Game Genres: Shmups

Foundations of Interactive Game Design
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Genre Specific Game Studies

• Most books and articles studying games do so very broadly
  ‣ Try to make statements applicable to all games
  ‣ An effort to understand games as form of computational media
  ‣ A good thing, since our understanding of games is incomplete

• Tends to abstract away genre specific details
  ‣ Each genre has quirky elements specific to it
    ❖ In shmups, things like respawning rules, and “shmup snakes”
  ‣ General game studies tend to deemphasize these points
    ❖ Often not the best exemplars of points being made

• Designers of games in these genres need to deeply understand genre conventions
  ‣ To appeal to audience that is deeply versed in these conventions
  ‣ To understand design freedoms so as to innovate within genre
Pre-history of the Shmup

• Space race, Apollo moon missions (1957-1975)
  ‣ Apollo 11 moon landing (1969) had tremendous impact on popular consciousness and culture
• Led to general interest in space themes
  ‣ Spacewar! (1961)
    ❖ University environments only (needed PDP-1)
    ❖ Realistic 2D physics in gameworld
    ❖ Reimplemented as Computer Space (1971)
      • Nolan Bushnell & Ted Dabney: would later found Atari
    ❖ Influenced later games (Asteroids)
  ‣ 2001: A Space Odyssey (1968)
    ❖ Stanley Kubrick film masterpiece
    ❖ Realistic portrayal of space travel
    ❖ Theme of human transcendence
    ❖ Not combat oriented
Ignition: Star Wars

- Star Wars (1977)
  - Watershed cultural event
  - Compelling scenes of space combat
  - Combination of the hero’s journey and the Western
  - Set the stage for....
Space Invaders: The First Shmup

• Space Invaders (1978)
  ‣ Easily understandable fictional background, human vs. alien
  ‣ Simple to learn, hard to master
  ‣ Huge cultural phenomenon in US and Japan
    ❖ National shortage of coins in Japan!
    ❖ Songs written about game’s addictiveness!
      • “He’s hooked, he’s hooked, his brain is cooked”
  ‣ 1D cardinality: move left or right
    ❖ Due to this, known as a fixed shooter, gallery shooter, or single screen shooter
  ‣ First major breakout game since Pong
    ❖ Opened new directions for computer games
Space Invaders: Thematic Mother of all Shmups

• Lone hero
  ‣ Fighting waves of aliens against long odds
    ❖ Western notion of rugged individualist hero
    ❖ Japanese notion of lone samurai
    ❖ Elements of the kamikaze

• Xenophobic
  ‣ It’s us vs. them baby
  ‣ Who are they? Not us!

• Abstract
  ‣ Clearly not a depiction of reality
  ‣ Abstract representation of a battle

• Decontextualized
  ‣ What are the aliens like? Why are we fighting them? Why are they fighting us? Do they have families? What does this battle mean in the overall war? *We have no idea.*
1d to the Max: Galaga, Phoenix and Galaxian

- **Galaxian (1979)**
  - Improved on Space Invaders with aliens that would dive bomb the player
  - No bases
  - Full color, background music

- **Phoenix (1980)**
  - First shmup boss (level 5)

- **Galaga (1981)**
  - Scoring system awards one value for ships in formation, and a higher value for ships when attacking
  - Aliens can capture player ship
    - Possible to recapture for double-fire
  - Bonus round
Problems with Fixed Shooters

• Challenge types do not vary
  ‣ Aiming at aliens, dodging bullets and aliens
  ‣ Learning patterns of alien ships
  ‣ Not enough variety of challenge

• Too difficult...
  ‣ New game players were quickly dispatched
  ‣ Reduces desire to play again

• ... and too easy
  ‣ Once players learn patterns, can play a very long time
  ‣ Only required strategy is to memorize alien patterns

• Limited narrative scope
  ‣ No characters, only ships
  ‣ No story being told
Defender (1981)

- Breakthrough on multiple levels
  - Full 2D motion
  - Wraparound game world
    - “Scanner” shows radar like view
    - First *scrolling shooter* & *horizontal shooter*
  - Multiple goals
    - Rescue people
    - Destroy enemies
  - Two weapon types
    - Beam, smart bombs
  - Permits more complex gameplay
    - Many more interesting decisions
    - Track state of people
    - Tradeoff of clearing an area vs continual movement
  - Con: fantastically complex button scheme
Scramble (1981)

- Establishes conventions for horizontal side-scrollers
- Continuous scrolling
  - In Defender, could move right or left
  - This is a major innovation
  - Makes it possible to have *level designs*
    - Positioning of enemies to create player challenge and control experience
    - Gives designer control over pace of play
  - Permits a kind of *landscape narrative*
    - As player progresses through the level, uncovers more about the environment
    - World and story uncovered in details of revealed landscape
    - Not possible with 1d waves of aliens, since every level looks the same as the one before
- Fuel challenge: must keep ship fueled
Zaxxon (1982)

- Horizontal side-scroller
- First game to use isometric projection
  - Very distinctive
  - No lasting impact on shmups
- Well developed *landscape narrative*
  - Fly over asteroid city
  - Details are uncovered as you progress
- End boss
  - Zaxxon, the robot
- Fuel challenge
  - Like Scramble, must keep ship fueled
Xevious (1983)

- Credited as first vertical scrolling shooter
    - OK, so Xevious is first influential scrolling shooter
  - Well developed landscape
    - No distinct levels, gradually evolves
    - Designed placement of enemies

- Strong graphics
  - Sense of improved realism
    - Different kinds of land, sea, forest, etc.

- Weak landscape narrative
  - Levels designed to create challenges, not to tell a story
  - Scramble and Zaxxon do better

http://ourworld.compuserve.com/homepages/ArcadeWin/XEVIous.htm
Gradius (1985)

• With Gradius, shmups genre stabilizes
  ‣ Scrolling over landscape
    ❖ In Gradius, side-scrolling
  ‣ Multiple distinct space-themed levels

• Power-up system
  ‣ Vulgus (Capcom, 1984) brings powerups to shmups
    ❖ Immediately before better-known 1942
  ‣ Gradius has power meter powerups
    ❖ Like pinball, each powerup collected moves indicator forward
    ❖ Also introduces “multiple” powerup, for multiple firing
      • Can be combined with other powerup features
    ❖ Adds additional dimension of strategy
      • Which powerup capability should be collected next?
Exploring Fantasy Narratives

• Two games that explored more fantasy-style settings
  ‣ Indication that genre is free to be less literal
    ❖ Improves storytelling capability of landscape narrative

• **Salamander/Lifeforce** (1986)
  ‣ Introduces the *shmup snake*
  ‣ A large snake in space
  ‣ Goofy, but works
  ‣ A kind of mini-boss

• **Twinbee** (1985)
  ‣ First “cute-em-up”
  ‣ Vertical scroller
  ‣ Brightly colored palette
  ‣ Whimsical landscape, enemies
Golden Age of Shmups

• Once the NES reestablishes the commercial viability of computer games, many shmups are created for consoles
  ‣ See *Xenocide Files* at [www.shmups.com](http://www.shmups.com)

• In Japan, continued viability of shmups in arcades leads to high quality arcade-first shmups
  ‣ R-Type is a notable example

• Best games tend to have some innovative aspects, but clearly work within genre conventions

• Following slides will focus on games with distinctive design or gameplay elements
Manic Shooters

• Games feature staggering numbers of bullets onscreen
  ‧ Ship often has small area of vulnerability
  ‧ Also called bullet hell, curtain fire, and danmaku
  ‧ Appeals to the experienced shmup player who desires extremely challenging gameplay
  ‧ A sign of maturation of the genre
    ❖ Also a sign of becoming inwardly focused

• Dodonpachi (1997)
  ‧ Absurdly powerful weapons
    ❖ Powerups galore
  ‧ Enemies fire copious bullets
  ‧ Chaining scoring system
    ❖ Hit enemy within a second of last one to increment
Radiant Silvergun (1997)

• No powerups
  ‣ All weapons available at beginning
  ‣ Emphasizes strategy of choosing best weapon for a given situation
  ‣ Gives designers more control over user experience, since player weapons always known
  ‣ Sword is unique weapon for shmup

• Storytelling
  ‣ RSG has original storyline, very well integrated into level design
  ‣ Demonstrates expanded narrative potential for shmups
  ‣ Can have strong characters in cut scenes
  ‣ Motivation for actions in game

Translation: http://www.emuxhaven.net/~silver/Main%20Story.html
Ikaruga (2001)

• Emphasizes beauty
  ‣ Visually appealing
  ‣ At times feels like work of fine art

• Unique gameplay aspects
  ‣ Polarity system
    ❖ Ship is white or black
      • Can be changed by player
    ❖ Bullets are white or black
      • Only opposite polarity bullet kills
  ‣ Chaining system
    ❖ Tied to polarity
    ❖ Kill enemies with similar polarity in a row
Rez (2001)

• **On-rails** 3D shooter
• Synchronized music, vibration
  ‣ Shooting enemies causes changes in musical score
  ‣ Controller vibrates along with music
• Strong integration of storyline with music, gameplay
  ‣ Descent into the depths of the supercomputer
    *K-project*
• Good example of game as art
Shmups Today

- **Scrollers: occasional console releases**
  - **Gradius V (2004)**
    - Explores integration of cutscenes into game
    - Adheres to genre xenophobia, limiting storytelling
  - **R-Type Final (2003)**
    - Large number of ships and powerup weapons
  - Both games explore use of 3D graphics while preserving 2 dimensions of gameplay
  - Solid command of genre, very polished games

- **Top-down shooters**
  - Minor revival led by Geometry Wars: Retro Evolved (2005)
  - **Everyday Shooter, Jonathan Mak (2006)**
    - “Everyday Shooter is an album of games exploring the expressive power of abstract shooters. Dissolute sounds of destruction are replaced with guitar riffs harmonizing over an all-guitar soundtrack, while modulating shapes celebrate the flowing beauty of geometry.”
Shmups Today

• Japanese solo efforts
  ‣ Shoot the Bullet (2005), by ZUN (Junya Ota?)
    ❖ Player takes pictures to clear enemies, instead of firing bullets
    ❖ Part of Touhou Project, a series of Japanese pro-am shooters
      • http://touhou.wikia.com/wiki/Touhou_Wiki

• Galaga Legions (2008)
  ‣ Very different mechanics from original
    ❖ Two satellites can be deployed against massive waves of enemies

• Platypus (2005?)
  ‣ Claymation shmup
    • www.squashysoftware.com/makingplatypus.php
Directions for Shmups

• What are some design potentials for Shmups?
  ‣ Push limits of storytelling
    ❖ Inject strong characters into the game
    ❖ Plots to motivate actions of player
  ‣ Improved choreography
    ❖ View game as a form of dance
    ❖ Synchronizing movements of player and enemies to achieve aesthetic effect
  ‣ Use to reinterpret existing media
    ❖ Shmup as a way to explore meaning of music, literature?
  ‣ Multiplayer shmup
    ❖ Create a campaign version of a shmup, where your play is integrated with many other battles of other players as part of ongoing campaign
    ❖ Intersticies between play sessions provides potential for storytelling