

Definitions of Games and Play

Magic Circle

Rules as Limitations and Affordances

Foundations of Interactive Game Design
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Upcoming Assignments

- Due Friday (Jan. 10): first Gamelog assignment
 - ▶ Game of your choice
 - ▶ Details on web site (Analysis > Game session logging)
 - ▶ Be sure to use standard English expression
 - ❖ Capitalization
 - ❖ Spelling
- Course web site:
 - ▶ <http://www.soe.ucsc.edu/classes/cmcs080k/Winter07/>
- Following Friday (Jan. 19): second Gamelog assignment
 - ▶ Game from classics list
- Sign up for in-class game demonstrations
 - ▶ List up front at end of class

Are these games?

- Consider these activities:
 - ▶ Children playing with dolls
 - ▶ Jumping rope
 - ▶ Using a slot machine in Las Vegas
 - ▶ Russian roulette
 - ▶ Playing Monopoly
 - ▶ Driving



Kaba Kick: Russian roulette “for kids.” Instead of bullets, a pair of feet come out the barrel. If gun doesn’t fire, player earns points.

Source: 209.180.204.251/russian-roulette/index.html



Challenges in creating definitions of games

- What are unique qualities that make a game a game?
- How to differentiate games from play, conflict, and merely rule governed activities?
- Some qualities of games
 - ▶ Has rules
 - ▶ Has a goal
 - ▶ Involves decision making
 - ▶ Safe, outside of ordinary life
 - ▶ Voluntary
 - ▶ Outcome is uncertain
- Ideally, definitions of games should address these

Clark Abt Definition

- In *Serious Games*, Clark C. Abt defines games as follows:

Reduced to its formal essence, a game is an *activity* among two or more independent *decision-makers* seeking to achieve their *objectives* in some *limiting context*. A more conventional definition would say that a game is a context with rules among adversaries trying to win objectives.



- Key elements of definition
 - ▶ **Activity**
 - ❖ Game is a series of actions taking place over time
 - ▶ **Decision makers**
 - ❖ People playing the game are actively making decisions
 - ▶ **Objectives**
 - ❖ There is a goal to the game, a desired outcome
 - ▶ **Limiting context**
 - ❖ Rules exist that structure and limit the activity of the game

Abt Definition Applied

Reduced to its formal essence, a game is an *activity* among two or more independent *decision-makers* seeking to achieve their *objectives* in some *limiting context*.

- How does this definition apply to the six activities from earlier this lecture?
 - ▶ Children playing with dolls
 - ▶ Jumping rope
 - ▶ Using a slot machine in Las Vegas
 - ▶ Russian roulette
 - ▶ Playing Monopoly
 - ▶ Driving
- Which of these would Abt consider to be a game?

Costikyan Definition

A game is a form of art in which participants, termed players, make decisions in order to manage resources through game tokens in pursuit of a goal.

- **Key elements**

- ▶ **Art**

- ❖ Games are a form of art, hence creating culture

- ▶ **Decision making players**

- ❖ Players actively participating and making choices

- ▶ **Resource management**

- ❖ Decisions made depend on resources available, and manipulate resources

- ▶ **Game tokens**

- ❖ Representation of the state of the game, affordances for user action

- ▶ **Goal**

- ❖ Objective of the game



costik.com

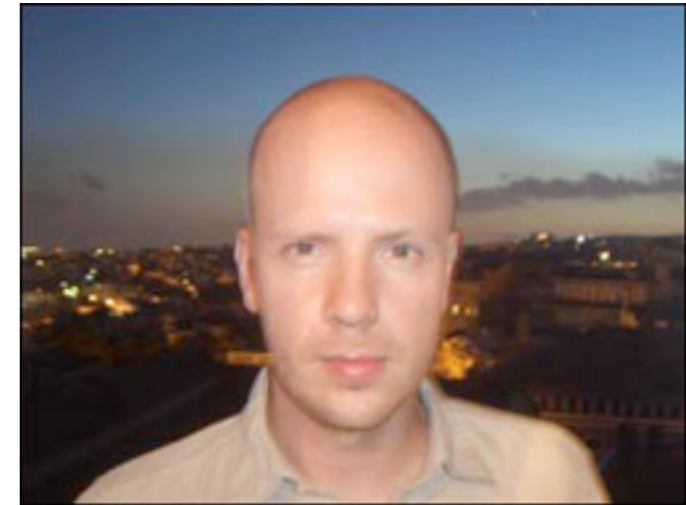
Costikyan Definition Applied

A game is a form of art in which participants, termed players, make decisions in order to manage resources through game tokens in pursuit of a goal.

- Apply to class list of activities
 - ▶ Children playing with dolls
 - ▶ Jumping rope
 - ▶ Using a slot machine in Las Vegas
 - ▶ Russian roulette
 - ▶ Playing Monopoly
 - ▶ Driving
- Which of these would Costikyan consider to be a game?

Jesper Juul's Classic Game Definition

- From *Half-Real*, Jesper Juul, MIT Press, 2005, p. 36
- **Rules**
 - ▶ Games are rule-based
- **Variable, quantifiable outcome**
 - ▶ Games have varying endings, with different numbers assignable to specific outcomes
- **Valorization of outcome**
 - ▶ The different potential outcomes of the game are assigned different values, some positive and some negative
- **Player effort**
 - ▶ The player exerts effort in order to influence the outcome
 - ❖ Games are challenging



jesperjuul.net

Juul's Classic Game Definition (2)

- **Player attached to outcome**

- ▶ The player is emotionally attached to the outcome of the game in the sense that a player will be a “winner” and happy in case of a positive outcome, but a loser and “unhappy” in case of a negative outcome.

- **Negotiable consequences**

- ▶ The same game [set of rules] can be played with or without real-world consequences.
- ▶ Examples
 - ❖ Poker: Can play this game without betting real money. Once money is bet, the game has real-world consequences.
 - ❖

Application of Juul's Classic Game Definition

- Juul's Classic Game Definition (overview):
 - ▶ Rules
 - ▶ Variable, quantifiable outcome
 - ▶ Valorization of outcome
 - ▶ Player effort
 - ▶ Player attached to outcome
 - ▶ Negotiable consequences
- Apply to set of six activities
 - ▶ Children playing with dolls
 - ▶ Jumping rope
 - ▶ Using a slot machine in Las Vegas
 - ▶ Russian roulette
 - ▶ Playing Monopoly
 - ▶ Driving

Play

- Let's shift our focus to play.
- Johann Huizinga's 1938 book *Homo Ludens* defines play as:
 - [Play is] a free activity standing quite consciously outside "ordinary" life as being "not serious," but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings, which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means.
- Does good job capturing essence of play
 - ▶ "absorbing the player intensely and utterly"
- Does not well distinguish games and play
 - ▶ Children's play is not strongly rule based, but is definitely play
- Do games always create social groupings?

Roger Caillois Definition of Play

- From *Man, Play, and Games*, play is:
- **Free**
 - ▶ Playing is not obligatory; if it were, it would at once lose its attractive and joyous quality as diversion
- **Separate**
 - ▶ Circumscribed within limits of space and time, defined and fixed in advance
- **Uncertain**
 - ▶ the course of which cannot be determined, nor the result attained beforehand, and some latitude for innovations being left to the player's initiative
- **Unproductive**
 - ▶ Creating neither goods, nor wealth, nor new elements of any kind, and, except for the exchange of property among the players, ending in a situation identical to that prevailing at the beginning of the game.

Roger Caillois Definition (cont'd)

- **Governed by Rules**

- ▶ Under conventions that suspend ordinary laws, and for the moment establish new legislation, which alone counts

- **Make-believe**

- ▶ Accompanied by a special awareness of a second reality or of a free unreality, as against real life

- **Good points**

- ▶ Identifies play as being voluntary
- ▶ Captures importance of fictional element of play

- **Bad points**

- ▶ Easy to think of counter-examples
 - ❖ Professional sports players are not voluntarily playing (have signed a contract)
 - ❖ Some games are purely abstract, with no fictional aspect (Tic-Tac-Toe)
 - ❖ Children's play is not strongly rule based

The Magic Circle

- When children play games and call “time out!” what does this mean?
 - ▶ Gameplay **time** stops
 - ▶ Players go **out** of the game space
- Michael Apter writes:

In the play-state you experience a protective frame which stands between you and the “real” world and its problems, creating an enchanted zone in which, in the end, you are confident that no harm can come.
- Game Studies researchers call this enchanted zone the *magic circle*
 - ▶ Term originally comes from Huizinga’s *Homo Ludens*
 - ▶ Elegantly captures the notion of the boundaries of a game

Salen and Zimmerman on Magic Circle

The fact that the magic circle is just that—a circle—is an important feature of this concept. As a closed circle, the space it circumscribes is enclosed and separate from the real world. As a marker of time, the magic circle is like a clock: it simultaneously represents a path with a beginning and end, but one without beginning and end. The magic circle inscribes a space that is repeatable, a space both limited and limitless. In short, a finite space with infinite possibility.

p. 95, *Rules of Play*

Game Rules

What are rules?

- Two viewpoints
- Rules are **limitations**
 - ▶ Limit the allowable actions of the player, thereby creating challenges
 - ❖ Examples: in the high jump, one cannot use a ladder; in a track race, one cannot run across the midfield; in golf you cannot put the ball in the hole with your hand
 - ❖ In chess, pieces have fixed movement (and players move the pieces, instead of setting them on fire, throw them, etc.)
 - ▶ In computer games, rules as limitations often appear as gaps in what the play can do
 - ❖ In Final Fantasy XII, the player cannot jump, even small distances
 - ▶ Many rules in computer games are not limitations, though
 - ❖ In Legend of Zelda, combat rules are of the form, if player hits a creature with the sword, the creature dies or takes damage. No limitations here!



What are rules (cont'd)

- Rules set up **potential actions**

- ▶ That is, rules create **affordances**

- ▶ An affordance is a feature that creates possible actions

- ❖ A handle on a pan affords picking it up while it is hot
- ❖ A door knob affords twisting and pulling, permitting the door to be opened



- ▶ Game rules afford certain kinds of action

- ❖ You can view a knight in chess as being limited to moving just two squares up and one square over
- ❖ Or, you can view the knight's rules as affording certain kinds of motion, and the ability to create interlocking support structures with other pieces.

- ▶ Rules provide the players meaningful actions

- ▶ Rules give a game structure

- ❖ By stating what is, and is not, possible
- ❖ Computer games need rules that govern player movement, interactions with the environment and other characters, as well as rules that prevent reaching a goal immediately.



In reality, both

- Games have rules that act as limitations, as well as rules that create affordances
 - ▶ In *Radiant Silvergun*:
 - ❖ Limitations:
 - Must stay within the 2D plane of play
 - Order of approach to enemies is fixed, no strategy possible here
 - Radiant sword must be charged for most effective use
 - ❖ Affordances:
 - 7 different weapon choices make it possible to create strategies for when to use each
 - Within the 2D game space, player has free movement
 - Chaining score rules also create strategy choices



Aspects of Rules

- From *Half-real*, Jesper Juul, MIT Press, 2005, pp. 55-56
- Rules are designed to be above discussion
 - ▶ Rules should be unambiguous, and able to be implemented without ingenuity
 - ▶ In computer games, the requirement to place rules into code ensures this
- Rules of a game create a state machine
 - ▶ A machine that responds to player action
 - ❖ Does not necessarily require a computer
 - Chutes and Ladders is a state machine game
- State machine of a game can be visualized as a landscape of possibilities
 - ▶ A branching “game tree” of possibilities from moment to moment

Aspects of Rules (2)

- A player must expend effort trying to reach as positive an outcome as possible
 - ▶ This creates a challenge
 - ▶ The source of many limitations.
 - ❖ It is easy to get to the top of a mountain if you use a helicopter, so for mountain climbing challenges, this isn't allowed.
- The way a game is actually played while the player tries to overcome its challenges is its *gameplay*.
- Gameplay is the interaction between rules, and players trying to win the game.

Aspects of Rules (3)

- Games are learning experiences
 - ▶ Players improve their skills at playing the game over multiple playings
 - ▶ At any given time, a player will have a repertoire of skills and methods for overcoming the challenges of the game
 - ▶ A good game continually challenges and makes new demands on the skills of the player
- Any specific game can be more or less challenging, emphasize specific kinds of challenges, or serve as the pretext for a social event
 - ▶ Different games can create different player experiences.
 - ▶ Rules can be designed to give players either *enjoyable* or *negative* experiences
 - ❖ Challenge contests in the TV game show *Survivor* can go both ways
 - Eating bugs, yuck!
 - Solving some physical + mental puzzle in a competitive context: can be fun

