

# THE DYNAMIC LAYER

# Topics

- **The Dynamic Layer**
- **The Role of the Player**
- **Dynamic Mechanics**
- **Dynamic Aesthetics**
- **Dynamic Narrative**
- **Dynamic Technology**

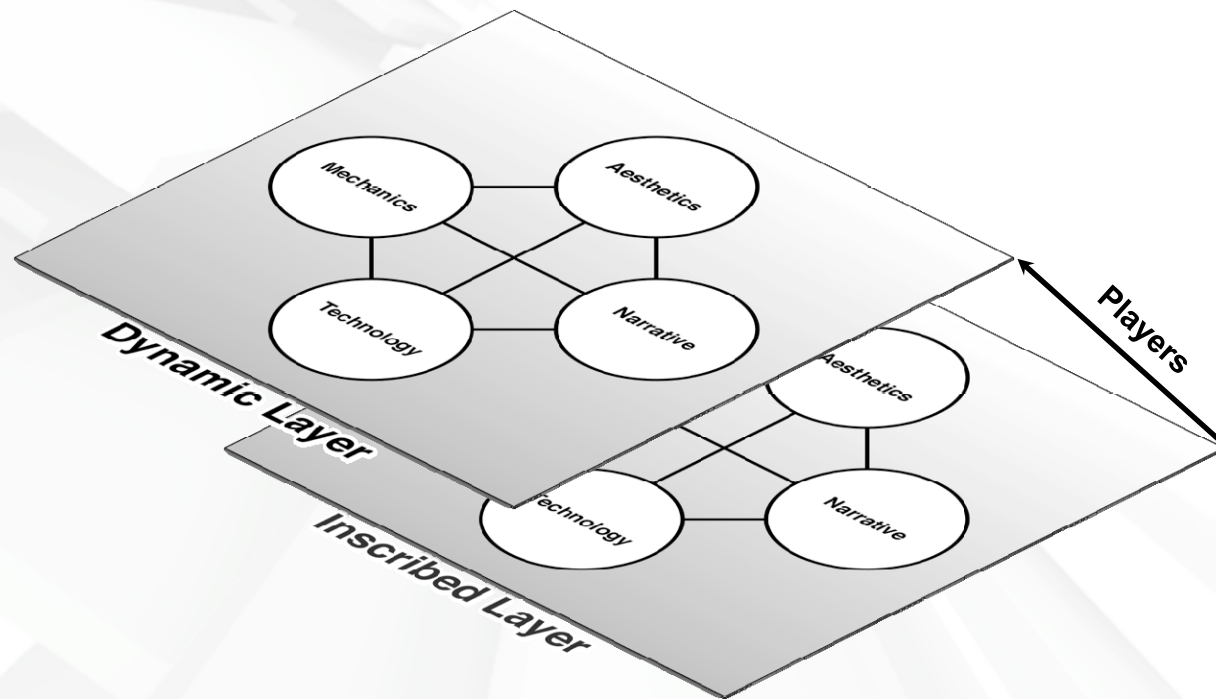
# The Dynamic Layer

**Once players start actually playing a game, it moves from the Inscribed Layer into the Dynamic Layer of the Layered Tetrad.**

**Play, strategy, and meaningful player choices all emerge in this layer.**

# The Role of the Player

- A game isn't a game unless someone is playing it
  - Players move the game into the Dynamic Layer



# The Dynamic Layer: Mechanics

## ■ aspects of Dynamic Mechanics

### – Procedures

- The actions taken by the players during the game

### – Meaningful Play

- Are game actions visible and integrated?

### – Strategy

- A calculated set of actions to help a player achieve her goal

### – Outcome

- What is the result of playing the game?

# The Dynamic Layer: Mechanics

## ■ Procedures

- Inscribed rules are instructions from the developers to players about how to play the game
- **Procedures are the actual actions taken by the players, which are prescribed by the rules**
- **Examples:**
  - Passing GO and collecting \$200 in *Monopoly*

# The Dynamic Layer: Mechanics

## ■ Meaningful Play

- In *Rules of Play*, "meaningful play" is defined as :  
**actions that are both noticeable and integrated**
- **noticeable** - **The player can tell that the game has reacted to his/her action**
  - When I push the call button for an elevator, it lights up
- **Integrated** - **The player knows that her action is affecting the overall outcome of the game**
  - Because I pushed the call button, the elevator will come to this floor, which will take me soon to an exit...
- If actions do not appear to the players to be meaningful, players can often lose interest in the game

# The Dynamic Layer: Mechanics

## ▪ Strategy

- **Plans made by the player to achieve his/her goal**
  - The **goal does not have to be winning the game**
    - When playing with a small child, many player's goal would be for the **child to have fun**
- **Optimal Strategy**
  - Some **games are so simple** that a single strategy has the **highest likelihood of winning**
  - Most games are **complex** enough to **not have a true optimal strategy**
- **Designing for Strategy**
  - **Provide the player with multiple ways to win**
  - **Create relationships between these possible ways of winning**
    - Make some complementary and others mutually exclusive



# The Dynamic Layer: Mechanics

## ■ Outcome

### – Multiple layers of outcome:

- **Immediate** - The **immediate result of each action** in the game
- **mission** - The **result of having completed or failed a mission**
  - Also often resolves a tiny narrative
- **Cumulative** - The **result of working toward a goal over time**
  - Example: Gathering experience points until eventually leveling up
- **Final** - The outcome that ends the game
  - Death is often not a final outcome

# The Dynamic Layer: Aesthetics

- **Dynamic Aesthetics emerge when playing the game**
- **Two main categories:**
  - **Procedural Aesthetics**
    - Aesthetics that are generated on the fly via programming
  - **Environmental Aesthetics**
    - The aesthetics of the environment in which the game is played

# The Dynamic Layer: Aesthetics

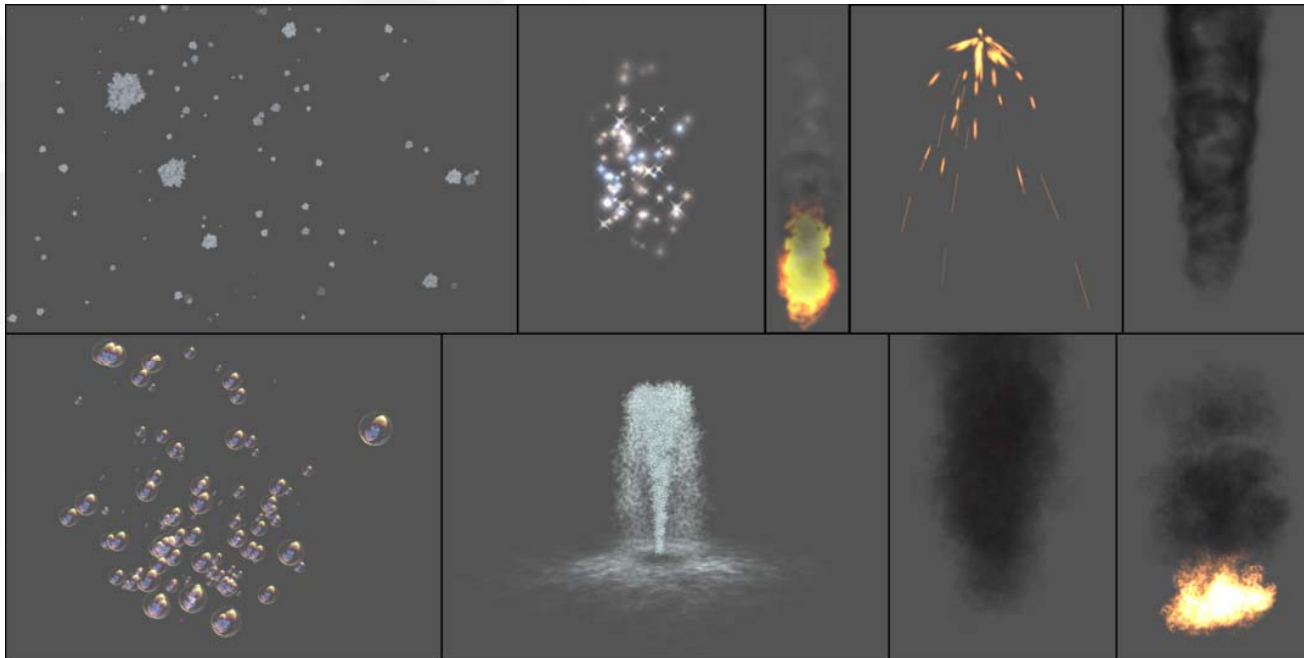
## ■ Procedural Aesthetics

- Combinations of technology and inscribed aesthetics
- Audio Example: Procedural Music
  - Three types:
    - **Horizontal Re-Sequencing** - Rearranges several pre-composed sections of music
    - **Vertical Re-Orchestration** - Various tracks of music are enabled or disabled to lend various voices to the music and change feel
    - **Procedural Composition** - Music is actually composed on the fly by the programming code based on the situation in the game
      - » Examples: *CPU Bach* and the procedural music in *Flower*

# The Dynamic Layer: Aesthetics

## ■ Procedural Aesthetics

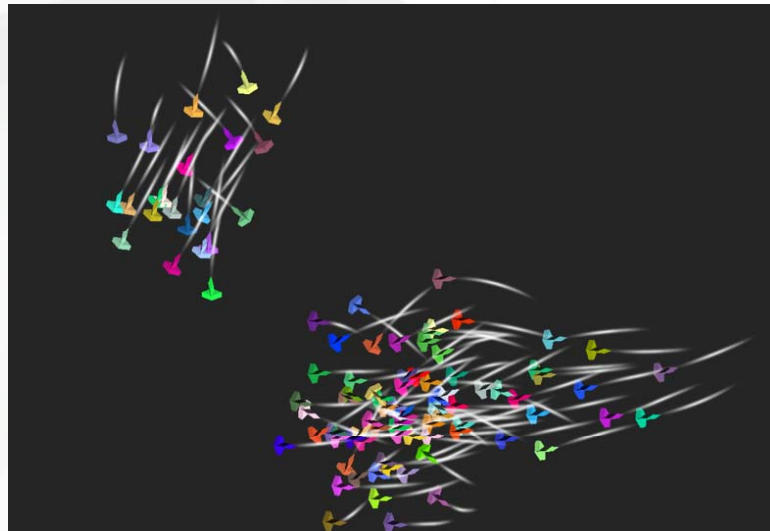
- Audio Example: Procedural Music
- Visual Examples
  - Particle Systems - Seen in almost every game



# The Dynamic Layer: Aesthetics

## ■ Procedural Aesthetics

- Audio Example: Procedural Music
- Visual Examples
  - **Particle Systems** - Seen in almost every game
  - **Procedural Animation** - Code moves or animates game elements
    - Examples: *Boids* and the creatures in *Spore*



# The Dynamic Layer: Aesthetics

## ■ Environmental Aesthetics

- The play environment will always dynamically affect the gameplay experience
- Visual Play Environment
  - Brightness of the environment vs. screen
  - Resolution of the player's screen
- Auditory Play Environment
  - Noisy environments
  - Players can lower or mute volume
- Player Considerations
  - Colorblindness - 7-10% of men have a form of colorblindness
  - Epilepsy and Migraines - Both can be caused by flashing or flickering images

# The Dynamic Layer: Narrative

- **Dynamic Narrative occurs as the game is played**
- **Two major types**
  - **Interactive Fiction** - An inscribed story that adapts to choices made by the player
  - **Emergent Narrative** - The player's story of her experience playing the game.

# Summary

- The four elements of the Dynamic Layer encompass everything that happens as the game is played
- Ownership over the the Dynamic Layer is shared between the developers and the players





# Questions?