Transitioning From Linear to Open World Design with Sunset Overdrive

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Designer at Insomniac Games

LINEAR GAMEPLAY

Overview

Overview

- What do we mean by *linear* and *open world*?

Overview

- What do we mean by *linear* and *open world*?

- How did the *roles and responsibilities* of designers change?

Overview

- What do we mean by *linear* and *open world*?

- How did the *roles and responsibilities* of designers change?

- How did our *workflow* change in implementing systems, spaces, and content?

Overview

- What do we mean by *linear* and *open world*?

- How did the *roles and responsibilities* of designers change?

- How did our *workflow* change in implementing systems, spaces, and content?

- What were the *side effects* of these changes?

Linear
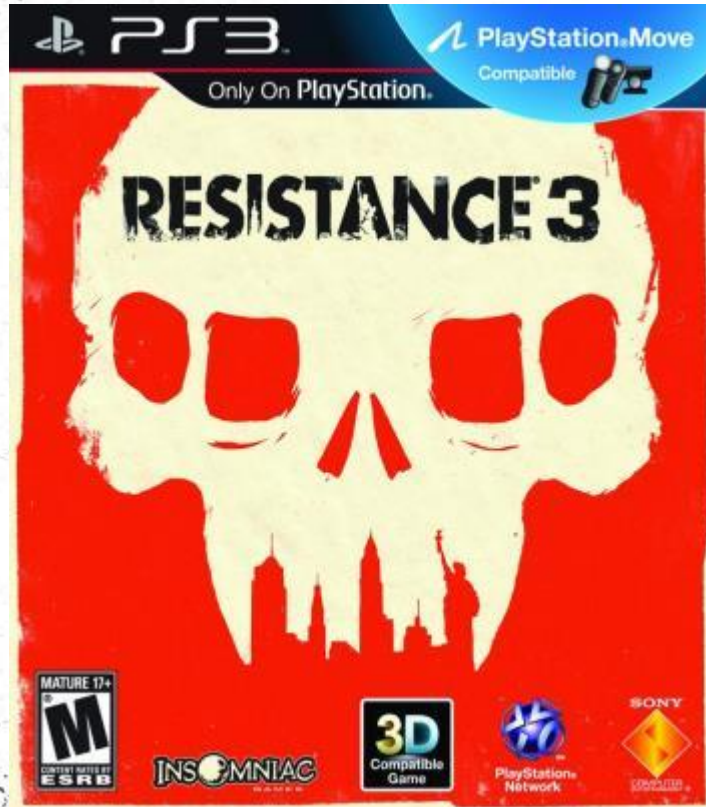
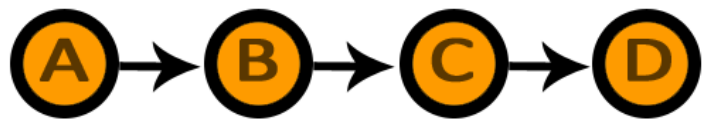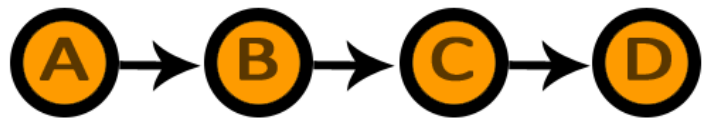Open World

PART 1:

Linear vs. Open World

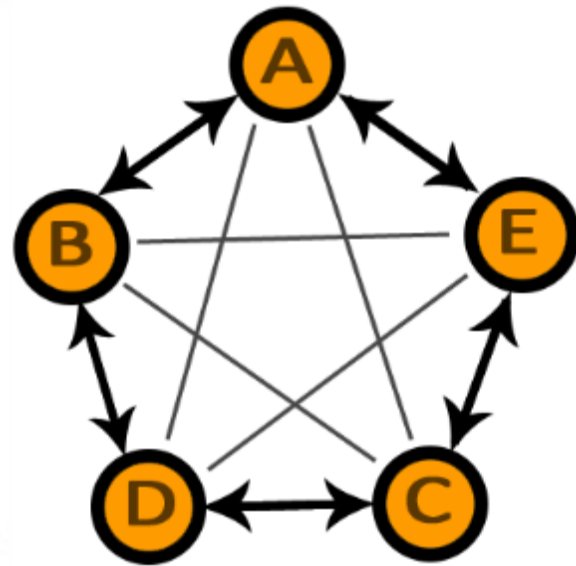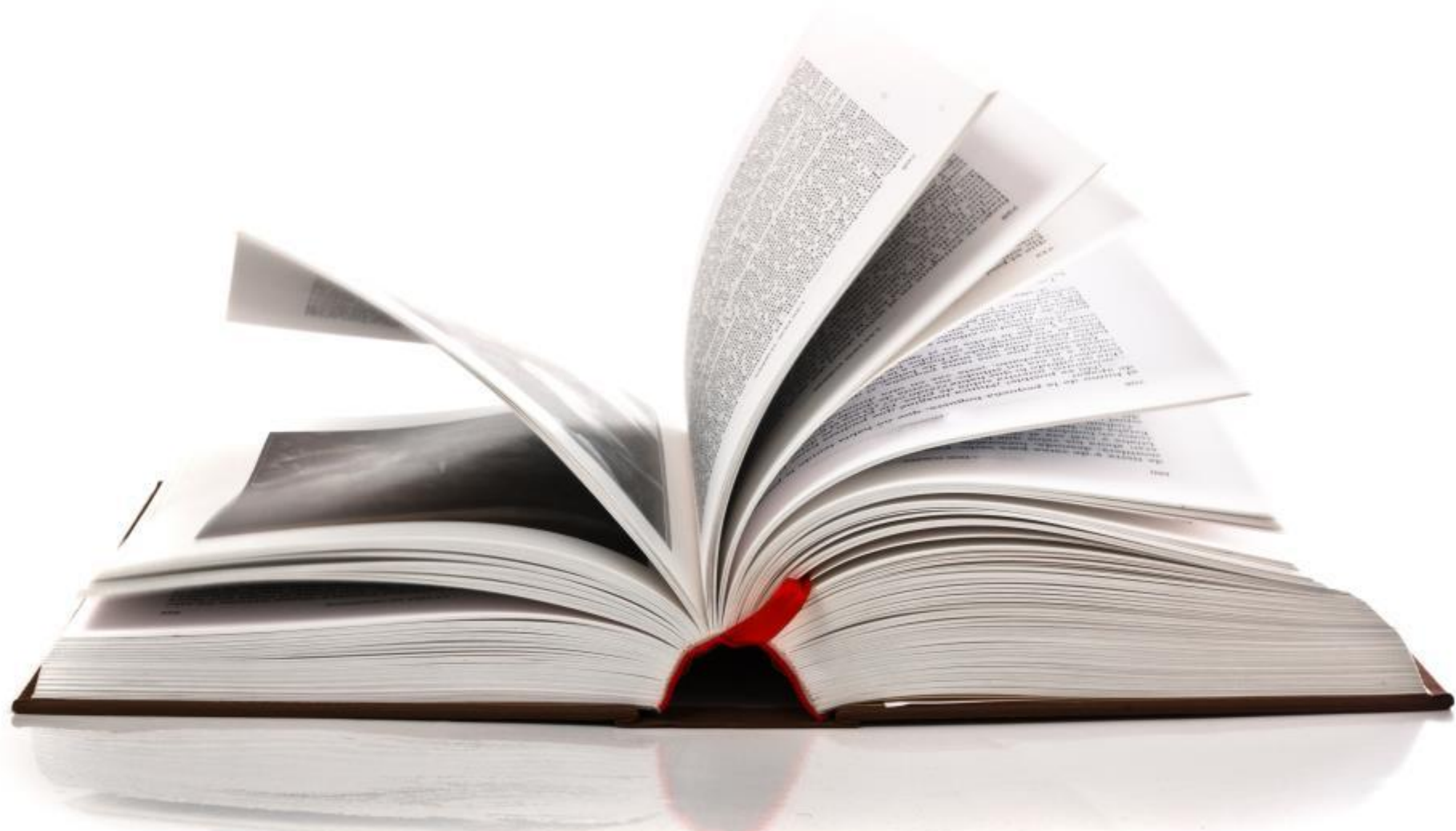Linear   Open World

Linear

Open World

A → B → C → D

Article   Talk

Read   Edit   View history

Search

Open world

From Wikipedia, the free encyclopedia

For other uses, see Open world (disambiguation).

An **open world** is a type of video game level design where a player can roam freely through a virtual world and is given considerable freedom in choosing how or when to approach objectives.[1] The term **free roam** is also used, as is **sandbox** and **free-roaming**.[2][3] "Open world" and "free-roaming" suggest the absence of artificial barriers,[4] in contrast to the invisible walls and loading screens that are common in linear level designs. Generally open world games still enforce many restrictions in the game environment, either because of absolute technical limitations or in-game limitations (such as locked areas) imposed by a game's linearity.

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What is a page in a video game?

"Based on *where* the player is, what do we know about the game state?"
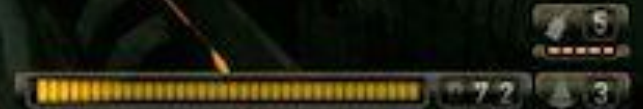
KNOWN

UNKNOWN

KNOWN

- Time into game
- Story Progress
- Tutorials
- Combat

- Level Content
- Enemies
- Weapons
- Pacing

UNKNOWN

KNOWN

- Time into game
- Story Progress
- Tutorials
- Combat
- Level Content
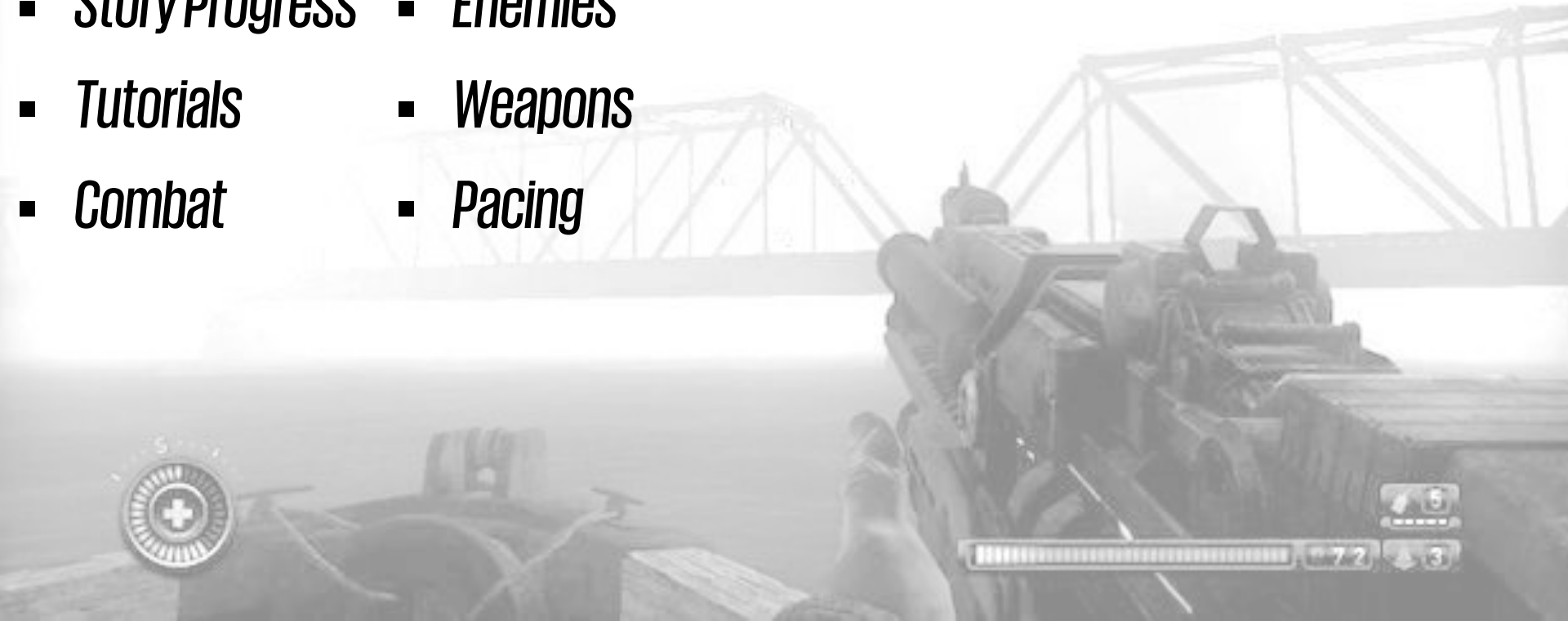- Enemies
- Weapons
- Pacing

UNKNOWN

- Coop
- Difficulty
- Weapon Level
- Replay?

Sunset Overdrive

102
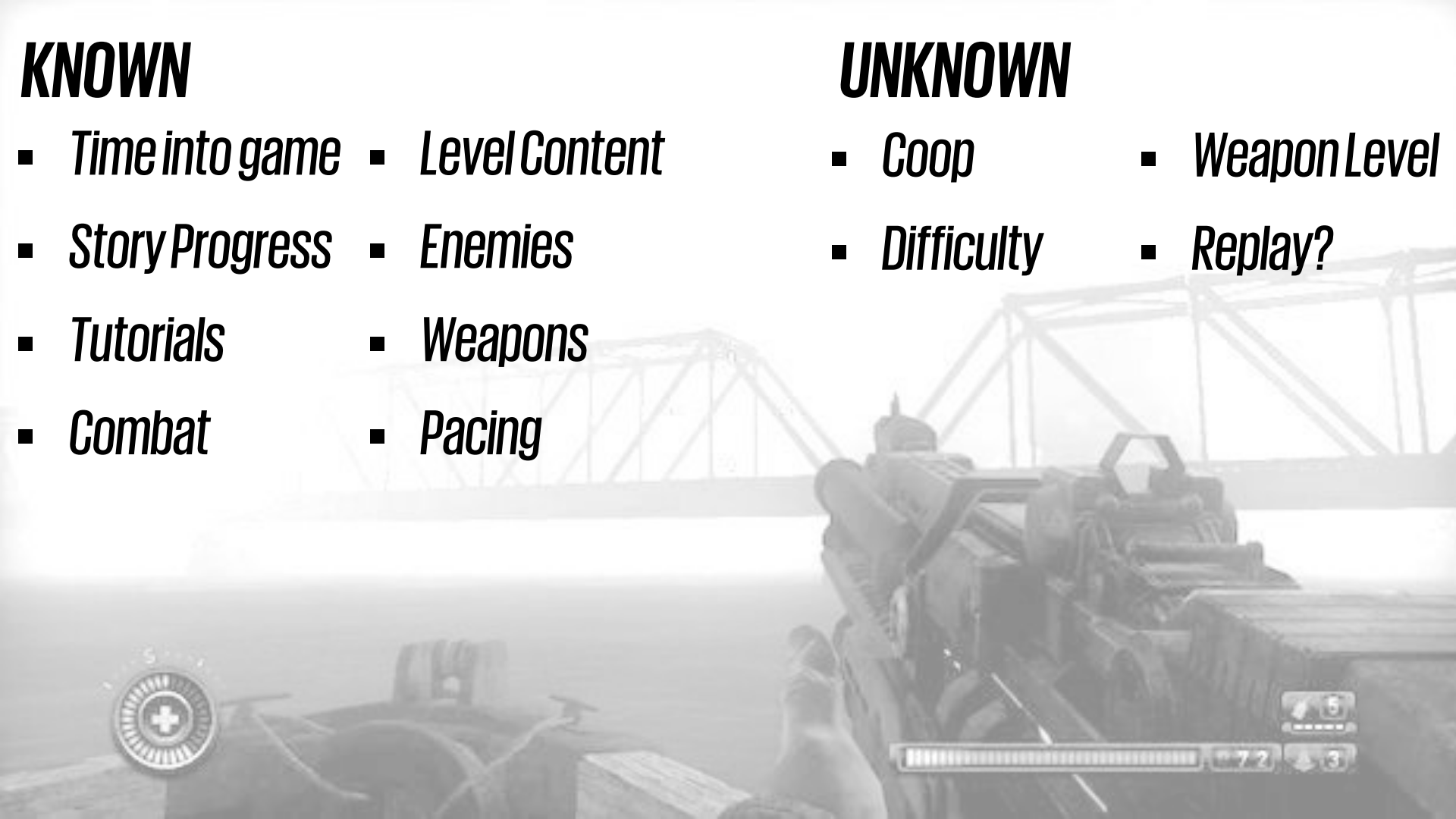
KNOWN UNKNOWN

KNOWN

- *Completed tutorial*

UNKNOWN

KNOWN

- Completed tutorial

UNKNOWN

- Time Played?
- Story Moments?
- Mission?
- Weapons?
- Abilities?
- Areas Explored?

- Allies?
- Multiplayer?
- Pacing?
- Combat?
- Difficulty?

PART 2:
Role of the Designer

Resistance 3 / Linear

Resistance 3 / Linear

- *Designers are generalists*

Resistance 3 / Linear

- Designers are *generalists*
- Owned discrete *spaces*

Resistance 3 / Linear

- Designers are *generalists*
- Owned discrete *spaces*
- Implemented *all gameplay* in that space

Resistance 3 / Linear

- Designers are *generalists*

- Owned discrete *spaces*

- Implemented *all gameplay* in that space

LEVEL 2

GEOMETRY

COMBAT

PUZZLES

MISSIONS

Resistance 3 / Linear

- Designers are *generalists*

- Owned discrete *spaces*

- Implemented *all gameplay* in that space

LEVEL 2

GEOMETRY

COMBAT

PUZZLES

MISSIONS

A → B → C → D

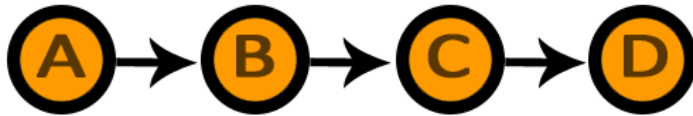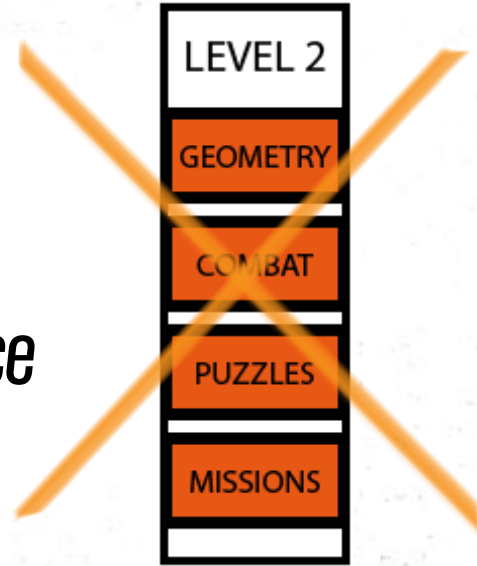# Resistance 3 / Linear

- Designers are *generalists*

- Owned discrete *spaces*

- Implemented *all gameplay* in that space
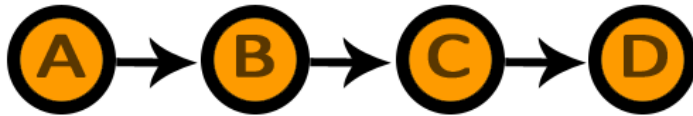
design generalists

became

design specialists

Sunset Overdrive / Open World

- *Designers are specialists*

Sunset Overdrive / Open World

- Designers are *specialists*
- Owned *systems* not spaces

Sunset Overdrive / Open World

- Designers are *specialists*
- Owned *systems* not spaces
- Implemented *one system in all spaces*

Vertical

Horizontal

Vertical

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
GEOMETRY	GEOMETRY	GEOMETRY	GEOMETRY
COMBAT	COMBAT	COMBAT	COMBAT
PUZZLES	PUZZLES	PUZZLES	PUZZLES
MISSIONS	MISSIONS	MISSIONS	MISSIONS

Horizontal

Vertical

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
GEOMETRY	GEOMETRY	GEOMETRY	GEOMETRY
COMBAT	COMBAT	COMBAT	COMBAT
PUZZLES	PUZZLES	PUZZLES	PUZZLES
MISSIONS	MISSIONS	MISSIONS	MISSIONS

Horizontal

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
GEOMETRY			
COMBAT			
PUZZLES			
MISSIONS			

What is a system?

What is the player *doing* in a space?

"Moving through it" ➡ traversal system

"Moving through it" ➡️ *traversal system*

"Fighting enemies" ➡️ *combat system*

"Moving through it" → traversal system

"Fighting enemies" → combat system

"Completing objectives" → mission & quest system

"Moving through it" → traversal system

"Fighting enemies" → combat system

"Completing objectives" → mission & quest system

"Searching for loot" → open world system

"Moving through it" → traversal system

"Fighting enemies" → combat system

"Completing objectives" → mission & quest system

"Searching for loot" → open world system

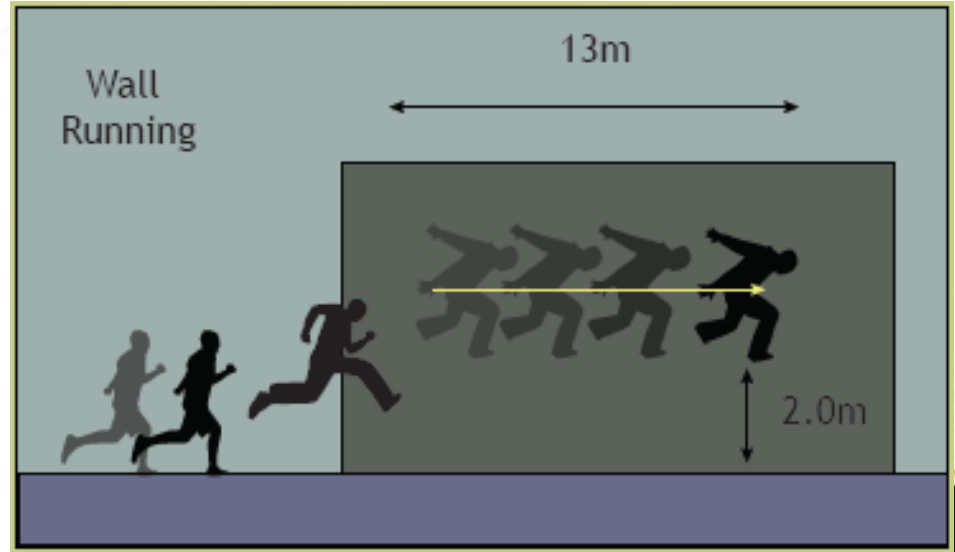"Competing" → multiplayer system

Why specialists?

Why specialists?

- *rise of systems*

Why specialists?

- rise of systems

- importance of metrics & rules

Why specialists?

- *rise of systems*

- *importance of* metrics & rules

Why specialists?

- rise of systems

- importance of metrics & rules

- *coordination* with departments

Why specialists?

- rise of systems

- importance of metrics & rules

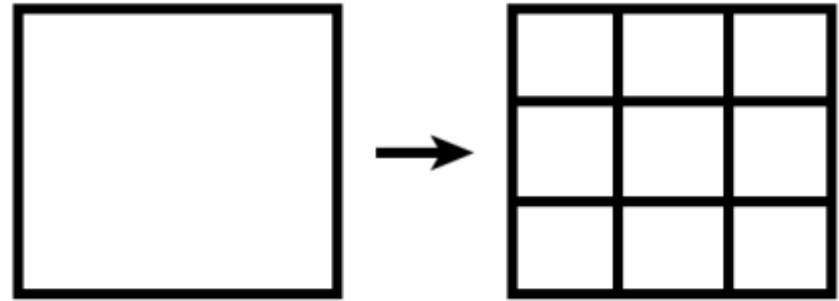- coordination with departments

- new tech specific to open world

Why specialists?

- rise of systems

- importance of metrics & rules

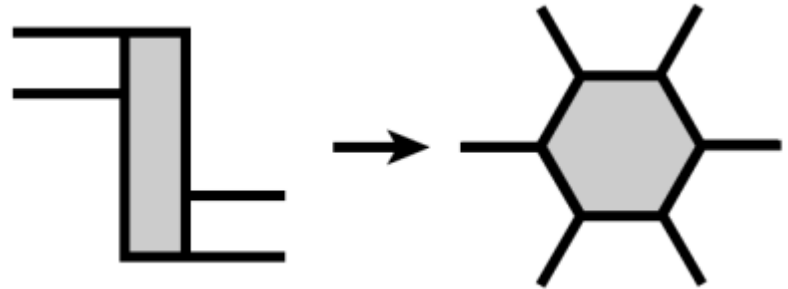- coordination with departments

- *new tech specific to open world*

modularized art system

Why specialists?

- rise of systems

- importance of metrics & rules

- coordination with departments

- *new* *tech* *specific to open world*

hex-based streaming

Why specialists?

- rise of systems

- importance of metrics & rules

- coordination with departments

- *new tech specific to open world*

tool to generate roads

Why specialists?

- rise of systems

- importance of metrics & rules

- coordination with departments

- new tech specific to open world

- tradition of hand-scripted gameplay

Why specialists?

- rise of systems

- importance of metrics & rules

- coordination with departments

- new tech specific to open world

- tradition of hand-scripted gameplay

} *full time job!*

PART 3:

Workflow

Recap!

Resistance 3

Sunset Overdrive

Systems Workflow

Resistance 3

Sunset Overdrive

DESIGNER

Systems Workflow

Resistance 3

Sunset Overdrive

DESIGNER

↓

define system

Systems Workflow

Resistance 3

Sunset Overdrive

DESIGNER

define system   PROGRAMMER

create system

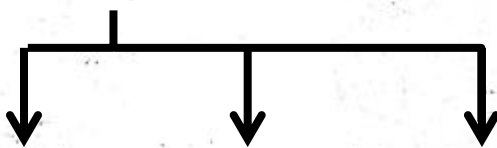# Systems Workflow

Resistance 3

Sunset Overdrive

DESIGNER
↓
define system   PROGRAMMER
↓
create system
↓   ↓   ↓
DESIGNER   DESIGNER   DESIGNER
implement implement implement

Systems Workflow

Resistance 3

Sunset Overdrive

DESIGNER

define system   PROGRAMMER

create system

implement implement   DESIGNER   DESIGNER
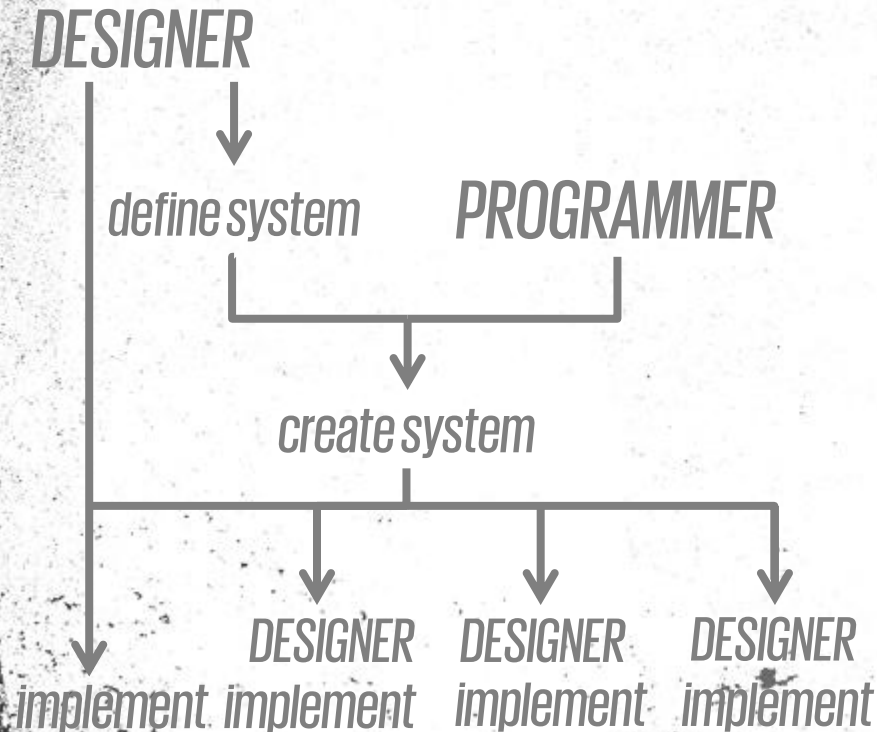   implement   implement

Systems Workflow

Resistance 3

Sunset Overdrive

DESIGNER

define system   PROGRAMMER

create system

DESIGNER   DESIGNER   DESIGNER
implement   implement   implement   implement

Systems Workflow

Resistance 3

Sunset Overdrive

DESIGNER

DESIGNER

define system   PROGRAMMER

create system

DESIGNER   DESIGNER   DESIGNER
implement   implement   implement   implement

Systems Workflow

Resistance 3

Sunset Overdrive

DESIGNER

define system   PROGRAMMER

create system

DESIGNER   DESIGNER   DESIGNER
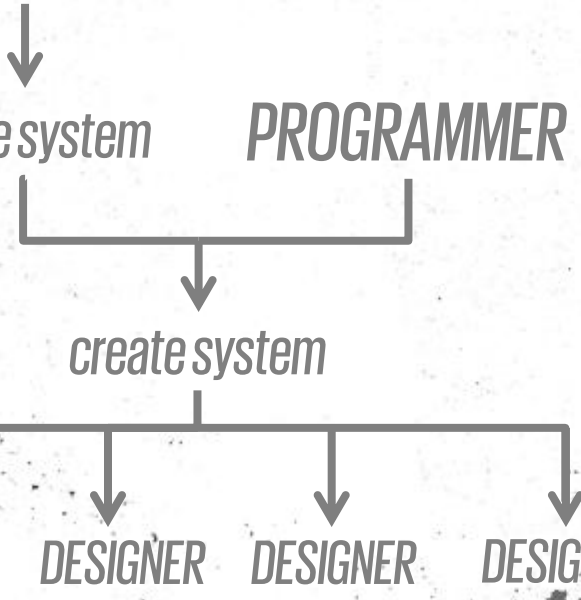implement implement implement implement

DESIGNER

define system

Systems Workflow

Resistance 3

Sunset Overdrive

DESIGNER
↓
define system   PROGRAMMER
↓
create system
↓
DESIGNER implement   DESIGNER implement   DESIGNER implement   DESIGNER implement
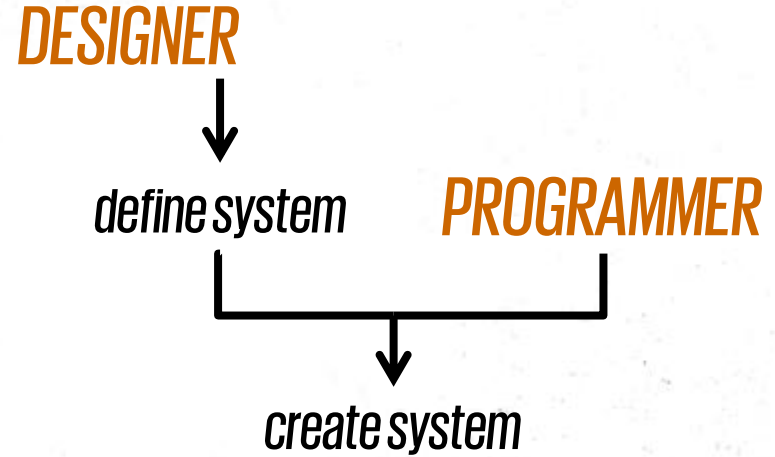
DESIGNER
↓
define system   PROGRAMMER
↓
create system

Systems Workflow

Resistance 3

DESIGNER

define system   PROGRAMMER

create system

DESIGNER
implement   DESIGNER
implement   DESIGNER
implement   DESIGNER
implement

Sunset Overdrive

DESIGNER

define system   PROGRAMMER

create system

implement

Spaces & Content Workflow

Resistance 3

Resistance 3

DESIGNER

Resistance 3

DESIGNER

→ *whitebox spaces*

Resistance 3

DESIGNER

→ whitebox spaces

→ prototype gameplay

Resistance 3

DESIGNER

whitebox spaces

ARTIST

prototype gameplay

define visuals

Resistance 3

DESIGNER

→ whitebox spaces   **ARTIST**

→ prototype gameplay   **AUDIO**

→ define visuals   **FX**

add layers

Resistance 3

DESIGNER

→ whitebox spaces **ARTIST**

→ prototype gameplay **AUDIO**

→ define visuals **FX**

→ add layers

→ iterate

Resistance 3

DESIGNER

→ whitebox spaces   **ARTIST**

→ prototype gameplay   **AUDIO**

→ define visuals   **FX**

→ add layers

→ iterate

→ bug-fix and polish

Sunset Overdrive

Sunset Overdrive

WORLD BUILDER

Sunset Overdrive

WORLD BUILDER

⌐→ *whitebox spaces*

Sunset Overdrive

WORLD BUILDER

→ *whitebox spaces*

→ *traversal layer*

Sunset Overdrive

WORLD BUILDER

→ whitebox spaces
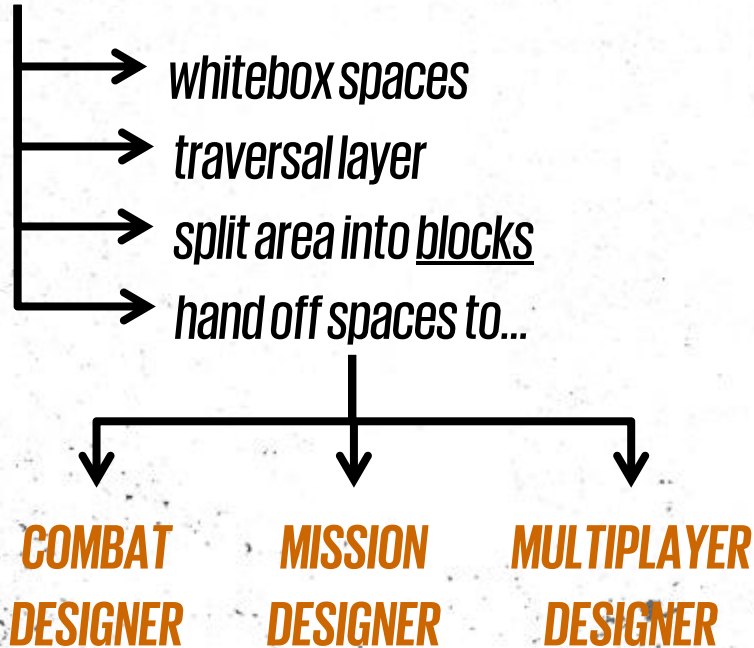
→ traversal layer

→ split area into <u>blocks</u>

Sunset Overdrive

WORLD BUILDER

- whitebox spaces
- traversal layer
- split area into <u>blocks</u>
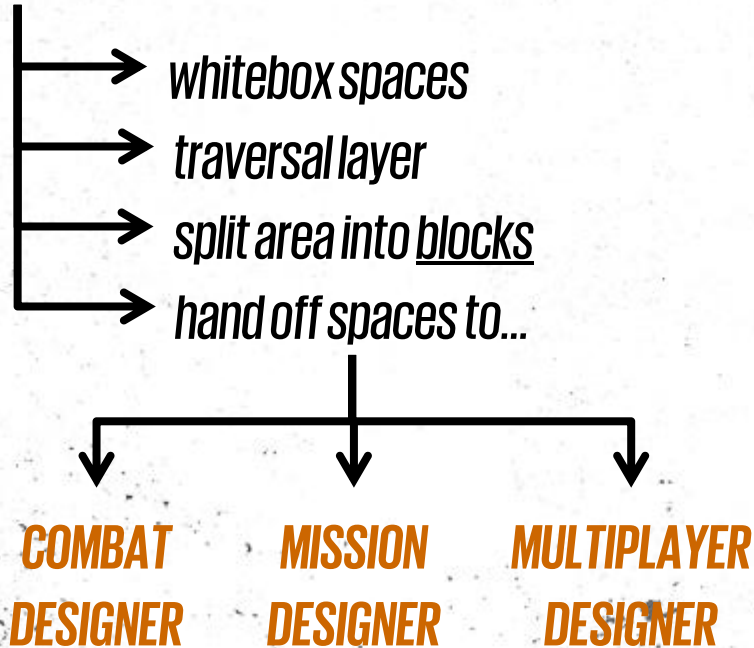- hand off spaces to...

Sunset Overdrive

WORLD BUILDER

- → whitebox spaces
- → traversal layer
- → split area into <u>blocks</u>
- → hand off spaces to...

COMBAT DESIGNER

MISSION DESIGNER

MULTIPLAYER DESIGNER

Spaces & Content Workflow

Sunset Overdrive

WORLD BUILDER

- whitebox spaces
- traversal layer
- split area into <u>blocks</u>
- hand off spaces to...

COMBAT DESIGNER

MISSION DESIGNER

MULTIPLAYER DESIGNER

EACH SPECIALIST...

Spaces & Content Workflow

Sunset Overdrive

WORLD BUILDER

- whitebox spaces
- traversal layer
- split area into <u>blocks</u>
- hand off spaces to...

COMBAT DESIGNER   **MISSION DESIGNER**   **MULTIPLAYER DESIGNER**

EACH SPECIALIST...

optimizes the space

Spaces & Content Workflow

Sunset Overdrive

WORLD BUILDER

- whitebox spaces
- traversal layer
- split area into <u>blocks</u>
- hand off spaces to...

COMBAT DESIGNER

MISSION DESIGNER

MULTIPLAYER DESIGNER

EACH SPECIALIST...

- optimizes the space
- finalizes the geometry

Spaces & Content Workflow

Sunset Overdrive

WORLD BUILDER

- whitebox spaces
- traversal layer
- split area into <u>blocks</u>
- hand off spaces to...

COMBAT DESIGNER

MISSION DESIGNER

MULTIPLAYER DESIGNER

EACH SPECIALIST...

- optimizes the space
- finalizes the geometry

the space is
ready for gameplay...

Gameplay content are instanced layers called "overlays"

Sunset Overdrive

- Basic open world structure
- Traversal markup
- Create identity for space
- Gameplay Layers
- Geometry Iteration
- Bug-fix & Polish

Missions
Quests
Challenges
Multiplayer
Open World
Combat

Do designers hand off work?

	Linear	Open World
Systems		
Spaces		

Do designers hand off work?

	Linear	Open World
Systems	YES	NO
Spaces	NO	YES

Recap

Recap

- What do we mean by *linear* and *open world*?

Recap

- *What do we mean by linear and open world?*

- *How did the roles and responsibilities of designers change?*

Recap

- *What do we mean by linear and open world?*

- *How did the roles and responsibilities of designers change?*

- **How did our workflow change in implementing systems, spaces, and content?**

Recap

- *What do we mean by linear and open world?*

- *How did the roles and responsibilities of designers change?*

- *How did our workflow change in implementing systems, spaces, and content?*

- **What were the side effects of these changes?**

PART 4:
Side Effects

The Bad

The Good

The Bad

- feedback lag from leads

The Good

The Bad

The Good

- feedback lag from leads
- bottlenecks

The Bad

The Good

- feedback lag from leads

- bottlenecks

- prototype levels delayed transition into open world thinking

The Bad

The Good

- *feedback lag from leads*
- *bottlenecks*
- *prototype levels delayed transition into open world thinking*
- *invisible conflicts between layers*

The Bad

The Good

- feedback lag from leads

- bottlenecks

- prototype levels delayed transition into open world thinking

- invisible conflicts between layers

- orphaned systems

The Bad

- *feedback lag from leads*
- *bottlenecks*
- *prototype levels delayed transition into open world thinking*
- *invisible conflicts between layers*
- *orphaned systems*
- *"hot-potato" bugs*

The Good

The Bad

The Good

- feedback lag from leads

- bottlenecks

- prototype levels delayed transition into open world thinking

- invisible conflicts between layers

- orphaned systems

- "hot-potato" bugs

The Bad

- feedback lag from leads

- bottlenecks

- prototype levels delayed transition into open world thinking

- invisible conflicts between layers

- orphaned systems

- "hot-potato" bugs

The Good

- rapid content creation

The Bad

- feedback lag from leads
- bottlenecks
- prototype levels delayed transition into open world thinking
- invisible conflicts between layers
- orphaned systems
- "hot-potato" bugs

The Good

- rapid content creation
- faster ramp up for new team members

The Bad

- feedback lag from leads
- bottlenecks
- prototype levels delayed transition into open world thinking
- invisible conflicts between layers
- orphaned systems
- "hot-potato" bugs

The Good

- rapid content creation
- faster ramp up for new team members
- Communication between designers

The Bad

- feedback lag from leads
- bottlenecks
- prototype levels delayed transition into open world thinking
- invisible conflicts between layers
- orphaned systems
- "hot-potato" bugs

The Good

- rapid content creation
- faster ramp up for new team members
- Communication between designers
- Communication with art

The Bad

- feedback lag from leads
- bottlenecks
- prototype levels delayed transition into open world thinking
- invisible conflicts between layers
- orphaned systems
- "hot-potato" bugs

The Good

- rapid content creation
- faster ramp up for new team members
- Communication between designers
- Communication with art
- Communication with gameplay programmers

Are these changes permanent?

Are these changes permanent?

No.

Q & A