

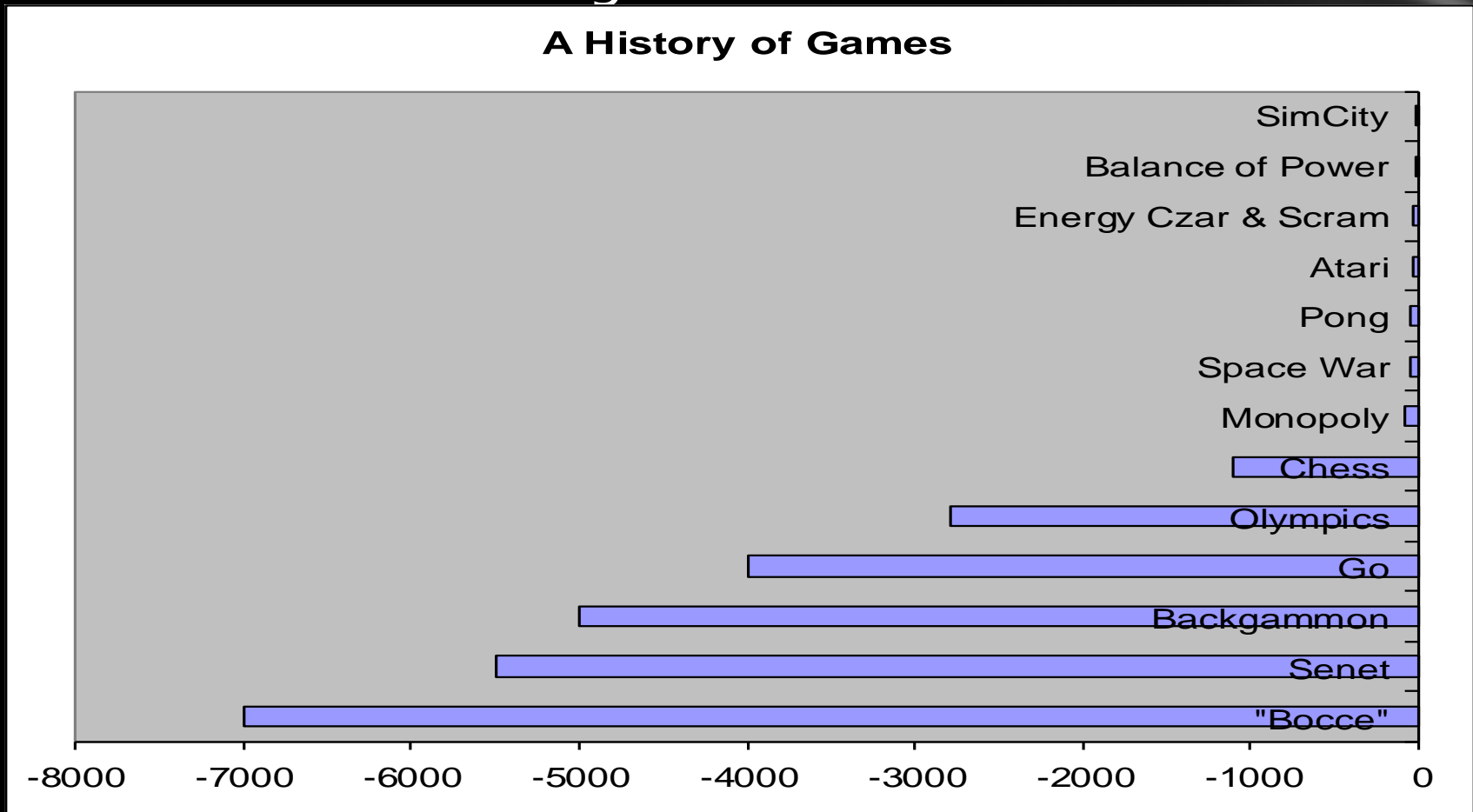
History of Design Theory for Computer Games –

Dr. Thomas Hainey

Dr. John Sutherland

The beginning of gameplay

- Humans have been playing games since historical records begun



Types of games

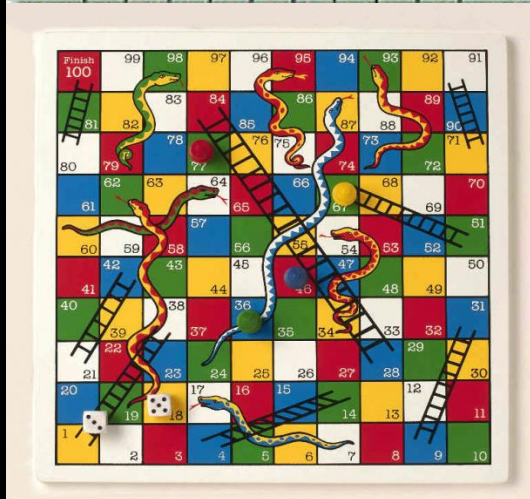
- Bocce – Boccia – Italian word meaning bowls. Played by the Roman empire. – 7000 BC
- Senet – Ancient Egyptian Board Game – 3500 BC
- Backgammon – Approximately 3000 BC



Ancient Games

- Following Simplistic Game Mechanics:
 - Luck
 - Strategy
 - Diplomacy
 - Territory Control
 - Resource Management
 - Goals and Rewards

Non-digital games



Non-digital games



Must play board and card games

- Chess
- Go
- Risk
- Monopoly
- Dungeons and Dragons
- Icehouse
- Duel Masters

Shoot-'em ups

SCORE<1> HI-SCORE SCORE<2>
0070 0880



Shoot-'em ups

- Must play shoot-'em ups
 - Asteroids (Atari)
 - Galaxian (Namco)
 - Scramble (Konami)
 - Robotron 2084 (Williams Electronics)
 - Xevious (Namco)
 - Gradius (Konami)
 - R-Type (Irem/Nintendo)
 - Ikaruga (Treasure, G.rev)
 - TUMKI Fighters (ABC Games/Kenta Cho)
 - Geometry Wars (Bizarre Creations)

First-person shooter

- Must play FPS games
 - Doom (id software)
 - Quake (id software)
 - Half Life (Valve software)
 - Return to Castle Wolfenstein (id Software)
 - GoldenEye 007 (Rareware)
 - Battlefield 1942 (EA Games)
 - Thief (Looking Glass Studios)
 - Rainbow Six (Red Storm)
 - Max Payne (Remedy)
 - XIII (Ubisoft)



- Donkey Kong
- Sonic the Hedgehog
- Mario the many faces



Platforms

- Must play platform games
 - Super Mario World (Nintendo)
 - Sonic the Hedgehog (Sega)
 - Yoshi's island (Nintendo)
 - Crash Bandicoot (Naughty Dog)
 - Super Mario 64 (Nintendo)
 - Jak the Daxter (Naughty Dog)
 - Super Mario Sunshine (Nintendo)
 - Super Mario Land Wii (Nintendo)

Strategy Games

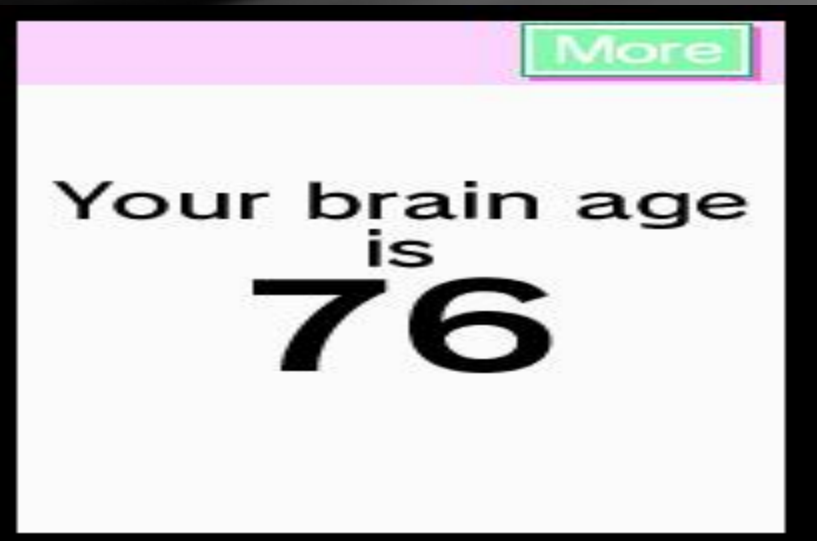
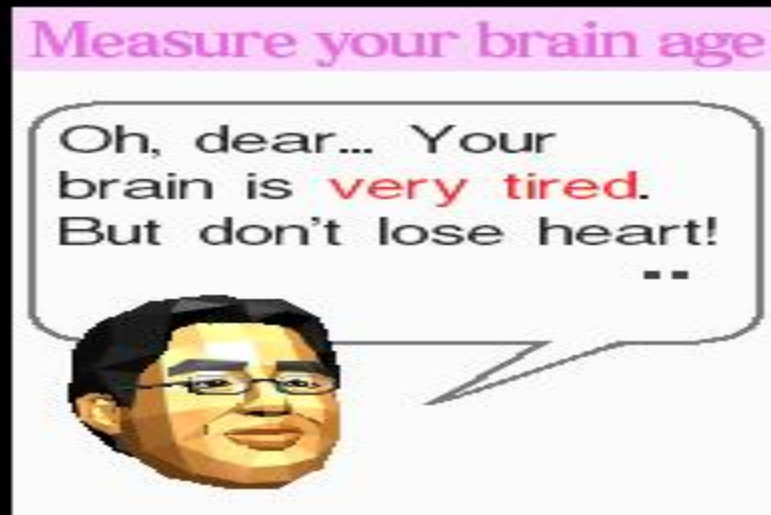
- Civilisation – Manage and develop a civilisation
- The SIMS – Manage and develop your simulated characters
- SIM City – Manage and develop your city
- Military RTS games – Rome Total War
- Fantasy war games
 - Warcraft

Strategy Games



Puzzle games

- Shape association – Tetris
 - Bejeweled
- Maze games
 - Marble madness
- Dr Kawashima's Brain Training



Game structure types

- There are two different kinds
 - Linear – single path to follow in order to achieve the goals
 - Sandbox – game where there is apparently far more freedom
- The advantage of a linear game is from a practical perspective for the designer. Once the limitations are defined then it is easier to implement than a sandbox game. Another advantage is that the game can be extremely rich.
- Once the limits are decided then the player can basically do what they want with apparent freedom.
- There are games that present a mixture of the styles.

Game structure types

- Animal crossing
- Super Mario Land
- Sim City
- Sonic the Hedgehog
- Grand Theft Auto
- The Legend of Zelda: Windwaker



Single vs. Multi-player

- Single-player games primary purpose is to entertain the player with the player competing or cooperating with NPCs
- Multi-player games is to make the players more or less equal with a strong emphasis on competition. Doom in the multi-player mode – Death Match
- Obviously there are differences in development time
- Teamwork - MMORPGs

Platform-specific design



Platform-specific design

- Console
- PC
- Apple Macintosh
- Handheld
- Mobile phone
- Java-based

Realism and abstraction

- Modelling reality
- Realism
- Sound and vision realism
- Simulating reality
- Abstract games – present the player with a make-believe world
- Abstract or real?
- St-Paul De vence



2D or 3D?

- What is a 2D game?
- What is a 3D game?
- Implications of 3D?
- 3D reinterpretations?
- Worms
- What perspective should the game adopt?

Storytelling in games

- If you are playing a tennis game then a minimal amount of story is necessary
- When the game requires a story then the question has to be exactly how much story?
- If you are planning a lot of story then you have to make sure that you have a great story
- Video cut scenes/real-time cut scenes/scripted



Motivation

- Personal motivation – your girlfriend has been kidnapped by a 20-foot gorilla
- Global motivation – an evil genius is going to destroy the planet if he doesn't get a million dollars
- Die hard motivation – your girlfriend has been kidnapped by a 20-foot gorilla, who happens to be an evil genius, who is going to destroy the planet if he doesn't get a million dollars – only you can save the day!
- Forced action



Players' roles

- Mario – unlikely hero – Super Mario Sunshine
- Anti-hero – GTA
- Born hero
- Playing God



Difficulty

- Very very easy
- Very easy
- Easy
- Medium
- Hard
- Very Hard
- Very very hard
- At some stage difficulty levels went a bit crazy

Game design catchwords

- Simplicity – KISS
- Consistency – players will immerse themselves as long as the game world is consistent
- Verisimilitude – once the story is created then the player will accept it as long as consistency is upheld
- Suspension of disbelief
- Fairness
- A key opens a door
- Upgrading with power ups
- Collecting things

Questions

- Does anyone have any questions?
- The next lecture will be Martin Smith talking about Advergaming
- The next lecture I will do will be part two of game design