & Vance Casino - Primm	Payout from previous scene - Road Sign referring to the car	Foreshadowing Payout
6	Fallout NV	Vikki & Vance Casino - Primm	Broken empty display case next to the car	Environmental Details, Prop Placement
6	Fallout NV	Vikki & Vance Casino - Primm	Upon closer inspection you see a sign next to the display case stating that in the case is the machine gun used to shoot and kill the people in the car	Written Narrative
6	Fallout NV	Vikki & Vance Casino - Primm	Naked mannequins placed next to the car	Environmental Details

# Grounded Theory - Categorized Codes + Relationships



Pain and suffering



# Process: Soft Evaluation, Refined ROTs

## Design

- Formative Evaluation
- 3 Practitioners
- Individual
- Prioritized categories to discuss

## Effect

- **Clarified how each category/concept related to Env. Storytelling**
- More diverse examples
- Clarified content within concepts
- Reviewed content which some believed were incorrect

- “What do you think about the content?”



*“Here's a document that does the same thing but better”*

- “Is the content well packaged?”



*“Well yes but where are the pictures and examples from different media”*

# Results - Overview

## First Steps of Grounded Theory

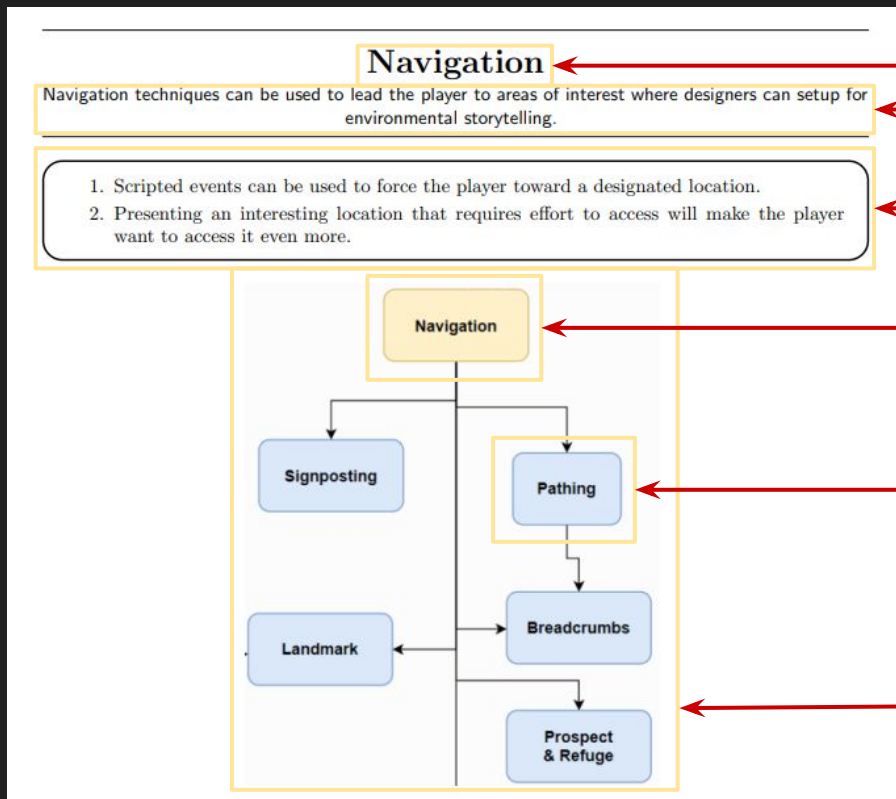
- 2 Theories
  - 4 Core Categories
  - 8 Themes
  - 15 Categories
  - 46 Concepts
- 110 Rules of Thumb

## Why only Categories and Concepts?

- Strived for practical guidance for designers
- Greater clarity and practicality
- Didn't continue beyond categories because too vague + all encompassing
  - Wanted more concrete Rules of Thumb



# Results - Formatting Example



Category Title

Relation to environmental storytelling

The Rules of Thumb

Yellow: Category

Blue: Concept

Overview of the section

## Landmark

Landmarks can be used as a tool to create points of interest that reflect the theme and story of the area around them.

1. Use landmarks to guide the player to their next destination.
2. Landmarks should be memorable and easily visible in different areas of the map.
3. Noticing the landmark getting closer gives the player a sense of progression.

Landmarks are structures that stand out in a scene and are effective in drawing the player's attention. Landmarks work very well in combination with camera composition and leading lines. A bottom up angled camera view of the landmark gives it a sense of importance and gives the player a sense of scale and destination.



Figure 36: Rise Of The Tomb Raider [31]: A shot of a landmark in the distance clear in the player's field of view setting up their next destination for their journey-

Concept Title

Relation to environmental storytelling

The Rules of Thumb

Description of the Rules of Thumb and/or clarification on how they can be used

A descriptive figure to further highlight the use of the Rules of Thumb



# Results - Interview Concepts

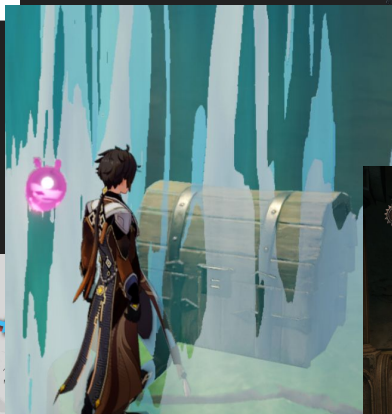
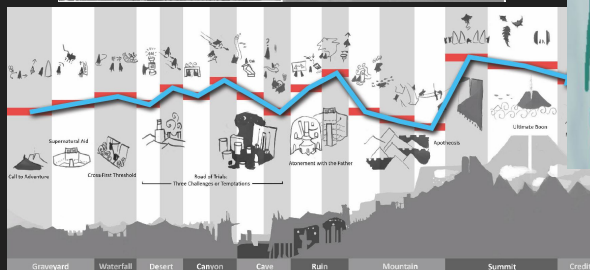
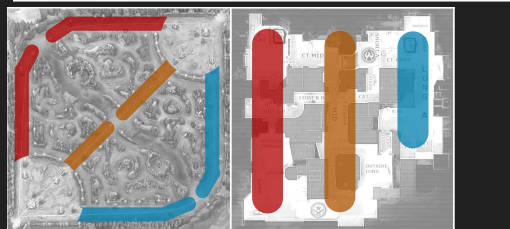
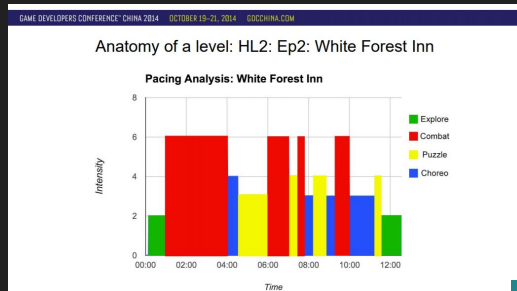
(Also Production)

Anticipation, Expectations

Pacing

Player Intuition

Characters



# What We Would Change If We Time Travelled Back

- Higher focus on RPGs
- Better understand scope first
  - Interview with practitioners first, then literature review
  - More literature review + game analysis iterations also would mitigate this
- Maintain consistency between researchers
  - Formatting, Assumptions, and definition of a datapoint
  - Data collection methods and open coding details
- Use references early when iterating on ROTs, Consistent References

# What should be considered when designing for supporting Environmental Storytelling?

## Answer to RQ

- More complicated than anticipated
- Many moving parts and interconnections
- We present our Rules of Thumb as an answer

## What We Learned

- Many aspects influence Env. Storytelling and many moving parts
- Games are hard to make, everything interconnected
- Armed with our knowledge we now are more aware of env. Storytelling in games

## Future Work

- More research on each category
- Summative Evaluation
- Implement more soft evaluation feedback
- Stimulated recall sessions with scenarios utilizing ROTs

Did this presentation hurt your eyes

# Thanks For Listening!

## Where the questions

If i look inside trash cans does it tell me stories of what people ate on the streets on that day

Stop touching grass