

## Topics

Balancing and Fleshing out Games

## In class work

Project 2 brainstorm and teams

## Out of class work

Unit 3

Continue Project 2

## Required Reading

AGD Ch. 13 Balance (38 pages)

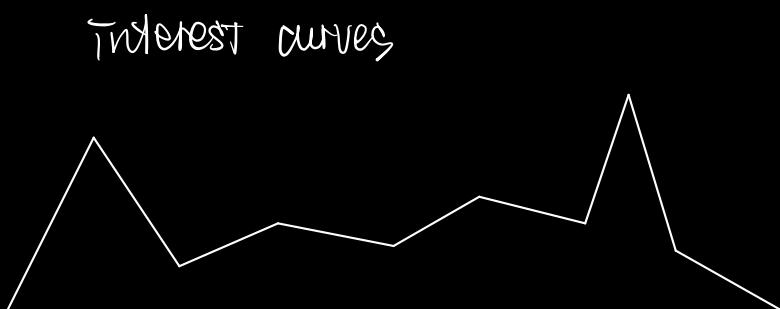
PMD Ch. 9 Flow (15 pages)

PMD Ch. 16 Balance (13 pages)

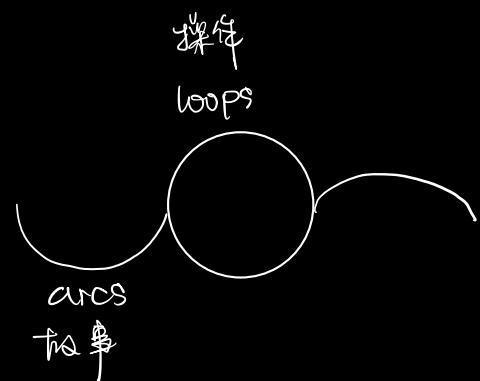
## Optional reading

AGD Ch. 16 Interest Curves (16 pages)

PMD Ch. 17 Feedback Loops (10 pages)



Assesing individual gears



# Balance

## Fairness

### Symmetrical games

- Put players into direct competition
- Assuming roughly equal skills
- Who moves first?

### Asymmetrical games

- To simulate a real-world situation
- To give players another way to explore the game
- Personalization - let players to choose/manage resources
- To level playing field - set standards or let everyone compete it's a tie
- To create interesting situations - combat between asymmetrical forces

### biplane battle

- Determine status' real value < by playtesting > then balance the totals

usually sums of values/resources equal for both sides

### rock, paper, scissors

- Don't let something supreme

## Challenge VS Success

increase difficulty with each success . but also tense & release

let players get easy part first

create layers of challenge course clear ☆☆☆

let players choose the difficulty level - harder for balancing < each difficulty >  
- could distract player < which one best? >

playtest with a variety of players

give the losers a break

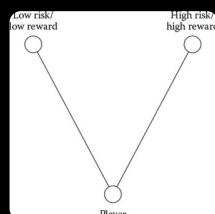
## Meaningful choices

choice  $\leq$  desire      overwhelm / frustrated

get rid of dominant strategy

## Triangularity

use expected value to balance



example : mario kart

- Manual or automatic? Manual requires more skill to use, but when used well, it gives you more speed boosts.
- Kart or bike? Karts have a faster base speed—but if you do a wheelie on a bike (which is risky because you can't turn during a wheelie), you go faster than the karts do.
- Grab power-ups? (risking a crash) or ignore them?
- Use power-ups? (risk breaking your concentration) or ignore them?
- Keep the power-up you've got? or dump it in favor of a new one?
- Use speed boost pads? They speed you up but tend to be in dangerous locations.
- Hit the gas early? If you hit the gas early at the starting line, you get a speed boost if you time it right, and a frustrating delay if you time it wrong.
- Left or right? Many tracks include forcing tracks that have a low-risk and high-risk path—and of course the high-risk path has more speed boosts.

## Lens #37: The Lens of Fairness

To use the Lens of Fairness, think carefully about the game from each player's point of view. Taking into account each player's skill level, find a way to give each player a chance of winning that each will consider to be fair.

Ask yourself these questions:

- Should my game be symmetrical? Why?
- Should my game be asymmetrical? Why?
- Which is more important: that my game is a reliable measure of who has the most skill or that it provide an interesting challenge to all players?
- If I want players of different skill levels to play together, what means will I use to make the game interesting and challenging for everyone?

## Lens #38: The Lens of Challenge

Challenge is at the core of almost all gameplay. You could even say that a game is defined by its goals and its challenges. When examining the challenges in your game, ask yourself these questions:

- What are the challenges in my game?
- Are they too easy, too hard, or just right?
- Can my challenges accommodate a wide variety of skill levels?
- How does the level of challenge increase as the player succeeds?
- Is there enough variety in the challenges?
- What is the maximum level of challenge in my game?

## Lens #39: The Lens of Meaningful Choices

When we make meaningful choices, it lets us feel like the things we do matter. To use this lens, ask yourself these questions:

- What choices am I asking the player to make?
- Are they meaningful? How?
- Am I giving the player the right number of choices? Would more make them feel more powerful? Would less make the game clearer?
- Are there any dominant strategies in my game?

## Lens #40: The Lens of Triangularity

Giving a player the choice to play it safe for a low reward or to take a risk for a big reward is a great way to make your game interesting and exciting. To use the Lens of Triangularity, ask yourself these questions:

- Do I have triangularity now? If not, how can I get it?
- Is my attempt at triangularity balanced? That is, are the rewards commensurate with the risks?

Once you start looking for triangularity in games, you will see it everywhere. A dull, monotonous game can quickly become exciting and rewarding when you add a dash of triangularity.

# Skill vs Chance

alternate the use of skill & chance

## Head vs Hands

### Lens #42: The Lens of Head and Hands

Yogi Berra once said, "Baseball is 90% mental. The other half is physical." To make sure your game has a more realistic balance of mental and physical elements, use the Lens of Head and Hands. Ask yourself these questions:

- Are my players looking for mindless action or an intellectual challenge?
- Would adding more places that involve puzzle solving in my game make it more interesting?
- Are there places where the player can relax their brain and just play the game without thinking?
- Can I give the player a choice—succeed either by exercising a high level of dexterity or by finding a clever strategy that works with a minimum of physical skill?
- If "1" means all physical and "10" means all mental, what number would my game get?

### Lens #41: The Lens of Skill vs. Chance

To help determine how to balance skill and chance in your game, ask yourself these questions:

- Are my players here to be judged (skill) or to take risks (chance)?
- Skill tends to be more serious than chance: is my game serious or casual?
- Are parts of my game tedious? If so, will adding elements of chance enliven them?
- Do parts of my game feel too random? If so, will replacing elements of chance with elements of skill or strategy make the players feel more in control?

# Competition vs Cooperation

## Competition

### Lens #43: The Lens of Competition

Determining who is most skilled at something is a basic human urge. Games of competition can satisfy that urge. Use this lens to be sure your competitive game makes people want to win it. Ask yourself these questions:

- Does my game give a fair measurement of player skill?
- Do people want to win my game? Why?
- Is winning this game something people can be proud of? Why?
- Can novices meaningfully compete at my game?
- Can experts meaningfully compete at my game?
- Can experts generally be sure they will defeat novices?

## Cooperation

### Lens #44: The Lens of Cooperation

Collaborating and succeeding as a team is a special pleasure that can create lasting social bonds. Use this lens to study the cooperative aspects of your game. Ask these questions:

- Cooperation requires communication. Do my players have enough opportunity to communicate? How could communication be enhanced?
- Are my players friends already, or are they strangers? If they are strangers, can I help them break the ice?
- Is there synergy ( $2 + 2 = 5$ ) or antergy ( $2 + 2 = 3$ ) when the players work together? Why?
- Do all the players have the same role, or do they have special jobs?
- Cooperation is greatly enhanced when there is no way an individual can do a task alone. Does my game have tasks like that?
- Tasks that force communication inspire cooperation. Do any of my tasks force communication?

# Competition vs Cooperation

### Lens #45: The Lens of Competition vs. Cooperation

Balancing competition and cooperation can be done in many interesting ways. Use this lens to decide whether they are balanced properly in your game. Ask these questions:

- If "1" is competition and "10" is cooperation, what number should my game get?
- Can I give players a choice whether to play cooperatively or competitively?
- Does my audience prefer competition, cooperation, or a mix?
- Is team competition something that makes sense for my game? Is my game more fun with team competition or with solo competition?

# Short vs Long

too short  $\leftrightarrow$  too long  $\rightarrow$  give players short immune when start

## Rewards

### Lens #46: The Lens of Reward

Everyone likes to be told they are doing a good job. Ask these questions to determine if your game is giving out the right rewards in the right amounts at the right times:

- What rewards is my game giving out now? Can it give out others as well?
- Are players excited when they get rewards in my game, or are they bored by them? Why?
- Getting a reward you don't understand is like getting no reward at all. Do my players understand the rewards they are getting?
- Are the rewards my game gives out too regular? Can they be given out in a more variable way?
- How are my rewards related to one another? Is there a way that they could be better connected?
- How are my rewards building? Too fast, too slow, or just right?

Balancing rewards is different for every game. Not only does a designer have to worry about giving out the right ones, but he have to worry about giving them at the right times in the right amounts. This can only be determined through trial and error—even then, it probably won't be right for everyone. When trying to balance rewards, it is hard to be perfect—you often have to settle for "good enough."

## Praise

## Points

## Prolonged Play

measure of success  
gateway to reward

$\leftarrow$   
natural human drive for survival

## Gateway

desire to explore  
access to new content

## Spectacle

music & animation

## Expression

special clothes & decoration

## Power

提高强度  
reach goals faster

## Resources

virtual money & items  
free to play blurs distinction  
between real & virtual

## Status

rankings &  
achievements

## Competition

solving problems

① 游戏通过奖励，逐渐增加

② 活用概念（结果将变长）

## Punishment — should be predictable

- ① punishment creates endogenous value
- ② taking risks is exciting - balance reward & balance
- ③ possible punishment increases challenge

shaming	loss points	shortened play
terminated play	Setback	Removal of powers
responsible deletion		

Punishment must be used delicately, since after all, players are in a game of their own free will. Balanced appropriately, it will give everything in your game more meaning, and players will have a real sense of pride when they succeed at your game. To examine the punishment in your game, ask yourself these questions:

- What are the punishments in my game?
- Why am I punishing the players? What do I hope to achieve by it?
- Do my punishments seem fair to the players? Why or why not?
- Is there a way to turn these punishments into rewards and get the same or a better effect?
- Are my strong punishments balanced against commensurately strong rewards?

## Freedom & Control

分析玩家行為，為何被制約？

## Simple & Complex

Innate Complexity 固有自然則

Emergent Complexity 自發

Striking the right balance between simplicity and complexity is difficult and must be done for the right reasons. Use this lens to help your game become one in which meaningful complexity arises out of a simple system. Ask yourself these questions:

- What elements of innate complexity do I have in my game?
- Is there a way this innate complexity could be turned into emergent complexity?
- Do elements of emergent complexity arise from my game? If not, why not?
- Are there elements of my game that are too simple?