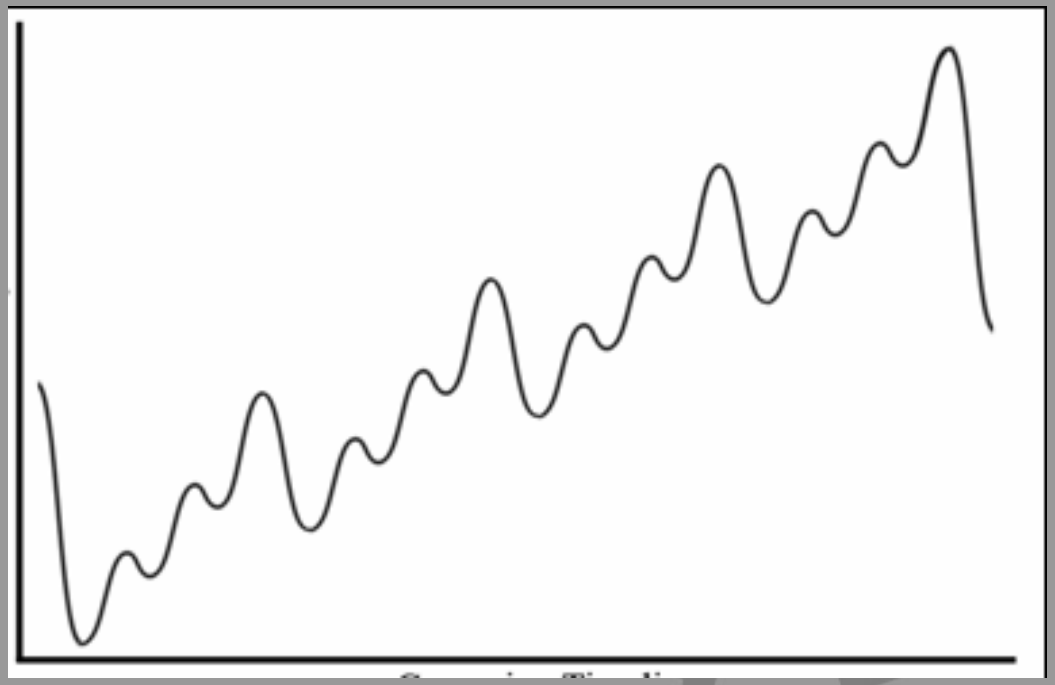
Combat Pacing and Resources



The Intensity Curve

- The Intensity Curve measures the engagement of a player at each point in a level.
- The Intensity Curve helps you deliver what the players need:
  - Time at the start of a level to ‘spin up’/get ready.
  - Vary intensity level so players can regroup/rest.
  - Adds power to the intensity spikes by comparison.
  - Help players feel smart/capable (“I got almost all the way!”)

What makes the curve go up?

- New content
- Varied content – including use of ‘expendables’
- Dynamics – exciting interactions of abilities
- Large game state changes (Boss Stages, Events)
- Uncertainty of outcome
- …

What makes the curve go up? Cont

- Unexpected content
- Experience – emotional triggers
- Impactful, short story – cutscenes, voiceovers.
- Rewards/achievements
- Resource Drain (Ammo, Time)

What makes the curve go down?

- Time
- Repetition
- Mastery
- Predictability
- Resolution
- Long Exposition

Limits

- Players need correct information!
- What limits the peaks:
  - Player processing ability
  - Forward thinking design
- What impacts the valleys:
  - Time
  - Ongoing interesting effects (flatten the slope)

Why you need down slopes

- A direct upward curve has no contrast.
  - "Exciting" and "dull" only exist relative to other things.
- Players need 'breathing time'.
  - Reassess goals/objectives.
  - Prep time (rearm/re-equip).
  - Co-ordinate with teammates.

The end of the Curve

- Link to your next curve!
- What does the end of your curve mean?
  - End of Fight: One side is dead
  - End of Fight: One side withdraws
  - Objective achieved
  - Time/Resource runs out

One game, two curves.

- The intensity curve for the same fight may be different for different players (more experience/exposure, different ‘parts’ of a fight (DPS vs Tank in a raid).
- The curve may even be different for the same player…the next time they play. “High Replay”=“Good intensity curve even the 2nd time.”

Applying the Curve to Combat

- You can have an effective intensity curve built into a simple combat system.
- This must be deliberately planned—it will rarely happen by accident.
- Understand how your curves interact – fight → level → game.

Combat Curve Example 1 - Melee

- Player has two attacks (quick, low damage Jab and slow, high damage uppercut).
- What is the curve for targets that have:
  - Low Defense, Low Hit Points
  - Low Defense, High Hit Points
  - High Defense, High Hit Points
  - High Armor that degrades
  - High Armor that toggles on and off (on time? On crit?)
  - Crit = 3 seconds of no Defense
  - Crit = Next attack does 3x damage

Combat Curve Example 1 - Hall of Kobolds

- Imagine a long narrow corridor populated by kobolds that only attack when you get near them (melee combat only).
- What is the curve if the kobolds are:
  - Randomly distributed?
  - Clustered towards the start?
  - The end?
- How would you get a good intensity curve just by placing the kobolds?

Applying the Curve to a ***System***

- While level design and enemy placement are extremely important, we want to focus on the system itself generating a good intensity curve.
- A simple combat system by itself usually just has a flat intensity curve.
- Adding hit points generally makes the curve rise over time, but usually with no peaks (or maybe one at best).

Special Events

- Special events can help create peaks.
- These raise the Intensity Curve because players can use and respond to them (they can feel smart/capable) and because they create variance.
- Examples:
  - Critical hits/Fumbles
  - Parries/blocks/dodges
  - Counters
  - Combos/chains

Varied Attacks/Weapons

- Varying the attacks a character can make (or weapons they can use) can create a more interesting curve.
- Examples:
  - Fast vs. slow attacks.
  - Attacks with side effects (stunning, for example).
  - Damage over time.
  - Damage adjustments based on target type.

M↔D↔E

- Intensity curve peaks and valleys are made possible by Dynamics, the interaction of mechanics that create interesting game play.
- Intensity curve peaks and valleys (and slope) are created by the Experience – the players ability to see/feel/connect with the results of the dynamics (which in turn are the result of the mechanics).

Resources

- One way to create upward curve movement is resources. Hit points are a simple resource that already makes a big difference.
- Lots of other types of resources exist:
  - Stun/Timers
  - Ammo for weapons/Limited use abilities
  - Energy/mana/rage for attacks (or defenses)
- Using a resource can move you upwards. Running low on a resource can more you upwards. Being out of a resource does not.

Stages

- Creating distinct stages in combat works well to craft a good intensity curve.
- Multiple boss stages triggered by hit point levels is the classic way to do this.
- It can be done other ways, and can be applied to non-bosses (even the characters themselves).
- Can feel staged in some cases – How do these stages fit the story of the game?

Stages Example

Altered Beast player stages

Mapping Intensity Curves

- This best done by actual observation of players – track “Oh, shit!” moments.
- You can also do this by ranking the upward effects relative to each other.
- Not all fights will have a good intensity curve—you are looking to make the *system* have one.

The odds of winning

- One important upward effect on the intensity curve is the players opinion of their odds of winning.
- Fluctuations in winning/losing serve to raise the intensity curve if they feel like they are under a players control/agency.
- This doesn’t work as well if the odds flip due to high randomness/things outside the players control.

Odds of winning cont.

- The main problem with tracking the odds of winning is that it requires a full simulation of the game (unless it is very simple).
- This means you are not required to do this, but simple proxies for “odds of winning”, such as percent of hit points remaining for each character, can often be a decent substitute.

Curves within curves

- How does the curve for a single fight flow into a full level?
- How does the curve of a level flow into the overall game curve?
- The importance of prolog and epilog
- Examples of good curves in a good system or a poor one

Due in Lab

- Select and expand on one of your combat systems from last weeks lab – Present in this lab
- Flesh out and add to that system
- Draw an example Intensity Curve (Including up/down lists)
- Write out an MDE section detailing what Mechanics, Dynamics, and Experiences your system creates, and why you think that's good.

Homework .

- Playtest report for lab including MDE doc and Intensity Curve
- Concept document for Project 1 included intended MDE and IC – Math! Experience!

Questions?