

AESTHETIC GRAVITY IN MODDABLE WORLDS

AWTNMY

What is a world without gravity? I'm purposefully not talking digital physics and rubber sausages here. I don't feel we need to re-litigate the nature of the universe and how to reconstruct it in the World Computer, and maybe we'd be more familiar with a word like stickiness if talking in a product sense. Perhaps throw away a loaded term like gravity altogether, but seeing as we are here to talk about worlds, fundamentally I am getting at the notion that no one has anything keeping them in orbit in a digital world without strong aesthetic gravity. I'm talking floating croissants.

I'm talking Aesthetics vs Metaphysics. We are going to explore how a design tool like the MDA Approach, can make your worlds better and your mechanics more engaging and extensible.

Aesthetic Objects

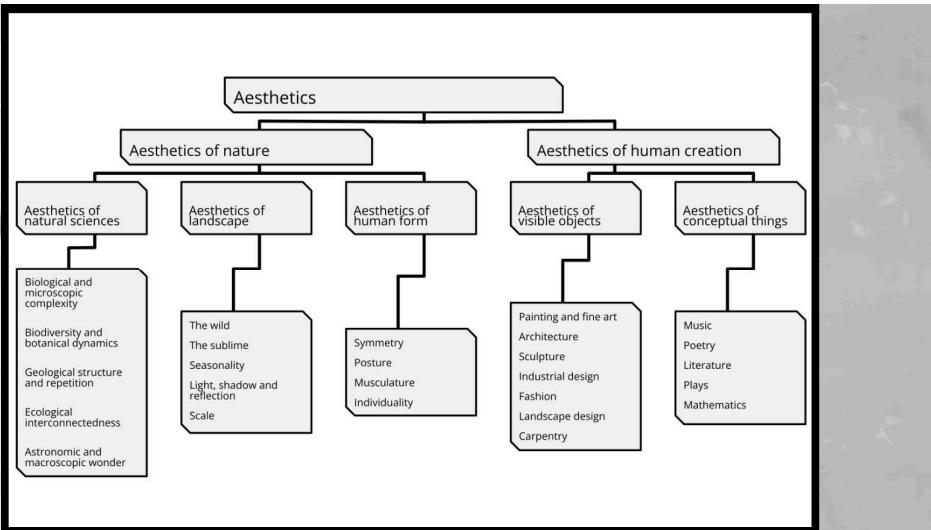
Philosophy can broadly be broken down into 3 areas of enquiry:

1. *Epistemology*, the study of knowledge and logic;
2. *Metaphysics*, the study of reality, its nature and structure
3. *Axiology*, the study of value. Aesthetics lies herewith, in the ultimate values of truth, goodness and beauty.

Aesthetic Object -> Aesthetic Experience -> Aesthetic Recipient

At the heart of it, games are a psychological experience. Frank Lantz gets at it in *The Beauty of Games (Playful Thinking)* where he talks about the value of games being enjoying the feeling of acting on a system. When we are making worlds we are looking to stimulate an aesthetic experience for an aesthetic recipient, and in order to do that our worlds must either be aesthetic objects or contain them. How many Autonomous Worlds (AW's) currently take their entities and objects seriously as aesthetic items and systems first?

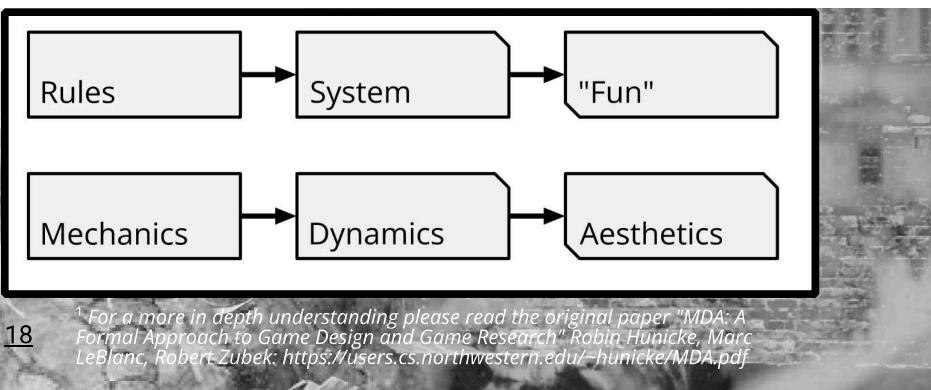
You may think you do. You may think you have tried to make your world beautiful, but the move people make in their heads is "Oh aesthetics is art and narrative" which allows us to then diminish the whole thing by making it a box to tick, not an issue we have to maintain and review at each layer of depth the systems operate on. Instead we go "I've made some pretty images, I've given it clever names. I'm done, back to the cool shit."



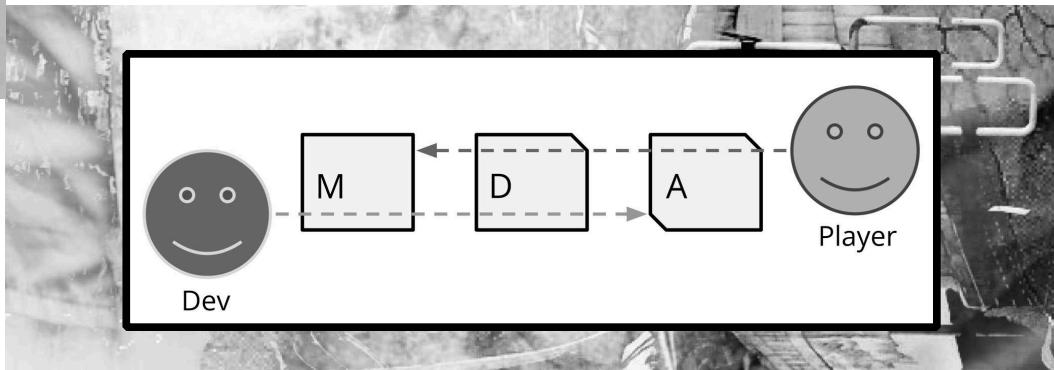
In traditional game design spaces there is this concept of 'lenses' (Foucault et al probably the OG here, Jesse Schell remixed for games). The idea being that, much like literary criticism, we can apply different critical frameworks to an artefact, game design, or digital world, and with that lens, deconstruct its qualities and better understand how to improve them.

heard u like systems in ur systems

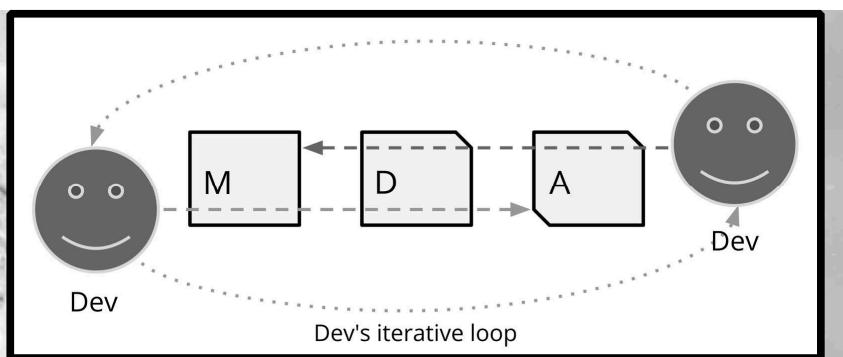
One such lens is **Mechanics Dynamics Aesthetics**¹, "the MDA approach." Mechanics refer to the specific, readable, components of the game, at the level of data representation and algorithms; Dynamics describe the run-time behaviour of those mechanics acting on player inputs and each other's outputs over time; and Aesthetics refer to the desired emotional responses evoked in the player, such as joy, fantasy, and challenge.



By analysing games through these lenses, designers can better predict how changes to mechanics will affect dynamics and, ultimately, the player's emotional experience. Designers can also work this lens in the other direction (or even in several passes), looking at how desired changes to aesthetics might need to be shown or made observable to the player by certain dynamics, and what mechanics must then be present to generate these. This holistic view facilitates the crafting of more engaging and balanced games by focusing on how different elements of the game interact to produce the intended experience.



Now, I'm not an MDA expert by any stretch, and in fact there are many flaws to this 20 year old theory, it gets read the wrong way round, taken as an exhaustive and prescriptive framework rather than the framing approach it was originally intended as. People too easily fall into applying it as doctrine for determining mechanisms, but with that caveat in place, the reason I have brought you here is that it can be an incredibly useful way of framing and balancing moddable games, and therefore fully onchain games and autonomous worlds.



If we are going to make games as composable extensions of other games, we need to have methods of making them coherent and compelling to the human psyche (aesthetics). This can't just be clever technologies and unique affordances, ground breaking primitives or mechanical innovations (metaphysics) - no one cares about them other than ourselves and we hopefully are not our entire audience.

Heartlessly stealing the words of a friend, "Zooming out, this is a wider problem of being able to approach design tasks holistically, when we have an engineer mindset of breaking things into their constituent parts." Remember, this is not a one-off process, this type of perspective review has to become embedded in your practice. So often, especially in traditional game design, we get lazy and deal with lenses in isolation and miss the point all over again.

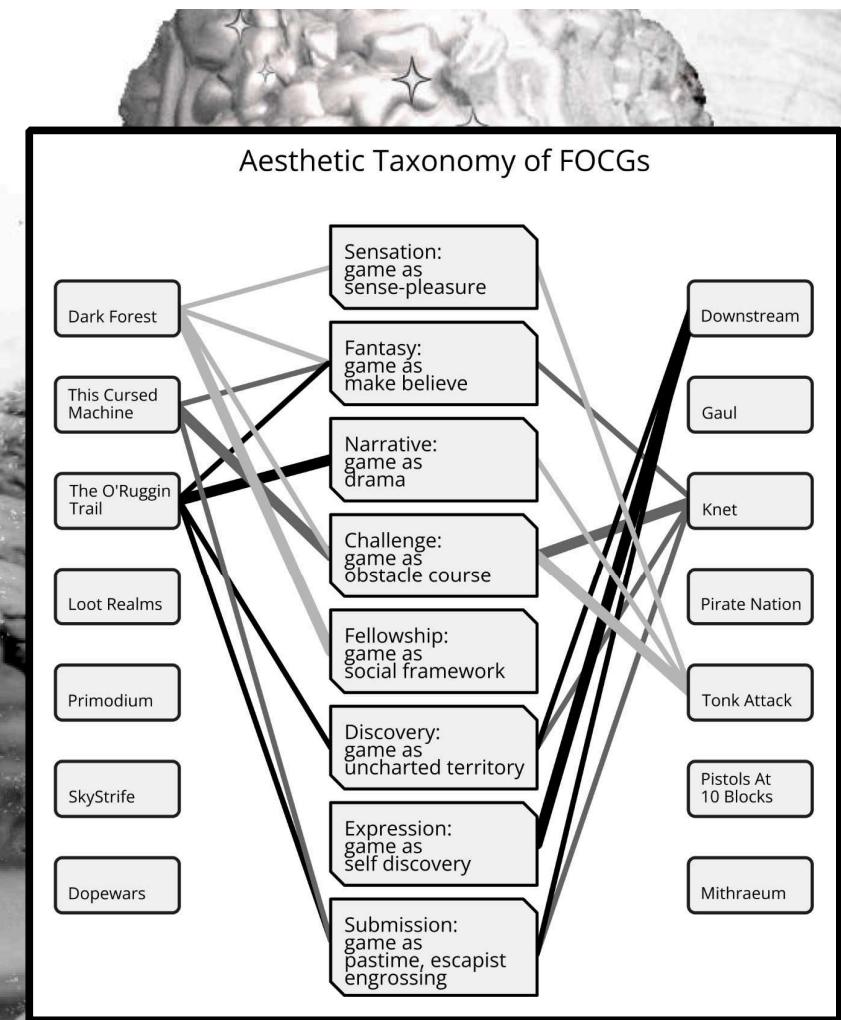
Fully Aesthetic Games

Let's take a look at some well known fully onchain games in the context of MDA, and out of pure ego and laziness some of my own, as it makes it easier for me to envision how mods, extensibility and composability combine across multiple titles that way.

PSA: The image opposite is *an aesthetic taxonomy* for games, formalised but not prescriptive (and perhaps more importantly applies differently to different players, or even the same players at different times in their lives or in the game's modalities or sequences).

I feel many fully onchain games (FOCGs) are made where the user is not the primary reason for creation - they are unidirectional: Mechanics first ($m \rightarrow d \rightarrow a$) with no assessment back in the other direction. Worse, many get stuck in $m \rightarrow d$ and never consciously make it to assessing the aesthetic impact of their implementation choices.

This is prevalent for programmers & technical designers in the mainstream games industry too. The Civ games were fraught with it throughout development due to their focus originally being on historic accuracy, political accuracy and other nerdery that designers are too easily drawn into ahead of more pressing priorities. Sid Meier (Civilisation's creator) is famous for onboarding all new programmers & designers with a phrase he earned the hard way: the player must "always be the star."



Interactive diagram: take a pencil, or a pen if you are confident, and fill in your thoughts on the aesthetics of the remaining games. The thickest or darkest line should be reserved for the primary aesthetic. The feeling your audience goes away holding onto after they have put down the joystick, and that they will return wanting more of.

Too often, developers create systems that are fun to make, forgetting to check that the same systems are fun to experience. We never get to analysing the dynamics our player must experience to be able to observe and grok those game systems, let alone understand our players' aesthetic motivations for seeking out, trying the game, and then staying there.

FOCG devs are especially guilty of this. Lots of us start not with "Aesthetics" but with our comfort zones - axioms, functionality, stability, rules, the smart contract, mechanics. Then, due to how much developer friction there is (lack of mature tooling etc.) iteration is slow and thus many stay in mechanics for the majority of their development cycle. Dynamics will still naturally (if unconsciously) emerge, but at the user experience end of this process, lack of design analysis leads to weak or non-existent aesthetics and therefore boring or poor games that are not compelling experiences. In other words, worlds without gravity or stickiness.

Even so, a glimmer of aesthetic, the mere suggestion of a graviton, will often find a way and leak through subconsciously. They may be weak or confused or conflicting, but the MDA methodology can be used to tease them apart and make them more clearly defined, and doing this later is better than never. Even if you find your FOCG has muddled aesthetics and that the only way to make them clearer and more well defined is to promote one that runs counter to one of your darling mechanics, you're better off killing the mechanic than having muddy aesthetics.

Any aesthetic that is present, even if not perfectly executed (but that has the potential to become a strong, coherent, and emotive drive for the player), is to be cherished and nurtured at the expense of almost everything else. Your art can be naive, your mechanics can be interesting but not perfect, your story a little clunky, but if your premise is strong and as a whole they deliver a compelling aesthetic, then it will work or be workable.

Leaving something to be desired

How is making a shit game with a good premise supposedly sound advice? This is because FOCGs have another super power: natural extensibility and composability. Cypherpunk philosophy, blockchain dev culture & the experimental economic models that FOCGs might afford, have helped incentivise open source and therefore incredibly composable, extensible and moddable games.

So long as you have a strong aesthetic that players engage with, then modders can be inspired by the game and its premise to unpick, iterate and improve upon it. Your game can have unbalanced mechanics, poorly implemented (but promising) design, intriguing but muddy dynamics, yet, if people enjoy it they will play. It may even be beneficial for FOGG devs to make games with strong immediate aesthetics that fall short in their implementation, leaving room for the community to come in and find gaps to fill.

This triumph in aesthetics and imperfection in mechanics can open up the opportunity for players to take a feeling they enjoy about the game and make it even better, or improve or fix mechanics that run counter to the dynamics they have observed and the aesthetics they love.

Player Instincts

We also want to explore how to make the perfect game, especially the perfect moddable game. So let's dive into what happens when we get an MDA iterative approach right from early on.

When it comes to modding and UGC, players instinctively assess immersion or compelling play (the success of a game's given aesthetics) and then, if they are enjoying it, decide if it can be a better or more coherent experience (more effective dynamics) by tweaking specific components of how the game is built (mechanics).

To incentivise community contributions we have to provide worlds with:

identifiable aesthetics that players can conceive of and imagine changing (to make "better" or more "fun" for themselves or their community)

observable dynamics with systems that it is simple to see the impacts of change within (initially just by player input but eventually with system balancing and adjustment)

AND *granular and transparent mechanics* where it is quickly apparent that a variety of hopefully simple or easy changes are available to perform upon flexible and modular rules, that range from being isolated and small, to interdependent and high impact or far reaching.

Enabling modding & UGC naturally makes 'Expression' an aesthetic of the game's meta experience for a larger proportion of players, but ultimately most games will have to have another clear and obvious aesthetic for modders to latch onto and explore, unless the game is a pure creative sandbox (although I'm not sure there is such a thing that has genuinely no other aesthetic). In the case where Expression is the dominant aesthetic, modders may choose to improve the 'expression' aesthetic by improving on player tooling ease-of-use or power, and so the game system's codebase even more urgently needs to be modular. Even then, without another strong aesthetic outside of "Expression" players may have trouble being motivated to create user generated content in the first place. Andbox and open ended platforms beware!

There are key differences between a game or world being moddable and it being composable:

Moddability = flexible and accessible game rules, open codebase, apis, high level language abstraction of gameplay systems, or UI tooling that grants access to many systems or speeds their modification, extensive documentation.

Composability = Moddability that aligns with the architecture of other similar games (much of the above and more) plus strong and open ended aesthetics and premises that can be expanded upon, permissive licensing to let the audience find new opportunities for the game/world.

Strong and Inside Everything

If a game's aesthetics are strong and run right the way through the observable dynamics and iterable mechanics, it will increase the percentage of players who contribute content. Additionally, the more coherent and defined the aesthetic and the more easily observed the dynamics, the more likely players are to find interesting overlaps and symbiosis between games to collide or compose. This is one of the other holy grail features of FOCG: if players start to find overlaps and are compelled by the aesthetics, the network effect can take hold and a web of games built out of games can occur. This is an especially unique affordance potentially only made possible, or at least incentivised at scale, by fully on chain and open source games.

To create a cohesive experience, aesthetics must be braided into the game's mechanics and dynamics, rather than being superficially added. Isolated aesthetics result in mere surface beauty. As opnpc said to me while eliciting feedback on this article, when it works "there's a sense in which all of the constituent parts of a game *feel* right together, when they're pulling from some collective source, and things fit together, and it becomes this thing with recursive beauty... you like the look of it, you like how it plays, and then you keep noticing how all the different elements feed into each other".

You Are a Dev and an Artist Now

Is this a question of "how do engineers formalise their process to be more likely to hit on the creation of art?" You may hear abstracts and platitudes like "great games have soul" while trying to wrestle with why your world ain't quite right, I hope this intro to MDA and its application in this new generation of games and worlds gives you a starting point on how to pick apart what that might mean, and how to improve them once you know.

We face a challenging task: merging the artist's focus on creating context-specific magic, unconcerned with platonic

ideals, with the engineer's preoccupation with fundamentals and mechanics. This requires blending two distinct mindsets. Our limited engagement with diverse fields and neglect of historical lessons means we often overlook the importance of human-centric creation, despite millennia of accumulated wisdom on the subject.

Successful aesthetics are entwined with the mechanics and the dynamics that make them occur and be observable, you cannot just add aesthetics on top, they have to be integrated throughout. So Anon - you are a dev and an artist now. You have a system you can neatly run your systems through to make sure of it, this is perfectly reflexive, it's so crypto, we are back. Go and make systems that are artful, make worlds with aesthetic gravity.

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