#### Video and Computer Games

A survey of some of the most influential and outstanding games and how games have changed over time

Some Of The Major Console Manufacturers<sup>1</sup>

- Coleco
- Atari
- Mattel
- Nintendo
- Sega
- Sony
- Microsoft

Background material for the "Consoles' section

17The ultimate history of video games: the story behind the craze that touched our lives and changed world, from Pong to Pokemon and beyond...\* (Steven L. Kent, Three rivers press 2001)

James Tam

James Tam

#### Major Players: Early Consoles (1970s)

- Coleco Telstar (1976)
- Atari 2600 (1977)
- Mattel Intellivision (1979)

### Coleco



- 1976: releases the Telstar game console.
   Telstar www.enwer.
   Between 1976 1978 a series of dedicated consoles are released.
- 1982: Colecovision released – Generic console: games were executed from read-only cartridges.



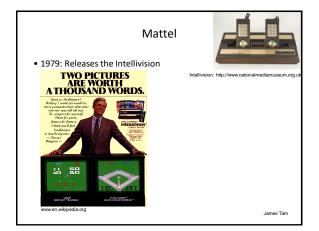
• 1988: Coleco goes bankrupt

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- 1972: Founded by Nolan Bushnell and Ted Dabney.
- 1976: Sold to Warner communications for 28 million.
- 1977: 2600 VCS (Video Computer System) released.
- Some of it's notable games:
- 1979: released Asteroids its best selling game
- 1979: Warren Robinett introduces the concept of Easter Eggs in the game 'Adventure'.
   1980: releases Space Invaders for the 2600.
- 1980: releases space invaders for t
- Fate of Atari:
  - 1984: Atari corporation bought by Jack Tramiel (but arcade division retained).
     Later sold to a disk drive manufacturer JTS and again to Hasbro
    - Interactive.



#### Major Next Generation Consoles (1980s)

- Nintendo
  - Nintendo Entertainment System (1985)
  - Gameboy (1989)
- Sega
- Sega Genesis (1987/1989)

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#### Major Next Generation Consoles (1990s)

Nintendo

- Super NES (1991)
- 64 bit Nintendo 64 (1995/1996)
- Sega
  - Saturn (1994/1995)
  - Dreamcast (1998/1999)
- Sony
  - PlayStation 1 (1994/1995).

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# Major Next Generation Consoles (2000s) • Nintendo - 2001: releases GameCube - 2006: Wii released - 2010: 3DS • Sony - P52 (2000) - P53 (2006) - P54 (2013)

- PS5 (Now if you can get one in 2020 :'(...)
- Microsoft
  - Xbox (2001)
  - Xbox 360 (2005)
  - Kinect (accessory released in 2010/2012)

- Series S, X (2020)

#### Nintendo



- 1889: Fusajiyo Yamauchi founds the Marufuku Co to manufacture and distribute Hanafuda (Japanese playing cards).
- 1951: Company named change to Nintendo "Leave luck to heaven"
- 1978: releases its first arcade game Othello.
- 1985: released the NES (Nintendo Entertainment System).
- 1989: releases the Game Boy.
- 1991: Super NES.
- 1995: 64 bit Nintendo 64 released in Japan (1996 in US).
- 1996: sells its billionth cartridge.

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#### Nintendo (2)

- 2001: releases GameCube in the US.
   Example: 3D GameCube game: (Real 3D) Highway Star NES Longplay (Famicom 3D) (Rad Racer) - YouTube
- 2006: Wii released
   Innovative method of interaction ("nunchuck")
   Initial competitor (Sony) reaction: 'tilt-controlled' game controller.
- 2011 Nintendo 3DS available:



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#### Sega • 1964: Rosen Enterprises merges with Service Games to form Sega Enterprises • 1965: releases Periscope a coin-op arcade game (the high shipping costs require 25 cents – becomes standard). • 1987: releases the 16 bit Mega Drive console in

- Japan (1989 released as Sega Genesis: gets majority in the US console market by 1992).
- 1994/1995: releases Sega Saturn (year later in US).
- 1998/1999: Releases its Dreamcast console.
- Eventually gave on console development in favor of game development.

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www.flippers.

# Sony



- 1994: Releases PlayStation in Japan (a year later in US).
   CD (Sony) vs. Cartridge (Nintendo 64)
- 2000: The PS2 (PlayStation 2) released in Japan and US.
   DVD
- 2006: The PS3 (PlayStation 3) released.
   Superior graphics (and other capabilities e.g. Blu-ray DVD)
- 2013: The PS4 (PlayStation 4) released at the end of this year.
   Features expanded beyond just gaming e.g. better support for streaming movies, built in web browser
  - More information: <u>PS4 Consoles: Pro, Bundles, Deals, 500GB | Best Buy</u> <u>Canada</u>

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#### Sony (2)

- 2020: PS 5 (PlayStation 5)
  - Nearly impossible to find (Dec 2020)
  - Raw 'specs' are very close to the competition (slight edge to the competition)
  - PS5 vs. Xbox Series X: Which console wins? | Tom's Guide
  - PS5 vs Xbox Series X: which next-gen console should you buy? | TechRadar

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#### Microsoft

- 2001 releases its Xbox console
- 2005 released its Xbox360 console

   2010 the Kinect is released for the Xbox360
   2012 a computer version of the Kinect is released.
- 2012 a computer version of the kneet is re
   2020 Xbox series S, X
  - Now: appears to be available for purchase.

#### Some Categories Of Video Games

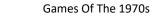
- Sports
- Fitness
- Fighting
- Music
- Simulation
- Shoot 'Em Up
- First person shooter
- Dog fighting
- Platform

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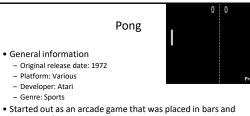
# Some Categories Of Video Games (2)

- Adventure
  - Interactive fiction
  - Multiplayer adventure
- Role playing
- Maze
- Trading
- Strategy
- Survival horror
- Edutainment

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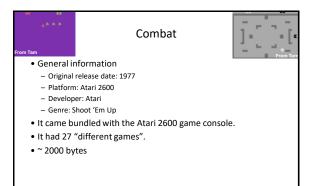
- Pong
- Combat
- Space Invaders
- Adventure
- Asteroids

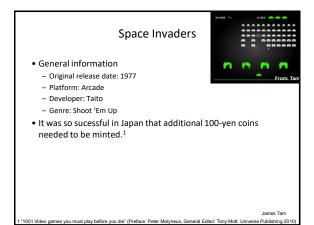


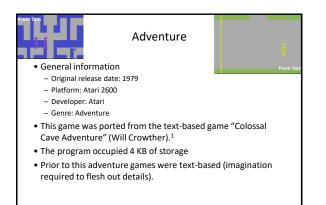
- game arcades.
- Urban legend (?)<sup>1</sup>
- First prototype installed in Andy Capp's Tavern in Sunnyvale California (very quickly 'broken').
- Simple game but small details matter
  - E.g. adding just the right 'English' could affect your return serve.

games you must play before you die" (Preface: Peter Molyneux, General Editor: Tony Mott: L

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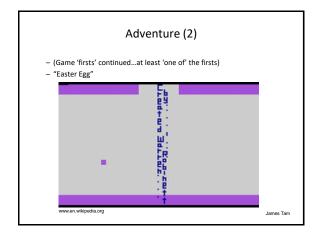


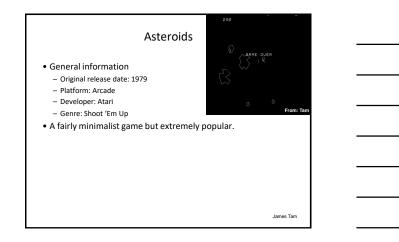


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#### Games Of The 1980s

- Battle Zone
- Defender
- MUD (Multi User Dungeon)
- Donkey Kong
- Pac-Man
- Dragon's Lair
- Elite
- Dungeon Master
- Dungeon And Dragons Adaptations
- Double Dragon
- The 'Simulation' Games (SimCity)

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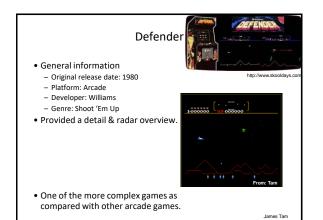
#### Battle Zone



- Original release date: 1980
- Platform: Arcade
- Developer: Atari
- Genre: Shoot 'Em Up
- Wireframe 3D graphics.
- 'Radar overview' of game terrain to provide 'situation awareness'.

games you must play before you die" (Preface: Peter Molyneux, General Editor: Tony Mott

 The designer Ed Rotberg received a request by the US military to create an even more realistic simulation to train its personel.<sup>1</sup>



#### MUD (Multi User Dungeon)

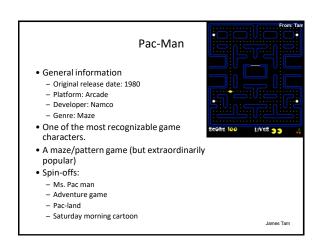
- General information
  - Original release date: 1980
  - Platform: Various
  - Developer: Roy Trubshaw, Richard Bartle
  - Genre: Adventure
- A text-based adventure game but allows for multiple users.
- Eventually allowed network/BBS access via dialup.

James Tam

#### Donkey Kong

- General information
  - Original release date: 1981
  - Platform: Arcade
  - Developer: Nintendo
  - Genre: Platform
- Two main characters: Donkey Kong and Jumpman<sup>1</sup> (later "Mario") reappeared in many spin-offs:
   Mario, Super Mario, Donkey Kong country
- A classic 'platform game'

#### James Tam es vou must play before you die" (Preface: Peter Molyneux, General Editor: Tony Mott: Universe Publishino 20



#### Dragon's Lair



- General information
  - Original release date: 1983 - Platform: Arcade

  - Developer: Cinematronics
  - Genre: Adventure / Interactive fiction
- Incredible cartoon-like graphics in an arcade game:

Laser disc.

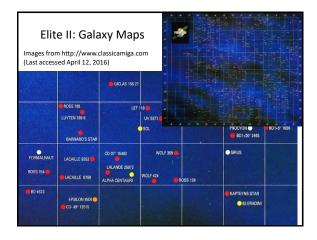
• Much of the game is a matter of timing and/or trial and error.

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#### Elite



- General information
  - Original release date: 1984
  - Platform: Various
  - Developer: Ian Bell, David Braben - Genre: Strategy / Shoot 'Em Up / Open-ended simulation (Elite II)
- Elite:
  - Dog fighting – Trading
- Frontier Elite II (1993):
  - Multiple approaches possible: trader (legal, grey area, illegal), bounty hunter, mercenary, pirate (or some combination of the above).
  - ~400 KB game but sophisticated: real physics, actual sized planets, (midi) classical musical compositions, a large number of real life solar systems were modeled in the game.





#### **Dungeon Master**



- General information
  - Original release date: 1987
  - Platform: Various (Amiga, Atari)
  - Developer: FTL Games
  - Genre: Role playing
- Real-time, first person, 3D action (non-modal).
- Non-linear, open-ended.





#### **Dungeon And Dragons** Adaptations



- The premier paper and pencil role playing company: TSR (Tactical Strategic Rules)
- Collaborated with SSI (Strategic Simulations Inc.) to produce the "Gold Box" games (1980s - 1990s) that faithfully implemented almost all the rules of the complex paper and pencil game into a turn-based tactical RPG (Role Playing Game).
  - Forgotten Realms: Pool of Radiance, Curse of the Azure Bonds, Secret of the Silver Blades, Pools of Darkness.
  - Savage Frontier (external development): Gateway to the Savage Frontier, Treasures of the Savage Frontier, Neverwinter Nights (a MMORG running on AOL).
  - Dragonlance series: Champions of Krynn, Death Knights of Krynn, The Dark Queen of Krynn.



- Using everyday objects as weapons
- Using the opponent's objects
- 'Friendly fire' possible
- Precursor to ever more interactive worlds



James Tam

#### The 'Simulation' Games (SimCity)

- General information
  - Original release date: 1989
  - Platform: Various
  - Developer: Maxis
- Genre: Strategy simulationCity building and management
- http://members.che

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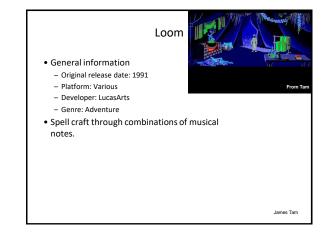
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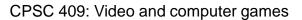
- Periodically an occasional natural disaster thrown in for 'fun'.
   "You don't get to win at SimCity but you'll derive constant satisfaction from playing it."<sup>1</sup>
- Many other simulation games were produced by Maxis: SimCity 2000, The Sims 1 (biggest all time PC game) 2 & 3, SimLife with the same open-ended format.

eo games you must play before you die" (Preface: Peter Molyneux, General Editor: Tony Mott

#### Games Of The 1990s

- Loom
- Civilization
- Alone In The Dark
- Mortal Kombat
- Myst
- Doom
- Virtua Fighter
- Hired Guns
- Beatmania
- Dungeon Keeper
- Silent Hill: Series
- Typing Of The Dead





#### Civilization

- General information
- Original release date: 1991
- Platform: PC
- Developer: Microprose
- Genre: Strategy simulation
- Many sequels released I-V (2010).
- An open-ended "civilization
- management" game.
- Begin with a historical civilization - e.g., Roman, Mongol etc.
- "Decision tree"
  - E.g., Researching the wheel unlocks access to other technologies later.



James Tam

#### Alone In The Dark

- General information
  - Original release date: 1992
  - Platform: Various
  - Developer: Infogames
  - Genre: Survival Horror
- It helped launched the "Survival Horror" genre of games.
- Inspired by the fictional works of H.P. Lovecraft it in turn inspired a number of sequels (I – III in series) as well as influencing other games (e.g., Resident Evil).

James Tam

#### Mortal Kombat General information - Original release date: 1992 - Platform: Various Image MK2? - Developer: Midway - Genre: Fighting • 'Photorealistic' visuals. - Gory graphics & super-human special abilities "Fatality!" - Sequel games strove to make light of the early game's gore: "Friendship!" "Babality" Two senators Joseph Lieberman and Herb Kohl who headed a US government inquiry into "video game violence and the corruption of society" contributed to the formation of the Entertainment Software Rating Board. Other games (e.g., "Postal") also influenced the senators James Tam

#### Myst



- General information – Original release date: 1993
  - Platform: Various
  - Developer: Cyan Worlds
  - Genre: Adventure
- Immersive:
  - "You don't so much play Myst, as experience it." (Jeff Sengstack via GameSpot).
- Despite the success of this game and it's sequels like Riven the development house eventually shut down.

James Tam

#### Doom





- General information
   Original release date: 1993
- Platform: Various
- Developer: id Software
- Genre: First-Person Shooter
- Objective:
  - "...shoot everything that moves and keep moving through wave after successive wave of every variety of infernal evil..."<sup>1</sup>
- It wasn't the first of the first-person shooters but one of the most popular:
  - Inspired a number of other first person shooters e.g., Halo, Call Duty, Resistance, Far Cry, BioShock, Battlefield 1942 etc.

es vou must plav before vou die" (Preface: Peter Molvneux, General Editor: Tony Mo

#### James Tam

# Virtua Fighter



- General information
  - Original release date: 1993
  - Platform: Arcade
  - Developer: Sega
- Genre: Fighting
- One of the first games to move to 3D graphics: fluid realistic movement (motion capture of actual martial artists).
- No super-human capabilities found in other games (Mortal Kombat, Street Fighter) since there was a focus on realism.

#### Hired Guns

General information
 Original release date: 1993



- Platform: Various (Amiga, MS-DOS)
   Developer: DMA Design Ltd.
- Genre: Multiplayer adventure, first-person shooter
- A split screen mode allowed up to 4 people to play that game (in front of) a single computer!.
  - Could run on a 7.14 MHz 68000 processor! (Commodore Amiga)

James Tam

#### Beatmania



General information

- Original release date: 1997
- Platform: Arcade (and later various)
- Developer: Konami
- Genre: Music





- Lead to many other music games: DDR (Dance Dance Revolution), Guitar Freaks, Drumania.
  - Some games were even placed in US schools (combat obesity)

James Tam

# Dungeon Keeper



- Original release date: 1997
- Platform: PC
- Developer: Bullfrog Productions
- Genre: Strategy
- There were many adventure and RPG games that involved dungeon exploration: fight monsters, avoid traps, solve puzzles, collect treasure.
- Dungeon Keeper was a complete role reversal.
- Players designed the dungeon that adventurers would take on.

#### Silent Hill: Series

- General information
  - Original release date: 1999 (Silent Hill #1)
  - Platform: Various
  - Developer: Konami
  - Genre: Survival Horror
- "...other survival horror games makes you jump..."<sup>1</sup>
- "Silent Hill was a game where the horror manifests itself in the town's oppressive and haunting atmosphere..."<sup>2</sup>
  - "Gets under your skin" (JT and various others).
  - What is actually real? Was the whole game just a hallucination???!!!
- The original game lead to several sequels.

"1001 Video games you must play before you die" (Preface: Peter Molyneux, General Editor: Tony Mott: Universe Publishing 2010) "Replay: The history of video games" (Tristan Donovan, Yellow Ant 2010)

#### Typing Of The Dead



- General information
  - Original release date: 1999
  - Platform: Various
  - Developer: WOW / Smilebit
  - Genre: First person / Edutainment
- Modified version of the original Sega game: House of the Dead.
- Zombie hunters carry keyboards instead of weapons.

James Tam

James Tam

#### Games Of The 2000s

- Neverwinter Nights
- WOW
- Guitar Hero
- Nintendogs
- Wii games (Fit and Sports)

# Neverwinter Nights



- General information
  - Original release date: 2002
  - Platform: Various (PC, Mac)
  - Developer: BioWare
  - Genre: RPG (Role playing game)
- This 2002 version should not be confused with the older online game hosted on AOL in early 1990s.



- It included a single player campaign but it was designed for multiple players.
  - The Aurora toolset, would allow for a person to referee ("Dungeon Master") the online game (like the old paper and pencil version).  $_{\rm James \, Tarr}$

# WOW (World Of WarCraft)



James Tam

- General information
  - Original release date: 2004
    Platform: Various (PC, Mac)
  - Developer: Blizzard
  - Genre: MMORPG (<u>Massively Multiplayer Online Role-Playing Game</u>).
- WOW is a spin-off of the strategy game: WarCraft.
- It wasn't the first online RPG but the designers learned from its predecessors (e.g., Ultima online, Diablo).
  - It was relatively simple to learn.
  - Player vs. player combat was more strictly controlled.
  - Monster killing ("hack and slash") were de-emphasized, 'quests' were favored (tasks / missions / jobs).

"Replay: The history of video games" (Tristan Donovan, Yellow Ant 2010)

#### WOW: Required Online Resources (2009)1

- 10 million subscribers world wide.
- Technical resources:
  - 20,000 computers to run the game.
  - 13,250 copies of the game running on Blizzard's servers storing an excess of 1.3 Petabytes of data (> 1,300 TB).
- Human resources:
- 2,396 support staff.
- 451 (in addition to the above) staff to develop game content or to catalog historical events.

James Tam

The history of video games" (Tristan Donovan, Yellow Ant 2010)



# Nintendogs



- General information
  - Original release date: 2005
  - Platform: Nintendo DS
  - Developer: Nintendo
  - Genre: Simulation (pet raising)
- An extremely open-ended simulation: no levels, points, score or fixed goals.
- Interaction is based on touch and sound: much like a real pet.



# Wii Games

# //wii.ign.com • Wii Sports

- General information
- Original release date: 2005
- Platform: Nintendo Wii
- Developer: Nintendo
- Developer: Ninte
   Genre: Sports
- -
- Original release date: 2007
   Platform: Nintendo Wii
   Developer: Nintendo
  - Genre: Fitness

General information

• Wii Fit

- Many sports games have the player 'competing' abstractly because the method of interaction and control doesn't map at all to the activity (e.g., mashing buttons and moving a joystick).
- In the Wii Sports there is a more direct mapping to how the activity is played in real life vs. how the game is played.
- Often the mapping is more direct for activities that require large movements (e.g., tennis) vs. those that require more subtle motion (e.g., shooting pool).
- The contrived goal in Wii Fit however is to increase the fitness level of the player.
- E.g., "balance board" weighs the player in order to determine a starting point. James Tam

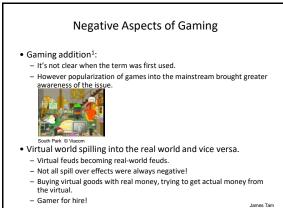
#### Crysis





- Platform: PC
- Developer: Crytek
- Genre: First-Person Shooter
- Realistic graphics ("video realism") to mimic the human eye rather than a camera using various techniques: depth, motion and blur.
  - Required some high end hardware (graphic cards, multi-core processors etc.) but fans were willing to pay the price.

James Tam



1 https://www.psychiatry.org







#### References

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- www.imdb.com (Last accessed April 3, 2012)
- www.gamespot.com (Last accessed April 4, 2012)
- www.mobygames.com (Last accessed April 4, 2012)

#### After This Section You Should Now Know

- General information
  - Release dates: consoles and games
- Gaming consoles
  - The companies that produced the consoles
  - $-\,$  What were the major events in their history and when did they occur
  - Who were the important people behind the game companies - What were some of the distinguishing characteristics of the consoles
- Computer games over time
  - The major games in different time periods
  - What were their distinguishing characteristics
  - What events were tied in the development and release of the games
  - Technical requirements (wherever applicable)
  - What were sequel or spin off games

James Tam

#### After This Section You Should Now Know (2)

• How games and reality would spillover into each other

• What are some of the possible future trends in gaming