UNIVERSITÉ DE FRIBOURG
UNIVERSITÄT FREIBURG

Spring 2020

GAME DESIGN

ACT 3

Maurizio Rigamonti

12 types of game balance

TYPE 1: FAIRNESS

- **Symmetrical games**
  - Equal resources and powers to all players
  - Good to determine the best player

- **Asymmetrical games**
  1. Simulation of a real situation (e.g. WWII)
  2. Different ways to explore a game
  3. Personalization
  4. Level opposing forces
  5. Interesting situations

EVOLVE

BALANCING ASYMMETRICAL GAMES

- A value to each resource (power, skill, etc.) and equal sum of the values
- Theoretical: verify by playtesting

- Intransitive relationships (“Rock, paper, scissors”)

1. ASSIGN SCORES

- Example: battleships choice in a shoot’em up
- Create a table and fill it with **expected** values

Plane	**Speed**	**Shields**	**Fire**	**Total**
1	High 3	Low 1	Medium 2	6
2	Medium 2	Medium 2	Medium 2	6
3	Low 1	Medium 2	High 3	6

2. PLAYTEST AND BALANCING

- Example: speed is the most important skill
- **Double the speed** the value and then **balance** again

Plane	Speed	Shields	Fire	Total
1	**High 6**	Low 1	**Low 1**	**8**
2	**Medium 4**	Medium 2	Medium 2	**8**
3	**Low 2**	**High 3**	High 3	**8**


Color
0:52

HACKS ET MÉMAS: BALANCING MECHANICS

Actions and **Resultant actions**

Level	Player 1 - platformer	Player 2 - shooter	Collaborative
1	- Move and jump - Gather objects	- Move and fire - Protect player 1	- Manage camera
2	- Multiple objects - New enemies	- Protect herself from flying enemies	
3	- Use switches to change player 2 weapon's color	- Use the good color to kill enemies with different colors	- Talk about switches

TYPE 2: CHALLENGE VS SUCCESS

- Cf. flow channel!
- Techniques
  - Increase difficulty after each success
  - Let players get through easy parts fast
  - Create “layers of challenge”
  - Let players choose the difficulty level
  - Playtest with a variety of players

RESIDENT EVIL REVELATIONS

TYPE 3: MEANINGFUL CHOICES

- Choices must have a real impact on the game
- Dangers:
  - 50 cars without driving differences
  - 10 guns, but 1 clearly better => **dominant strategy**
- Many **dominant strategies** in the beginning of the development
- **Triangularity**: the player has to choose between a low or high risk for a low or high reward

MARIO KART WII

TYPE 4: SKILL VS CHANCE

- The balance depends on **players tastes**
  - But also age, gender, culture, etc.
- Alternate the use of skills and chance
  - Handing out a card is chance
  - How to play it is skill

TYPE 5: HEAD VS HAND

- Games can alternate or even involve simultaneously problem solving and dexterity
  - E.g. action platform like Castlevania
- Announce clearly this balance in your game
  - PacMan II was unsuccessful: puzzle game associated with a Sonic-like appearance

TYPE 6: COMPETITION VS COOPERATION

- Basic instincts
- In videogames, more competition
- Competition and cooperation can **coexist**
  - E.g. for getting bonus!
  - Hokuto no Neko, Joust: the player decides how to play
  - Teams competition

TYPE 7: SHORT VS LONG

- Too short games
  - Players may not develop **meaningful strategies**
- Too long games
  - Sometimes **boring**
  - Demand **too much time**
- Altering win conditions influences the length
  - Spy Hunter
- Change gameplay after some times
  - Minotaur, Bomberman, Bubble Bobble

TYPE 8: REWARDS

- People want to be judged favorably
- Common rewards (sometimes combined):
  - Praise (e.g. the sounds in Nintendo games)
  - Points (achievements XBOX, PS3, Steam, etc.)
  - Prolonged play (e.g. Pinball, extra lives)
  - Gateway (e.g. Mario’s secret levels)
  - Spectacle
  - Expression (e.g. special cloths)
  - Powers (e.g. Resident Evil 5 weapons)
  - Resources (virtual money, food, etc.)
  - Completion
- How to balance them
  - Increase the value of rewards as the player progresses
  - Variable rewards

TYPE 9: PUNISHMENT

- Games are supposed to be fun, but
  - Punishment create endogenous value
  - Taking risk is exciting
  - Punishments increase challenge
- Common punishments
  - Shaming (opposite of praise)
  - Loss of points
  - Shortened play (e.g. losing a life)
  - Game over
  - Setback (back to a checkpoint or to the start)
  - Removal of powers (temporal is often better)
  - Resource depletion (e.g. money, ammos, etc.)
- Reward more effective than punishment

THE BANNER SAGA & DARK SOULS

TYPE 10: FREEDOM VS CONTROLLED EXPERIENCE

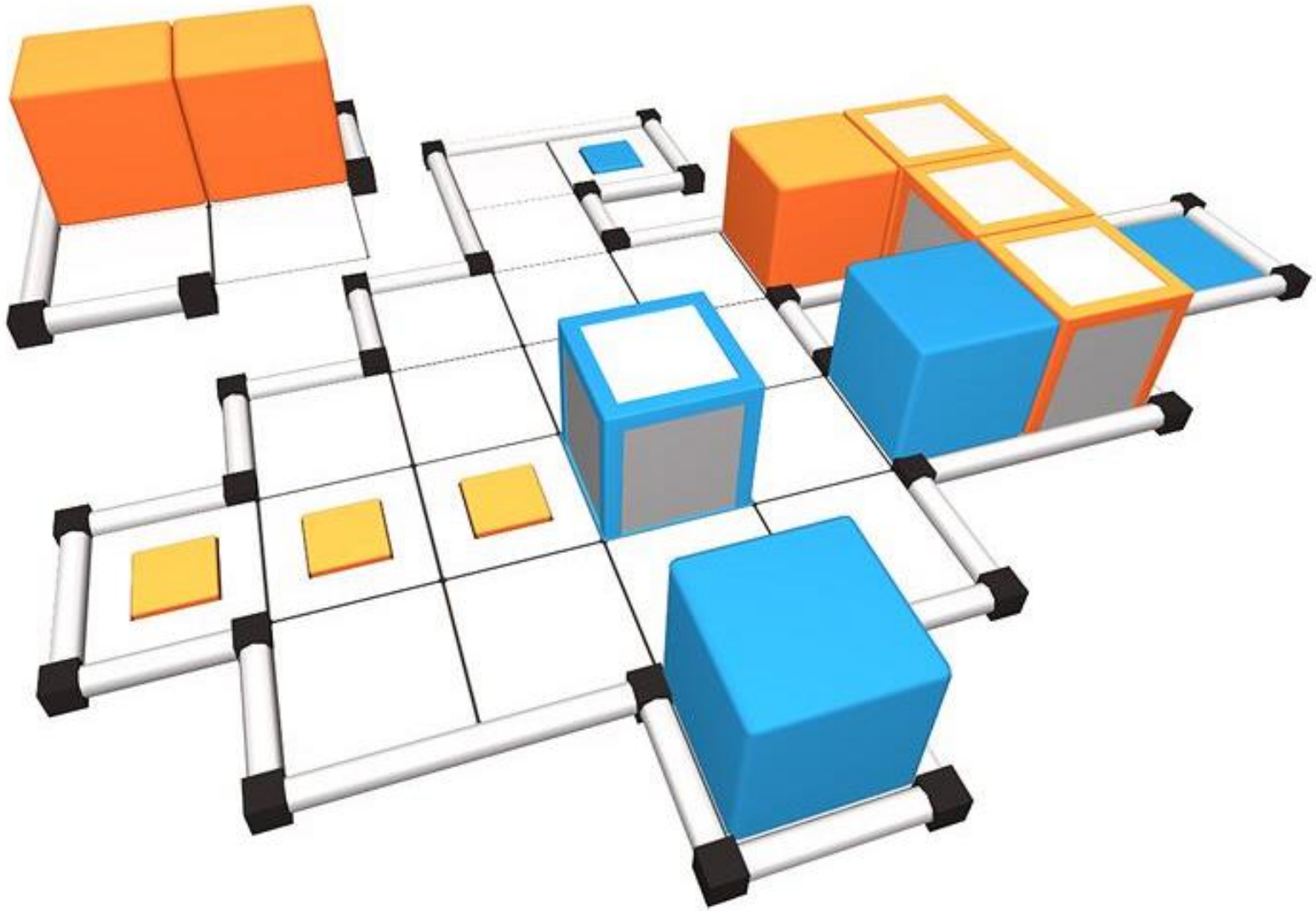
- Control over everything can be boring for players and complex for designers
- Where to give player freedom?
- How much?
- Freedom is expensive
  - GTA 5
  - Red Dead Redemption


EAST BOSTON
25
MPH

TYPE 11: SIMPLE VS COMPLEX

- Innate complexity: very complex rules
  - Simulations
  - “artificial balancing”
- Emergent complexity
  - Praised by everyone
- “Elegance” (simple systems performing well in complex situations)
  - **Remove elements with only 1 or 2 purposes**
- But character can mitigate the elegance
  - think at the tower of Pisa => no tilt, no interest

CUBOT



TYPE 12: DETAIL VS IMAGINATION

- Only detail what you can do well
- Give details the imagination can use
- Familiar worlds do not need much detail
- Use the binocular effect
  - Spectators in theatre mostly look actors at beginning
- Give details that inspire imagination

DIABLO 3

GAME BALANCING METHODOLOGIES

- A general method does not exist

- State your problem
- “Doubling and halving” instead of fine tuning
- Train your intuition
- Document your model
- Tune your model as you tune your game
- Plan to balance (even in real-time)
- Let players do it (in general, to avoid)

BALANCING GAME ECONOMIES

- How will the player earn money?
- How will the player spend it?

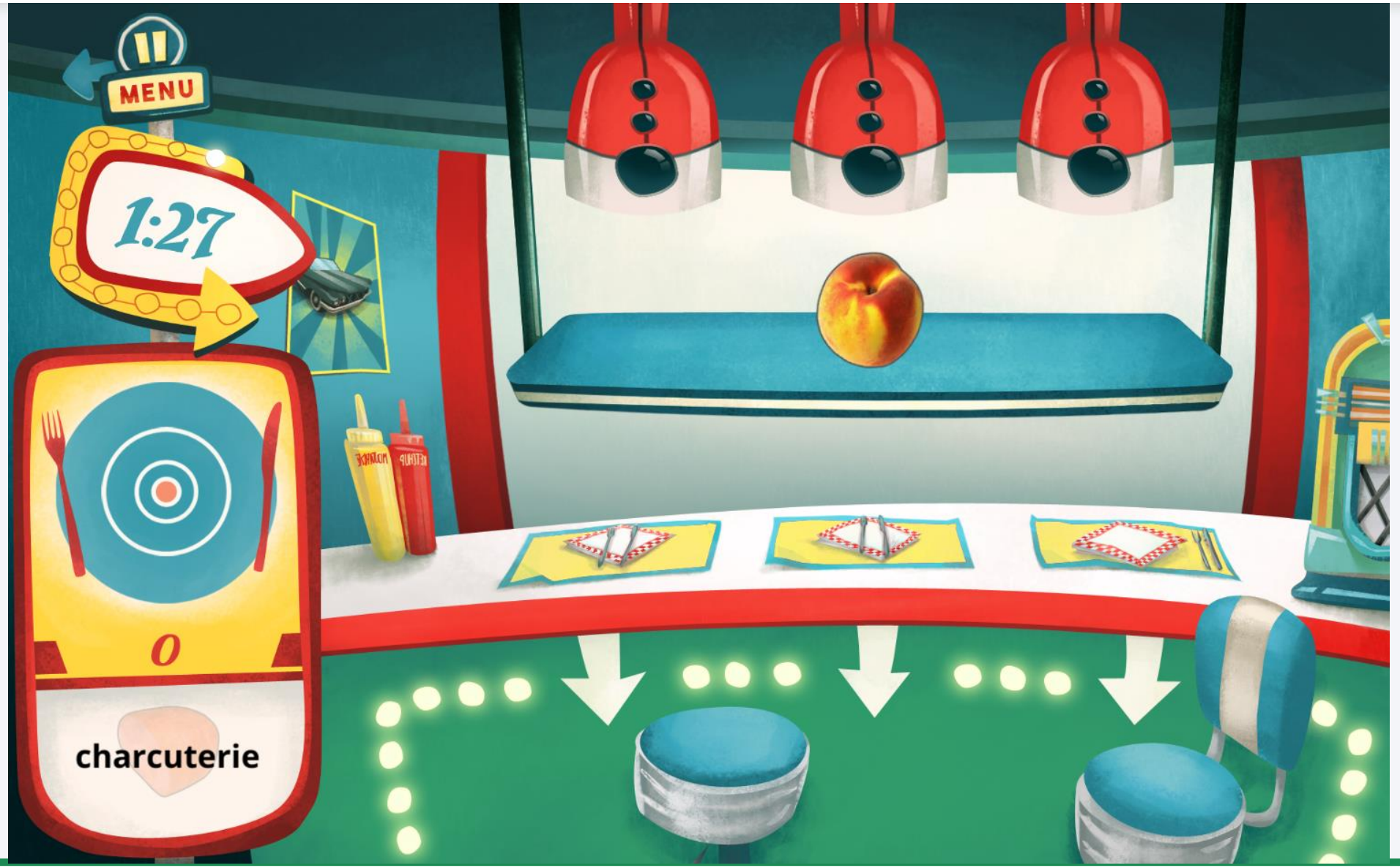
- Money can also be skill points

- Similar to balance any other mechanic of the game

DYNAMIC GAME BALANCING

- Dream: adapt the game to player's skills on the fly
- Problems
  - It spoils the reality of the world
  - It is exploitable by players
  - Players improve with practice

THE DINER



Nintendo style

Next act: Mechanics supports Puzzles

QUESTIONS?