

# The Rambling Quest for a “Good” Boss Encounter in Grim Dawn (2018)

-Ceno, Praetorian

## Introduction

Initially starting as a discord-based discussion on ‘wackiness’ in video games, this is a bunch of feedback on the simplistic-seriousness of Grim Dawn boss design, with the intent of communicating the point that more complex encounters can result in greater “shock and awe” for players, which all in all make them more engrossed in the game as a whole. While Grim Dawn largely tries to stay very down-to-earth with what players are exposed to, I feel like its bosses—especially those which are optional—could do with a substantially greater highlighting in terms of player involvement or attentiveness. Grim Dawn does little in the ‘wow-factor’ department outside of a boss’s initial introduction, such as seeing the Loghorrean or Theodin Marcell for the first time.

Before we get into the fine details of my shower-thoughts on the matter, there are a few things I feel are important to admit, first and foremost being that ***I don’t expect anything to change in existing Grim Dawn content*** as a result of writing this feedback. This feedback is not a suggestion to go back and redo everything, but is instead meant as something to reflect on for future development projects. Another thing worth admitting is that, like all feedback, this is purely opinion and speculation (albeit with some concrete research to back up some claims here and there), namely ***my*** opinion and ***my*** speculation. Other users likely have different takes on the matter, and if so I invite them to weigh in. As a final admittance, from a technical standpoint, I’m going to incorrectly use the term ‘AI’ throughout this feedback. What I’ll be discussing is much less to do with anything relating to AI programming, and much more to do with what players think an enemy is thinking by virtue of what’s happening in-game. With that out of the way, let’s get into things.

## Suggested Reading/Viewing

I’ve been a hobbyist gamedev for a little over a year now, working on a small project in my spare time. Over the course of that year, I’ve read and watched hundreds of gaming-theoretic resources to better understand why developers do what they do. Relevant to this conversation on Boss AI in an ARPG, here are my recommendations on the matter; I’ll be making reference to some things made throughout the following resources:

[Immersion and identity in video games, Yaman Terzioglu, 2015.](#) This paper serves as a great background to the rest of our discussion if you have to ask “Why bother?” with respect to the purpose of this feedback. Insofar as we’re concerned, nothing past page 16 is really relative to us, but the case studies from page 17-on serve as good evidence supporting the first half of the paper, if you’re so inclined to read on.

[What Makes Good AI? | Game Maker’s Toolkit, Mark Brown, 2017.](#) An excellent video on all sorts of AI systems in all sorts of video game genres. The arguments I’m going to make in my feedback here rely heavily on concepts introduced toward the beginning and end of this video, but everything in between is a fascinating learning experience too. It also introduces our third and final recommended resource...

[The Illusion of Intelligence: The Integration of AI and Level Design in Halo, Chris Butcher; Jaime Griesmer, 2002.](#) In a PowerPoint presentation at GDC 2002, Bungie game developers lay out design decisions they made for the first Halo game pertinent toward engaging, ‘intelligent’ AI systems

and how those systems interact with and influence their environment design. ‘Pages’ 6 through 8, and their accompanying notes, serve as a sufficient introduction to what I’ll discuss ahead.

### **Anyways, the feedback itself...**

Grim Dawn bosses are boring. They run at you and slap you, or they summon things to run at you and slap you. And that’s essentially the full extent of their ability to exist. Bosses, while they may look unique, rarely feel so. To some extent Grim Dawn has done this by design, wanting boss fights that were not world-shattering and were instead more down-to-earth foes of political importance. I would argue that both could be accomplished via better mechanics, but the phrase ‘game mechanics’ is thrown around a lot and I’ve only rarely seen it well-defined. So before I go into suggestions of how to make ‘the perfect ARPG boss,’ I’d first like to set up a schema for player-boss interaction in the first place.

I suggest that, insofar as we can discuss game mechanics for an ARPG (or even just an RPG) boss, there are two levels of distinction to consider in terms of player involvement with those mechanics, and one preliminary definition worth identifying:

0. Pacing of an encounter. A measure of how much a player is capable of ending an encounter in such a fashion that will not result in an unfavorable ending. In simple ARPG terms, how actively can a character attack an enemy at any given time without dying for having done so at that time? This definition need not apply strictly to raw-spreadsheet-dps/tankiness metrics, however; instead, suppose the question instead is “how soon can I jump over Bowser, hit that axe, and drop the King of the Koopa’s into a fiery demise?” A big part of (A)RPGs is in having and using some degree of well-earned power; how different encounters modulate your ability to do so is the topic of conversation insofar as we’re concerned here.
1. One-way mechanics. An entity does something that potentially changes the pacing of the encounter, but there is not any further interaction. Example: an attack is thrown out at the player, and if it hits the player, the player takes damage. Provided the attack doesn’t kill the player, which would result in an unfavorable ending to the encounter, this is the full extent of the mechanic.
2. Two-way mechanics. An entity does something that its opponent can interact with by choice, and choosing to or not to interact with the event has differing results on the encounter’s pacing. Example: a boss summons a pet that attacks the player, but if the pet is killed, the boss gets a damage mitigation buff; players can either try to endure the boss+pet combo and focus the boss down, or kill the pet but deal less dps against the boss afterward. Note that the player taking more damage due to the addition of the pet is not the mechanic at hand—likely that additional damage is dealt via a one-way mechanic from the pet. The mechanic at hand is singularly the choice of leaving the pet alive or not, with either option having a commensurate effect.

A YouTuber under the alias of Huizui makes ‘Mechanics Explained’ videos for various Path of Exile encounters. I don’t particularly enjoy this nomenclature because by and large, many of these videos feature boss fights that only feature “one-way” mechanics; they are effects without a cause, so to speak. An example of such an encounter would be the [Lunaris/Solaris fight](#), in which there are two bosses that tag each other in and out of fighting the player. But that’s really it. Players do not have any interactivity with the swapping of the bosses, and only really need to dodge (or power through) individual attacks, much like in Grim Dawn. Alternatively, consider Huizui’s video on the [Doedre the Vile fight](#); as the battle draws on, the arena is flooded with various debuffing pools/bubbles to hamper the player’s efforts to survive. The player can actively choose when they want to ‘clean’ the arena by cycling it to a different set of debuffs while granting a buff to the boss. This is an excellent “two-way” mechanic that

gives players total control over the state of the boss fight while simultaneously keeping things very dangerous. As Mark Brown points out in his Game Maker's Toolkit video, the purpose of AI encounters is to present interesting gameplay. It isn't necessarily to crush the player's hopes and dreams, but simply to keep the player on their toes and engaged with what's going on. Enabling players to interact with such an AI goes a long way toward fueling that engagement and alertness.

In a discussion comparing Path of Exile and Grim Dawn, a friend impressed upon me the concept of 'spreadsheets over content.' He argued that that was the extent of the scope of Grim Dawn gameplay, in which you reach a certain threshold of numbers in various areas and then you proceed to wade into combat until you inevitably win. And he's right. This is not the case with Path of Exile, in which seemingly no threshold of numbers is attainable that enables you to seamlessly pierce through the game's content. My friend made the argument that this inherently made PoE's fights 'better' than GD's, and I can't say I agree...completely, at least. While, yes, PoE's fights do involve greater player interaction, there is rarely any 'choice' involved with them, only the illusion thereof if you intend to emerge from such fights victoriously. Ignoring the mechanics of the aforementioned Doedre fight, for instance, will absolutely kill you. I personally don't find this to be good game design. I don't think anything should be forced down a player's throat, or that players should ever need to do anything in a certain way. Ideally, I'd like to see both games reach a middle ground between each others' extremes, where mechanics could exist to make the fight easier, but stats could still enable players to persevere in ignorance or indifference to such mechanics.

In my now-ending sabbatical from Grim Dawn, I touched upon various other RPGs and MMOs...and some MMORPGs. One of these was Warframe, which by and large has not had a history for interactive or optional game mechanics. Warframe, in fact, is plagued by one-way mechanics that I refer to as "a loss of interaction." Grim Dawn has some of these too, as does Path of Exile. These are mechanics that, instead of creating interaction between a boss and a player, the player is forcibly broken away from the flow of the game. This most commonly happens in Warframe with invulnerability phases, such as those belonging to [Captain Vor](#) or [Lech Kril](#) (in fact, Lech Kril spends most of his fight invulnerable, which is awful). Preventing a player from even engaging a boss at any period of time for any length of time is a massive turn-off for me. Grim Dawn's Fabius/A.F.F. Bourbon does this with Blade Barrier, Cronley/Bourbon Clones do it (to a lesser extent) with an amp'd-up Maiven's, and I'd argue that even the Mad Queen's enrage is an example of this, because while not impossible to fight against, does make "manning up" somewhat ill-advised. I do bring Warframe up, however, because it does feature an end-game fight with a perfect balance between 'spreadsheets over enemies' and in using mechanics to better one's performance: [The Eidolon Hydrolyst](#). Throughout the fight, the Hydrolyst will spawn giant orbs that create thunderstorms around the area of combat; these thunderstorms will, in turn, warp the ground into a swampy mess that inflicts heavy damage against players standing inside. The 'giant orbs' initially responsible for all of this can be focused down and destroyed as they're spawned; however, because the Hydrolyst is constantly on the move (in a massive landscape) throughout the fight, advanced players may note that it will often arrive at safer lands untouched by its thunderstorms/swamps, and so may opt to look for continually better positioning as the fight drags on, using sufficient stat configurations to ensure they can reliably get from a dangerous point-A to a safer point-B. That was a mouthful, but in practice it results in a two-way gameplay mechanic that can be completely ignored either by player skill or stat configuration (or by playing [Rhino](#), but if everyone takes Rhino to a Hydrolyst fight, you're in for a bad time for other reasons).

As good as such two-way gameplay interactions are, I would not argue that they are uniformly essential for any fight to be a good one. Of the three games I've mentioned so far in this feedback, all three of my favorite fights strictly have one-way mechanics—Theodin Marcell in Grim Dawn, [Innocence](#) in Path of Exile, and [Ambulas](#) in Warframe (though Ambulas has interactivity, the choice of ignoring this interactivity is mission-failure, so I wouldn't consider it to be an actual choice at all).

Grim Dawn has also has a tendency to want to make story-required bosses somewhat simpler and easier than its optional bosses, something Path of Exile neglects, and I am firmly of the mind that GD's approach is superior—Warframe, meanwhile, makes all bosses—required and optional alike—relatively easy, which I don't think is quite the right call. In any event, one-way mechanics can still make a fight interesting if they are more than just different sorts of melee attacks...

...but one thing that Grim Dawn is sorely missing as opposed to its other RPG competitors is that of boss mobility and positioning. As I've alluded to earlier, bosses in GD usually just run up to and slap the player a bunch, with exceptions being ranged bosses—which exclusively use one or two very standard ranged attacks—or stationary bosses like Loghorrean or Queen Ravna (phase one) that tend to be summoners at range and melee bosses up close. Path of Exile and, hell, even Titan Quest had more complex movement mechanics on the side of bosses. TQ had the great fight against [Bandari](#) that I'll likely remember forever (even if I keep forgetting his name), an enemy that would continually teleport deeper and deeper into the arena. With Grim Dawn soon giving players more movement options with the upcoming augments for medals, I think it'd be the perfect time to consider giving bosses more randomized movement options and stationary attack patterns to complement them. There isn't really a lot to say in this regard, as there are plenty of examples of other ARPGs having more mobile encounters while Grim Dawn is far more stagnant in its combat. I think this is one of the few grave mistakes of the TQ engine, though for its time, its competition was not terribly different.

### **So...what do I want to see?**

Mark Brown summarizes the Bungie analysis into the premise of players finding enemies more 'intelligent' when they have more health and deal more damage. If we're to assume that 'intelligent' enemies make gameplay more 'interesting'—which to me seems like a reasonable assumption to make—then clearly this faux-intelligence is a worthwhile goal. But it's arbitrary and frankly harrowing when simple enemy attacks just wind up oneshotting players (which is, and always will be, why I think PoE is far inferior to GD), so there really ought to be a middle ground. Dangerous attacks are something of thin ice in ARPGs, but dangerous mechanics are much more welcome, as a dangerous mechanic does not even need to directly be what might kill a player.

Suppose, for instance, if the crystals that the Sentinel summoned were much more potent, but could be targeted and destroyed by players. This'd be a strong beginning of two-way mechanics being present in GD—players can choose to ignore or destroy the Sentinel's crystals, or try to bait the Sentinel out of their radius as they do now. Presently, this premise of 'baiting' enemies around is seemingly GD's primary attempt at developing more involved enemy mechanics, such as with Kubacabra's blood pools, but I'd argue that so far it is a half measure relying on player movement that is not unique from encounter-to-encounter, as players moving around is something they do throughout the whole game anyways. Kiting isn't especially mechanical or interactive, but forcibly nudging players to do so in moderation is not entirely a bad thing either. This is why I like the premise of enemy mobility, because if an enemy has unique movement patterns, then players would need to follow that enemy around in a likewise-unique fashion.

As far as I know of the engine right now, such opportunity for suggestions are slim. The turret system used by Theodin/Gargabol and the damage-pillars used by the Amalgamation/Ellena are among the most recent technological advancements in enemy skill usage, and both of those technologies are fixed-in-place, leaving little room for creativity. Moreover, gating special skills behind certain %'s of HP on bosses is also a nontrivial task, especially for mobile bosses—enemies are only allocated one 'enrage' skill at one threshold of health. Loghorrean, for instance, is three individual enemies disguised as one to make the fight appear to be three distinct phases, but you do actually kill two different

enemies when Logh's healthbar hits 66% and 33% health, respectively. So realistically, there is not a whole lot of room to work with for, say, Forgotten Gods without greater engine work. I do, however, think that with the pathing system rework teased for the addition of movement runes, enemies like Valdaran could reasonably begin to target ground-based areas of the map that are neither swapping positions with a player or teleporting right next to a player. Picking some position within a certain radius of their starting position semi-randomly to move/leap/dash/etc. toward could go a long way to spicing up combat with otherwise-stationary foes.

The vast majority of this feedback has focused on the premise of interactive, two-way mechanics, but unfortunately to the best of my knowledge I don't really know how much is possible within the confines of Grim Dawn. The aforementioned Doedre fight, for instance, is not doable to the best of my knowledge, even with significant Lua scripting, and being as we're so late into the lifetime of the game, it's worth wondering how much work should really be put into making more advanced bosses in the first place. So while some of this feedback might maybe be worth considering for FG design, I mostly write this should Crate ever decide to do a Grim Dawn 2 with an improved engine system. So, to summarize everything:

1. Players being able to interact with things, including the potency/power of their foes, is important.
2. Enemies being able to kite around the player, instead of vice versa, can help to add a unique flavor to encounters intended to be unique.
3. High danger, while capable of being a means of communicating what to remember and avoid in a certain encounter, is not the end-all-be-all of enemy design for ARPGs.
4. Optional content being harder/more advanced than story content is most probably an exceptional idea.