How to do well in the course: Take notes, work with your colleagues, play games.

Just answer everything on the lecture guide and will be fine with everything.

# KNUCKLEBONES: KEY

Date: ca. 5000 BCE

Developer: Unknown

Platform: Dice Game

Region of origin: Unknown

They are very old.

Earliest form of dice.

When did humans start playing?

Games 🡪

1.8 million years ago – Homo ergaster

300,000 years ago – Burial

200,000 years ago – Homo sapiens

150,000 years ago – clothing, jewelry, “speech”

🡪 Human Culture

# SENET: KEY

Date: ca. 3500 BCE

Developer: Unknown

Platform: Board game

Region of origin: Egypt

Why? Senet changed overtime.

Theme and mechanics: from abstract game to a very specific narrative game. (Solider moving to the afterlife)

Terms from game design:

Mechanics – Units of gameplay, re-combinable game actions that are often shared between different games. (e.g. roll dice and move piece, or land on opponent’s piece to capture).

System – The overall game described as a collection of mechanics, the properties of the game as a well-defined set of rules.

Theme – The fictional or representational aspects of the game.

# BACKGAMMON: KEY

Date: ca. 3000 BCE

Developer: Unknown

Platform: Board Game

Region of origin: Ancient Persia

The table game

A racing game

An immortal Game: Having been played continuously for 5000 years.

Still evolving

A lot of randomness

Doubling Cube: double the money or forfeit.

1920, New York East Village

# MANCALA: KEY

Date: ca. 600 CE

Developer: Unknown

What is depth?

Depth is the capacity for a game to sustain long term (generations) of serious study and play

# GO: KEY

What is elegance:

Depth + simplicity

Simple rules that lead to a very very large state space

# CHESS: KEY

A story of adaptation

2018.9.17

Arete

Sports are games where player skill plays a crucial role

Physical, with a focus on athletics

Large Scale

Global, official, shared, universal, we can recognize them as same things

Sports are part of people’s identities.

Sports have always been about social activism.

**Competition:**

Experience and Spectacle are parts of sport.

Sometimes a moment can be bigger than the sport.

**Basketball:**

Date: 1891 CE

Developer: James Naismith

Platform: Ball game

Region of origin: USA

He was working for YMCA, so basketball could become so popular.

Original Rules: 13.

Why Basketball?

Tremendously Popular, second popular in USA.

Basic Rules are simple, but allows for complex strategy

Different roles based on skills, size, and strength

Original missing rules: three pointers, holding ball time

Woman league

**American Football:**

Date: ca. 1800 CE

Developer: ca Walter Camp

Platform: Ball game

Region of origin: USA

11 vs. 11 game on a 100-yard field.

Either just offense and just defense, originally people play both.

Walter Camp: Line of scrimmage, the snap, distance requirement, scoring

John J. Miller: civilize or destroy football, how to make the game safer? The Above 4 methods.

Football causes a lot of problems: 95.6% deceased NFL players tested positive for CTE

Why American football?

Most Popular American Sport

Strategic, turn based, like Chess with people

Raw aggression vs Aesthetic Beauty

Violence, balancing rules for safety vs staying true to the game.

Super bawl most watched.

**Olympic Games:**

Date: 776 BCE

Developer: Unknown

Platform: Physical games (various)

Region of origin: Ancient Greece

Arete: Virtual. Excellence, reaching your highest potential. Courage and strength in the face of adversity.

National pride is a huge part that makes the Olympic important.

Why Olympic?

International Competition, national pride

Amateurism?

Nationalism

Sports as a proxy for politics/war

The Nazi Olympics, 1936

Jesse Owens: got 4 metal at the Nazi Olympics.

**Soccer:**

Date: 1848 CE

Developer: Unknown

Platform: Ball game

Origin: England

256 million people worldwide

World’s most popular sports

Soccer Pitch, 11 vs. 11 with a goal keeper

Why Soccer?

Most popular Sports in the world

Very team oriented

Very simple for a team sport

Elegant, ease of play

The side effects of simplicity: the off side rule: Conditions: In opponent’s half of field, in front of ball, fewer than 2 opposing players between player and goal line

**Cricket**

Date: 1774 CE

Platform: Bat and Ball game

Region of origin: England

Why Cricket?

Second Most Popular sport around the world

Team Sport, but very, very individualized

Slow paced, long matched (5 days standard, 6 hours of play)

In a state transition, many changes right now

Spirt of the Game (“That’s not Cricket”):

Has to by Spirt of the Game.

Don Bradman: early 1930s English had a problem with Don. He was all time best sports man. This guy was better than anybody else, and he was playing for Australia.

Twenty20 Cricket, limited balls and very short play time.

**Tennis:**

Date: ca 1500 CE

Platform: Ball and racket

Region of origin: France

A game for rich elite for France.

A bunch of men decided that women were too fragile to play 5 sets.

To reduce the effect of randomness.

Why Tennis?

Player vs Player (rivalries)

Popular for men and women

Old Sport, the “Game of Palms”

**Golf:**

Ca. 1400 CE

Ball and club game

Scotland

Why Golf:

Player vs Physics

Player vs. Nature

Indirect competition

Nature modified to fit the Game (level design): Lots of different golf course, not trying to be similar, wanted to be challenging

Reserved sports, quiet sports

Babe Didrikson Zaharias: Professional league for women LPGA

Slow Sport

**Formula 1**

1946 CE

FIA (Federation Internationale de I’Automobile)

Motorsport

France

Monaco is a city that people used to race on.

Drivers swallow a pill to monitor the body temperature.

**Other Sports:**

**Boxing**

**Hockey**

**Volleyball**

9.24.18

# ADVENTURE GAMES

Adventure games started as simulations of fictional worlds

The need for more streamlined user interfaces made the simulations lose detail and narrow down the possible actions.

Oldest video game genre that dealt with narrative and gameplay

Narrative Design

Interactive Story means there is branch. The forking Path.

Story takes place in fictional world, whether based on real worlds or imaginary.

Worlds need to be populated.

What is an Adventure game?

* Story-driven: Every challenge in the game is a story in the world
* Player Character: Player has a character.
* Exploration of space/actions: Player explore the space. Players are like toddlers in adventure games. Exploration -> possibilities of the game.
* Object manipulation: Object what we find in the adventure are what we use to advance the game.
* Puzzle solving/Choices: Gather information, get somebody to talk to us

**COLOSSAL CAVE ADVENTURE:**

**1977 CE**

**Will Crowther and Don Woods**

**PDP 10**

**USA**

Player interact with computers by typing command

It was huge and took up a whole room

It was supposed to simulate a real cave

He invented this for his daughter to see what would happen if she went into a cave system

Exploring the space, but also possible to get stuck.

Only took 300kb memory. Uses a parser

Why?

First game in the genre that name the genre. Established the convention of the genre. Also originated text adventures / Interactive fiction.

Directly influenced other important games: Adventure, Zork, Mystery House.

**INFOCOM: Interactive fiction (1979 – 1989)**

**ZORK**

**PLUNDERED HEARTS:**

**1987**

**Amy Briggs w/ Infocom**

**Commodore 64, Apple II, etc.**

**USA**

Inspiration: Pirate novels

Having a woman write the story would expand the audience.

WHY?

Created at the height of Infocom’s popularity, a flourishing of experimentation with the form

Complex defined protagonist with a personality and history

The first video game to explore the romance genre

**SIERRA ON-LINE**

**MYSTERY HOUSE:**

1980

They are going to bring graphic.

Graphical text adventure.

Need to use text to expand what graphics could not do.

**KING’s QUEST (SERIES)**

**1983 – 1998**

**Roberta Williams w/ Sierra On-Line**

**IBM PC Jr.**

**USA**

It started with a text adventure but ended up being a point and click

She had her husband talk to the programmers. She wrote the design documents and had her husband brought to the programmers.

The game talks to the player as a narrator

King quest V: First point and click interface. No Parser anymore, only point and click

Now interactions are limited to a small set.

Hot spot searching, pixel hunt.

It was difficult, if you make the wrong move, you die. Auto save is not a thing then.

There is not a lot of things to do so it’s hard to get stuck

WHY?

Most popular and longest series developed by Sierra

Fairytale setting and narrator voice emphasized the focus on storytelling which also pushed the kinds of stories and events that videogames could incorporate.

The different titles exemplify how adventure games went from parser to point and click interface, trying to make the interaction seamless.

Made adventure game dying into an art.

**LUCASARTS**

All the designers were men.

**MONKEY ISLAND (SERIES)**

**1990 – 2009**

**Ron Gilbert w/ Lucasfilm Games**

**PC**

**USA**

Player Character: Pirates.

Player does not die when they do something wrong. It’s the reverse of King’s Quest. Does not punish player by exploring the place.

Writing is a characteristic. Story + Puzzle solving. The most famous mechanics is the insult fighting. To defeat the pirate in sword fight, you need to banter better.

WHY?

Most popular and longest series developed by LucasArts

First game that opted to not have game over states until the player completed the game, letting the player explore the world

A model for contemporary point and clicks adventure games, often imitated and quoted in later works

Excellent comedy writing.

**MYST (SERIES)**

**1993 – 20005**

**Rand and Robin Miller w/ Cyan**

**PC**

**USA**

FMV Games: Full motion video.

The storage expanded a lot that time, so people could store videos.

Videos are often shoot by game makers, so they don’t have the screen writing skills.

The videos are very short, they are imbedded in the picture.

Inspired Walking simulators. Players can leisurely do things.

Exploration + Storytelling: Discover the story.

Cool part is the puzzle solving.

WHY MYST?

Became the top-selling game of all time until 1998

Best demonstration of how CD\_ROM and larger storage could change adventure games.

Created a new paradigm of adventure games: verbs and menus were substituted by a minimalistic point and clicks interface

Anticipated Walking simulators

Introduced 3D graphics into adventure games.

**VISUAL NOVELS**

**ACE ATTORNEY(SERIES)**

**2001-Present**

**Shu Takumi w/ Capcom**

**Game Boy Advance**

**Japan**

Story + Exploration of Space

We talk to people and explore spaces.

WHY?

The most successful visual novel series to be commercially released outside of Japan.

Combines the tradition of visual novels with Western adventure game design, which also emphasized exploration and puzzle-solving

Created a set dialogue mechanics to model cross-questioning in a court room.

**Modern Interactive Fiction**

Focus on Storytelling and character

INDIE ADVENTURE GAMES

Focus on Character

BESCAPE THE ROOM

Focus on the Puzzles

HIDDEN OBJECT GAMES

WALKING SIMULATORS

CONTEMPORARY DATEING SIMS

Time-based chice0driven games

Modular Choice driven games

**TELLTALE Games**

**THE WALKING DEAD (SERIES)**

**2012 – 2018**

**Telltale Games**

**PC**

**USA**

**WHY?**

Revived mainstream interes on adventure games, as well as making non gamers interested in playing

Made the episodic format into a successful commercial model

Presents combination of different adventure game tradition, moving from puzzle-focused gameplay to narrative choices and quick time events

**A KEY INFLUENTIAL GENRE**

**10.1.18**

**ACTION GAME**

**Key Concepts**

* The first video game genre, evolving from arcade amusements and early computer-lab experiments
* Early design features emerge from the affordances of hardware
* And go away as the hardware changes over time
* The commercial move to the living room changes the design of videogames
* Some styles evolve continually over 50 years, or leap forward during the 3D revolution

**Convergent Evolution**

Same set of idea consumed by different people

**The Penny Arcade**

19th Century CE

**Pin-Ball**

Roll a ball trying to pass the pins.

**HUMPTY DUMPTY**

**1947**

**Harry Mabs**

**Pinball USA**

**SPOT BOWLER**

**1948**

**Wayne Neyens**

**Pinball**

**USA**

First time have protectors that player could control. Pinball starts to take off as cultural phenomenon.

**The Addams Family**

**1992**

**Pat Lawlor and Larry Demar**

**Pinball**

**USA**

Very rich audio video reward for everything you did in game

Very high scores

**Road Runner**

**1971**

**Bally**

**Electromechanical**

**USA**

Road Race

**Periscope**

**1965**

**Masaya Nakamura and Namco**

**Electromechanical**

**Japan**

Hit ship

**SPACEWAR! KEY GAME**

**1962**

**Steve Russell, Martin Graetz, Wayne Waienem**

**PDP-1**

**USA**

Extremely Expensive

Why Spacewar?

One of the oldest games running on a computer and the most influential.

Computer allows you to do certain things. It’s a proper mass machine.

Uses the unique affordances of a real computer to create a simulated physical world.

Shows that games have an ancestor that does not emerge from the arcade

**Computer Space (The first Arcade Video Game)**

**1971**

**Nolan Bushnell**

**Arcade (Discrete Logic)**

**USA**

**PONG KEY GAME**

**1972**

**Al Alcorn**

**Arcade (Discrete Logic)**

**USA**

First commercially successful game

**Table Tennis**

**1972**

**Ralph Baer**

**Magnavox Odyssey**

**USA**

**Why Pong?**

**Early example of a successful industrial design for games**

**Understanding that extreme…**

**Break Out**

**1976**

**Nolan Bushnell, Steve Wozniak and Ste Jobs**

**Arcade**

**USA**

**SPACE INVADERS KEY GAME**

**1978**

**Tomohiro Nishikado**

**Arcade (Computer)**

**Japan**

**SPEED RACE**

**1974**

**Tomohiro Nishikado**

**Arcade (Discrete Logic)**

**Japan**

**GUN FIGHT**

**1975**

**Tomohiro Nishikado**

**Arcade (Discrete Logic and Computer)**

**Japan**

**SEA WOLF**

**1976**

**David Nutting**

**Arcade (Computer)**

**USA**

**Direct inspiration for Space Invader**

**Common Mechanics of action games**

Avatar-based

Positional

AI Controlled Enemies

Dexterity and Reflex Intensive

Linear Difficulty Progression

High scores

Extra lives eqivalent to the Extra Shots in Pin ball

Why Space Invaders?

Has direct relatives on the computer side and on the electromechanical side

Uses an actual computer

Allowing high scores – Allow playing socially

The first colossally successful video game

**Centipede KEY GAME**

**1981**

**Dona Bailey and Ed Logg**

**Arcade**

**USA**

Everybody is drawing inspirations from many other games

Asteroids

1979

Lyle Rains and Ed Logg

Arcade (Computer)

USA

First game to allow putting initials besides the high score.

Why CENTIPEDE

The first great shoot-em-up

Each enemy has different AI that affects gameplay in a deep way

Dynamics create emergent strategies where optimal play is not easy to find

A rare action game by a woman

Use a trackball

**Atari VCS 1977**

**The idea of a console is to drive the hardware prices down**

**E.T. The extraterrestrial**

**1982**

**Howard Scott Warshaw**

**Atari VCS**

**USA**

**The Great Crash of 1983**

**Mostly a console phenomenon**

**Japan not affected.**

**Made a million extra unsold copies of E.T.**

**Nintendo Entertainment System (Famicom)**

**Japan 1983, USA 1985, Europe 1986**

**The Console Generation**

**Nintendo tries to limit developers so as to maintain quality**

**The Platformer**

**DONKEY KONG**

**1981**

**Shigeru Miyamoto**

**Arcade**

**Japan**

**MARIO BROS**

**1983**

**Shigeru Miyamoto**

**Arcade**

**Japan**

**MINER 2049ER**

**1982**

**Bill Hogue**

**Atari 8-bit**

**USA**

**MANIC MINER**

**1983**

**Matthew Smith**

**ZX Spectrum**

**England**

**Independent Revolution?**

**Sometimes a new genre will just appear when all people are working towards the same thing.**

**SUPER MARIO BROS**

**1985**

**Shigeru Miyamoto**

**Famicom (NES)**

**Japna**

**Super Mario Bros 3 KEY GAME**

**1988**

**Shigeru Miyamoto w. Nitendo R&D4**

**Famicom (NES)**

**Japan**

One of the first game that we think now that matches a AAA game

He worked on this game for 2 years, which was never heard of at that time.

Giant jump of ambition.

Huge steps from both complexity and scope.

Console game are only paid once. So, designers want to give lots of stuff in the game.

Legacy: Stages; 3 lives: game over when 0; Scoring system; Dexterity and reflexes

Innovation: Non-linear stage order; Balanced for accessibility;

**SUPER MARIO 64 KEY GAME**

**1996**

**Shigeru Miyamoto w. Nintendo EAD**

**Nintendo 64**

**Japan**

3D Platformer

Technical Innovations: Controller was designed

Able to move in any angle.

Important: Camera has an AI Controller. It rotates to show player the correct path, another character

Never lose Progress.

**Fade To Black**

**1995**

**Paul Cuisset w. Delphine**

**MS-DOS**

**France**

The invention of camera is very important, early 3D game uses a fixed camera

**LEGACY: Deterity and relexes**

**INNOVATIONS:**

Analog control in a 3D world

No major loss of progress

Exploration and narrative instead of points

First viable 3D camera.

**NEKKETSU KOHA KUNIO-KUN KEY GAME**

1986

Yoshihisa Kishimoto w. Technos Japan

Arcade

Japan

Beat him up game.

They are trying to mechanics first design.

**Double Dragon**

**1987**

**Yoshihisa Kishimoto w. Technos Japan**

**Arcade**

**Japan**

**River City Ransom**

**1989 Technos Japan**

**NES**

**Japan**

Without the restriction of arcade, so they experiment with the narrative

**Final Fight**

**1989**

**Akira Nishitani w. Capcom**

**Arcade**

**Japan**

**The main mechanics of the game that never really changes**

**Devil May Cry**

**2001**

**Hideki Kamiya w. Capcom**

**Arcade**

**Japan**

**BATMAN: ARKHAM ASYLUM**

**2009**

**Rocksteady Studios**

**Playstation 3/ XBOX 360**

**USA**

**WHY NEKKETSU KOHA KUNIO-KUN?**

The beginning of the brawler genre

Represents a move away from mechanical abstraction toward simulation

**Raiden**

1990

Seibu Kaihatsu

Arcade

Japan

**MUSHIHIMESAMA**

**2004**

**Cave**

**Arcade**

**Japan**

**SUPER HEXAGON KEY GAME**

**2012**

**Terry Cavanagh**

**iPhone**

**England**

**Why Super Hexagon**

**Action game design has been driven by technology**

**But also, been driven by trends and artistic movements**

**Demonstrates the ‘engineering fallacy’**

**A shooter with the shooting taken out**

**Product of its time, of app store.**

**We are not in the living room anymore, we are in somebody’s hand, somebody’s pocket**

**Action games**

**The first video-games, evolving from arcade amusements and early computer-lab experiments**

**Early design features emerge from the affordances of hardware**

**And go away as the hardware changes over time**

**The commercial move to the living room changes the design of video games**

**Some styles evolve continually over 50 years, or leap forward during the 3D evolution**

**While others reach evolutionary dead ends**

**While some evolutions are driven by technology, others are not at all**

**10.9.18**

**FIRST PERSON SHOOTER**

**KEY CONCEPTS:**

**TECHNOLOGY: how does software shape hardware?**

**PERSPECTIVE: how do we see through our/other eyes?**

**VIOLENCE: how are games invested in violence?**

**MULTIPLAYER: how do we socialize with games?**

**NARRATIVE DESIGN: how to tell stories with games?**

**MAZE WAR: \*\*\*\***

**1973**

**Steve Cooley**

**IMLAC PDS-1**

**USA**

**NASA Lab**

**Very early compared to other video games**

**FPS was born at the same time as multiplayer network games**

**Vertical portrait, a first mini-map in games as well**

**Leaderboard at the first time**

**First multiplayer network games**

**First prototype is called MAZE. Do we really need the war part?**

**BATTLEZONE:**

**1980**

**Atari**

**Arcade**

**USA**

**First-person 3D Tank shooter**

**Continuous motion custom made arcade controller and cabinet.**

**WOLFENSTEIN 3D**

**1992**

**Id Software**

**PC (MS-DOS)**

**USA**

**Kill Nazi**

**More like a stealth game, not like a typical shooter**

**Demonstrate a new 3D technology, ray casting**

**THE FPS AND TECHNOLOGY**

**FPS would be known as graphic showcase powerhouse**

**THE FPS AND PERSPECTIVE**

**DOOM: \*\*\*\*\*\*  
1993**

**Id Software**

**PC (MS-DOS)**

**USA**

**Shooting Demon Nazi**

**Same Engine and look but more advanced in other ways**

**Intel banned DOOM because it was too popular, and everyone is playing it**

**Not arcade mode, have no scores in DOOM**

**WHY DOOM?**

**POPULARIZATION OF NETWORKED MULTIPLAYER “DEATHMATCH” ON TELEPHONY MODEMS**

**DOOM called it deathmatch**

**FRIST BIG GAME MOD DEV COMMUNITY**

**INVENTION OF THE “GAME ENGINE”**

**FIRST GAME TO SEPARATE GAME DATA WITH GAME CONTENT**

**INVENSION OF LIGHTING, VERTICALITY, SPATIAL IMMERSION**

**THE FPS AND PERSPECTIVE**

**When you play a game, who are you?**

**DO you feel like you are immersed?**

**How do we feel embodied in another place?**

**FPS and VIOLENCE:**

**SHOULD VIOLENT GAMES BE REGULATED? (2001)**

**Whether these games influence young people**

**In the end the law did not pass**

**US Supreme Court: Brown V. ESA (2011)**

**Q: Does free speech mean that the government cannot restrict the sale of violent video games to minors?**

**A: Yes, games are a protected form of free speech (7-2 Decision)**

**GUN violence / “GUN culture” In the US**

**FPS as advertising arm of the gun industry?**

**COUNTER\_STRIKE \*\*\*\*\***

**WHY CS?**

**DE\_DUST IS A VERY FAMOUS INFLUENTIAL MAP**

**Dave Johnston made it when he was 16**

**For a long time, this was the only good map**

**Popularizes Military Realism for next 20 years**

**THE FPS and Narrative Worlds:**

**(1998 – 2007)**

**HALF-LIFE: \*\*\*\*\***

**1998**

**Valve Software**

**PC**

**USA**

**Realism and single player storytelling to a degree where no other games are doing this**

**WHY HALF\_LIFE?**

**LEVEL design with Realism + Scripted Drama**

**You get locked in a room and listen to other people**

**Horror game**

**Iconic Crowbar as main weapon**

**PORTAL: \*\*\*\*\***

**2007**

**Valve Software**

**PC**

**USA**

**First person puzzle solving game**

**WHY Portal?**

**The last truly original single player FPS;**

**About Space / Story, not graphics or killing**

**THE FPS AND MULTIPLAYER (1997 – 2007)**

**Goldeneye 007: \*\*\*\***

**1997**

**Rare**

**Nintendo 64**

**England**

**The most famous movie tying game**

**Controls were horrible, only have one analog stick**

**But everyone played it together anyway**

**CALL OF DUTY: MODERN WARFARE: \*\*\*\*\*\*\*\*  
2007**

**Infinity Ward**

**Xbox 360, PS3**

**USA**

**WHY COD?**

**Drama of Half-Life + Counter-strike Militarism. Sandwiching the two trends**

**A lot of storytelling, just a different tone in nature. Still the credits in half-life.**

**+ Goldeneye’s Chaotic Multiplayer Nonsense**

**Behold the brand machinery of the game industry**

**It’s thousands of people work on one game**

**More than 10 studios work together for one game.**

**The NO Future of the FPS…**

**A genre that is dying?**

**An alternate future of the FPS: Immersive SIM**

**Either of these game series is discontinued by AAA.**

**The actual future of FPS, he thinks**

**Is PUBG, Fortnite**

**S: Fortnite, Battle Royale**

**FP: Walking Sims**

**FPS REVIEW:**

**TECHNOLOGY: pushes internet/ hardware/ GPU advances**

**PERSPECTIVE: Immersion, embodiment, identity**

**Violence: gun industry, gun culture, Columbine, Brown v ESA**

**Multiplayer Culture: LAN party, home console FPS, proto eSport**

**Narrative Design: story worlds, walking sims, level design**

* **Overwhelmingly a US / North American genre**
* **Golden Age: form 1993 (DOOM) to 2007 (Portal / COD: MW)**

**STATEGY GAMES:**

**KEY CONCEPTS:**

**-War as a subject**

**-Decision making under uncertainty**

**-Thinking as experience – the “cerebral” domain**

**-Time as a game design parameter – turn -based vs. real-time**

**Macro vs micro**

**The importance of interface and control schemes**

**The evolution**

**KRIEGSPIEL: \*\*\*\*\*\*\*\*\*\***

**A Chess Variant**

**Game involves adding stuff to chess**

**Add complexity to decision making by adding hidden information, not pure information**

**A simulation of combat with more accurate details**

**A “Serious” Game**

**Why KREIGSPIEL?**

**The first war game**

**First example of detailed combat simulation**

**Roots of D&D and therefore and important influence on much of modern games**

**FOG of WAR**

**War is an area of uncertainty, three quarters of the things on which all action in War is based on are lying in a fog of uncertainty to a greater or lesser extent. The first thing here is a fine, piercing mind, to feel the truth with the measure of its judgment. – Carl von Clausewitz**

**Strategy: High-Level Plans; Long term predictions; General principles; Abstract Logic**

**Tactics: Short-term predictions Concrete turn-by0turn calculations**

**Action: Immediate, in -the-moment execution**

**3 Ways to Win**

**LUCK/ACTION/STRATEGY**

**Being doing thinking**

**Fate skill intelligence**

**Strategy as AN Ingredient in Games Strategy as a game genre**

**Conscious, deliberate choices Competitive decision making**

**Calculation Military simulation**

**Planning and prediction Top-down “general’s eye” view**

**The “cerebral” style Abstraction, system, rules**

**M.U.L.E: \*\*\*\*\*\*\***

**1973**

**Danielle Bunten Berry w. Ozark Softscape**

**Atari 400/800**

**USA**

**Not a simulation of war, but an economic conflict.**

**Competitive resource management**

**Inspiration of Monopoly**

**Why MULE?**

**Deeply respected and influential among game designers**

**Advanced ideas – far ahead of its time**

**Economic conflict**

**Deep multiplayer**

**CIVILIZATION (SERIES): \*\*\*\*\*\*\*\*\*\*\***

**1991- Present**

**Sid Meier w. MicroProse**

**PC**

**USA**

**4X games**

* **Explore**
* **Expand**
* **Exploit**
* **Exterminate**

**Modol interface has different ways of representing different interactions**

**Deep. Tetailed, comlex layerd ruleset**

**Complex Diplomacy**

**Multi-modal interface**

**Multiple**

**A game is a series of interesting decisions – Sid Meier**

**Why Civilization**

**Widely considered on of the greatest games of all time**

**Sophisticated theme**

**Deeply compelling single-player game**

**Highly influential**

**X-COME (SERIES): \*\*\*\*\*\*\*\***

**1993 – Present**

**Julian Gollop w. MicroProse**

**PC**

**England**

**WHY X-COM?**

**Beloved example of deep gameplay**

**Two-tiered experience, Tactical and Strategic levels**

**Powerful example of emergent emotional attachment**

**FIRE EMBLEM (SERIES): \*\*\*\*\*\*\***

**1990 – Present**

**Intelligent Systems**

**Famicom (NES)**

**Japan**

**Why Fire Emblem?**

**Accessible and deep**

**One of the all-time great turn-based tactics games**

**Successful blend of strategy and storytelling**

**Modular story / character death**

**QUICK ASIDE: GAME THEORY**

**The logic of interacting choices**

**A mathematical analysis of decision-making**

**Developed by studying poker and other games**

**POPULOUS: \*\*\*\*\*\*\*\***

**1989**

**Peter Molyneux w. Bullfrog Productions**

**PC, Amiga**

**England**

**Why Populous?**

**Great example of Molyneux’ genius**

**First god game**

**Other Early Real-time strategy game**

**REAL-TIME STRATEGY: COMMON FEATURES  
Resource Management**

**Base Building**

**Tech-trees**

**Indirect control / semi0autonomous units**

**Context-sensitive cursor-based controls**

**STARCRAFT: \*\*\*\*\***

**1998 – present**

**Blizzard Entertainment**

**PC**

**USA**

**WHY STARCRAFT?**

**Greatest RTS game of all time**

**Macro/Micro – deep strategy / high skill**

**LEAGUE of LEGENDS: \*\*\*\*\*\***

**2009**

**Riot Games**

**PC**

**USA**

**Why?**

**Biggest, most popular video game in the world**

**Complex, deep, difficult, challenging, and beautiful!**

**Team-based strategy game**

**Most successful eSport**