

IAT 210: Introduction to Game Studies

A Course Overview

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Contents

1	History of Play and Games	2
1.1	General Background	2
1.2	Digital Games	2
2	Properties of Games	4
2.1	Games Today	4
2.2	Attributes of Games	4
2.3	Game Boundaries and Gamespaces	5
2.4	Game Mechanics	5
2.5	Rules	6
3	Types of Games	7
3.1	Types of Play	7
3.2	Social Games	7
3.3	Mobile Games	7
3.4	Indie Games	9
3.5	Serious Games	9
3.6	Platforms	11
3.7	Genres	11
4	Narrative	14
5	Participatory Gaming	16
5.1	Subculture	16
5.2	Streaming Gameplay	17
6	Designing Games	19
6.1	General Game Design	19
6.2	Designing Rules	19
7	Reasons for Game Design	20
7.1	Gamification and Motivational Design	20
7.2	The Impact of Games on the World	21
8	Business	23
8.1	Project and Company Funding	23
8.2	Business Models of Game Types	23
8.3	The Company	24
9	The Audience	26
9.1	Game Players	26
9.2	Hardcore Gamers	26
9.3	Casual Gamers	26
9.4	Player Personae	26
10	The Player's Perspective	28
10.1	Choices and Payoffs	28
10.2	Gameplay Gestalts	28
10.3	Reward and Addiction	28

1 History of Play and Games

1.1 General Background

- *Game*: Series of interesting, meaningful choices in pursuit of a clear and compelling goal
 - Definitions from various experts:
 - * A game is the voluntary effort to overcome unnecessary obstacles. – *Bernard Suits*
 - * A game is an activity among two or more decision makers seeking to achieve their objectives in a limiting context. – *Clark Abt*
 - * A game is an art in which players make decisions in order to manage resources in pursuit of a goal. – *Greg Costikyan*
 - * A game is an exercise of voluntary control systems in which there is a contest of power, confined by rules, to produce a disequilibrium outcome. – *Brian Sutton-Smith*
 - * A formal game has a two-fold structure based on ends (a winning condition) and means (rules by which you win). – *David Parlett*
- *Demystification*: Games' origins are often rooted in traditions
 - E.g. Masks were sacred objects, checkers was for divination
- Play, fun, and games:
 - *Homo Ludens* by Johan Huizinga discusses the importance of play in society
 - Play is a necessary condition for civilization
 - * E.g. Release of tensions, diplomacy
 - Characteristics of play:
 - * Free activity
 - * Fun; not serious; no material interest
 - * Bounded; separate from the real world
 - * Immersive
- *Gary Gygax*:
 - Avid wargamer
 - Responsible for developing:
 - * The D20 combat system
 - * The ruleset for *Chainmail*, the origin of *Dungeons and Dragons*
 - * *Dungeons and Dragons*: Tabletop roleplaying game
 - Players assume the roles and attributes of fantasy characters who embark on magical adventures

1.2 Digital Games

- Arcade games:
 - 1890s: Simply streetside amusements
 - 1940s: Electromechanical projection machines became popular after WWII

- 1950s: Pinball games developed
- 1970-80s: Arcades became prevalent in malls
- *Nolan Bushnell*:
 - Creator of Chuck E Cheese's
 - Invented the Atari game system
 - Engineer to entrepreneur
 - Employed Steve Wozniak and Steve Jobs, who:
 - * Originally worked with Atari on the arcade game *Breakout*
 - * Created the first Apple computer with Atari parts
 - * Asked Bushnell to invest \$50,000 in their startup, who declined
 - Inspired by B.F. Skinner:
 - * Coined operant conditioning
 - Giving consistent positive/negative feedback to someone to condition them to act that way more/less
 - * *Skinner box*: Psychological tool which dispensed rewards when a test subject activated a lever
 - Led to one-armed bandits (gambling machines which only require pulling a lever)
- Personal computers created possibilities for game developers
- *Johann von Neumann*: Contributor to the digital computer
 - Played games such as kriegspiel (miniature war re-enactments)
 - Began a more formal analysis of parlour games, leading to the study of game theory itself with a wide range of applications
 - Defined games as conflicts between players:
 - * Players are assumed to be 'rational' (i.e. will pursue maximum utility)
 - * *Minimax theorem*: There is always a rational solution to games where players are in conflict
 - * Solutions can result in a positive/negative/zero sum game

2 Properties of Games

2.1 Games Today

- Consist of:
 - Hardware and software components (generally)
 - * Use a device/platform
 - Immediate interaction
 - Data-driven experiences
 - Increasing complexities
- Are designed for a specific player personae (see subsection 9.4)
- Are classified and analyzed by genre (see subsection 3.7)
- Are created by designers with motives (see section 7)
- Can have a narrative aspect (see section 4)

2.2 Attributes of Games

- A game has:
 - A winning condition
 - Mechanics defined by objects, attributes, and actions
 - Rules to set bounds and show how mechanics lead to the winning condition
- Game axes:
 - Rules/play
 - Casual/hardcore
 - Challenge/flow
 - Ludology/storytelling
 - Uniqueness
- *Fourteen Forms of Fun* by Pierre-Alexandre Garneau
 - Beauty, immersion, problem solving, competition, social interaction, comedy, thrills/danger, physical activity, love, creation, power discovery, advancement, using an ability
- *Agency*: Autonomy of a player within the constraints of the game
- *Resources*: Properties which the player may use and control to complete tasks
 - Provide a goal or incentive
 - E.g. Money, health/energy, time, space/territory, inventory
- *Fog of war*: Player(s) have limited knowledge about the state of the game
 - E.g. In StarCraft, any area without the player's troops is darkened and does not show enemy troops

2.3 Game Boundaries and Gamespaces

- Game boundaries / gamespace:
 - Created when players decide that the game begins
 - *Magic circle*: Finite space with infinite possibilities which sets the mood, tone, and boundaries
 - * Marks boundary of the game space concretely or abstractly
 - * Defines an enclosed, separate, temporary space
 - * Contains the role-playing and experimentation
 - * Breaking the magic circle ends the game
 - * E.g. Loading a game into a system and seeing logos, music, and menus
 - * Examples in other contexts:
 - Lights dimming and trailers appearing in a movie theatre to prepare for the showing of the movie
 - Opening ceremonies to gather attention and a feeling of having begun a special period
 - *Frame*: Boundary which signifies that a game is being played
 - * Separate from the real world
 - * Psychological; can have physical components
 - *Lusory attitude*: Being in the 'mood' to play a game
 - *Discrete gamespace*: Play where the moves are restricted to a certain set
 - *Continuous gamespace*: Play where the moves are free and generally unlimited
 - *Bound*: Boundary or restriction of the physical gamespace
 - *Subspace*: Separate area of play which is governed by slightly different rules and conventions
 - * E.g. Penalty shots in hockey

2.4 Game Mechanics

- *Game mechanic*: Factor which gives a reward when a certain action happens
 - Creates constraints which are concrete, interesting, repeatable, and fun
 - Determines the methods of playing/winning
 - Creates a difficulty scale
 - Incorporates the game's flavour
 - Logical or illogical as required
 - May be an object, attribute, or action
- *Object*: Character, prop, token, or other 'physical' component of a game
 - Noun of mechanical analysis
 - One or more attributes
- *Attribute*: Property of an object
 - Detail of mechanical analysis

- Static or dynamic; inherent or customizable
 - * Design needs to know how and when states change
- Degree of transparency of attributes affects gameplay
- Increase through levelling up/gaining experience
- E.g. In *World of Warcraft*, the basic building blocks of a character are:
 - * Primary: Strength, agility, intellect, stamina etc.
 - * Secondary: Damage absorption, armour class, spell power, etc.
- E.g. In *Need for Speed*, the specifications of your car are:
 - * Primary: Speed, acceleration, control, strength, durability, etc.
 - * Secondary: Colour, manufacturer, make, etc.
- *Action*: Verb of mechanical analysis
 - *Operative action*: Basic, simple action which the player can take
 - *Resultant action*: Action taken in pursuit of a broader goal
 - The greater the 'operative-resultant ratio', the more unique ways to win

2.5 Rules

- *Rule*: Statement which defines the relationship between players, goals, mechanics, and the game space
 - Binding; limits player action
 - Explicit and unambiguous
 - Shared by all players
 - Fixed
- *Operational rule*: Rule which describes how the game is played in general
- *Foundational rule*: Rule which describes the underlying formal structure of the game
 - Often tracked in physical games with items such as dice, chips, and game boards
- *Behavioural rule*: Rule which specifies a social contract between players
 - Preserving the magic circle
 - Sportsmanship
- *Written rule*: Precise documentation which specifies the operative actions
- *Tournament rule*: Rule which specifies how the game should be played competitively
 - Eliminates ambiguity
 - Creates a level playing field
- *Advisory rule*: Tip or strategy to optimize gameplay
- *House rule*: Rule created by particular groups of players to suit circumstances or preferences
- Digital games allow for faster, more enjoyable, and more complex gameplay due to being able to enforce rules objectively and almost instantaneously
- See *Designing Rules*, subsection [6.2](#)

3 Types of Games

3.1 Types of Play

- *Man, Play, and Games* by Roger Callois
 - Modes of play:
 - * *Ludus*: Structured play created with the idea of discipline, training, and boundaries
 - Based on patience, skill, and/or ingenuity
 - Less freeform
 - * *Paidia*: Freeform play
 - Based on spontaneity and/or luck
 - Prioritizes fantasy over structures and limits
 - Categories of play:
 - * *Agon*: Competitive play (e.g. chess, sports, contests)
 - * *Alea*: Chance-based play (i.e. probability and luck)
 - * *Mimicry*: Role-playing/make-believe (e.g. theatre)
 - * *Ilinx*: Physical sensation of vertigo (e.g. rollercoasters; children spinning until they fall down)

3.2 Social Games

- Began with browser-based games played and social networks to link such games
 - Increased in popularity due to companies such as Zynga, Playfish, etc.
- Involve gameplay requiring cooperation and interaction
 - *Asynchronous gameplay*: Players do not have to play the game at the same time to have an interactive experience

3.3 Mobile Games

- Defined by their device(s), which:
 - Are low-powered
 - Have a small screen
 - Are different from portable game devices
- Allow for interrupted gameplay
- Focus on mechanics over graphics or story
- History:
 - Periodic and bumpy
 - Global market:
 - * 2005: \$2.6 billion
 - * 2014: \$10.3 billion
 - Late 1990s:

- * Began to emerge
- * Constrained by hardware and software limitations
- * Defined a new mode of play
- * E.g. Tetris, Snake
- Early 2000s:
 - * Nokia released the N-Gage phone which:
 - Awkwardly changed the form factor of the phone to suit gaming
 - Attempted to bring big ideas to a small screen
 - Only sold 3 million units
 - Was rebranded as a service rather than hardware
 - Ended sales in 2010
 - Successful games: Pathway to Glory, Rifts
 - * Apple developed the iTunes system which:
 - Provided:
 - Automatically downloadable and extendable content
 - 'Frictionless' publishing by third parties
 - Was a surprise hit
 - Established microtransactions as a new consumer behaviour
 - Enabled proliferation of free/lite games
- Business models:
 - Ad-supported and/or free
 - *Freemium*: Game which is essentially free, but requires payment to make any significant progress
 - Paid
 - Pay-to-win
- *Kim Kardashian: Hollywood*
 - Developed by Glu
 - Simple; linear
 - Uses a mobile RPG engine reskinned with a Kardashian theme
 - Freemium:
 - * Free to download and play
 - * Not fun and quite difficult by default
 - * Progress speeds up and fun increases when players pay
 - Great alignment with Kardashian's fanbase
 - * Smartphone addicts
 - * Heavy use of social media
 - Strong brand alignment which links with other Kardashian media properties

- Business statistics (over 3 months):
 - * 22 million downloads
 - * \$43 million earned
 - * 5.7 billion minutes played

3.4 Indie Games

- *Indie game*: Game created by a small-scale developer (individual or team) with little financial support
- Developed from the shareware movement of the 1990s
 - Technology and tools became more broadly accessible
 - Increasingly bizarre and unique games developed
- For the developer(s), creating an indie game is:
 - Personally fulfilling
 - Not necessarily financially rewarding
 - A great way to put ideas into practice with little downside
 - Free of constraints imposed by big budgets, big publishers, etc. to allow for a wide range of experimentation in gameplay/styles
- A business first and foremost
- Industry is driven by summits, festivals, game jams
- Development of open distribution platforms means that indie games will continue to have a future
- E.g. Minecraft, Super Meat Boy, Mountain
- For information on the business of indie games, see subsection [8.2](#)

3.5 Serious Games

- *Serious game*: Game which attempts to convey a social/moral message to a specific audience
- E.g. SimEarth, Points of Entry, World Without Oil, September 12th
- Seek to affect their audience through:
 - Empowering
 - Persuading
 - Educating
 - Converting
 - Subverting
 - Training
- Do not include:
 - Education + entertainment games (e.g. typing games)
 - Education/learning games
 - Simulations
- Have a target audience of:

- Students
- *Barometric citizen*: Someone who potentially may have a great impact
- Certain consumers
- Are models which provide entertaining solutions to real world problems
- Ian Bogost:
 - Games are models we create
 - Through designing a game, we impose rules
 - Rules define roles for players
 - Player roles lead to understanding or empathy
 - Understanding is linked to the context of the game and creates meaningful insight
- E.g. *September 12th* using Bogost's model:
 - Models a war in the Middle East
 - Rules consist of having the ability to fire down delayed missiles at civilians and terrorists
 - Role is the player in the air killing the people
 - Understanding that killing the 'bad guys' is not so simple
 - Context is the current war in Iraq
- *Militainment*: Simulating war in a game to affect a player's thinking
 - US Military *Doom* mod
 - * Created 1996
 - * Used for squad-based training
 - *America's Army*: First-person shooter designed to recruit youths
 - * Created by the US Military
 - * Self-proclaimed propaganda
 - * Gamified recruiting tool
 - Embodies core values of soldiers
 - Identifies and indoctrinates promising youth while weeding those who would be a bad fit
 - Effective ROI (return on investment)
 - *Medal of Honor* controversy:
 - * Players could play as the enemy in the Middle East
 - * Some were displeased that people could play as the 'enemy'
 - *This War of Mine*: Survival game where the player has to live as a civilian in a war zone
 - * Focuses on civilians rather than soldiers
 - * Created to show life during the siege of Sarajevo
 - * Survival sub-genre of adventure games
 - * Using Bogost's model:
 - Models the reality of the civilians behind the soldiers

- Rules govern possible survival strategies
- Role is to keep the family alive until the siege ends
- Understanding is built through choice and moral dilemma
- Context is a war in a civilian area

3.6 Platforms

- PC:
 - One of the main platforms
 - Large role in the market
 - Interface: Mouse and keyboard
 - * Allows for more complex interactions
- Consoles: Dedicated game box which requires a TV to be used
 - Began with the Atari 2600
 - Currently: Xbox, PlayStation, Wii
 - Interface: Controllers of increasing complexity
- Smartphones:
 - Began with the iPhone (released in 2007)
 - ‘Must-have’ consumer device; pushed portable gaming devices out of the market
 - Gameplay defined by mobile device considerations
 - Interface: Touchscreen controls
 - * Allows for more intuitive interactions
- Tablets:
 - Larger screens allow for a richer experience
 - Popular with the especially older and younger generations
 - Interface: See *Smartphones*, above

3.7 Genres

- *Genre*: Name which encapsulates a type of objects defined by specific and recurring characteristics
 - Term used to categorize arts and entertainment
- Puzzle:
 - *Static puzzle*: Puzzle in which the game board does not change significantly
 - * E.g. Crossword puzzles
 - *Dynamic puzzle*: Puzzle in which the game board changes significantly during gameplay
 - * E.g. Tetris
 - Popular category of casual games
 - Generally require logic and analysis

- E.g. Tetris, Puzzle Pirates, 2048, Angry Birds
- *Simulation*: Representation of one system of behaviour through another abstracted system
 - May revolve around resource management and development
 - E.g. The Sims, Flight Simulator
- Strategy:
 - Also called 'god games' due to the player's perspective
 - Turn-based or RTS (real time strategy)
 - 4 X's of objectives:
 - * Explore
 - * Expand
 - * Exploit
 - * Exterminate
 - Rely on analysis and resource management
 - Pushed classic war-games out of the market
 - E.g. Civilization, Alpha Centauri, Total War
- Adventure:
 - Began as text-based games
 - Can combine storytelling and puzzles
 - Less twitch and reaction
 - E.g. Fable, Blade Runner, Myst
- Shooters:
 - FPS (first-person shooter), TPS (third-person shooter), platformer
 - Fast-paced, twitch-based reaction
 - Simple; easy to understand
 - Often played online with others
 - E.g. Halo, Doom, Call of Duty
- Role-playing game (RPG):
 - Extension of Dungeons and Dragons (see *Gary Gygax*, subsection [1.1](#))
 - Players assume the role of a fantasy character and create development through adventures
 - Utilizes the dice combat system, leveling, classes, abilities
 - Massively Multiplayer Online Role Playing Games (MMORPGs) greatly expanded the audience and appeal
 - E.g. Mass Effect, World of Warcraft, EVE Online
- Sports:
 - Meant to emulate the physical sport
 - Incredibly successful
 - Difficult to develop/expand from

- E.g. Madden, Fifa, NHL, NBA
- Party:
 - Casual gameplay
 - ‘Living room’ experience for multiple players
 - Can range from mini-games to physical play
 - Fun revolves around participation and humour
 - E.g. Dance Dance Revolution, Mario Party, Wario Ware, Guitar Hero

4 Narrative

- *Story*: Experience bounded in time with a beginning, middle, and end (in any order)
- Examples of narrative frameworks:
 - 3-act structure
 - Hero's journey
 - Non-linear stories
- Types of story designs:
 - *Classical design*:
 - * Active protagonist
 - * Struggle against external forces
 - * Continuous time
 - * Consistent reality
 - * Closed ending
 - *Minimalist structure*:
 - * Passive protagonist
 - * Struggle against internal forces
 - * Consistent reality
 - * Open ending
 - *Antiplot narrative*:
 - * Non-linear time
 - * Inconsistent reality
 - * Chance and coincidence are prevalent
- *Run, Lola, Run*: Movie by Tom Twyker from 1998
 - Combines elements of all 3 story design types
 - Can be thought of as a narrative database from which many stories could be told
 - Utilizes common film conventions such as:
 - * Flashbacks
 - * Foreshadowing
 - * Hand-held filming
 - * Animation
 - * Supernatural elements
 - * *Maguffin*: Motivator which a character pursues with little or no narrative explanation/reason
 - Characteristics of classical design:
 - * Active protagonist - Lola runs to her father for money
 - * Struggle against external forces: Time, the hobo with the money, the police
 - * Continuous time in each part

- * Closed ending - death of either, or both surviving
- Characteristics of non-linear films:
 - * Time repeats and events change
 - * Choice and coincidence from small changes
 - * “Hero’s Journey” :
 - Coined by Joseph Campbell in the book *The Hero with a Thousand Faces*
 - Made more accessible (adapted to film) by Christopher Vogler
 - Use of recognizable and universal archetypes (e.g. threshold guardians, tricksters, mentors)
- Similarities to a video game:
 - * Having ‘lives’ or starting over with a new/better strategy
 - * Bounded game space - city of Berlin
- *Narrative gestalt*: How a game and its story are connected and influence each other
 - How the story emerges from the game based on your actions and choices

5 Participatory Gaming

5.1 Subculture

- *Subculture*: Culture within (usually a rejection of) a mainstream culture
- Maintains basic mainstream culture attributes but changes attitudes, values, interests, terminology, music, art, etc.
- Primarily demonstrated by teens and young adults
- Forming a tight in-group and rejecting those who do not adopt the same values
- *In-group*: Cohesive social group that members identify with, and members associate with other members
 - *In-group bias*: In-group members favour in-group members over others
- *Out-group*: Any person who a member of an in-group does not identify with
 - *Out-group bias*: In-group members are hostile towards out-group members
- *Poseur*: Person who adopts subculture identifiers for acceptance into the group, but does not truly recognize the core values of the group
 - Perceived as inauthentic
- Nerd subculture:
 - *Nerd*: Person obsessed with obscure or unpopular hobbies
 - Formed around 'nerdy' hobbies and interests such as video games, anime, comic books, etc.
 - Looser than other subcultures
 - History and growth:
 - * Once mocked, now proud and celebrated in popular culture
 - * Became mainstream due to the internet, and its facilitation of communication through groups dedicated to specific topics:
 - BBS and Usenet:
 - Exchange of ideas
 - Small audience, little exposure to new ideas/interests
 - Forums:
 - Indexed by search engines
 - Very small subcultures
 - * Web 2.0 allowed massive social media and content-sharing websites (e.g. Facebook, 4chan, Tumblr, Reddit)
 - No dedicated discussion topic
 - Extremely rapid and diverse exchange of ideas and content to a wide audience
 - Allowed discussion of taboo hobbies and topics
 - Helped expose nerd culture
 - Identification:
 - * Clothing includes body modifications and tattoos, cosplay, media references, etc.
 - * Discussion on video games, internet culture, etc.

- * Conventions allow for physical sharing of interests
- Physical games such as DnD, MtG, board games, etc.
- Multiplayer gameplay such as LAN parties, MMORPGs, eSports
- Specific interest meetups
- Values and aspirations:
 - * Intelligence and intellectual pursuits
 - * Gameplay skill
 - * Up-to-date regarding nerdy topics
 - * Employment as a software or game developer
 - * Success in participatory gameplay
- New subculture members sometimes rejected by 'veterans' due to bitterness prior to nerd acceptance
- Threats - e.g. Gamergate: Scandal in which a female game developer was accused of manipulating others to become more powerful/famous
- Popular culture:
 - * Many are upset with how people who once marginalized them now glorify them
 - * Threats by cultural appropriation:
 - Breaks the boundary between the gamers' world and the mainstream world
 - E.g. Mass-marketed merchandise, popularity of widely-palatable non-casual games, etc.

5.2 Streaming Gameplay

- Callois described how mimicry vs agency, fantasy fulfillment, and looking up to a skilled person create an interest in watching others play games
- eSports:
 - Builds on this shared interest
 - Changed from amateur to highly professional
 - * E.g. Some universities offer scholarships to professional gamers
 - Most popular game genres: MOBA, FPS, RTS, fighting
 - Statistics:
 - * League of Legends: 1300 tournaments
 - * DOTA 2: 300 tournaments
 - * StarCraft: 2200 tournaments
 - Celebrities/online personalities:
 - * Defined by low production values and a niche audience
 - * Often humorous
 - * Empowered by social video sites such as YouTube
 - * Traditional media is challenged and threatened by this because they cannot control it or its growth

- * E.g. PewDiePie:
 - Millions of subscribers
 - Popularized games such as Flappy Bird and Goat Simulator simply by playing them in his videos
- Twitch TV: Website where people can stream live gameplay
 - Fundamentally a second screen experience; no need to actively play to interact
 - Fourth largest provider of online video behind Netflix, YouTube, Hulu
 - 100 million unique users per month
 - Purchased by Amazon for \$970 million
 - Shares best practices for gamers and content creators
 - Game industry is attempting to appeal to the same audience via:
 - * Game optimization
 - * Live events
 - * Sponsorships
 - * Celebrity engagement
 - * Spectator modes
 - * Contrasted with Bell Media in Canada, which is raising TV fees, blocking content, violating net neutrality, and fighting Netflix
 - Raises questions about how to value this media, how to deal with legal/copyright issues, what constitutes as intellectual property, etc.

6 Designing Games

6.1 General Game Design

- Game mechanics:
 - Add verbs/actions to increase the number of mechanical interactions
 - * Allow actions to act on more objects
 - Add nouns/objects
- Ensure flow:
 - Create small, achievable goals and manageable challenges
 - Write clear rules
 - Give immediate feedback
- Allow game goals to be achieved through multiple gameplay gestalts (see subsection [10.2](#))
- Balance:
 - Cake-cutting example: Two people share a slice of cake. One person cuts the slice in half, the other person chooses who gets which slice.
 - * Cutter has an incentive to cut the slice as fairly as possible
 - * Ensures fairness and does not enable cheating

6.2 Designing Rules

- Designing rules:
 - Designed iteratively with trial and error
 - Order:
 - * Create operational rules
 - * Create foundational rules and ensure game balance
 - * Use playtesting and iteration to cover every circumstance possible
 - * Create written rules

7 Reasons for Game Design

- Schell's 4 types of game designers:
 - *Persuasives*: Game designers who create games to fulfill a third-party goal
 - * See *Gamification and Motivational Design*, subsection 7.1
 - *Humanitarians*: Game designers who design games for a greater good
 - * See *The Impact of Games on the World*, subsection 7.2
 - *Fulfillers*: Game designers who create games for gamers
 - *Artists/Indies*: Game designers who create games as a form of artistic expression
 - * See *Indie Games*, subsection 3.4

7.1 Gamification and Motivational Design

- *Gamification*: Application of game design conventions such as competitions and rewards to non-game activities
 - Adds fun and engagement
 - Wide range of potential applications (e.g. fitness, personal finances)
 - Most people and hardcore gamers want different things
 - Is enabled by:
 - * A cultural framework which is friendly towards games
 - * More people playing more games on an increasing range of devices
 - * Tracking technology, web analytics, cultural momentum
 - In today's world, gamification:
 - * Has shifted the design of experiences towards pleasure
 - * New developments engage with the user, are quicker to market, are cheaper to create, etc.
 - * Is mostly driven by marketing teams
 - * Relies on extrinsic motivators and non-fun ideas such as savings and status
 - Somewhat controversial
 - * Counter-argument - Ian Bogost's paper on *Schell Games*:
 - Refers to such experiences as exploitation-ware
 - Questions whether measurable outcomes matter more than true player motivation
 - Questions whether it is okay for incentives to muddy meaningful player agency
- *Motivational design*: Game design around giving the player a reason to play, which benefits both the player and designer
 - Coined by Sebastian Deterding
 - * Understand the difference between intrinsic and extrinsic motivation when we structure experiences to engage
 - * Internalization can occur through the application of positive reinforcement; externalization can happen when rewards are applied heavily to an experience

- * Problem occurs when extrinsic factors are applied without taking into account the user questioning benefits for themselves
- *Self-determination*: Why people choose what they choose, when they are free to choose
 - Field of psychology that has only recently been considered empirically valid
 - Explains the three universal needs of a gamified experience:
 - * *Confidence*: Mastery of a pursuit
 - See *agon*, subsection [3.1](#)
 - * *Autonomy*: Control and self-direction
 - See *agency*, subsection [2.2](#)
 - * *Relatedness*: Positive social environment and/or motivational climate
 - * E.g. Twitch, nerd culture, fitness clubs
- Pursuit of pleasure:
 - Some play games to seek pleasure; some play games as social obligations (e.g. FarmVille, grinding)
 - Some games shift motivations from pleasure-seeking to another motivator
 - See *14 Forms of Fun*, subsection [2.2](#)
- Motivationally designed experiences must:
 - Hold strong appeal from the pleasure centre
 - Engage with the intended user to encourage return
 - Require minimal effort to play
 - Disallow gaming of the system
 - Not be embarrassing to peers
 - Questions to ask about the application of gamification:
 - * How to define the form of fun for an experience
 - * Whether the intended users will enjoy the experience
 - * How to ensure traits become more and more prevalent through repetition
 - * How to create the right mix between intrinsic and extrinsic rewards
 - * Whether it reinforces the business goal

7.2 The Impact of Games on the World

- Some believe games can create a better world, partially due to the proliferation of games in society
- Some believe that solving imaginary problems in virtual worlds is mostly unproductive
- Jane McGonigal:
 - Game designer and theorist
 - Believes that intrinsically motivated gameplay can lead to collective benefits for society
 - Gamers are learning:
 - * *Urgent optimism*: Ability to act immediately to overcome a problem
 - * *Epic meaning*: Wanting to be a part of a larger purpose

- * Blissful productivity
 - * Social skills
- Created a game named SuperBetter:
 - * Adapts the challenge/reward structure of games
 - * Helps players solve their own real-life problems such as obesity, depression, getting a job, asthma, etc.
- Challenge is to find a way to use games to harness creative and productive energy
- See *Serious Games*, subsection [3.5](#)

8 Business

8.1 Project and Company Funding

- Timing is important when it comes to fundraising
- Types of investment:
 - *Dumb money*: Money donated with hidden conditions
 - * E.g. Advertising for a company, changing content away from controversial subjects
 - *Silent money*: Money donated without conditions
 - *Smart money*: Money invested by those who are well-informed and/or experienced in the industry
- Types of project funding:
 - Self-funding through day job and personal wealth
 - * Often not enough
 - Prizes and contests (only when desperate)
 - Money from family/friends
 - * Will quickly dry up
 - Crowdfunding through networks such as Kickstarter
 - Government programs
- Types of company funding:
 - *Incubator*: Company which provides management training, guidance, office space, and other services to startup companies
 - * Government-funded
 - * Receive no equity
 - * May focus on biotechnology, medical technology
 - *Accelerator*: Cohort program which provides mentorship and education, with the goal of having the startups present their product to investors after a fixed period of time
 - * May provide a physical workspace
 - * Publicly or privately funded
 - * May focus on a wide range of industries
 - Angel investor: Entity who invests significantly in a venture in exchange for ownership equity
 - * Difficult to find
 - * Best type of investment to have
 - Venture capitalist: Entity who provides money to new and emerging companies
 - Traditional banking is no longer an option

8.2 Business Models of Game Types

- Casual games:
 - Lower costs spur early development

- Initial organic audience growth
- Greater attention leads to monetization
- Creates early returns due to easy scaling
- E.g. Zynga, Big Fish
- Indie games:
 - For an overview of indie games, see subsection [3.4](#)
 - Not always successful
 - Relies on discoverability by the intended audience
 - Compared to the mainstream game industry:
 - * Less hit-driven
 - * Small successes/failures are more relevant
 - Developers need to be smart business people and marketers
 - Raising money:
 - * Tradeoff between time spent:
 - Raising money
 - Developing the game
 - * ‘Raise only what you need, but raise enough’

8.3 The Company

- Industries are discovering that making a great business is different from making a good game
- *Unicorn company*: Ideal company which utilizes a small team and big ideas to quickly make a continuously profitable product/line
 - ‘Jewels’ of Silicon Valley
 - * Rarely works elsewhere; some of its properties don’t create much traction
 - E.g. Minimum Viable Product (MVP): Idea of creating a product which has the minimum required features to fulfil its purpose, in order to minimize costs
 - Can hit a pre-public valuation of \$1 billion
 - Nearly impossible to find
 - Increasing numbers
 - * Causing worries about the tech bubble popping
 - E.g. Hootsuite, Slack
- *Rhino company*: Company which is well-rounded, realistic, and works through problems and failures at a slower, more reasonable pace
 - Ugly, bulky, but have staying power
 - Has more chances to pivot (change focus/direction) to find a product-market fit
 - Being in a secondary market means a lower run-rate (spending over time)
- ‘Think like a unicorn, work like a rhino’

- Starting a new venture is notoriously difficult
- Failures do not mean you cannot succeed

9 The Audience

9.1 Game Players

- Stereotypically anti-social teenagers
- Large amount of society
- Ongoing feedback loop created by new platforms and rapid data transfer exists between:
 - Businesses
 - Game designers
 - The audience

9.2 Hardcore Gamers

- Consumers of a wide range of games
- Can be competitive
- Participate in game culture beyond the game itself

9.3 Casual Gamers

- Limited interest in and time for video games
- Do not usually self-identify as gamers
- May play games types such as:
 - Puzzle
 - Hidden object
 - Arcade
 - Card/casino games
- May play games on non-game devices
- Requires games which:
 - Are easy to learn
 - Are quick to play
 - Are easily accessible/convenient
 - Have either no goal or easily achievable goals
 - Have a flat difficulty curve
- Demographics: Older and more female than other types of gamers

9.4 Player Personae

- Developers must:
 - Understand their audience
 - * *Psychographic approach*: Analysis of interests, attitudes, and opinions

- Avoid self-referential design (designing with their own ideals in mind rather than the audience's ideals)
- *Persona*: Fictional depiction of the psychology and lifestyle of an ideal player
 - Created by developers to target the game towards a certain audience
 - Includes:
 - * A picture
 - * Personal history and details
 - * Aspirations
 - * Desires
 - * Goals
 - * Use-case scenario with the game
 - Begins with a notion of the audience, and improved by data
 - Different from a focus group

10 The Player's Perspective

- *Natural advantage*: A skill or ability not directly related to the game which gives a player an upper-hand
 - Unrelated to:
 - * Knowledge of the game
 - * Familiarity of the game's strategy or gameplay

10.1 Choices and Payoffs

- Choices in games can be modeled through payoff matrices

- E.g. Prisoner's Dilemma:

Two criminals are apprehended for a crime and are pressured to confess in isolation. If a prisoner defects, he is promised an easier sentence. If they cooperate by maintaining silence, they will both receive a heavier sentence.

- Payoffs:

- * *Temptation payoff*: Winning at the other person's expense
- * *Reward payoff*: Both players win by cooperating, but very little
- * *Punishment payoff*: Both players lose for trying to cheat each other
- * *Sucker payoff*: Losing due to trying to do the right thing, and the other person trying to cheat you

10.2 Gameplay Gestalts

- *Gameplay gestalt*: Personal strategy/pattern of actions allowing players to progress
 - *Emergent actions*: Subset of all possible actions driven by unique player strategies and created by the available mechanics
 - Many games have numerous emergent patterns which appeal to different player psychologies
 - May use exploits in a game

10.3 Reward and Addiction

- *Reward*: Positive reinforcement for a goal-oriented behaviour
 - Biologically modulated by dopamine
 - In games:
 - * Common; easy to earn
 - * Short-term
 - * Allows social comparison
 - * E.g. Achievements, leveling up, daily quests, unlockable content, rare items and collections
 - * 4 main types of reward-oriented behaviour:
 - Exploring

- Collecting
 - Achieving
 - Killing
- *Addiction*: Excessive or compulsive repetition of an activity
 - Can be created through high-frequency, low-effort rewards
 - Directly linked to behaviours such as:
 - * Craving
 - * Tolerance
 - * Withdrawal
 - * Loss of control
 - * Neglect of other activities
 - Consequences of MMO play:
 - * Negative:
 - Lower psychological well-being
 - Worse life outcomes
 - Lower self-esteem
 - Greater aggressiveness
 - * Positive:
 - In-game friendships and connections
 - Teamwork
 - Group identity
 - Social interaction and immersion
 - Treatment:
 - * Online support forums
 - * Therapy
 - * Medication