

PRESENTATION:

https://docs.google.com/presentation/d/1nR_25ODQgCXkC6NtON8OsYCXy-N1eHlyjoMlo4wnC4U/edit?usp=sharing

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Presentation Script:

Start

So, we are going to talk about the last of us from naughty dog, which you all know about.

The foundations

Before diving into the level, I wanted to dig into some of the considerations naughty dog goes through when creating a level, and some others I want to highlight personally.

The game

First, what is the last of us about? Action Adventure/Survival horror post apocalyptic experience, in a 3rd person perspective. A single player narrative driven shooter. Right, we know what the game is about.

The cast

Naughty dog's game arises from the relationship of these two protagonists, a story is built around the father-daughter relationship they develop and gives birth to the last of us. So, they start with the characters and their relationship development. Why am I even telling you these statistics, age, height and weight?

Well, in the word of one of the game's director's:

“Gameplay design has to obey the limitations of the character” - Bruce Straley

The affordance

Which means that when we build our levels we build them against these limitations.

That includes the affordance of this level, here you can see some examples that illustrate this. A trunk (cultural, we all know we can get over a trunk), a climbable surface (again, cultural since we all know we can climb it, and so can the characters in this world), and some GUI icons which are explicit.

The nouns

Also known as nouns, as mentioned by Emilia Schatz if you remember her (lead designer at ND), and most likely people before her. Vaultable object indicated by color, a ledge indicated by

both color and motion, and items and interactable surfaces indicated by GUI prompts. These are the nouns of the level.

The verbs

How do we interact with them, here comes the verbs. Vaulting, climbing grabbing and interacting mechanics allow us to.

The animations

What about this? We know joel can vault this, and we can see how he does. Can we make the trunk double its size? No, the animations won't work if we do not use something like warping. So if they do not work we have a problem, we need to account for them also.

Coherence

This was quite funny to see, from part 2. Your character can in no way traverse this part the way the kid does, because of its size, weight and animations that fit the jump.

The metrics

So we take this into account when building our levels, our metrics that fit our characters. This is an illustration by Emilia. ND has well defined metrics and zones that objects have to stay clear from to not confuse the player. As per her, a player should not be even thinking about what objects are interactable and which are not. This has to be perceived immediately.

The blockmesh

What you are seeing now is a blockmesh of a tloU part 2 level, as showed by its level designer. Space and color.

The blockmesh's Testing

And this is what the designer has at its hands when making the level. The character's controller, the final animations, mechanics, even combat. When building the level, they know what they are building it up against, and can make it fit perfectly.

The Journey

Summarizing, this is how this museum level was made. They start with two paragraphs, centered around the character's relationship at the beginning and at the end, some concept art and also the animations and character limitations we talked about before. All is already at their disposal.

From this they start straight into blockmesh, as said by Evan himself, and here comes the most important part, which is iterating countless times with feedback from writing and art until they get the pacing right. Remember that this is a full narrative level, there is no combat whatsoever.

3 final statements: A lot of the dialogue is actually written in reaction to the art", which goes to support this back and forth with the art team. At ND they are ready to scrap and redo things

over and over again if they do not work. So there is nothing like the level designer finishing a blockmesh, giving it to the artists and leaving, they are there until the very end.

This specific level took 2 years to make, and was redone at least 4 times, with many more changes that are not fully scrapping the level. He even says that some levels were remade 25 times. Quite a number.

The Level

So, after this introduction to ND's level design process and some considerations, let's dive into the level at hand, which is the Sewers from the last of us. I leave the video here in case someone wants to look into it, but we'll be relying on gifs and images during this presentation.

The player

In this specific level we have to account for two types of players, those that go for combat, and those that go mainly for stealth. These impact directly the types of challenges we see.

The goals

The player/ and character have 3 specific intrinsic goals, which are exploring (satisfying the autonomy need), surviving (which satisfies the competence need) and following the story and character relationships development (which satisfies relatedness). The extrinsic ones are escaping the sewers and reaching the lighthouse.

The map

In this level we need to enter and escape the sewers, you can see player start at the bottom right and player end at the left. We'll be looking into each section separately so do not panic. I just want you to have the general shape in mind.

Sublevel 1

We start the level in the beach, which is a contrast to the last part of the previous level, in which we were running from an armored car. This is what they call a story downbeat, tension down. We follow the narrative and have optional possibilities in the golden path, both from narrative and scavenging.

Then we head into the sewers, and we close the door behind us. This is the concept of a valve.

Sublevel 2

In sublevel 2 we have more optional narrative and scavenging in the golden path as well as a set up, a foreshadowing. In the bottom right image you can see a grating (point it). Ellie will crawl through and open the door on the right for you. This is going to happen again in the future.

Sublevel 2 -2

We keep going through a calm part of the level, and we find water, we need to get to the other side. This triggers more narrative and the start of a puzzle.

Sublevel 2 - 3

We manage to open the door and scavenge around for supplies and something that helps us get to the other side. We found an interactable wood plank and we drop it into the water.

Sublevel 2 -4

If we follow the golden path, there is a door that will lead us into the first surprise, the first challenge, and also some secondary narrative and supplies.

Sublevel 2 -5

The first challenge can be solved in two ways, easily through stealth, and taking out both clickers, or, as in this case, through brute force. Depending on the player's choice it is one challenge or the other. See how it fits both playstyles.

Sublevel 2-6

We use the plank to get Ellie to open a path for us, and we trigger another valve, which leads us into sublevel 3.

Sublevel 3

If we explore the golden path we will get an upgrade for our tools that will let us add higher tier modifications to our weapons. There are also narrative and optional scavenging events that alert us a bit.

Sublevel 3-2

But there is nothing to worry about as there is no one, we get a new weapon, the shorty, and even an upgrade to our bombs. This is a set up, remember these upgrades for later. Additional narrative and scavenging reduce the tension again.

Sublevel 3-3

Perfect place to introduce a new surprise, 2nd challenge, the player opens a door and runs into many infected. This is an extension of the first challenge (if you went the combat way) and a story upbeat. Notice how there is an obstacle that prevents the enemies from coming altogether, which would allow you to try out your newly acquired shorty. This specific player does not use it though.

Sublevel 3-4

After this moment of tension for sure there has to be a counter right? We'll be back to the good old peaceful narrative. So we make the player drop their guard and introduce a gap between expectation and reality. A forced 3rd valve opens the sandwich. In words of Neil Druckmann, creative director, you have to sandwich the climax moments. Lower the tension to the lowest limit and then get on a nice old rollercoaster to the climax. Remember this sandwich.

Sublevel 4

We are left in charge of Sam and in a big area full of infected, they have not noticed us so we can play it safe (or not).

Sublevel 4-2

. If you play it stealthily we got an evolution of the first challenge due to new enemies (a new type, the stalker, which tries to hide and attack you unexpectedly) that are patrolling. But ... If we go into combat everything will turn into a mess very fast and we'll have 3 or 4 enemies on us.

Sublevel 4-3

An evolution of the first due to enemy placement, if you make any noise when going to the right, without seeing this one, everything will escalate pretty quickly. If you went for combat this one will join the previous challenge.

Sublevel 4-4

Now we have a patrolling enemy and a hidden enemy behind the next wall, an evolution of 3+4 (patrol + enemy placement) if you go the stealth way, or an expansion of the second challenge if you chose combat that triggers 3 enemies, 1 stalker and two clickers.

Sublevel 4-5

The last challenge of the area, 3 enemies placed in key positions, static, an expansion of a previous challenge. If you went the combat way they are most likely all dead, or so are you.

Sublevel 4-6

We exit the area through 2 valves, and dive directly into player driven narrative event.

Sublevel 5

You run from the infected and face another valve, which will give you some moments of calmness.

Sublevel 6

You keep running, we create a pocket of tension and a valve reduces the possibility space to the last room, for the climactic challenge.

Sublevel 7

A valve and a gate keep you in this room, which is also a gap between expectations and reality. You expect to exit the sewers, but your objective is stopped by a closed door.

Sublevel 7-2

The only option here is the combat way, and it is an evolution and expansion of the second challenge, where the first open attack of the level happens.

Sublevel 7-3

I told you to remember something before, do you see the molotovs? You got a bombs upgrade, what a coincidence that they will come in so handy at the end right? They even place a free molotov here. This is the highest the story and gameplay upbeat gets, and afterwards, as you can expect...

Exit

We escape the sewers, out to open nature, big contrast, story downbeat. Which means we close the sandwich around the end of the climactic challenge.

Cadence

This is the full cadence of the level, just for reference, the dotted lines indicate the possibility of a certain challenge happening in one branch or the other. So when you have player choices these cadence graphs get much more complex. This one is not since you only have 2 branches and no backtracking due to valves.

Improvement

Remember the room in which we get the tools upgrade? It's in the golden path, though right next to the critical one. Such a key upgrade is as easy to get as getting into a little room and pressing a button. So I'd say we moved this to the first challenge, or a new challenge. Why? You know the saying - high risk high reward?, feels way better to get it after a good fight.

Takeaways

This is what I want you to remember, I offered you a few keys about what ND does in their levels. The contrast and beats, story-wise and gameplay wise. The build up of tension, the gaps which align the character to the player, to feel and think the same.

The set ups and foreshadowing with the bombs upgrades. The overall ND level design process as mentioned by Evan. In the end, some keys to create this emotional rollercoaster of a game. Do not forget to sandwich your climaxes, either.

References

So, if you want to know more about what I dived into and even more that I did not include here, see the attached document, I tried to make it as readable as possible. There is a lot about Naughty Dog in there, maybe something is useful for you.

Thanks

Thanks for your attention everyone

Questions

If there are any questions then go ahead.

End

Article about writer's intentions on tlou2

<https://venturebeat.com/2020/07/12/naughty-dogs-narrative-lead-explains-the-story-of-the-last-of-us-part-ii/>

Let's play sewers

https://www.youtube.com/watch?v=HvcLEWejtew&ab_channel=WatchMeBeibeh

TLOU tutorial level design analysis by its designer GDC

https://www.youtube.com/watch?v=7L71MA4Bq2s&ab_channel=GDC

Museum level by its designer (tlou2)

[TLOU 2 - level design](#)

Level design analysis of toul last level by its designer peter field, and more from him

https://www.youtube.com/watch?v=oGM8IR9znDY&ab_channel=PeterField

https://www.youtube.com/watch?v=xN_dHI3Ibis&ab_channel=IntoGames

<https://www.forbes.com/sites/danielnyegriffiths/2014/07/14/how-game-design-transformed-the-last-of-us/?sh=6849fd5a2b99>

https://www.youtube.com/watch?v=AKeUZVikPV8&ab_channel=PeterField

Emilia Schatz on level design (environment language)

<https://80.lv/articles/defining-environment-language-for-video-games/>

ND player guidance + lighting by a professor

[https://www.gdcvault.com/play/1025179/Level-Design-Workshop-Invisible-Intuition%20\(LD\)](https://www.gdcvault.com/play/1025179/Level-Design-Workshop-Invisible-Intuition%20(LD))

Single player level design

<https://www.gdcvault.com/play/1024423/Level-Design-Workshop-Singleplayer-vs>

Getting and holding attention / not immersion by Richard Lemarchandd, Lead game designer at ND

<https://www.gdcvault.com/play/1015464/Attention-Not-Immersion-Making-Your>

Character development in non linear spaces (also TLOU seattle day 1?) - ND

[https://www.gdcvault.com/play/1024926/Character-Development-in-Non-Linear%20\(ULL\)](https://www.gdcvault.com/play/1024926/Character-Development-in-Non-Linear%20(ULL))

Bruce Straley & neil druckmann active cinematic experience

<https://www.gdcvault.com/play/1012348/Creating-the-Active-Cinematic-Experience>

On polish from ND

[https://www.gdcvault.com/play/1015372/The-Last-10-Going-From%20\(Polish\)](https://www.gdcvault.com/play/1015372/The-Last-10-Going-From%20(Polish))

TLOU lighting

[https://www.gdcvault.com/play/1020475/In-Game-and-Cinematic-Lighting%20\(TLOU\)](https://www.gdcvault.com/play/1020475/In-Game-and-Cinematic-Lighting%20(TLOU))

#Blocktober in Twitter

TLOUR full gameplay

https://www.youtube.com/watch?v=zOET0ZMfayI&ab_channel=MKIceAndFire

Commented level

https://www.youtube.com/watch?v=viP1PbiQiv8&ab_channel=MikeBettencourt

Commented level 2

https://www.youtube.com/watch?v=cwwE6Uo2fTY&ab_channel=PS5Trophies

On color psychology, used for the presentation:

Red Excitement Strength Love Energy	Orange Confidence Success Bravery Sociability	Yellow Creativity Happiness Warmth Cheer	Green Nature Healing Freshness Quality	Blue Trust Peace Loyalty Competence
Pink Compassion Sincerity Sophistication Sweet	Purple Royalty Luxury Spirituality Ambition	Brown Dependable Rugged Trustworthy Simple	Black Formality Dramatic Sophistication Security	White Clean Simplicity Innocence Honest

Tips from links above

Mentioned in presentation

gameplay design has to obey the limitations of the character - bruce straley
story beats (upbeat downbeat contrast)
sandwich climax moments
cutscenes - emotions
set ups and payoffs, foreshadowing
ground character into world

Peter field:

contrast, building up tension, pockets of tension, anticipation, emotions, story through mechanics
privileged perspective, time to take everything in, strategy
safe zones

Active cinematic experience gdc (Neil Druckmann and Bruce Straley):

story beats (upbeat downbeat contrast), cutscene raises interest - gameplay keeps it until next cutscene
rollercoaster
gameplay design has to obey the limitations of the character - bruce straley
gap between expectation and result, align player to character
sandwich climax moments

why are you doing sth over what, if cutscenes/narrative too spaced, you lose interest in your goal

sandwich climax moments

cutscenes - emotions
emotion before cutscene applies to init of cutscene, align player to character
balance between cutscenes and gameplay, we don't wanna take control for much time
it is not a movie
scenes / sequence / Act change in protagonist or world

extra personal conflict - threatens hero's life, well being
personal conflict - hero and people close to hero conflict
inner conflict - hero against themselves

try to resolve conflicts in gameplay - active cinematic experience

in-game dialogues
contextual move-sets - react to environment

ground character into world
in-game character moments, not cutscenes, different in-game cameras
keep it core, core mechanics
set ups and payoffs, foreshadowing

support interactivity of our medium, greater investment towards what they are doing, emotionally invested
in their actions - neil druckmann

From richard lemarchand's presentation (lead at ND)



Amy Hennig

Amy Hennig, Naughty Dog's Creative Director and head writer on the *Uncharted* series, talks about the very great value of leaving something to an audience's imagination, in terms of the storytelling in our games, so that the individual player fills in the details for themselves, and the experience of the game truly becomes their own, even before they have taken an action in our interactive system.

To put it another way, if linear games are well written, they're not truly linear.

But I worry that we have a tendency to over-focus on compulsion loops and explicit goals in the games we make, and we tend to look past the emotional value, and artistic value, brought to a game by things like nuanced aesthetics, the narrative and the social, and the space for autotelic self-determination created by open systems.

In his GDC talk last year, *An Apology for Roger Ebert*, Brian Moriarty gave us the definition, "Sublime art is the still evocation of the inexpressible." When we're trying to make games that succeed artistically, our ultimate goal is to evoke ideas and emotion in the player about subjects that are difficult to express.

But as Brian suggested in his talk, and as Csikszentmihalyi himself says, the flow state we enter when we're caught up in the formal parts of a game is almost emotionless, as an essential part of its character. Our minds are just too busy when we're dealing with all the rational tasks that a game presents, to allow in the subtlety of feeling that we're always chasing as artists.

But I see room for both the flow of gameplay and reflective experience in our games if, from time to time in the progression of a game, we have the confidence to let the player just drop out of their flow state.

vigilance fatigue, emotional and narrative pacing / emotional investment , parallel story and gameplay

intrinsic and extrinsic goals

autotelic experience - sense of purpose and curiosity, internally driven, explore for the sake of exploring

experiential games: systematized, open-ended, explorative experiences