GAME ANALYSIS FRAMEWORKS
Topics
Topics

- Common Frameworks for Ludology
Topics

- Common Frameworks for Ludology
  - MDA: Mechanics, Dynamics, and Aesthetics
Topics

- Common Frameworks for Ludology
  - MDA: Mechanics, Dynamics, and Aesthetics
  - Formal, Dramatic, and Dynamic Elements
Topics

- Common Frameworks for Ludology
  - MDA: Mechanics, Dynamics, and Aesthetics
  - Formal, Dramatic, and Dynamic Elements
  - Elemental Tetrads
MDA: Mechanics, Dynamics, & Aesthetics
MDA: Mechanics, Dynamics, & Aesthetics

- Proposed at the Game Developers Conference (2001)
MDA: Mechanics, Dynamics, & Aesthetics

- Proposed at the Game Developers Conference (2001)
- Formalized in "MDA: A Formal Approach to Game Design and Game Research"
MDA: Mechanics, Dynamics, & Aesthetics

- Proposed at the Game Developers Conference (2001)
- Formalized in "MDA: A Formal Approach to Game Design and Game Research"
  - Robin Hunicke, Marc LeBlanc, Robert Zubek (2004)
MDA: Mechanics, Dynamics, & Aesthetics

▪ Proposed at the Game Developers Conference (2001)
▪ Formalized in "MDA: A Formal Approach to Game Design and Game Research"
▪ Most well known framework for game analysis
MDA: Mechanics, Dynamics, & Aesthetics

- Proposed at the Game Developers Conference (2001)
- Formalized in "MDA: A Formal Approach to Game Design and Game Research"
  - Robin Hunicke, Marc LeBlanc, Robert Zubek (2004)
- Most well known framework for game analysis
- Three elements:
MDA: Mechanics, Dynamics, & Aesthetics

- Proposed at the Game Developers Conference (2001)
- Formalized in "MDA: A Formal Approach to Game Design and Game Research"
  - Robin Hunicke, Marc LeBlanc, Robert Zubek (2004)
- Most well known framework for game analysis
- Three elements:
  - Mechanics: The particular components of the game at the level of data representation and algorithms
MDA: Mechanics, Dynamics, & Aesthetics

- Proposed at the Game Developers Conference (2001)
- Formalized in "MDA: A Formal Approach to Game Design and Game Research"
  - Robin Hunicke, Marc LeBlanc, Robert Zubek (2004)
- Most well known framework for game analysis
- Three elements:
  - Mechanics: The particular components of the game at the level of data representation and algorithms
  - Dynamics: The runtime behavior of the mechanics acting on player inputs and each other's outputs over time
MDA: Mechanics, Dynamics, & Aesthetics

- Proposed at the Game Developers Conference (2001)
- Formalized in "MDA: A Formal Approach to Game Design and Game Research"
  - Robin Hunicke, Marc LeBlanc, Robert Zubek (2004)
- Most well known framework for game analysis

- Three elements:
  - Mechanics: The particular components of the game at the level of data representation and algorithms
  - Dynamics: The runtime behavior of the mechanics acting on player inputs and each other's outputs over time
  - Aesthetics: The desirable emotional responses evoked in the player when she interacts with the game system
MDA: Mechanics, Dynamics, & Aesthetics
MDA: Mechanics, Dynamics, & Aesthetics

- Designers and players view games from different directions
MDA: Mechanics, Dynamics, & Aesthetics

- Designers and players view games from different directions
  
  - Designers first consider the aesthetic feelings that they want players to experience
MDA: Mechanics, Dynamics, & Aesthetics

- Designers and players view games from different directions
  - Designers first consider the aesthetic feelings that they want players to experience
    - Then consider the dynamic play that will engender these aesthetics
MDA: Mechanics, Dynamics, & Aesthetics

- Designers and players view games from different directions

  - Designers first consider the aesthetic feelings that they want players to experience
    - Then consider the dynamic play that will engender these aesthetics
    - Finally create mechanics that will lead to these dynamics
MDA: Mechanics, Dynamics, & Aesthetics

- Designers and players view games from different directions

- Designers first consider the aesthetic feelings that they want players to experience
  - Then consider the dynamic play that will engender these aesthetics
  - Finally create mechanics that will lead to these dynamics

- Players first read the rules of the game (mechanics)
MDA: Mechanics, Dynamics, & Aesthetics

- Designers and players view games from different directions

  - Designers first consider the aesthetic feelings that they want players to experience
    - Then consider the dynamic play that will engender these aesthetics
    - Finally create mechanics that will lead to these dynamics

  - Players first read the rules of the game (mechanics)
    - These rules lead to dynamic play
MDA: Mechanics, Dynamics, & Aesthetics

- Designers and players view games from different directions

  - Designers first consider the aesthetic feelings that they want players to experience
    - Then consider the dynamic play that will engender these aesthetics
    - Finally create mechanics that will lead to these dynamics

  - Players first read the rules of the game (mechanics)
    - These rules lead to dynamic play
    - The dynamics engender aesthetic feelings
Designers and players view games from different directions

- Designers first consider the aesthetic feelings that they want players to experience
  - Then consider the dynamic play that will engender these aesthetics
  - Finally create mechanics that will lead to these dynamics

- Players first read the rules of the game (mechanics)
  - These rules lead to dynamic play
  - The dynamics engender aesthetic feelings
Formal, Dramatic, and Dynamic Elements
Formal, Dramatic, and Dynamic Elements

- From *Game Design Workshop* by Tracy Fullerton
Formal, Dramatic, and Dynamic Elements

From *Game Design Workshop* by Tracy Fullerton

- **Formal elements**: The elements that make games different from other forms of media or interaction and provide the structure of a game. Formal elements include things like rules, resources, and boundaries.
Formal, Dramatic, and Dynamic Elements

- **Formal elements**: The elements that make games different from other forms of media or interaction and provide the structure of a game. Formal elements include things like rules, resources, and boundaries.

- **Dramatic elements**: The story and narrative of the game, including the premise. Dramatic elements tie the game together, help players understand the rules, and encourage the player to become emotionally invested in the outcome of the game.

From *Game Design Workshop* by Tracy Fullerton
From *Game Design Workshop* by Tracy Fullerton

- **Formal elements**: The elements that make games different from other forms of media or interaction and provide the structure of a game. Formal elements include things like rules, resources, and boundaries.

- **Dramatic elements**: The story and narrative of the game, including the premise. Dramatic elements tie the game together, help players understand the rules, and encourage the player to become emotionally invested in the outcome of the game.

- **Dynamic elements**: The game in motion. Once players turn the rules into actual gameplay, the game has moved into dynamic elements. Dynamic elements include things like strategy, behavior, and relationships between game entities.
Formal, Dramatic, and Dynamic Elements
Formal, Dramatic, and Dynamic Elements

- A game ceases to be a game if the formal elements are removed
Formal, Dramatic, and Dynamic Elements

- A game ceases to be a game if the formal elements are removed
- Seven formal elements of games
Formal, Dramatic, and Dynamic Elements

- A game ceases to be a game if the formal elements are removed
- Seven formal elements of games
  - 1. Player interaction pattern: How do the players interact?
Formal, Dramatic, and Dynamic Elements

- A game ceases to be a game if the formal elements are removed

- Seven formal elements of games
  - 1. Player interaction pattern: How do the players interact?
    - Single-player
Formal, Dramatic, and Dynamic Elements

- A game ceases to be a game if the formal elements are removed

- Seven formal elements of games
  - 1. **Player interaction pattern**: How do the players interact?
    - Single-player
    - One-on-one
Formal, Dramatic, and Dynamic Elements

- A game ceases to be a game if the formal elements are removed

- Seven formal elements of games
  - 1. **Player interaction pattern**: How do the players interact?
    - Single-player
    - One-on-one
    - Team versus team
A game ceases to be a game if the formal elements are removed

Seven formal elements of games

1. **Player interaction pattern**: How do the players interact?
   - Single-player
   - One-on-one
   - Team versus team
   - Multilateral (multiple players versus each other)
Formal, Dramatic, and Dynamic Elements

- A game ceases to be a game if the formal elements are removed

- Seven formal elements of games
  - 1. **Player interaction pattern**: How do the players interact?
     - Single-player
     - One-on-one
     - Team versus team
     - Multilateral (multiple players versus each other)
     - Unilateral (one player versus all the other players)
Formal, Dramatic, and Dynamic Elements

- A game ceases to be a game if the formal elements are removed

- Seven formal elements of games
  - 1. **Player interaction pattern**: How do the players interact?
    - Single-player
    - One-on-one
    - Team versus team
    - Multilateral (multiple players versus each other)
    - Unilateral (one player versus all the other players)
    - Cooperative play
Formal, Dramatic, and Dynamic Elements

- A game ceases to be a game if the formal elements are removed

- Seven formal elements of games
  - 1. **Player interaction pattern**: How do the players interact?
    - Single-player
    - One-on-one
    - Team versus team
    - Multilateral (multiple players versus each other)
    - Unilateral (one player versus all the other players)
    - Cooperative play
    - Multiple individual players each working against the same system
Formal, Dramatic, and Dynamic Elements

- A game ceases to be a game if the formal elements are removed

- Seven formal elements of games
  - 1. **Player interaction pattern**: How do the players interact?
    - Single-player
    - One-on-one
    - Team versus team
    - Multilateral (multiple players versus each other)
    - Unilateral (one player versus all the other players)
    - Cooperative play
      - Multiple individual players each working against the same system
  - 2. **Objective**: What are the players trying to achieve in the game? When has someone won the game?
Formal, Dramatic, and Dynamic Elements
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games
Formal, Dramatic, and Dynamic Elements

- **Seven formal elements of games**
  - **3. Rules:** Limit the players' actions by telling them what they may and may not do in the game.
Seven formal elements of games

3. Rules: Limit the players' actions by telling them what they may and may not do in the game.
   - Many rules are explicit, but others are implicitly understood.
Formal, Dramatic, and Dynamic Elements

- **Seven formal elements of games**
  - **3. Rules:** Limit the players' actions by telling them what they may and may not do in the game.
    - Many rules are explicit, but others are implicitly understood
  - **4. Procedures:** Actions taken by the players in the game
Formal, Dramatic, and Dynamic Elements

- **Seven formal elements of games**
  - **3. Rules:** Limit the players' actions by telling them what they may and may not do in the game.
    - Many rules are explicit, but others are implicitly understood
  - **4. Procedures:** Actions taken by the players in the game
    - A rule tells the player what to do
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games
  - 3. Rules: Limit the players' actions by telling them what they may and may not do in the game.
    - Many rules are explicit, but others are implicitly understood
  - 4. Procedures: Actions taken by the players in the game
    - A rule tells the player what to do
    - The procedure dictated by that rule is the actual action of the player
Seven formal elements of games

3. Rules: Limit the players' actions by telling them what they may and may not do in the game.
   - Many rules are explicit, but others are implicitly understood

4. Procedures: Actions taken by the players in the game
   - A rule tells the player what to do
   - The procedure dictated by that rule is the actual action of the player
   - Procedures are often defined by the interaction of a number of rules
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games
  - 3. **Rules**: Limit the players' actions by telling them what they may and may not do in the game.
    - Many rules are explicit, but others are implicitly understood
  - 4. **Procedures**: Actions taken by the players in the game
    - A rule tells the player what to do
    - The procedure dictated by that rule is the actual action of the player
    - Procedures are often defined by the interaction of a number of rules
    - Some procedures are also outside of the rules: Bluffing in Poker
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games
  - 3. Rules: Limit the players' actions by telling them what they may and may not do in the game.
    - Many rules are explicit, but others are implicitly understood
  - 4. Procedures: Actions taken by the players in the game
    - A rule tells the player what to do
    - The procedure dictated by that rule is the actual action of the player
    - Procedures are often defined by the interaction of a number of rules
    - Some procedures are also outside of the rules: Bluffing in Poker
  - 5. Resources: Elements that have value in the game
Formal, Dramatic, and Dynamic Elements

- **Seven formal elements of games**
  - **3. Rules:** Limit the players' actions by telling them what they may and may not do in the game.
    - Many rules are explicit, but others are implicitly understood
  - **4. Procedures:** Actions taken by the players in the game
    - A rule tells the player what to do
    - The procedure dictated by that rule is the actual action of the player
    - Procedures are often defined by the interaction of a number of rules
    - Some procedures are also outside of the rules: Bluffing in Poker
  - **5. Resources:** Elements that have value in the game
    - Money
Formal, Dramatic, and Dynamic Elements

- **Seven formal elements of games**
  - **3. Rules:** Limit the players' actions by telling them what they may and may not do in the game.
    - Many rules are explicit, but others are implicitly understood
  - **4. Procedures:** Actions taken by the players in the game
    - A rule tells the player what to do
    - The procedure dictated by that rule is the actual action of the player
    - Procedures are often defined by the interaction of a number of rules
    - Some procedures are also outside of the rules: Bluffing in Poker
  - **5. Resources:** Elements that have value in the game
    - Money
    - Health
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games
  - 3. Rules: Limit the players' actions by telling them what they may and may not do in the game.
    - Many rules are explicit, but others are implicitly understood
  - 4. Procedures: Actions taken by the players in the game
    - A rule tells the player what to do
    - The procedure dictated by that rule is the actual action of the player
    - Procedures are often defined by the interaction of a number of rules
    - Some procedures are also outside of the rules: Bluffing in Poker
  - 5. Resources: Elements that have value in the game
    - Money
    - Health
    - Items
Formal, Dramatic, and Dynamic Elements

- **Seven formal elements of games**
  - **3. Rules**: Limit the players' actions by telling them what they may and may not do in the game.
    - Many rules are explicit, but others are implicitly understood.
  - **4. Procedures**: Actions taken by the players in the game.
    - A rule tells the player what to do.
    - The procedure dictated by that rule is the actual action of the player.
    - Procedures are often defined by the interaction of a number of rules.
    - Some procedures are also outside of the rules: Bluffing in Poker.
  - **5. Resources**: Elements that have value in the game.
    - Money
    - Health
    - Items
    - Property
Formal, Dramatic, and Dynamic Elements
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games
  - 6. Boundaries: Where does the game end and reality begin?
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games
  - 6. **Boundaries**: Where does the game end and reality begin?

"A game is a temporary world where the rules of the game apply rather than the rules of the ordinary world" – Johan Huizinga, *Homo Ludens* (1955)
Seven formal elements of games

- **6. Boundaries:** Where does the game end and reality begin?

"A game is a temporary world where the rules of the game apply rather than the rules of the ordinary world" – Johan Huizinga, *Homo Ludens* (1955)

• This concept is now known as the **Magic Circle**
Seven formal elements of games

6. Boundaries: Where does the game end and reality begin?

"A game is a temporary world where the rules of the game apply rather than the rules of the ordinary world" – Johan Huizinga, *Homo Ludens* (1955)

• This concept is now known as the Magic Circle

• In a sport like football or ice hockey, the magic circle is defined by the boundaries of the playing field
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games
  - 6. **Boundaries**: Where does the game end and reality begin?

  "A game is a temporary world where the rules of the game apply rather than the rules of the ordinary world" – Johan Huizinga, *Homo Ludens* (1955)

  - This concept is now known as the **Magic Circle**
  - In a sport like football or ice hockey, the magic circle is defined by the boundaries of the playing field
  - In an Alternative Reality Game like *I Love Bees* (the ARG for *Halo 2*), the boundaries are more vague
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games

  6. **Boundaries:** Where does the game end and reality begin?

  "A game is a temporary world where the rules of the game apply rather than the rules of the ordinary world" – Johan Huizinga, *Homo Ludens* (1955)

  - This concept is now known as the **Magic Circle**
  - In a sport like football or ice hockey, the magic circle is defined by the boundaries of the playing field
  - In an Alternative Reality Game like *I Love Bees* (the ARG for *Halo 2*), the boundaries are more vague

  7. **Outcome:** How did the game end?
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games

  - 6. Boundaries: Where does the game end and reality begin?

    "A game is a temporary world where the rules of the game apply rather than the rules of the ordinary world" – Johan Huizinga, *Homo Ludens* (1955)
    
    • This concept is now known as the Magic Circle
    • In a sport like football or ice hockey, the magic circle is defined by the boundaries of the playing field
    • In an Alternative Reality Game like *I Love Bees* (the ARG for *Halo 2*), the boundaries are more vague

  - 7. Outcome: How did the game end?
    
    • Both final and incremental outcomes
Formal, Dramatic, and Dynamic Elements

- Seven formal elements of games
  - 6. Boundaries: Where does the game end and reality begin?
    "A game is a temporary world where the rules of the game apply rather than the rules of the ordinary world" – Johan Huizinga, *Homo Ludens* (1955)
    - This concept is now known as the Magic Circle
    - In a sport like football or ice hockey, the magic circle is defined by the boundaries of the playing field
    - In an Alternative Reality Game like *I Love Bees* (the ARG for *Halo 2*), the boundaries are more vague
  - 7. Outcome: How did the game end?
    - Both final and incremental outcomes
    - In Chess, the final outcome is that one player will win, and the other will lose
• **Seven formal elements of games**

  – **6. Boundaries**: Where does the game end and reality begin?

  "A game is a temporary world where the rules of the game apply rather than the rules of the ordinary world" – Johan Huizinga, *Homo Ludens* (1955)

  • This concept is now known as the **Magic Circle**
  • In a sport like football or ice hockey, the magic circle is defined by the boundaries of the playing field
  • In an Alternative Reality Game like *I Love Bees* (the ARG for *Halo 2*), the boundaries are more vague

  – **7. Outcome**: How did the game end?

  • Both final and incremental outcomes
  • In Chess, the final outcome is that one player will win, and the other will lose
  • In an RPG, there are several incremental outcomes
Formal, Dramatic, and Dynamic Elements
Formal, Dramatic, and Dynamic Elements

- Dramatic elements of games
Dramatic elements of games

- Make the rules and resources more understandable
Formal, Dramatic, and Dynamic Elements

- **Dramatic elements of games**
  - Make the rules and resources more understandable
  - Give players greater emotional investment in the game
Formal, Dramatic, and Dynamic Elements

- **Dramatic elements of games**
  - Make the rules and resources more understandable
  - Give players greater emotional investment in the game

- **Three dramatic elements of games**
Formal, Dramatic, and Dynamic Elements

- **Dramatic elements of games**
  - Make the rules and resources more understandable
  - Give players greater emotional investment in the game

- **Three dramatic elements of games**
  - 1. **Premise**: The basic story of the game world
Formal, Dramatic, and Dynamic Elements

- Dramatic elements of games
  - Make the rules and resources more understandable
  - Give players greater emotional investment in the game

- Three dramatic elements of games
  - 1. Premise: The basic story of the game world
    - Monopoly: The players are real-estate developers trying to get a monopoly on corporate real estate in Atlantic City, New Jersey
Formal, Dramatic, and Dynamic Elements

- **Dramatic elements of games**
  - Make the rules and resources more understandable
  - Give players greater emotional investment in the game

- **Three dramatic elements of games**
  - 1. **Premise**: The basic story of the game world
    - **Monopoly**: The players are real-estate developers trying to get a monopoly on corporate real estate in Atlantic City, New Jersey
    - **Donkey Kong**: The player is trying to single-handedly save his girlfriend from a gorilla that has kidnapped her
Formal, Dramatic, and Dynamic Elements

▪ **Dramatic elements of games**
  – Make the rules and resources more understandable
  – Give players greater emotional investment in the game

▪ **Three dramatic elements of games**
  – 1. **Premise**: The basic story of the game world
    1. **Monopoly**: The players are real-estate developers trying to get a monopoly on corporate real estate in Atlantic City, New Jersey
    2. **Donkey Kong**: The player is trying to single-handedly save his girlfriend from a gorilla that has kidnapped her
    3. The premise forms the basis around which the rest of the game's narrative is built
Formal, Dramatic, and Dynamic Elements
Formal, Dramatic, and Dynamic Elements

- Three dramatic elements of games
Three dramatic elements of games

2. Character: The individuals around whom the story revolves
Formal, Dramatic, and Dynamic Elements

- Three dramatic elements of games
  - 2. **Character**: The individuals around whom the story revolves
    - Vary widely in depth
Three dramatic elements of games

2. Character: The individuals around whom the story revolves
   - Vary widely in depth
     - The main character of Quake is nameless and largely undefined
Formal, Dramatic, and Dynamic Elements

- Three dramatic elements of games
  - 2. Character: The individuals around whom the story revolves
    - Vary widely in depth
      - The main character of Quake is nameless and largely undefined
      - Nathan Drake, from the Uncharted games, is as deep and multidimensional as the lead characters in most movies
Formal, Dramatic, and Dynamic Elements

- Three dramatic elements of games
  - 2. Character: The individuals around whom the story revolves
    - Vary widely in depth
      - The main character of Quake is nameless and largely undefined
      - Nathan Drake, from the Uncharted games, is as deep and multidimensional as the lead characters in most movies
    - In movies, the goal of the director is to encourage the audience to have empathy for the film's protagonist
Three dramatic elements of games

- **2. Character**: The individuals around whom the story revolves
  - Vary widely in depth
    - The main character of Quake is nameless and largely undefined
    - Nathan Drake, from the Uncharted games, is as deep and multidimensional as the lead characters in most movies
  - In movies, the goal of the director is to encourage the audience to have empathy for the film's protagonist
  - In games, the player actually *is* the protagonist character
Formal, Dramatic, and Dynamic Elements

- Three dramatic elements of games
  - 2. Character: The individuals around whom the story revolves
    - Vary widely in depth
      - The main character of Quake is nameless and largely undefined
      - Nathan Drake, from the Uncharted games, is as deep and multidimensional as the lead characters in most movies
    - In movies, the goal of the director is to encourage the audience to have empathy for the film's protagonist
    - In games, the player actually is the protagonist character
    - Designers must choose whether the protagonist will act as
Formal, Dramatic, and Dynamic Elements

- **Three dramatic elements of games**
  - **2. Character:** The individuals around whom the story revolves
    - Vary widely in depth
      - The main character of Quake is nameless and largely undefined
      - Nathan Drake, from the Uncharted games, is as deep and multidimensional as the lead characters in most movies
    - In movies, the goal of the director is to encourage the audience to have empathy for the film's protagonist
    - In games, the player actually *is* the protagonist character
    - Designers must choose whether the protagonist will act as
      - An avatar for the player
Three dramatic elements of games

2. Character: The individuals around whom the story revolves

- Vary widely in depth
  - The main character of Quake is nameless and largely undefined
  - Nathan Drake, from the Uncharted games, is as deep and multidimensional as the lead characters in most movies

- In movies, the goal of the director is to encourage the audience to have empathy for the film's protagonist

- In games, the player actually is the protagonist character

- Designers must choose whether the protagonist will act as
  - An avatar for the player
  - A role that the player must take on
Three dramatic elements of games

- **2. Character**: The individuals around whom the story revolves
  - Vary widely in depth
    - The main character of Quake is nameless and largely undefined
    - Nathan Drake, from the Uncharted games, is as deep and multidimensional as the lead characters in most movies
  - In movies, the goal of the director is to encourage the audience to have empathy for the film's protagonist
  - In games, the player actually *is* the protagonist character
  - Designers must choose whether the protagonist will act as
    - An avatar for the player
    - A role that the player must take on
      » Most common of the two
Three dramatic elements of games

- **Character**: The individuals around whom the story revolves
  - Vary widely in depth
    - The main character of Quake is nameless and largely undefined
    - Nathan Drake, from the Uncharted games, is as deep and multidimensional as the lead characters in most movies
  - In movies, the goal of the director is to encourage the audience to have empathy for the film's protagonist
  - In games, the player actually *is* the protagonist character
  - Designers must choose whether the protagonist will act as
    - An avatar for the player
    - A role that the player must take on
      » Most common of the two
      » Much simpler to implement.
Formal, Dramatic, and Dynamic Elements

- **Three dramatic elements of games**
  - **2. Character:** The individuals around whom the story revolves
    - Vary widely in depth
      - The main character of Quake is nameless and largely undefined
      - Nathan Drake, from the Uncharted games, is as deep and multidimensional as the lead characters in most movies
    - In movies, the goal of the director is to encourage the audience to have empathy for the film's protagonist
    - In games, the player actually *is* the protagonist character
    - Designers must choose whether the protagonist will act as
      - An avatar for the player
      - A role that the player must take on
        » Most common of the two
        » Much simpler to implement.
  - **3. Story:** The plot of the game
Three dramatic elements of games

2. Character: The individuals around whom the story revolves
   - Vary widely in depth
     - The main character of Quake is nameless and largely undefined
     - Nathan Drake, from the Uncharted games, is as deep and multidimensional as the lead characters in most movies
   - In movies, the goal of the director is to encourage the audience to have empathy for the film's protagonist
   - In games, the player actually is the protagonist character
   - Designers must choose whether the protagonist will act as
     - An avatar for the player
     - A role that the player must take on
       » Most common of the two
       » Much simpler to implement.

3. Story: The plot of the game
   - The narrative that takes place through the course of the game
Formal, Dramatic, and Dynamic Elements
Formal, Dramatic, and Dynamic Elements

- Dynamic elements of games
Formal, Dramatic, and Dynamic Elements

- **Dynamic elements of games**
  - Occur only when the game is being played
Formal, Dramatic, and Dynamic Elements

- Dynamic elements of games
  - Occur only when the game is being played
- Core concepts of dynamic elements
Formal, Dramatic, and Dynamic Elements

- **Dynamic elements of games**
  - Occur only when the game is being played

- **Core concepts of dynamic elements**
  - Emergence
Formal, Dramatic, and Dynamic Elements

- Dynamic elements of games
  - Occur only when the game is being played

- Core concepts of dynamic elements
  - Emergence
    - Simple rules lead to complex and unpredictable behavior
Formal, Dramatic, and Dynamic Elements

- **Dynamic elements of games**
  - Occur only when the game is being played

- **Core concepts of dynamic elements**
  - **Emergence**
    - Simple rules lead to complex and unpredictable behavior
    - One of a game designer's most important jobs is to attempt to understand the emergent implications of the rules in a game.
Formal, Dramatic, and Dynamic Elements

- Dynamic elements of games
  - Occur only when the game is being played

- Core concepts of dynamic elements
  - Emergence
    - Simple rules lead to complex and unpredictable behavior
    - One of a game designer's most important jobs is to attempt to understand the emergent implications of the rules in a game.
  - Emergent narrative
Formal, Dramatic, and Dynamic Elements

- **Dynamic elements of games**
  - Occur only when the game is being played

- **Core concepts of dynamic elements**
  - Emergence
    - Simple rules lead to complex and unpredictable behavior
    - One of a game designer's most important jobs is to attempt to understand the emergent implications of the rules in a game.
  - Emergent narrative
    - Narrative can also be dynamic
Formal, Dramatic, and Dynamic Elements

- **Dynamic elements of games**
  - Occur only when the game is being played

- **Core concepts of dynamic elements**
  - **Emergence**
    - Simple rules lead to complex and unpredictable behavior
    - One of a game designer's most important jobs is to attempt to understand the emergent implications of the rules in a game.
  - **Emergent narrative**
    - Narrative can also be dynamic
    - Narratives can emerge from the gameplay itself
Formal, Dramatic, and Dynamic Elements

- **Dynamic elements of games**
  - Occur only when the game is being played

- **Core concepts of dynamic elements**
  - **Emergence**
    - Simple rules lead to complex and unpredictable behavior
    - One of a game designer's most important jobs is to attempt to understand the emergent implications of the rules in a game.
  - **Emergent narrative**
    - Narrative can also be dynamic
    - Narratives can emerge from the gameplay itself
    - One of the central appeals of RPGs like Dungeons & Dragons
Formal, Dramatic, and Dynamic Elements

- **Dynamic elements of games**
  - Occur only when the game is being played

- **Core concepts of dynamic elements**
  - **Emergence**
    - Simple rules lead to complex and unpredictable behavior
    - One of a game designer's most important jobs is to attempt to understand the emergent implications of the rules in a game.
  - **Emergent narrative**
    - Narrative can also be dynamic
    - Narratives can emerge from the gameplay itself
    - One of the central appeals of RPGs like Dungeons & Dragons
    - Different from the narrative embedded in cut scenes and plot
Formal, Dramatic, and Dynamic Elements

- **Dynamic elements of games**
  - Occur only when the game is being played

- **Core concepts of dynamic elements**
  - **Emergence**
    - Simple rules lead to complex and unpredictable behavior
    - One of a game designer's most important jobs is to attempt to understand the emergent implications of the rules in a game.
  - **Emergent narrative**
    - Narrative can also be dynamic
    - Narratives can emerge from the gameplay itself
    - One of the central appeals of RPGs like Dungeons & Dragons
    - Different from the narrative embedded in cut scenes and plot
    - Unique to interactive experiences.
Formal, Dramatic, and Dynamic Elements
Formal, Dramatic, and Dynamic Elements

- Core concepts of dynamic elements
Formal, Dramatic, and Dynamic Elements

- Core concepts of dynamic elements
  - Playtesting is the *only* way to understand dynamics
Formal, Dramatic, and Dynamic Elements

- Core concepts of dynamic elements
  - Playtesting is the *only* way to understand dynamics
    - Game systems are unpredictable
Formal, Dramatic, and Dynamic Elements

- Core concepts of dynamic elements
  - Playtesting is the *only* way to understand dynamics
    - Game systems are unpredictable
    - Experienced game designers can make better guesses
Formal, Dramatic, and Dynamic Elements

- Core concepts of dynamic elements
  - Playtesting is the *only* way to understand dynamics
    - Game systems are unpredictable
    - Experienced game designers can make better guesses
    - But, everyone **must** playtest to understand a game
The Elemental Tetrad
The Elemental Tetrad

- From *The Art of Game Design: A Book of Lenses* by Jesse Schell
The Elemental Tetrad

- From *The Art of Game Design: A Book of Lenses* by Jesse Schell
- A tetrad of elements
The Elemental Tetrad

- From *The Art of Game Design: A Book of Lenses* by Jesse Schell
- A tetrad of elements
The Elemental Tetrad
The Elemental Tetrad

- Mechanics
The Elemental Tetrad

- Mechanics
  - Rules for interaction between the player and the game
The Elemental Tetrad

- **Mechanics**
  - Rules for interaction between the player and the game
  - Differentiate games from other non-interactive media
The Elemental Tetrad

- **Mechanics**
  - Rules for interaction between the player and the game
  - Differentiate games from other non-interactive media
  - Contain
The Elemental Tetrad

- **Mechanics**
  - Rules for interaction between the player and the game
  - Differentiate games from other non-interactive media
  - Contain
    - Rules
The Elemental Tetrad

- **Mechanics**
  - Rules for interaction between the player and the game
  - Differentiate games from other non-interactive media
  - Contain
    - Rules
    - Objectives
The Elemental Tetrad

- **Mechanics**
  - Rules for interaction between the player and the game
  - Differentiate games from other non-interactive media
  - Contain
    - Rules
    - Objectives
    - Other Formal elements
The Elemental Tetrad

- **Mechanics**
  - Rules for interaction between the player and the game
  - Differentiate games from other non-interactive media
  - Contain
    - Rules
    - Objectives
    - Other Formal elements
  - Different from *mechanics* in MDA
The Elemental Tetrad

- **Mechanics**
  - Rules for interaction between the player and the game
  - Differentiate games from other non-interactive media
  - **Contain**
    - Rules
    - Objectives
    - Other Formal elements
  - **Different from** *mechanics* in MDA
    - Schell differentiates between mechanics and technology
The Elemental Tetrad
The Elemental Tetrad

- Aesthetics
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
    - Smell
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
    - Smell
    - Taste
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
    - Smell
    - Taste
    - Touch
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
    - Smell
    - Taste
    - Touch
  - Many different aspects of aesthetics
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
    - Smell
    - Taste
    - Touch
  - Many different aspects of aesthetics
    - Soundtrack
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
    - Smell
    - Taste
    - Touch
  - Many different aspects of aesthetics
    - Soundtrack
    - 3D graphics and animation
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
    - Smell
    - Taste
    - Touch
  - Many different aspects of aesthetics
    - Soundtrack
    - 3D graphics and animation
    - Packaging and cover art
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
    - Smell
    - Taste
    - Touch
  - Many different aspects of aesthetics
    - Soundtrack
    - 3D graphics and animation
    - Packaging and cover art
  - Different from *aesthetics* in MDA
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
    - Smell
    - Taste
    - Touch
  - Many different aspects of aesthetics
    - Soundtrack
    - 3D graphics and animation
    - Packaging and cover art
  - Different from *aesthetics* in MDA
    - MDA aesthetics describes the emotional response to the game
The Elemental Tetrad

- **Aesthetics**
  - Describe how the game is perceived by the five senses
    - Vision
    - Sound
    - Smell
    - Taste
    - Touch
  - Many different aspects of aesthetics
    - Soundtrack
    - 3D graphics and animation
    - Packaging and cover art
  - Different from *aesthetics* in MDA
    - MDA aesthetics describes the emotional response to the game
    - Schell's aesthetics describe the five senses
The Elemental Tetrad
The Elemental Tetrad

- Technology
The Elemental Tetrad

- Technology
  - The underlying technology that makes the game work
The Elemental Tetrad

- **Technology**
  - The underlying technology that makes the game work
  - Digital technologies
The Elemental Tetrad

- **Technology**
  - The underlying technology that makes the game work
  - Digital technologies
    - Computer and console hardware
The Elemental Tetrad

- **Technology**
  - The underlying technology that makes the game work
  - Digital technologies
    - Computer and console hardware
    - Software and programming
The Elemental Tetrad

- **Technology**
  - The underlying technology that makes the game work
  - Digital technologies
    - Computer and console hardware
    - Software and programming
    - Rendering software and pipelines
The Elemental Tetrad

- **Technology**
  - The underlying technology that makes the game work
  - **Digital technologies**
    - Computer and console hardware
    - Software and programming
    - Rendering software and pipelines
  - **Paper technologies**
The Elemental Tetrad

- **Technology**
  - The underlying technology that makes the game work
  - **Digital technologies**
    - Computer and console hardware
    - Software and programming
    - Rendering software and pipelines
  - **Paper technologies**
    - Dice and other randomizers
The Elemental Tetrad

- **Technology**
  - The underlying technology that makes the game work
  - Digital technologies
    - Computer and console hardware
    - Software and programming
    - Rendering software and pipelines
  - Paper technologies
    - Dice and other randomizers
    - Statistics tables
The Elemental Tetrad
The Elemental Tetrad

- Story
The Elemental Tetrad

- **Story**
  - Everything included in Fullerton's Dramatic Elements
The Elemental Tetrad

- **Story**
  - Everything included in Fullerton's Dramatic Elements
  - Differs from Fullerton's Dramatic Elements because it is broader than what she terms *story*.
The Elemental Tetrad

- **Story**
  - Everything included in Fullerton's Dramatic Elements
  - Differs from Fullerton's Dramatic Elements because it is broader than what she terms *story*.
    - Schell's story includes premise and character as well
The Elemental Tetrad
The Elemental Tetrad

- Schell arranges the elements in a tetrad
The Elemental Tetrad

- Schell arranges the elements in a tetrad
  - Four elements also represent four groups in a game studio
Schell arranges the elements in a tetrad

- Four elements also represent four groups in a game studio
- Arranged from most to least visible
The Elemental Tetrad

- Schell arranges the elements in a tetrad
  - Four elements also represent four groups in a game studio
  - Arranged from most to least visible
Chapter 2 – Summary
Chapter 2 – Summary

- Each framework has a different perspective
Chapter 2 – Summary

- Each framework has a different perspective
  - MDA demonstrates that gamers and designers approach games from different directions
Chapter 2 – Summary

- Each framework has a different perspective
  - MDA demonstrates that gamers and designers approach games from different directions
    - Encourages designers to see games from the perspective of players
Chapter 2 – Summary

- Each framework has a different perspective
  - MDA demonstrates that gamers and designers approach games from different directions
    - Encourages designers to see games from the perspective of players
  - Formal, Dramatic, & Dynamic breaks games down into specific components that can be isolated, tweaked, and improved
Each framework has a different perspective

- MDA demonstrates that gamers and designers approach games from different directions
  - Encourages designers to see games from the perspective of players
- Formal, Dramatic, & Dynamic breaks games down into specific components that can be isolated, tweaked, and improved
- Elemental Tetrad views games from the perspective of a development studio
Chapter 2 – Summary

- Each framework has a different perspective
  - MDA demonstrates that gamers and designers approach games from different directions
    - Encourages designers to see games from the perspective of players
  - Formal, Dramatic, & Dynamic breaks games down into specific components that can be isolated, tweaked, and improved
  - Elemental Tetrad views games from the perspective of a development studio

- Next Chapter: The Layered Tetrad
Chapter 2 – Summary

- Each framework has a different perspective
  - MDA demonstrates that gamers and designers approach games from different directions
    - Encourages designers to see games from the perspective of players
  - Formal, Dramatic, & Dynamic breaks games down into specific components that can be isolated, tweaked, and improved
  - Elemental Tetrad views games from the perspective of a development studio

- Next Chapter: The Layered Tetrad
  - The Layered Tetrad attempts to bring these schools of thought together into a more complete theory