Tabletop Game Creator's Codex

A document designed to guide you towards being an effective tabletop game designer.

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With respect to my readers, simple terms are used throughout. I have attempted to present concepts so that the youngest possible audience can understand them.

Development Notes:

This book is a work in progress. There may be various inadequacies, inaccuracies and inconsistencies. Please bear this in mind as you read through the material.

Comments and suggestions are very welcome and have been enabled on this document. However, please **avoid commenting on typos**. Google docs has a very good spell checker and you'll be wasting your time. If however there is a grammatical issue, drawing my attention to it is much appreciated.

Additionally, if at any point you find the terms or language too lofty or unusual, please let me know and I can seek to clarify concepts better. Ideally I would like children to be able to understand the language used in this book as well as adults.

Introduction

READER QUESTION (respond with comments): I want to take a 'proof is in the pudding' approach with this book. I don't want to waste any of the readers' time verifying why they should care about what I say. I'd rather just get straight to saying it. I know that's not a norm, but I don't see the value in "I've achieved X Y Z" when I could be teaching and inspiring the reader. I think this will be especially resonant with readers who aren't already in the industry and just wanted to learn about game design. I want to hook people with nutrients, not credentials. Is this a good approach? Does this concern people? How important are credentials to you as a reader?

REVISED 22 Nov 2022 Though I once thought of my games as creations, things I had brought into this world, I now consider them to be *discoveries*, and myself an explorer. Every game anyone will ever create already exists, we just can't see it through the distracting and crowded portal of *reality.* You know the stuff. If reality is infinite, so are games. Every place in which you look, you are looking at part of a great game. Why am I telling you this? Because it's exciting! You're thinking about exploring time and space? Alternate realities? That's pretty awesome! The future is going to need people like you.

When you create a game, what you're actually doing is revealing an arrangement of information that was previously obscured, but was in fact always there. Thus as you explore your ambitions and ideas as a game designer, try to keep in mind that making an enjoyable game is one of the more complex things a person has ever tried to do, and I do not believe anyone finds it easy at the start. No game is original and the art of game creation evolves from the ideas of previous pioneers much like language and biology evolve from previous iterations.

You are part of this process and if you wish to engage in it efficiently, it helps to remember that this is a process demanding time. Each moment you spend worrying about whether you're smart enough to be a designer or if your idea is original enough is time you could be spending creating games and getting better at it.

Ultimately, the process that will allow you to identify the answer to those worries is the exact same process that will make you a good game designer. The answer you'll find will always be 'yes, you are good enough'. No possible intellect could ever be strong enough to rule out the possibility that you, by whatever random assortment of qualities and flaws you possess, won't one day be the creator of the greatest game of all time.

READER QUESTION (respond with comments): Does 'tips and tricks' sound too amateur / casual in the paragraph below?

Among an assortment of tips and tricks, this book will aim to guide you through the process of creating a game from the perspective of the designer / developer, whilst also offering advice on the commercial capacity of games (in the interest of supporting your career as a designer).

I will aim to approach this subject from an objective perspective, considering the various values and ambitions of both designers and players in a manner that best serves everyone reading this book. Bias does not serve the process of analysing games, and I have found it consistently beneficial to try to identify and isolate the 'habits' of personal biases. *For those of you interested, a list of 'cognitive biases' is available on wikipedia and makes for a **very** enlightening read, especially for game designers.*

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Part 1: Philosophy and Approach

Beneath many of the variables and considerations when designing a game, you might simply find yourself ‘stuck’. This is common, it is not a symptom of poor abilities half as often (in my experience) as a symptom of narrow approach.

This section aims to help you, as a designer, resolve those situations where you aren’t even sure where your problem is hiding.

NEW! 28th Dec 2022 The Purpose of Your Project

A common early barrier and sometimes also a sneaky obstruction in later development is sometimes that a developer has not fully identified what their ambition is for their game, why they are making it.

I think the most important aspect here is that you have an internal image of the games functionality that you can use to measure your progress against, both over time and within each individual design decision you make.Without this you're potentially going to struggle to assess the impact of each alteration you make to the design, and you might find yourself more prone to being unsure which feedback is worth following and which is not.

This is especially tricky in that changes can feel good, but also not serve or even be detrimental to the goal of the project. Again, if you don't have at least an idea of what you want the project to achieve, it can be very hard to design towards it. You might find a really fun mechanic and stick it in because it's fun, rather than saying "This is great, but it doesn't serve my aims for this project, so I'll set it aside for a different project."

When you climb a mountain, you're not doing it to climb a mountain. You're doing it to DEFEAT GRAVITY. That's how I approach making games, and yes, it's intentionally dramatic. I find emotions are generally more motivating and easier to suspend in our consciousness than masses of information, and I find that they make for much better targets than something like 'create a game that simulates the human ability to cope with the challenges of scaling a treacherous mountain.' That's generally not how people seem to interpret experiences. They experience them as 'brutally hard decisions made with little margin for error' or 'Using your wits to make the most of the emergent scenarios of an unfolding mystery' or 'searching for a powerful arrangement of components amongst a dysfunctional mass'.

So let's pretend you're not making a game at all. You're making an experience. You're making memories and planting them into the minds of those willing to adopt them. Have an idea of the feelings, the experiences, the memories you want your game to deliver, and you'll have some means of measuring our progress (or derailment).

NEW! 28th Dec 2022 Identify Bias

It's ok to have an opinion or specific tastes. When designing games, it's not ok to not have a reason for it.

Your personal tastes can grant you a passion for certain designs, and that passion can translate into a greater ability to pursue design improvements in the designs you care about. That said, I do not believe it is *always* the case that the best choices for a design are the choices

and decisions that are similar to that design overall. Sometimes your answer is found outside your passions and ideals. For this reason, I think one critical underlying principle of overcoming barriers as a developer or designer is that you are constantly looking for places where you believe you have 'solved' a concept within the art of game design. What I mean by this I'll illustrate with the greatest mistake I've made so far as a designer; I assumed randomness was bad.

Luck in games is non-meritocratic, it's not a true test of our abilities and performance in a '*fair*' trial. However, to quote my mother; "Life isn't fair". She was right. Life isn't fair, and games aren't always fair, and that's sometimes a good thing. Rather than testing our ability to manage definitive, explicit variables and produce inevitable results, some games test our ability to handle misfortune, strategically and emotionally, or challenge us to overcome handicaps through explorative means. Maybe instead of trying to win a straight line against someone faster, we could move the finish line off to the side once they've built up momentum. Some games allow that and sometimes it's great.

My point being that I read a few books, read a few articles, and designed a few games. I'm an unlucky person, historically speaking, so I don't like leaving things to chance. I like to control outcomes with my decisions. The issue as a designer then arose when I accepted the notion that I had 'solved' the luck / skill decision, and so always favoured skill and definitive information rather than randomness.

Each game I made where a dash of randomness would enhance the delivered experience, I would fail to add that randomness because I had closed that decision to any further considerations. These attachments to 'solved' principles in game design can sometimes present a designer with an interesting, if invisible, challenge that produces some wonderful and innovative solutions, and subsequently great games.

On the other hand, assuming a specific answer is always the best answer for a decision can completely disarm a designer or developer, who might spend months or years searching for answers without thinking to look directly under there knows, where a simple solution was hid by their assumption that it couldn't possibly be found in that place.

So, remember, there are no solutions, and your biases will try to tell you otherwise. Even the most consistently poor design decisions, in the right situation, can have an incredibly positive impact. Try to remain open minded to how great solutions might appear and where they might be found. Play games you don't like, listen to feedback you don't like, read books you don't like. Passion should, in my opinion, drive art, but a lot can be learnt from giving all perspectives some thought. Maybe your 1v1 duelling game is better with a roll and move mechanic.

Mistakes to Make (unfinished)

Many guides will tell you what mistakes to try and avoid early on, and I'm going to offer my own contributions in the next section,, but I'd like to begin with a different approach, by suggesting which mistakes you **should** make.

You should spend about 90 hours creating a huge database of items, events and characters for a game that doesn't even have a single mechanic tested yet. Pouring out raw content isn't an effective means of developing a game, but if you've found yourself doing this and you enjoy it, go along with it. You'll develop an ability to produce variable content and game elements quickly and effectively.

You should stubbornly ignore repeated feedback coming from basically every person that plays your game, naively assuming that you're the only person able to perceive some as of yet undiscovered truth of game design and that it is your mission to advocate for this truth until the whole world sees its glory. This is an important part of the process of realising you've gone mad with power, completely lost any idea of what is and isn't effective game design, and probably need to go out and talk to a few people instead of sitting on your computer for 75 hours a week writing rules for how other people can behave. And then somehow after that, you have to consider that you might not have been insane at all, and maybe you actually can see something that 150 players couldn't see (which sometimes happens when you start thinking about things other people aren't thinking about).

You should delay pooping and eating in favour of finishing that amazing mechanic or bit of fluff because this will teach you very quickly that there is no single moment of design good enough to warrant falling over malnourished and pooping your pants. This is actually a lie, those moments do exist, but they usually come when you're relatively relaxed and comfortable. My point here is really that it's easy to under-estimate how important self care is. You should be drinking water, getting exercise, and socialising. Tunnel vision is not healthy for creative pursuits.

Common Good Practices

Whilst there are already many fantastic resources on this subject, I'll offer my own observations here;

Share your game. You need to have it tested by other people as much as possible, even if it's a solo game. Ideally you want most testers to be in the target audience. COMMENT

Build a community. When you get players, invite them to an online community for the game. It's basically a free by-product of testing the game, and having a community is an almost entirely positive thing (you can look forward to being your own complaints department though). This is something many new developers fail to do, and they're losing out on a ton of benefits.

Take care with your spelling and phrasing. A lack of effort in creating prototype materials is usually quite apparent and supports negative assumptions about the quality of the prototype. A visible lack of effort can lead potential players / testers to assume you haven't put that much effort into the project, especially if they don't understand the work it takes just to get a functional game on the table. If you've gone to the vast effort of making a game, go to the small effort of presenting it with due care, checking and correcting spelling where you can and staying on top of rule delivery issues. This will also help avoid a lot of feedback that is just pointing out obvious issues you could have easily found yourself.

Part 2: Design

Here I'll run through some generally useful things to consider when designing your game, from overall approaches to specific decisions. I'll cover the foundations of design, the ground level understanding upon which I've built my overall knowledge, and then I'll present a range of considerations that become situationally useful depending on my design goals.

Foundations of Design

The Key Elements of a Game

It helps not only to understand what the core elements that make up every game are, but also what the impact of these elements can be on the experience a game delivers.

Components
The physical, tactile materials your game is made from. If your game is aimed at children, you probably won't want a format that involves numerous small pieces, because they will lose them, or eat them, gaining their power and resulting in genetically advanced super-kinder that cannot be controlled. Here are some considerations;

Where will the game be played? If it's outdoors you have to consider the environment. If it's in a preschool classroom you might want big colourful pieces that can't fit in a child's mouth and are easy to track down when tidying. If it's a tabletop RPG it might be played in a 'gaming room', so you can potentially design around the player's ability to leave it out on a table between sessions, enabling higher component amounts. If it's a travel game you might want more spares since no one is going to fly back to Venice to look for their custom 11 sided dice they need to play 'Dice of Wrath: travellers edition'.

Theme

I'll start with my definition of theme. The theme of the game is the combination of the presented setting and elements within that setting. The 'context' from a narrative perspective.

Theme is important both in the appearance of your game and conveying information. Themes prompt assumptions, most players make assumptions and if both of these assumptions match up it can make learning the game much smoother and reduce the amount of mistakes in rule pickup (though this doesn't mean you should lean on assumption and intuition when writing rules). The player standing behind you holding a scythe might be far more concerning in a dark, bloody battle royale setting than they would be in a sunny farming simulator. A suitable theme can help players learn a game faster and make the occurrences in the game more believable and 'real' feeling. Run a mental check every now and again to think about the theme and what alternatives you might have.

When thinking about what theme might fit your game, consider the following; which things function in a similar way to your game, on a mechanical level. Do the mechanics in your game involve refinement or growth, such as in a deckbuilder? Then maybe that could represent evolution or bioengineering? Or maybe your mechanics involve chain reactions and triggered effects? In that case they might be better presented as a simulation of how ideologies and religions spread, or flames spreading through a warehouse. Ask yourself 'what effects / processes are being simulated'.

What can help a great deal here is having a broad basic awareness of a lot of concepts within the world. The immune system, the social structures of insects, the curiosity of a Crow, a jungle in a cavern. More realistically, talk to lots of people about the mechanical concept of your game and this will allow you to borrow their knowledge of the world as well. They might say "that sounds like how Termites build termite mounds!'

<u>Victory Conditions</u>

A core part of any game are the conditions under which a player or players are identified as the winner. For many games this is no more complex than having the most resources or having progressed the furthest, but there are often many viable victory conditions a game could employ. The winner could be ‘the surviving player with the fewest upgrades’, ‘the first player who finds a way to lose after becoming immortal’. It doesn't need to always be a straight race along a linear path.

Objectives can carry more weight than just being a 'win' condition. You can have the consequences carry over into the next game, supplying other game components such as envelopes or game diary sheets so players can develop a sense of progress and value within each victory they achieve.

It's also not inherently a bad choice to use simple victory conditions that might be considered bland in isolation. You might not want players to be too focused on the mechanical functions of ‘winning’ the game, but to instead focus on other parts you feel are stronger. This doesn't mean you shouldn't give the victory conditions a lot of thought, but keep in mind that dramatic or climactic endings fit more easily within some games than others and may not have much potential to enhance the experience your game provides. Apply your attention to where you feel your current game design can best benefit from it.

Mechanics

Game mechanics are a set of tools that allow you to simulate various things within your game. As you spend more time designing and developing games you’ll get better at choosing the right tool for the job, applying the tool in an effective way, and gauging which combination of tools will best help you reach your design objectives.

EDIT NOTE: Explain the personification concept in detail.
REVISION IN PROGRESS (i got sleepy) A technique I’m very fond of here is *personification.* By regarding each mechanic as a person with dreams, aptitudes, weaknesses and preferences in who they hang out with, I’m more easily able to maintain a mental library of mechanics and quickly assess where they could be useful. Dreams might be the distance between a mechanic's potential and its current average performance. I consider that roll and move mechanics have many dreams; their potential has not been explored, and they’re a risky investment since they’re not proven to work well among modern audiences. Deckbuilders on the other hand have no dreams, they’re living their dream! Well valued by society, pampered… but maybe they do have dreams, of getting away from it all, away from the trends, the expectations, and doing something weird. Granted this probably sounds insane, but if you’re sitting around creating little fake realities, sanity might not be a card you can play anymore.
Aptitudes are the functions at which mechanisms are especially good. A lot of mechanics can simulate growth, but if you want *explosive* growth you’ll want combo-building, maybe engine

builders and effect sequencing. If you want a mechanic that's

Rondels (a circular sequence of triggers / effects) are ideal for simulating the passing of time, or swaying of culture, but might not be so effective at simulating a battle or a sinking ship (but don't rule them out!)

There will also be times when you simply are not currently good enough at designing and combining mechanics to achieve your design goal. Sometimes this might lead you to conclude that some goals cannot be achieved within your current design. This is in my experience never true. If you are flexible, conceptually adventurous and willing to step away from the task and take some time doing research, there is a way to achieve almost anything in tabletop game design. Judging when to try and break through an obstacle and when to head in a different direction is part of the mysterious science of game design.

Playing lots of games and reading rulebooks is a great way to not only build an internal library of mechanics in your memory, but also of how they can be applied, which situations they work well or poorly in, and how they function in varying combinations (which I'd arguably is very close to the core of the 'art' of designing games, painting with mechanisms).

I will note that it's not unheard of that very talented artists coincidentally or intentionally avoid the art of their peers in order to maintain their own unique 'flavour' in what they create. I believe that through discipline and self-moderation a designer can avoid relying on the ideas of other people and benefit from an extended knowledge of the impact games can have on the world.

Anything that develops your creative problem solving skills is usually healthy for a game designer, since picking and integrating mechanics is a form of creative problem solving.

Audience (State: needs work)

I think its not only beneficial, but extremely important to keep your audience in mind as you design and develop your game. I have come to view my audience as three 'theoretical' audiences; Intended, Optimal and Actual, which I'll explain below;

Intended audience is the audience the game is intended to entertain / serve.
Intentional design is typically the most effective. That said, I believe it is worth being open to the possibility that in following an intended path, you might come across an opportunity to explore

another more rewarding path you had not intended to explore.

I consider this distinct from 'Target audience', which I consider to be the audience the game is being marketed towards. This might justifiably be a fourth audience type, but I will spare my thoughts on this, as I'm not a marketer and I feel target audience is a well explored concept.

Optimal audience is the audience your game is best suited to entertain / serve. When making a design choice I advise considering not only how it services your intended audience, but also which other audiences it might better serve, even if it takes you into design space you are less familiar / experienced with. There may be times during development where you are actually much closer to an optimal audience that is different from your target audience, which at that point may still be very far away.

Actual audience is the audience that is actually drawn to your game. It can be beneficial to pay attention to this as you present your promotional materials, host playsets and talk about your game. This should not be assumed to be your ideal audience, even in cases where the game is selling well. This differs from the intended audience in that there can be a difference between the audience you tried to design your game for and the audience it is actually attracting.

For example you might make a game with lots of tiny props and models that you wanted to entice children to play with, but the models are so appealing you instead attract a mature, employed audience who are willing to pay increasingly higher prices for these models. You're then prompted to decide which you are more passionate about; providing the experience you initially cared about vs making lots of money! It's more complex than that, but I just wanted to poke fun at sellouts.

So, try to keep audiences in mind, and always consider the difference between who you **intend** to make a game for, who is best **served** by your game, and the **actual** audience drawn to your game during development.
Whilst each player will experience each game in their own unique way, patterns exist between the combinations of player and game characteristics. I operate on the assumption that each person / player attributes different values to different experiences based on factors such as what experiences they've already had, where they are in life and current events that may impact them. The science of predicting what someone will enjoy is one I feel is currently well beyond our means, however I do feel that in all situations it serves a designer well to consider how each part of their game and each alteration they make serves their intended / optimal audience. I'll try to emphasise this occasionally throughout this book, but consider this a key observation; **Always keep your assumed end-user in mind.** UPDATED 24 Nov 2022

n'consider this element in terms of how it serves your target audience / ideal audience', I will

urge you to adopt this as a habit as best you can, and I will only occasionally encourage this habit throughout this book. It is an approach that I have found to be relevant and beneficial at all times, in all situations. Target audience is **always** an important consideration.

Product Design: Name of the Game (MOVE TO DEVELOPMENT SECTION)

Though it might in some way seem superficial, the name of your game carries a massive amount of weight and importance when it comes to getting people's attention. This tiny, easily overlooked portal is the only part of your game most of your potential players are going to encounter naturally. Not only can this impact how well your game sells, it can impact which and how many playtesters and other investors the game attracts during development.

Names become recognizable to the relevant communities over time and changing them can result in the loss of a lot of that recognition. So, the name is really important and you don't want to rush picking one, but you also don't want to delay picking one, stalling the game's development and growth of its community. Tricky huh? Well, fear not! In this portion of the book I'll first outline the role a game's name plays, and then I share a method I use for generating 'good' names quickly.

What does a name do?

First let's identify *what a name can do for your game*;
> Identify The Game.
> Generate Curiosity.
> Generate Accurate Assumptions

Identify the game

The ideal game name is easy to spell, so that it can be typed into a search engine or message to a friend with minimal effort and maximum accuracy.
It's ideal if it's easy to pronounce, but having an odd pronunciation could make it more memorable. My main concern here is that its probably best to avoid a name that can be pronounced in multiple or non-obvious ways, like Eischeurtu, which could be 'eesh-yurta' or 'eyes-che-urtu' or 'ee-sure-to'. You may want to forgo this advice for a culturally accurate name, but still consider that if this name is heard, not read, the listener might struggle to correctly put it into a search engine or reference it to someone else.

Generate Curiosity

Some names suggest more than just information, they almost tell a story, albeit in very low resolution. To quote Rule of Carnage; "Games can sometimes be grouped into being verb games, which are about what you do, and adjective games, which are about what you feel. Verb names can be

effective for verb games, but adjectives can be more effective for adjective games. If the game is about racing around in a storm, Storm Riders might be effective, but if the game is about being trapped in a storm, experiencing its nature, its struggles and dangers then just The Storm might work better."

Generally verbs help here, since they present a strong clue as to what the game involves along with a sense of something happening. The name Storm Riders might lead you to think of racing or navigating a vessel through dangerous environments. Riders Storm doesn't really make me think of anything, but is somehow more intriguing; Is Rider a character? Am I being told that Riders are storming something? (granted this probably isn't how this would be interpreted but it illustrates my point). I feel less informed, but more curious.

This will often cost you in the next parameter, damaging how consistently your game generates the correct assumptions about the actual content of your game. They are not mutually exclusive, a great name could both communicate the game's content consistently **and** generate curiosity and interest, but they do tend to contend with each when a name is being created.

Generate Accurate Assumptions

When someone reads a name they're going to generate a number of assumptions in their mind about what that game involves. This then essentially serves as information to the person, on which they'll base the decision of whether that game might be of interest to them.

There are three assumptions I think people make when they read a name. They'll guess;

> The challenges the player will face during the game.
> The mechanics used to simulate those challenges.
> The theme of the game.

Additionally, but less vitally; The weight / target audience of the game. Details like this tend to not matter as much, since the purpose of a name is to entice the **Ideal Audience** of your game into seeking more information about it.

I doubt we'll ever truly know how important a game's name is in the success of that game, but I do know that I'd rather put *too much* thought into it rather than *too little*.

Creating A Name

Here I outline one method I use to generate ideas to help me name my games.

Step 1: Note on a document your game's core gameplay challenges, mechanics and theme as section headings.

Step 2: Under each, list words that you think summarise that aspect of your game. You'll want to aim for words that best direct the reader's assumptions and curiosity. If your game has 2 core mechanics, try and find words that communicate both of them as best as possible. 48% of one mechanic and 12% of another might be better than 20% of both, but it's up to you how big a part of the gameplay experience each mechanic is. Apply this same consideration to gameplay challenges and themes.

Step 3: Now, score each word or phrase 1 point for each category it falls under. For example, in my space game I wrote down 'Volatile expansion', 'Transforming / evolving player factions', and 'space' for my gameplay challenge, mechanics and theme. Whilst some words such as 'turbulent' and 'fractious' spread across two categories, one word, 'Nova', could fairly well represent all three.

Step 4: Combine words that score well or just stand out to you in a variety of ways. Feel free to splice words (Catastrophe + Astronauts = Catastronauts) or mutate words (Nova = Novarius). Alliteration is naturally appealing (Nefarious Nova) and don't under-estimate the impact of rotating words (Nova Nefarious). A play on words can go down nicely (Space For Tyrants) and Acronyms (S.P.A.C.E: Some Pretentious Attempt at Controlling Everything). Just be considerate with acronyms; how easily can the name be explained through speech; "It's called space, except it's an acronym. That thing where each letter is the first letter of another word. Oh, I think it's Some Pretend Attempt at Cautious… something like that, I can't actually remember" - This is not an efficient way of telling someone about a game.

I can't say that this means the resulting phrases have to be in the name of that game, or that there aren't better potential names that this method would suggest don't work at all, but I do feel this method is a great way to efficiently find something that at least functions well for the purpose of getting on with the development of other parts of the project. As previously mentioned, names can impact your development and your community building and even if it takes you 4 hours across two days, a great name is a great investment. Seeking a great name helps to prime a trail of thinking that might develop as you work on other areas of your game, and it might also help you fortify your understanding of what kind of experience you want your game to deliver.

I'll also note here that it can be worth running an opinion poll on potential game names and getting feedback on them, but be careful not to take anything for granted here. If you poll a single community or a small number of people you might get very biassed feedback based on the members of that community.

Product Design: Presentation

Visual consistency is important in assuring most players that the game has been created with care and intentional design. A mash up of different graphic styles might have its qualities and there are times where this variation can be very beneficial for the experience, but as a ground rule the game should have a consistent style both during gameplay and on the outer packaging.

Approach: Ambition

I suspect I'll mention ambition a few times in this book, but I'd like to present it here as it's relevant to the entire way we approach designing games. I meet a lot of people who say "I just want something I can show off to my friends" or "I want to fix trading card games and revolutionise the market". I've never felt that it was beneficial to limit your ambition to one specific objective. You'll want some specific objectives to work towards, but you shouldn't assume there's any limit to what you might achieve. Approach the creation of games as though you have the potential to become the greatest game designer in history, because you do! You could never know otherwise, though you might at times feel the odds are low.

Many of history's greatest successes followed public rejection and critical resistance. If I remember correctly, the first flying machine was built in spite of all relevant experts claiming it wasn't possible. They were scared to be brave and look silly, but that's often what leads to great discoveries.

Don't set a bar for yourself. The chances of your self-applied expectation being a representation of your potential is zero. The only view that can possibly be accurate is 'I could achieve anything, this could go anywhere'.

See In Spectrums UNCERTAIN

All elements within your game's design will sit upon a variety of spectrums, such as simplicity, strategic depth, player engagement, component density etc and there are benefits and drawbacks all along these spectrums. I have never found an idea, mechanic or rule that I felt had no situation where it potentially be part of an entertaining experience wherever it sat on a spectrum. My experiences suggest that despite what I might firmly believe to be true, there might be a way to a euro game with really high player interaction and take that mechanics. It would probably be an outlier design, but it could work (maybe it does somewhere!). Every variable under your control has the potential to improve the game. You simply need to consider where it sits along various spectrums and seek the optimal position for serving your game's needs.

You might consider a game to be better the further along the simplicity spectrum it is, and that may be true for your game specifically. Overall, simplicity reduces variables, and the fewer variables in a game the

more impactful each change the designer makes will have on the game (which might be more limiting but is also easier to measure and test than a chance in a game with hundreds of variables).

Try to keep in mind that whilst you might fight heuristics (simple rules) that lead to a good outcome *most* of the time, no one concept or idea works *all* of the time in games. Some games benefit from low player agency, some benefit from player elimination, some benefit from excessive components. You must choose the most appropriate intensity for the project, and base the decision on the needs and goals of the project.

NEW! 28th Dec 2022 Cherish People's Time
Agree or disagree: 'Anything that does not add to a game, takes away from it.'

In my opinion, if something is in your game, it must be there for one of two purposes; because it contributes to the intended value of playing the game, or because it enables another part of the game to do so.

What I try to avoid is any part of the game where it's presence is justified by;
I thought it was a cool mechanic.
It pushes sales / I saw it sell really well in this other game.
A friend / playtester wanted it in there really badly.
I did some polls and it was the most popular answer.

This is because of the player's attention budget. Everywhere your game directs the attention of the player, you want there to be something that directly or indirectly contributes to the purpose of that game. Maybe the purpose is for the game to make money, sure. That's not good game design, that's not what I'm advising here. Selling a product is a different subject that can be intermingled with game design, but that's not my goal here.

My point here is that every piece your game asks the player to move, every paragraph they're asked to read, every concept they're asked to learn, you want all of this to serve the purpose of your game. Being stubborn in your pursuit of objectives that are outside of this purpose (for example, maybe you REALLY want to use all this great art you paid for) can result in a player feeling like they're there for your enjoyment, not theirs. They're there to satiate your need for gratification, or recognition, or representation. People don't seem to like that.

Yes, you're giving them something you've made and put time and care into. They're also giving your game their time when they play it.

Author Note: If you'd like to financially support the development of this book there's the option to support me on patreon at https://www.patreon.com/AaronBeedle. There are no specific

costs (apart from the social deprivation of sitting in a poorly lit room for thousands of hours making games), but financial support means I can dedicate more of my time to projects such as this. If you'd like to get in contact or explore my other work, you can head to www.paperweightgames.co.uk.

Design Considerations

1v1 vs Free For All: Balancing (Suggested rename: Player Hostility)

In a competitive 1v1 you want the winner of each engagement to gain a small reward so that overall performance matters more than getting lucky or making a single good decision. This also accommodates comeback better, which is all part of the fun.

In free for all, it is inevitable that the lead player will be ganged up on but the other players. For this reason the reward for each engagement should be proportionately large within the balance of the game. Each engagement is significant, and as a player moves ahead more players will ally against them, so the snowballing power of a single player is less of a concern towards making the game snowball overall, and all of this encourages deception and diplomacy (if your games contain those elements.)

Stockpiling and Debt

Stockpiling and Debt allow players to modify the rate at which they have influence over the game. These are mechanics that allow a player to modify the normal rate at which they gain resources (in this case resources means 'anything that lets them influence the game state'). They might feel they need more resources on a specific turn, or maybe less, saving some for a future turn.

A player might feel that this turn is very important and make long term sacrifices to get more done now. Or they might feel they have spotted a chance to prepare for a better turn in the future, doing less on their turn but confident that the long term benefits will pay off.

Offering this can add strategic depth and complexity to a game, allowing a player to alter their 'rate of impact' on the game to suit their current objectives. Also beware that this might significantly complicate balancing, and typically also increases **Skill Response**, making it harder for players to keep up with more competent players.

Types of Failure

At the end of Pikmin you are given an ending where even if you fail your mission, the narrative is still one where you achieve something. Instead of making it back to your home planet, you stay on the Pikmin planet and they convert you into a Pikmin so you can live on with them. Even in failure games should try and avoid simply black screening the player or ending the narrative there. Leave some sort of consequence, mechanic or acknowledgment of the player's previous efforts.

Skill Response (Skill-To-Reward Ratio / Skill Sensitivity)

Each game rewards a player's abilities and competence within that game with a certain level of intensity. It's even possible that your game rewards skills and abilities you didn't intend for it to, and it's even possible that it **doesn't** respond well to skills you **did** want it to reward. A very common example of this is when non-memory games have elements of gameplay where a player gains an advantage if they can remember certain pieces of information. This player will then perform better in the game than they would with weaker memory, which changes the experience the game delivers and which skills it encourages growth for within the players.

Ideally you want to intentionally design whether your game has a lot of game-specific learning and skills, rather than leave such things to chance. Games that have a lot of contextual knowledge and skills can be harsher on new players who are unable to rely on transferable skills as much.

Typically in 'Gateway' games that aim to bring together rookie and veteran players you want a low skill response, whereas in highly competitive games you want to aim for a higher skill response. This isn't set in stone, especially considering that skill response is also a matter of the player's taste, some people preferring a lower / higher response regardless of how good they currently are at the game.

Randomiser Density (unfinished)

A game can both have luck in it and still reward player skill. We see this in many popular games where the game favours the player best able to 'swim through the storm'. Occasionally the best swimmer will falter and someone else wins, but most of the time the better swimmer will win.

The benefit of this compared to a pure-skill or highly skill-responsive game is that it delivers much more drama at the cost of its high performance competitive validity. This presents a

situation where the weaker player will sometimes be granted just enough luck to help them win, whilst still being a small enough amount that they had to do something impressive to claim the victory.

The key to this lies in the **Law of Averages**. The more times a random element triggers in your game, the closer the overall impact of those randomisers gets to their average result. So if you roll a six sided dice 3 times, the average result might be 4.8, but if you roll it 40 times the average result will be much closer to the mathematical average of 3.5. The impact of this is then that if there are enough rolls during a game, luck has a diminishing impact on the outcome of the game and skill has an increasing impact.

It might seem counter-intuitive, but **not having enough randomness potentially** degrades the value of skill in a game. Across 3 rolls my decisions have little impact, but across 40 rolls I'm much more likely to see the consistent benefits of my good decisions. This leaves you with a game that is chaotic and dramatic on a small scale, but in a wider scope is much more responsive to skill than luck.

Random Chance:
Whether you include random variables in your game or not all comes down to how much control you want your players to have and how much you want the game to throw unexpected challenges at players. A tendency towards random chance favours a simulatory nature of game whereas set values gives the game a more story-telling vibe. For example, the heroes of most games would realistically die within the first 5 minutes, due to random shrapnel, illness, hidden threats or other hazards, but no one wants to play a game about that. So cut out the random nature of the world and guide your story.

That said, there are times where random generation can increase pressure and place strain on the player. In my opinion, every application of random generation that you apply within your game should be carefully considered. It shouldn't be added just for consistency's sake. You are allowed to make some things random and others set.

Random Chance Safety Netting
If you do add random variables to your game, there is something you should always consider; how badly can this go for the player? You may want to consider placing a hard limit on how many times the most extreme random outcomes can occur. For example you are shooting a target in a skirmish with a 98% chance to hit. You miss, and shoot again. You miss again, and then a 3rd time.

Make sure that this stuff can't happen

Integrating Mechanics

Categories; Component reduction, Novelty.

I find this approach to game design is great for both optimising the delivery of an experience, and making it more interesting / novel. Consider whether any of your current mechanics could facilitate the function of other mechanics in your game without changing the overall effect of those mechanics in an undesirable way. This can lead to significant optimisation in the delivery of the experience. First identify what function you are aiming for, then look at whether that function could be provided by other mechanics already being used.

In a card duel game I might have a health pool. The function of this might be regarded as 'a resource spent by opponents that triggers a loss condition if it runs out'. You might look at the cards in your game and note that a lot of effects remove 'Spell' cards from the opponent's deck, and that this is something present in all decks (for whatever reason, maybe your game has preset decks).

Spells are then 'a resource removed (spent) by the opponent'. All you need to do is add 'that triggers a loss condition if they run out'. Instead of designing an entirely separate mechanic for health, I could potentially just add a single line of rule text; "You win as soon as your opponent has at least 8 removed Spells".

Another Example: A game I was hired to develop involved a countdown mechanic to force the end of the game. Eliminated players could come back into play if they got lucky. Since the countdown mechanic was causing a lot of problems and the game already had global hazards activated by player elimination, I tested the change that a player can push their luck when attempting to return to play, but this also involves a chance of activating another global hazard.

Since return players are quite weak, this meant they could rush the process of getting back into the play, but at the risk of shortening the remaining game time, since the global hazards all stack.

You can have an integrated economy (Card games often do this by granting bonus resources if you have the right combination of cards, though this could feasibly be your entire economy

mechanic if you wished to integrate it). A more common one is upgrades, unlocked (or maybe disabled / withdrawn) as you build up your strength, as opposed to simply buying and selling upgrades from a market.

Some mechanics are entertaining and some mechanics facilitate entertainment provided elsewhere. Games often benefit significantly if you can integrate the vital functions of non-enjoyable mechanics into mechanics that are enjoyable.

Game Elements NEEDS SIGNIFICANT WORK

When designing your game elements, begin your design with balancing. Work out what types you need, how many, and how their variations are going to connect. It may help to start with their back story and give them flesh early on, to encourage characterization, but you must involve balancing early into the process.

Once you have a clear layout of what the game play function of each element is going to be, you can start adding flesh, superfluous information to decorate the elements. Building lore around function is much easier than building function around lore, especially since you may have bias and preferences in lore.

For example, when you design a team of 5 balanced heroes, but begin the process with lore, you may end up with 3 of the 5 characters being powerful alpha males, because you prefer those kinds of characters. You will then encounter a significant issue when trying to give those 5 character differing game play functions that all balance out together. Beginning with functions will present the game elements as functional, evolutionarily viable inhabitants of your game world, in which case it's much easier to see imbalance in the design.

Granularity

Consider the scale and scope of the challenges presented to players, and their relevance within the simulation. To reference digital games, many real time strategies have (from 2012 to 2022) fallen into a habit of asking players (military generals) to manage the acute decisions of individual troops. This can reduce immersion and create a mis-match between the advertised experience and the one delivered.

If my game communicates to a player that they are going to play the role of a general commanding a mighty army, if I then ask them to tell each soldier when to reload their weapon, they're going to immediately question what role they're actually being asked to play. Generals make **wide scale** decisions. That's a key part of the role they play.

When we design board games I think it is healthy to consider what decisions we present to the player, and try to avoid presenting gameplay that is overly granular or detailed . Digital games are great for realistic simulation, but the strength of tabletop games more often lies in focusing on specific desirable decisions and abilities within the proposed game world.

If I'm making a game about building a civilisation in a hostile environment, do I want the player to be making decisions about which bedtime stories the children are reading, or do I want the gameplay to be limited to the 'big decisions' like how many soldiers to station on guard duty and how big their meals should be? Exploring the granularity of a scenario can be a great way to find interesting concepts and ideas.

There is no right answer. Again, this is about deciding where you wish for your game to sit along a spectrum. The proposed game might be **much** more enjoyable specifically **because** it asks me to decide which bedtime stories the children are being told, and were I able to connect this decision (as the designer) to the resolution of environmental threats, I could have an extremely interesting game in my hands.

So to summarise Granularity; where you game presents challenges and decisions to the player, consider how many details and variables with be present among them, and whether they might be better as an 'assumed' state so that the player can focus somewhere else. Explore both ways; are the **current** decisions really contributing to the overall experience I want to deliver, and what **potential** decisions could allow me to deliver an even more interesting experience?

Satisfaction of Expectation

One consistent principle I've found in game design is that of making sure players know roughly what they're getting into. If they don't, make sure they know they don't know what they're getting into.

Surprises can very much be a good thing and there's no method I've found that would help me judge whether dropping a dice roll into the middle of an apparently pure-skill play experience might delight or infuriate the majority of my players. What I have learnt is that if a game is presented in a way that suggests it is (for example) pure-skill with no surprises, and then presents a surprise, this betrayal of premise will pretty much **always** upset players.

A game known as 'The Box', available on Steam, very quickly demonstrates to the player that it is absolute chaos. First it presents some challenge of skill, then a set collection mechanic, then

you're playing chess, but within 5 minutes you'll also have rolled a pineapple-sided dice, three shoes and a cake. I've never known anyone get annoyed at this game because its design and mechanics very clearly communicate what kind of experience it intends to provide.

One situation in which this can hamper designers is with tutorial / beginner modes. The designer wants new players to be able to pick up the game easily, but it's a complicated game, so they make a 'simple version'.

Spoon feeding rules and information is a great technique for delivering complex rulesets to new players, but this is not the same as a 'beginner mode'. A beginner mode is essentially a fake version of the game. These are, in my experience, very prone to painting a false image of the game. In many complex games, the complexity is either **part of the enjoyment,** or critical to **facilitating the enjoyment**.

'Beginner' versions of complex games potentially both attracts a player demographic that won't enjoy the game at full complexity, but also deters players who **would** enjoy the game at full complexity, but would be very bored with the beginner's version. This isn't to say that simpler 'rule variants' aren't a great option to give players, but if you're going to present something as a 'beginner mode', be careful that you're only **spoon feeding** (delivering in small portions) the gameplay, rather than actually diluting it and presenting a false image of the game.

Does what it says on the tin:
To the fullest extent possible you want your game to present the player with the experiences and opportunities that your game advertises through its external art and packaging. Using Spyro the Dragon as an example, you're being presented with a game of adventure and being a dragon. The assumption the player might make here is that they can fly and breathe fire, and are quite powerful within their environment. You have to consider whether your game simulates these things in a satisfying way. You could also consider what other assumptions the player might make. Am I an evil dragon, stealing cattle and hiding in a cave? Am I a magical dragon that can command humans? On one hand, playing into the assumed fantasy can lead to higher player satisfaction. On the other hand, betraying this expectation with a surprise can be massively exciting for the player. What, I'm a dragon that turns into a bowling ball every so often and only gets a few seconds warning?

Just as you don't want to advertise something that isn't in the game, you don't want to miss out on too many of the game's qualities. If you can command an army of flying monkeys, consider whether that's one of the top 5 features for which you have space to feature on the packaging.

Familiarity Tax

Consider how present you want this effect to be in your game and what would be the optimal presence for the experience you wish to deliver. Generally I find that the less players are punished simply for not being familiar with the game, the more efficiently the game is able to entertain its players. However this is not always the case, and some enjoyment can be found in exploring and adapting to unfamiliar gameplay.

If an option is available to a player, they will assume there is a reason it is available, and will assume it to be an appropriate action in that situation. It could take players a while to learn that some options are more situational, so try to make it clear to players which options are appropriate for which situations. Think of it like showing a computer to a child. At first, they will want to press all of the buttons, but not all of those buttons will be appropriate. You could instead reveal a few buttons and have other buttons light up when they're a valid option.

On a similar note, the visual prominence and appearance of elements in the game will ideally represent the gravity of those elements and how much impact they have on the game state. For example an ability that can only be used once per battle to swing the match should probably look quite dramatic and eventful, where an ability you'll typically use multiple times per battle could have a more mundane appearance.

It is a valid design decision to incorporate elements into your game that are consistently weak or even invalid, presenting players with the task of identifying that lack of value as part of the 'getting better at the game' process. Deducing good and bad options is a completely valid form of gameplay that many people enjoy, but this has an impact on the game that you should be aware of.

I call this 'Familiarity Tax'. The game penalises you as a player proportionate to how unfamiliar you are with it. This means that players who have played more will have an advantage over you, potentially even if you're actually better at the game in terms of the decisions it presents. In my opinion this is more enjoyable when the information landscape of each play session is presented in randomised batches. This means that each time players dive into a game session they are faced with a new landscape of variables to try and find an optimal path through; their previous familiarity with the game still matters, but it matters a lot less because the game doesn't present consistent challenges they can easily learn the solution to.

Familiarity threshold (consolidate with 'Familiarity Tax')

This is the point at which the player's external, transferable abilities become a stronger influence

on their success in the game than their familiarity with the game. It should not be confused with mechanical competence, though this does factor into it.

For example, two people play football. Abe is naturally skilled with the ball, but has never played football. Zodd is terrible with the ball, but has played many matches. Initially Zodd will win more often, because though he is a poor performer, he understands the basics of winning the game. He not only understands the rules and how to win, but he understands the dominant tactics / strategies (even if he uses them poorly), such as knowing to avoid kicking the ball back towards home goal or keeping the ball when under pressure. He is beyond the familiarity threshold.

Once Abe passes the familiarity threshold his natural abilities will allow him to dominate and the game will feel more as though it rewards genuine good play and less like it penalises new players.

To further clarify this, a game with a very low Familiarity Threshold would be tag. You tag someone and then they're 'it' and they have to try and tag you. Within 5 seconds of being introduced to the game, your success is entirely based on performance, and virtually not at all on your familiarity with the game.

A game with a high familiarity threshold is Age of Wonders 3, where we find literally hundreds of elements and entries, rules and abilities that take a great amount of time to learn and understand, along with many strategic options due to the vast amount of variables within the game. Though the game feels deeper and more dense an experience, it can also be alienating, much like having to learn a new language after you've moved to a different country.

Where this threshold sits within your gameplay experience doesn't have a 'right answer'. It's simply something a designer can benefit from thinking about. There is a better and worse answer, but this is entirely specific to those consoles. Super Smash Bros is a great example, where there is enough to learn to give the game complexity and variety of options, but not so much that a player cannot enjoy a decent contest after an hour or so of playtime. The intuitive design greatly supports this. If you 'smash' a button and joystick, you do a smash attack. You attack in the direction you tilt the joystick. If you hold the attack button you hold the attack. These design elements are intuitive and thus easily picked up by new players.

Validity of Choice

Before discussing this subject i'll mention that validity of choice, despite what seems intuitive to begin with, is not a scale of quality, but a scale of taste. Some players enjoy filtering through bad options to find metas whilst others (more frequently but less intensely in my experience) prefer to be presented with almost entirely valid choices, by which I mean all their choices

provide competitively viable bonuses.

If an option is available to a player, they will assume there is a reason it is available, and will assume it to be an appropriate action in that situation. It could take players a while to learn that some options are more situational, so try to make it clear to players which options are appropriate for which situations. Think of it like showing a computer to a child. At first, they will want to press all of the buttons, but not all of those buttons will be appropriate. You could instead reveal a few buttons and have other buttons light up when they apply.

On a similar note, the visual prominence and appearance of elements in the game will ideally represent the gravity of those elements and how much impact they have on the game state. For example an ability that can only be used once per every 500 enemies killed should stand out much more and look like a big deal compared to an ability that recharges after 2 minutes.

EXTENSION – NEGATIVE SPACE

To broaden this concept, we will refer to an aspect of gaming I call negative space designs. These are things that are entirely arbitrary to the game. Costless choices are a negative space. A plot sequence where you make small talk whilst someone hacks a door lock for 60 seconds is negative space. Negative space is the kind of stuff a book or movie wouldn't make a big deal of.

You don't need to take the player through the 12 years of childhood before the game started, just bring them in where their story gets interesting and tie in key details of how they got there as the game progresses. Writers call this an information dump, dropping a large amount of contextual information onto the reader without them really needing it.

That said, you must take care not to present these things as merely 2 dimensional concepts. There must always be equilibrium. You always need contrast for something to be visible. If the player has absolute control, they have no control, because there is no contending force by which to measure the notion of control. If you present them with vulnerabilities, then they must work for that power and this gives it value, because if they must work for it so must all other things.

Joy in all things

'Thinking outside the box' or 'lateral thinking' involves seeking solutions beyond those that seem obvious, typical or intended. This approach can often lead us to look in places other people are not, and this lack of peers might convince us that there is nothing to be found in those places. Often when we design we become attached to ideas such as **'this** is the fun part and **that** is the part that gets a job done'. This can blind to us to opportunities to find fun in the seemingly

mundane parts of our game.

Maybe you've had a simple card playing mechanic for the entirety of development and not considered how the game might play if you use the effect of cards you played on *the previous* turn? What if instead of spending resources you pay for things by *gaining* resources rather than spending them, but are punished if you gain too much of certain resources?

A great approach here is that of **flip, nudge or shuffle**. You can read about these in a fantastic book called 'Creative Thinking' by Deej Johnson and Billy Langsworthy, but I'll outline them here too.

Flip: Take some amount of an idea and reverse it, then tinker with how it could work that way.
Nudge: Take one part of an idea and mutate / change it slightly, or do this for the entire concept in relation to the other concepts that surround it.
Shuffle: Take a part of your game and replace it with something random. Don't worry about it too much, just be playful. In Creative Thinking this is called 'What If', but in either case it's a fantastic approach to uncovering greater potential. Consider that many great things were not found by looking for them, but simply by looking. Being curious can have unimaginable benefits.

Integrity of Simulation

Following a playtest of Wistful, One-armed Bandit told me that what they liked about the game was how it felt like they constantly had to fight tooth and nail just to stay alive. When I thought more about why and how this worked, and why it was enjoyable, I came to the following conclusion.

A game is essentially a simulation of a reality. It may not match our own, but it is a reality in its own right. When a person plays that game, they are applying themselves to that reality to see if they can prosper there. This is where integrity of design, and thus simulation comes in.

It should be an absolute priority that the player does not at any point question the integrity of the simulation. They must believe that the rules of the simulated world are being applied to them indiscriminately and consistently. If they suspect at any point that they are receiving special treatment within the world because they are the player, the immersion is broken. They can no longer trust that their victories are the result of their own input, because they can't trust that the game isn't giving them some secret edge or shortcut.

The player will only value their experiences and progress in the game world if they genuinely

believe that they are subject to the same rules as everything else in that world. They are not immune to death because they are the player. They don't get privileges. Each victory is theirs to own, something they worked for and have earnt.

Achieving this without making the game too harsh and difficult can be a massive challenge, as any reality will often be unforgiving and at times brutal. At the same time, anything that exists within those worlds have fought in some sense to get to where they are when the player assumes control of them. They have faced the trial of evolution, and though small they possess an innate conceptual power that when combined with the mind of the player allows them to claw their way through the harsh reality of the game world.

Density of power

As power is condensed it becomes easier to manage and hard to exploit the weaknesses of.

Consider how a player can distribute their power and what the costs and benefits are to this. How does focusing entirely on a single strategic path / approach stand up against investing in several different ones? Do you actually want these approaches to be fairly equal in their effectiveness? Depending on the surrounding mechanics, investing all your resources in a single area might be highly risky, or very safe.

NEW! Threat Escalation

Many games benefit from simulating an increasing array of threats / risks as the players progress and / or the game draws to an end. If the increasing threat is exponential, it can serve as the game ending mechanism itself. Most games with player growth will be very receptive to design choices that present an increasing cost to failing to outperform other players, or for making mistakes.

The benefits of employing this in a design, assuming it is appropriate, seem to be that it maintains or improves player engagement late game, whilst also ensuring player's choices remain interesting and valid, and often also forming an interesting **Strategic Narrative**.

As advised in the book 'Creative Thinking: The Snakes and Ladders of Game Design', you can also *flip* this concept, giving us 'Opportunity Escalation'. I think this is generally avoided because a threat will regress the player back into territory already covered, but an opportunity requires the game to be able to simulate an even higher scope of growth and prosperity, perhaps exponentially so. That said, I think this is entirely achievable by a game intentionally designed around this idea and I believe it would yield similar benefits to Threat Escalation.

Diplomacy NEEDS ATTENTION

Diplomacy is a big subject that has a lot of implications, so I'll be sorting this entry into sub-sections, as listed below;
What is Diplomacy (in a mechanical sense).
Being aware of Diplomacy in your game.
The most common implications of Diplomacy in gameplay.

The simplest way I might define Diplomacy is as 'the involvement of social contract and assumption in decision making'. In choosing one player and not another, the player makes a diplomatic choice and in doing so will change how the players at the table treat them, both in that game session but also potentially beyond that game session.

Typically any game that involves both competitive gameplay and more than 2 players will involve this diplomatic decision making. I can't confirm that's 100% true in all situations, but it seems to be a natural law of… well, the universe. I think it's worth considering the difference in social consequences between applying positive effects and negative ones. A mechanic that asks you to take something from a single player will upset that player a lot and might please one or two players a small amount. The decision to help a specific other player one time might not bother any other player, and will improve your relationship with that player, however repeatedly doing this might upset all other players a lot because it could be seen as an allegiance. If you don't want that allegiance to be part of the experience your game delivers, you might present mechanics that offer fast, potent benefits, rather than ones that offer small, steady benefits over a long time. Conversely, you might want dramatic betrayals, in which case that small, long term arrangement might be a more effective design for facilitating that.

An important factor in assessing Diplomacy is sometimes actually being aware of its presence in your game. Some games intentionally support diplomacy, others don't but it's always presence to some degree. If there is player interaction, there is an element of potential diplomacy. Some factors that impact the influence of diplomacy within your game are;

- The cost of taking an action compared against the reward of that action for another player.
- The diversity and granularity of resources (how specific you can be in measuring resources. It becomes increasingly difficult to present viable offers to other players if you can't deliver your resources in portions that allow you to accurate represent how much you value the arrangement you are making with them. For example I might value player A's cooperation at 16 of my 40 apples. I offer them 6 apples. If the resource system is a 10th as granular, I value their cooperation at 1.6 of my 4 apples. Now I have to decide between 2 (more than I want to offer) or 1 (an offer I don't expect to be accepted). This

also complicates negotiations in the same way, so generally I find that a lack of granularity will dis-encourage diplomacy.

- Is there a cost or limit to diplomatic interaction? For example does making an offer to a player cost me an action? Or maybe they can accept the offer, then not uphold their part of the agreement?
- Benefit of interacting with the game compared to the benefits of interacting with the players. If more resources / benefits can be acquired through interacting with the game than through players.

House Ruling for Diplomacy

Something I've seen a good number of times is a game that could involve trading / bribery / negotiation, but doesn't offer any rules relating to it. The assumption often seems to be that if it is not explicitly permitted in the rules, it should not be allowed. Despite that, some players / play groups really enjoy diplomacy and player arrangements, and might choose to create their own rules for diplomacy within your game, even if it never mentions any such possibility.

In having observed this I consider the following; If your game provides components and core rules that *could* facilitate diplomacy, should you provide rules for diplomatic gameplay? For example in Small World, players make decisions that could impact different players to different degrees, and player possess coins (which function as score). The game doesn't (to my recollection) mention any passing of coins between players, however it would be completely viable to pass coins to a player as part of a diplomatic agreement.
This then becomes an emergent rule variant (a fancy way of saying house rules I suppose), and whilst we can't go writing rules for when the players don't like our rules, the desire to introduce diplomacy into games is a somewhat common one that doesn't require much extra work in a lot of cases. You could then offer a small rule section on how to conduct diplomatic interactions within a game, based on your testing of what provides the best experience, e.g. Can players lie, are alliances bound by a specific duration, how long can players negotiate for?

Games do fine without this for the most part, but depending on your game it might be an easy way to add a ruel variant that brings a lot of value to the players that want it, and has no impact on those that don't.

Implications

Within Diplomacy there is also 'justification', your reasons for your actions. If a game rewards a player for attacking other players, then attacks against other players will feel far less personal, which will decrease the diplomatic complexity of a game. If I then choose to march through player A to reach player B and attack them, they might take that personally since player A was the easier and more profitable target, but the game is at least then giving me a viable 'it's just

good business' motivation when choosing who to attack.

To complicate things, I might possess hidden information about player B that the other players do not, which means that my aggression towards player B is not actually personal, but seems personal to other players.

Diplomacy is a large concept. If you look at games that involve unregulated diplomacy including negotiation, haggling or bartering, the bulk (80%+ seems to be normal) of the gameplay sits in the discussion between players and the playtimes are consistently quite high. Short diplomatic games aren't impossible, but the nature of diplomacy is that it is a thing that occurs and develops within scenarios that take a while themselves to develop.

On a note of mechanical synergy, diplomacy and skill have a fairly unique and profound relationship worth being aware of. Diplomacy will often devalue skill, where skill has a critical impact on the outcome of the game. In other words, if skill is an effective path to victory and diplomacy is an option, diplomacy becomes the more effective path not to victory, but to competing with the more skilled player. Multiple players can team up to bring them down. The weakest player might team up with the most skilled, knowing that among an alliance they might be snuffed out once the greater threat is eliminated, but that the most skilled player is going to be fighting that alliance for a long time. Possibly long enough to wear both sides down, opening a path to victory for the least skilled player.

Again, diplomacy changes a **lot** about a game. If diplomacy is present in your game, be aware that it changes a lot of the strategic principles that would normally apply in it's absence.

Diplomacy: Regulated vs Unregulated Player Interaction CHECK

Expanding on the previous points regarding diplomacy, it's important to consider how many or few rules are applied to the ways in which players can interact with each other within the game. This is not only important for diplomacy to function within the specific design of your game and what you want it to do, but it's also vital when considering the game duration.

You might think 'I won't have any rules for diplomacy, that'll keep it simple and get people playing faster'. Oh, you sweet summer child. It will devour the entire experience. Despite that unregulated diplomacy is a simple concept, it's a massively complex mechanic (Imagine explaining to a computer what diplomacy is and how to go about it and you'll have a decent image of the implications of unregulated diplomacy).

Diplomacy: Justification of Hostility

If your game involves diplomacy and hostility, consider this question; how easy justified is each hostile action a player might choose to make? This impacts how turbulent and chaotic player relations can be within a single play session.

If each turn a player **must** attack one other player, that's an easily justified hostility; "The game made me do it". If that player continues to attack the same other player turn after turn, that's an intentional choice made by that player and the victim may develop a personal grudge against them, both within the play session but potentially also beyond it.

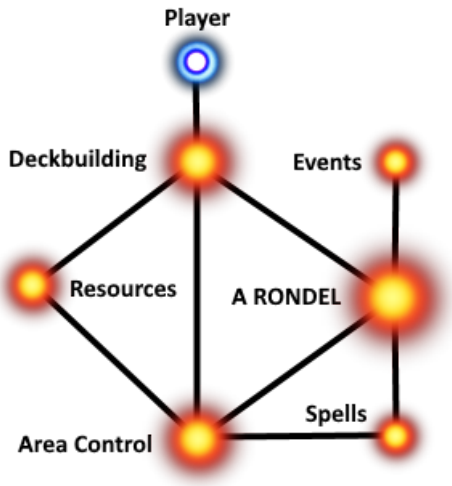
On the other hand, if attacking other players is expensive and demanding, choosing to do so may seem very spiteful and targeted, intentionally disadvantaging the victim. If they can't honestly say "yeah, I can understand why you have done that and it makes sense", they'll usually assume there's a personal reason, which can only reasonably be addressed with an equal amount of hostility in self defence.

Both approaches are valid and have their strengths and weaknesses, but each will work better in differing game designs.

Mechanical Structure CHECK

The mechanics within a game impact, influence and interact in varied, but specific ways. Some have a high structural relevance in that they act as a conversion point between many other mechanics, whilst others are more external and only provide simple roles, such as converting one resource into another at differing levels of efficiency. Being aware of the relationships between each of the mechanics within your game can be a massively helpful tool for detecting issues and opportunities, and can also help with balancing the game as well.

Let me illustrate this concept with our favourite mechanism, the RONDEL. Place this in the centre of the play area. The Rondel is split into areas that can be controlled by players through a deckbuilding mechanic. These areas generate resources that the players can spend to improve their deck. All cards played impact the function of the Rondel, indirectly impacting when Events trigger and which Spells players are able to cast.



Looking at the action packed interaction map I've created for this theoretically awesome game I'll definitely make one day, we can see the role certain mechanics are playing in how the game

functions overall. Players can indirectly control Events through the Rodel, but they'll also be competing for control so they can gain resources and improve their deck. They can also indirectly control Spells, which they can use to influence area control.

In this case we can consider Events to be low-structural importance as they only have a returned effect on the Rondel. Most other mechanics are semi-structural (which is normal), but the Rondel is the core structural mechanic, because it regulates almost every part of the game. Resources are not directly regulated by the Rondel, but they still operate within it's influence.

Having a visual (or conceptual) map of your game's mechanical relationships can add a lot of stability and confidence to your development efforts. You can gauge how disruptive certain changes might be, or which factors might be having a non-obvious impact on other parts of your game despite not being directly affected by them.

Which mechanics you combine is down to you, but consider that your freedom is functionally limitless here. Not only can you place two mechanics side by side and have them interact, you can have one mechanic contain another, maybe even multiple, and structure how they interact.

Maybe we reverse our proposed groundbreaking industry-shaping 'Rondel game' idea I came up with just now. What if the deckbuilder is the central mechanic? Use cards to create a series of small circular engines that cycle as separate Rondels, offering new places for players to place their pieces on and lap around, but weakening your deck by creating them.

As you explore these interactions, I think it is important to keep in mind how much time and effort you can invest in developing them and how much of that the interactions might demand of you. The more unusual ideas are typically the ones that are most demanding to develop, as you'll have minimal similar material to use as a source of information.

Genre Specifics

Cooperative

Cooperative games are in my experience a very tricky genre of game to design. The most distinct challenge typically found in this genre is communication, either delivering information to another player using a limited means of communication, or discussing options in a situation to communally come to the right decision.

Cooperative: Alpha Gaming

First a definition. This is the behaviour of advising or guiding another player's decisions in a cooperative game. This is specific to this genre because in a cooperative game all players win together. Thus without an element of competition between players, there's no reason for deception or trickery between players, and so it can become the case that a player's decision is whether to listen to the apparent most experienced player, or take their own approach. The issue with this is that there is quite often a most experienced player, and because the game is a communal effort, choosing to follow your own judgement rather than that of the most experienced player could be deemed selfish or poor spirited (since everyone generally wants to win).

I think one way to remedy this is to provide different players with different strategic motivations. You can achieve this by;

1} Overtly giving different players access to different hidden information that is critical to success, and that they cannot share. This will partially invalidate the authority of any single player and demand that players cooperate and place faith in each other communally, because only one player is aware of their specific goals / limitations / variables.

Yes, sometimes players will find loopholes they believe allow them to communicate things, such as saying 'if I play the card on the left, it's probably an item, and on the right is probably a task' before the game starts. This IS cheating, and this goes beyond the domain of the rulebook. The best you can do is advise players against the impulsion to try and establish 'legal' forms of communication, during or beyond the game session.

2} Offer differing objectives. Much like hidden information, not being sure what player's goals are diminishes the authority of any single player. Note that this is more potent than option 1, but some players might not enjoy the social tension of having to do things that hinder other players, or being accountable for the success / failure of other players. As always, consider your target audience.

3} Present a high volume of viable options as often as possible. If the volume of information relevant to players' decisions goes beyond any one player's ability to effectively process that information and determine the optimal approach to each challenge, it increases the odds that the gameplay challenges can be solved through a 'wide scope' of consideration rather than a single competent perspective. In other words, each player will typically have their own unique theories and approaches to solving the problem, and are therefore encouraged to advocate for them, whereas if there were less options, it's easier for the most competent player to appear to have considered all aspects of the presente challenge. REMOVE the play group as a whole will need the contributions of everyone involved REMOVE

In these situations should any one player attempt to dominate decision making it seems likely that it will become clear to the group as a whole that no one player can effectively find the best solution to all challenges (as the group consistently fails challenges due to a narrow approach to challenges) and the team must collaborate if they are to win the game. If they then fail to recognise that and continue to try to dominate decision making, it should become clear to the other players that they lack leadership skills, and their authority will diminish.

4}Randomly generating scenarios and challenges and the variables within them, to decrease the speed at which return players become familiar with the game's challenges and potential solutions. This might not suppress a player's impulse to try and dominate decision making within the play group, but it does again clearly diminish their authority if it's clear that they aren't overly familiar with the specific challenges the game is presenting.

5} Accept alpha gaming as part of the experience. Some players will have so little self confidence that it wouldn't be reasonable to attempt to create a game that avoids them being alpha-gamed, though this depends on your target audience and intended experience. A child or someone who just wants to come along for the ride might appreciate being

You can mechanically grant authority, for example 'this turn, player 2 must make these decisions without the advice of other players', though I find this is contradictory design, since coop games are about cooperation.

Solo

Here are a few key considerations I keep in mind during solo game development;
Test with others. Just because you can test the game yourself a lot, doesn't mean that's a great approach.

Consider lack of peers. A group of 3-4 players is much more likely to contain at least one player that can make sense of each rule in the game. A solo game lacks this diversity of rule interpretation, so I always assume rules have to be clearer in a solo game, since the learning player can often only confer with themselves and the game manual as to how the game should be played.

Difficulty: Players can present both a diverse range of opponent challenge levels, and can grow to present a greater challenge to each other. Solo games this, and so a much greater portion of design in solo game projects involves offering difficulty options so that the game can maintain a good challenge.

Horror

I think boardgames lack the simulative power to trigger our 'terror' instincts, which tend to rely on shapes (like teeth) or noises (like a roar). Where they can present horror is where 'horror' appears to be strongest, and where many films are now failing due to their over-reliance on 'terror' and not 'horror'.

This is in the mind. I'm doing 'this' because I don't have a concrete definition of these terms, but let's say horror is of the unknown and terror is of the known. Horror appears to be exclusive to the unknown. If I am fully aware of the presence and capabilities of a force, no matter how threatening they may be, it seems to me that I (and others) do not feel fearful of it. It is the unknowns that generate fear.

I am not scared of nuclear bombs, I am scared of radioactive fallout and the loss of loved ones. It is the unknown implications that generate fear. Thus when I watch a movie and I establish the rule 'this humanoid walks slowly forever and when they reach the victim they stab them to death', what I'm describing there is the least scary part of it. It's the lifetime spent running and having to keep track of an relentless hunter that is horrific.

This is my theory, based on the seemingly common consensus that horror can only exist within the imagination; a pessimistic forecasting tool to encourage our survival. It is the beneficial behaviour (in a survival setting) of over-estimating the danger presented by an unknown threat.

So, back to boardgames. We can mostly work with text and cardboard, so the horror to be found here is probably only possible through 'the unknown'. You would have to provide content that lead players to draw their own horrific conclusions when playing the game, and these conclusions must carry to the real world, because boardgames, unlike digital mediums, are not able to immerse our survival instincts (by presenting 'teeth and roaring').

I think it would probably require a decent understanding of human psychology to pull of, but I can't see why it wouldn't be possible.

The Gameplay Analysis

The process of analysing gameplay is one that provides a foundation to a great deal of the understandings I present in this book. It therefore seems logical that I document the individual components of this analysis here so as to assist others in learning these analytical skills. These form the core of my freelance work as a developer / consultant, supported by abilities I have acquired elsewhere as a teacher, designer, editor, writer and artist.

For any who have seen an example of my gameplay analysis, the parameters of design I present in this section should be familiar, and they will likely be found in some form in many other analysis / testing forms as well.

Validity of Player Interaction

How consistently interaction options between players are viable and varied.

Player interaction is perhaps the most important aspect of a tabletop game. It is the defining feature that allows tabletop games to compete with the all round more versatile, more accessible medium of computer games. The physical presence of other people playing the game with us in person enables experiences that currently cannot be provided by a computer game.

These experience can be both positive and negative, such as the stress of asking someone to try a game out and not being sure if they'll like it or consider it a waste of their time (for which you might feel responsible), or feeling uncomfortable as you steal their last base and knock them out of the game, despite it being their first game.

Fear not, for game design is also packed with options for positive interactions between players sat at the table. In the same way this face to face format can amplify the awkward and tense interactions, it can do the same for positive interactions, whilst also allowing a range of interactions only possible in person (see games like Twister, Jenga or Rhino Hero).

The most valuable resource you have as a game designer is the *human resource*, the players sat at your table. These are your computing engines, your processors, and in many ways they are far more powerful as a computing device than anything we can currently produce. Ask yourself how your game is making the most of this inherently available resource and you'll be able to access one of the most potent qualities of table games; the players.

<u>Piggy-Backing</u>

Compatible with both diplomatic and non-diplomatic games, player versus player and 'solo together', this concept is one in which players can both *feed* and *benefit from* the success of other players. I might for example make a purchase that lowers the cost of an upgrade that lets another player make a small amount of money each time they buy from a store, knowing most of the items they want are sold in my store.

I might alternately leave a space and some nutrients in a forest for another player to grow trees

in knowing that I've already maxed out my 'tree cluster' score but if someone else grows a tree there I can gain a 'dense woodland' score bonus with them without paying for the extra few trees myself.

This is a great way of maintaining competition without introducing 'spite' options that require the player to directly hinder or upset the ambitions of another player, which can introduce diplomacy to a game you might not want to involve diplomacy.

Pacing

Increasing Response to Actions

One great way of offering a steady but accelerating pace that engages players and increases tension towards the end of the game is to increase the impact actions have on the game the longer the game goes on. Alternately you can decrease the game state's resistance to changes, this is essentially the same thing.

This is something a lot of games do naturally. Players will grow in strength whilst the game's demands remain the same, so over time players gain more control over the board.

Marketing Design

I'm going to give this its own specific section of the book since it's a special kind of design. This is the bringing together of design and marketing, designing a game with an awareness of how you're actually going to entice people into investing in it. Much like how themes and mechanics can inspire each other in a fluid and shifting manner, marketing and design share the same relationship. You might find some wonderful way to represent your gameplay through appealing components or a charming promotional campaign, or you might have an idea for a centrepiece component that will draw people's attention from across the room and design your mechanics based around that.

The experience your game provides isn't just in sitting down, following the rules and engaging in the gameplay. The experience begins the second the player encounters your 'product', your game, be it on TV or a poster or a friends table or through a story they heard someone on the bus telling a friend over the phone.

Not all games are designed in a way that easily facilitates marketable qualities. Marketability

might not be one of your design priorities, it may not be something you value much. That's ok, games designed this way have consistently found success (Battletech is, to my eyes, a terrifying and hideous game to approach). Don't adopt too much stress in worrying about this if you lack enthusiasm for it.

Do however give it a *little* thought. Just enough to keep it in your mind. Sometimes marketing-motivated decisions lead to modifications that massively improve gameplay. You can never be sure which line of thinking can be the best place to find the next improvement, especially if you've already heavily explored one area.

For example, I once playtested an abstract game about racing across a desert. Being abstract, a flashy promo video might not have been a great investment, but instead the game was shipped in a message scroll container and played on canvas roll… I can't say it really made much sense now that I'm thinking about it, but it gave the game a very powerful presence that drew me to it. Being able to then provide a gameplay experience that maintains that aura of wonder and satisfies expectations generated by those components can result in an extremely potent combination that has the player enjoying themselves from the moment they set eyes on the game.

Tactile Appeal

Include physical components in your game that invoke people's desire to create pretty little things that feel good to look at and hold. Great examples would be shiny little gold nuggets, pretty glass gems, little silicone eggs, miniatures (a popular but expensive option), shiny tokens etc…

Even just cardboard coins and little pouches can invoke this desire to possess something tactile and cool looking. There's more to this than simply 'holding unusual things that provoke a primitive desire to possess the unusual'. This is the point where many games stop, but you can continue on.

Author Note: If you'd like to financially support the development of this book there's the option to support me on patreon at https://www.patreon.com/AaronBeedle. If you'd like to get in contact or explore my other work, you can head to www.paperweightgames.co.uk

Part 3: Development Considerations

Below we will look into some good habits and practices to develop when designing games in order to achieve a more efficient process. Inefficiency can reduce the momentum of your design career, and hitting too many bumps repeatedly can bring you to a complete stall.

Best Practices during Development

Frequently backup all files / databases for your projects. Beware of data loss / theft.
Avoid sunken costs fallacies. Don't keep working on something just because you've already worked on it a lot.

Involve other people. Games are transmitted information, which then has to be interpreted by the end user. You must test this interpretation, and ideally need to test many other elements too.

1} Backup files. It goes without saying that losing the design files for a project will stall, if not end a project. For the sake of 2-5 minutes once a month backing up your files to an external hard drive or online storage you can save 500+ hours of work. Remember that you're not just at risk from property theft, loss or destruction in real life, but also online. Ransomware and viruses are also viable threats to your files. As a note, never pay a ransomware distributor to get your files back. You fund criminal activity and they have absolutely no reason to return the files even if you do pay. You must simply accept the loss and change your security process.

2} Sunken costs. It's natural to develop an attachment to something you invest a lot of resources into. The challenge is in being able to look at it objectively and admit that regardless of how much love and work has gone into something, it may not be working. Ideas and designs can be fundamentally flawed. This does not mean the general idea needs to be abandoned, but that possibly the way the idea is currently being executed is not optimal.

Sometimes you will need to make bold changes and decisions to make those leaps that really carry a game forward. As long as you document any such changes, the worst that can happen is you lose a very small amount of time, gain more experience and revert the game to its previous form. If you don't explore these options then you're sticking with your initial idea, and initial ideas are rarely even close to the optimal design for an idea.

3} Involve other people. It can be intimidating at first to share your idea with others. It is a reflection and insight into your own mind, and that's quite personal. It is however necessary to

develop a game. All games, even solo games involve people reading or somehow learning the rules and interpreting them in their own way. This needs to be consistent and reliable, and you will need to test this with other people, as much as possible. Preferably a mixture of familiar and unfamiliar people. The more critical and honest they are, the better. Don't be afraid of people pointing out your mistakes or criticising your design. This is vital to improving it.

Get the Ball Rolling

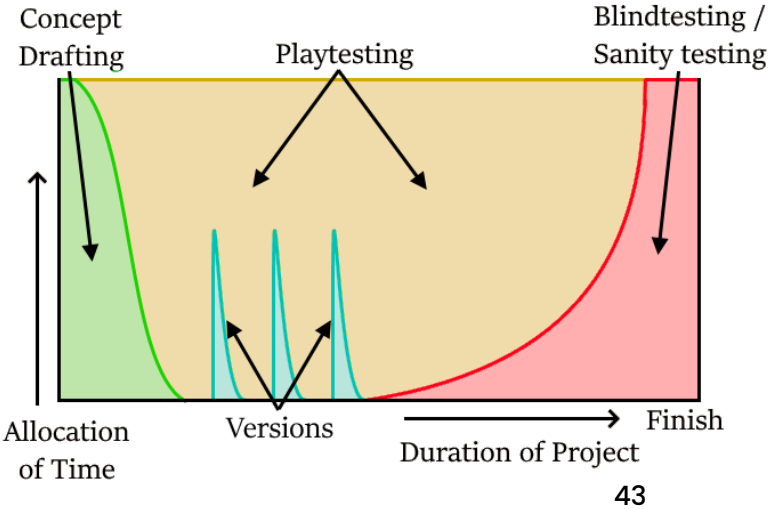
Games have a lot of conceptual inertia. They usually develop slowly and can feel weak to begin, but as ideas develop and mechanics are defined they build speed and slowly alter their course towards a more exciting destination. You can change tracks and head somewhere else safe enough, but make sure you keep records of significant (if not all) changes and plan out your alterations before gently applying them. Once the ball is moving, try to avoid making wild alterations based on single suggestions or playtests. Imagine you're steering a giant rolling boulder by hitting it with a hammer. Steer it slowly in the right direction considering all factors as you go, and remember that as long as you put the effort in, initial flawed elements will be replaced with improvements, and your ability to do this will also improve.

There are several profound benefits to maintaining daily investments in developing your game;

1} You aren't wasting time 'working out where you left off'.
2} Playtesters can more easily set aside time to join your tests if you're hosting them at regular times throughout the week.
3} People will be inspired by your commitment and may be encouraged to make contributions to your project.

Testing Time Allocation (unfinished)

You'll have to decide how to allocate your time when developing your game. As a basic guide there is a graphic to the left that illustrates a **typical** development allocation of time. These allocations vary massively between one project and another, but there are certain aspects that are vital and should not be overlooked.



First you'll want to draft concepts, laying out some basic ideas and mechanisms that you suspect might have the effect you want. This is the emotional minefield of game design.

You might find 6 terrible ideas in a row and decide you suck at game design. You might find one great idea on the first try and become so loyal to it that you're never able to effectively assess how it's contributing to your current design goals.

Game development requires quite a broad range of skills and it's very unlikely a person will be naturally good at all of these things when they begin. At some point you're very likely going to have to tackle challenges you don't like. It's simply something you either care about, or don't. If you care, keep looking, and you'll find something good.

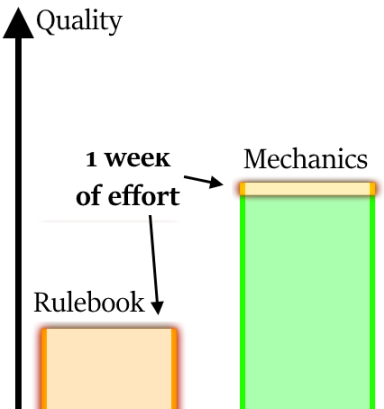
Step 2: Development. This is a combination of steady playtesting and occasional redesigns that result in different versions of the game. Much like when a taste tester or food critic cleans their tongue so that the taste of the previous dish doesn't impact the taste of the next, as you develop your game it can help to try switching a significant amount of the design around. Even if this doesn't result in improved gameplay, you've increased your knowledge of what does and doesn't work.

You get different perspectives of the mechanisms and ideas you're already attached to in different contexts. This can give you a better understanding of them, so that when you return to the version you're most confident in, you might have new ideas or be able to detect issues you hadn't been aware of previously.

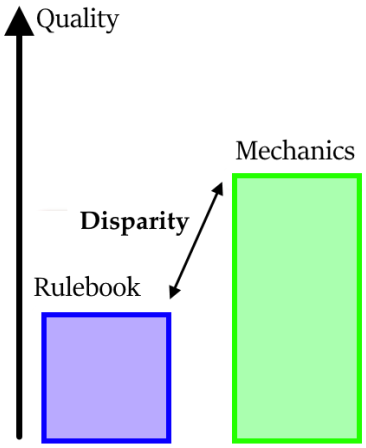
Step 3: Is Blindtests. As shown in the image, these can viably begin quite early into the second half of development. This is because **player authenticity** (see page XX) matters a lot in testing and getting feedback, and no matter how good you are at judging people and processing feedback, players are never really players when they know they're testing a game in development. You don't want to leave all of this entirely until the end of your planned development. Revelations found during blindtests and the way players interpret and engage with the game can have tenable relevance to decisions typically made in the playtesting stages. Use your best judgement to determine when you need to start blindtest and how much you should be doing.

For **newer developers**; Be aware of your needs for **blindtesting** (see page XX). Testing a game with friends and family is very different from playtesting it with real gamers and members of your target audience. The **authenticity of the player** is much lower, and this can produce very misleading responses to your game.

Diminishing Returns on Investment (unfinished)



As displayed to the right, your efforts have a diminishing impact on each aspect of your project as they are honed and improved. This is an important consideration when developing; where can I make the most impact over the next batch of updates? It may feel that your strengths lie in one area and thus this is the most beneficial place to apply your efforts, but there is a price in neglecting other parts of the product.



It's also worth remembering that this graphic isn't just representing your game, it's representing your abilities as a developer. If you only practice the things you are good at, your overall growth will be slower than if you had a more rounded approach to design and development, and as I'm about to discuss, the **lowest quality** aspects of your game matter just as much, if not more, than its strengths.

When developing a game alone or with a small team, you'll probably have to focus your attention on single elements of the game, rather than developing multiple aspects alongside each other. One week you might be working on balance, the next on the rulebook and then later on something else.

This is fine, but what you want to be aware of is that you are not over-investing in a specific element, either because you've misjudged it's value, or because you enjoy that element of the game (or game design) and are 'playing to your strengths'. You may also just be avoiding some tasks you don't like.

It makes sense to play to your strengths. Artists are probably going to invest more time and effort in their game's art whilst concept tinkering might be more popular with a creative problem-solver. Whilst this approach appears to make sense, like many things in life a lack of equilibrium can negatively impact growth and stability.

Here's an example of how tunnel vision and focusing on a single aspect of a game too much can negatively impact the game's development;

Mario's game has 3 concepts, Flutes, Fairies and Pretzels. Mario has been working on involving fun and engaging concepts in his game and hasn't made much time for balancing. Playtests have indicated that.

Fairies don't fare well in the game and players prefer Flutes and Pretzels, so Mario assumes the Fairy concept is the issue.

Mario's brother Luigi is working on another, identical game. Luigi has spent a ton of time

balancing and can clearly see that even when well balanced, Flutes just don't add to the game and it works just as well with two resources. Luigi removes Flutes from the game and now has to re-do the last 3 weeks of balancing.

The brothers' clever friend Peach (also working on an identical game) put about half of her effort into making interesting concepts and half into balancing them. Because the balance of her concepts was stable, she was able to see an issue with one of the concepts in the game. Unlike Luigi, Peach didn't obsess for an extra 3 weeks about balance, avoiding a lot of wasted time.

The lesson here being that Mario invested too little in balancing which distorted the function of the concepts and Luigi focused too much on balancing leading to time wasted on something he could have seen wasn't working if he'd taken a step back and looked at the broader picture.

If that doens't clarify it, think of it this way; The more time you invest in one element or aspect of something, the further the returns decrease. You've grabbed all of the 'low hanging fruit', the easy to reach revelations and advancements, and now you're stretching out and trying to find progress that is much harder to find.

That initial clump of easy to reach revelations involves a lot of key revelations that prevent you from going for a very long walk down the wrong path.

One much more common example is commissioning professional art before you've tested core mechanics and gameplay properly. The quality of the art might lead people to make inaccurate assumptions of the overall state of the development of the game, resulting in it attracting the wrong kind of playtesters. People who are happy playing raw, poorly developed games are often not the same people as those who are looking for a relatively polished, stable experience. And, perhaps equally so, going too long without appropriately enticing art might cause an equally disruptive mis-match in who is drawn to your game.

It's also worth considering that the final product will be a combination of all aspects, not an array of individual aspects side by side. Each part of your game influences the others.

Excessive loyalty to any single aspect of a game, for example a refusal to alter a mechanic to make it easier to learn and teach, might seem like a good principle and in some cases very much is. It is however in my experience far more efficient to ensure that no aspect of your game / project is too far behind or ahead of any other.

That said, it's probably also true that the design of every game has strengths and weaknesses, so try not to confuse a balanced approach to design with not looking for the game's strengths and weaknesses and investing your attention proportionately based on that.

When it comes to the core elements of what a tabletop game consists of, consider that what

holds your game back could be both that its strengths are not strong enough and that its weaknesses are too weak. A game with fantastic mechanics and a terrible rule book will more often suffer from agitation with the rulebook than joy at the fantastic mechanics. (Note: Rule of Carnage notes here that players can get past bad rules to get to good gameplay, but the opposite is not true. I imagine some readers will also share this thought, so I wanted to note that whilst the gameplay is truly what matters, a key concern of mine is that poor rule writing can destroy gameplay, and as a result its quality could be impacted and inconsistent.)

When it comes to rules, players proceed on the assumption that the creator has taken the care to prepare the material to be suitable for consumption, like a chef picking the bones out of a fish. If the player then finds a disruptive amount of bones in their fish, it's a fair assumption that care was not taken in the delivery of the meal. If a player finds a few typos in the first few pages of a rulebook, they might then struggle to have faith in the rulewriting and the gameplay. This lack of quality will lead to **doubt**, and doubt can encourage players to spend 10 minutes clarifying that they've read an unusual rule correctly, rather than just trusting that the rules say exactly what they mean to say.

Again I will note that this doesn't mean that there should be no variation or contrast in the strength of the various aspects of your game. What I'm advising is that all aspects gets some attention relatively routinely. You should still identify and invest more in the game's strengths, just avoid completely neglecting the weaker aspects to the point that they are the most memorable aspect of the delivered experience.

NEEDS EDITOR DIGESTION Contrast of Quality

The first thing a player is most likely to notice is the strongest and weakest part of your game. If it has outstanding graphics, that will draw in an audience. If it then displays terrible gameplay, the audience will be pushed away. The difference between the best and worst aspects of your game is worth consideration. This distance creates contrast due to higher player expectations when they see the strong part of your game.

This can set off alarm bells when they notice that other parts aren't up to that standard, and they might ask themselves why the game is specifically strong in one sense and profoundly weak in another. It doesn't necessarily hurt to have a distinct strength such as theme, gameplay or graphics, but you want all aspects of the game to be at least around 50% the level of quality of the strongest aspect. Otherwise the significant disparity will jar the player and distract them from being able to enjoy the strengths of your game.

Some examples would be having a terrible soundtrack, inexplicably bad graphics, poor controls and camera positioning or a game with imbalanced enemies scattered randomly through the

narrative. The best part of your game is going to be obscured by the more immediately apparent flaws, so maintaining a good ground level of quality is an important consideration.

Deduct Inherent Value

Organise a meeting of some people you like. Some of them like each other. Sit them at a table. Put some nice music on. There are snacks. They aren't worried about other obligations right now; this is their time to relax and have fun. Now bundle all of this pleasure and good mood up in your hands. Ask yourself; How much better does my game make this?

The event that is a gaming session is inherently enjoyable, setting participants up for good times, making it much easier to enjoy things and express said joy. Put a puppy on that table. Put a bottle of beer on it. Put an interesting book on it. Put some potatoes on it. In all cases, this gathering of friendly faces is probably going to have some fun with it. Does that make you a great entertainer? A great game designer? Is that the extent of your ambition? ARE YOU HAPPY TO BE AT THE LEVEL OF POTATOES AND PUPPIES?

Imagine I'm a drill sergeant if it helps. It's completely fine if you just want to get a pat on the back from your mates after they play your game and acknowledge that it works and that you have somehow constructed a functional game. But if you CAN strive for more, then why not? Don't let the reason you didn't try something braver be that you simply didn't think to. Don't let the inherent value of a social gathering trick you into thinking you got lucky with your design and probably aren't going to pull it off a second time. Ask yourself what your game does to amplify the inherent value of a situation, and whether it's enough for you to function at the level of potatoes.

Understand Your Game

As is advised when teaching a game, you must also understand your game as you design it. You need to be able to answer any question that might be asked about your game's rules and about the common strategies and interactions that might apply. What does this represent? What is the value of this within the game, and how much impact does it have? How difficult should this part be? Playtesting is a vital practice in achieving this, both by yourself and observing others.

You must also have clear mechanics and concepts set out as early as possible. You should have a distinct idea of the role each element plays within the game. There shouldn't be any elements that are obscure in their role or function. That doesn't mean you need to know exactly

how they'll behave. You just need to know in what capacity they will function within the game. What is that element's role or purpose, why is it in the game?

If you can't answer these questions then there can't be an answer because you are the one creating the game. The player will be left to make assumptions which will lead to frustration and disappointment when they find those assumptions to be wrong. During design, outline what the role / purpose of each element of your game is, the impact it has on gameplay, what it adds to the game and why it might be needed.

Assume Good Intent

Now firstly as a philosopher I feel I should point out that this is generally good life advice; approach people and scenarios with the presumption that those involved will act in the way they feel is most beneficial to themselves. That might sound selfish, but genuinely selfish people are actually very healthy for a community, because genuinely selfish people will recognise that as part of that community, investments in it will also benefit them in a way being greedy and self-serving typically won't.

That doesn't mean some people are directly selfish, because sometimes that is more personally beneficial, but as a game designer consider that this is never a better way to approach playing games. The player might not know it, but the underlying value of tabletop games requires a communal, 'selfless' investment of time, attention and effort. Because playing games is at its core a cooperative endeavour (even if the gameplay is competitive), being selfish is never a valid approach… Well, there might be this girl you're trying to impress and you might cheat to show her how good you are at making money, only to discover that she's observant and immediately calls you out, which I'm sure is an experience that has never happened to anyone before, even a child.

What all of this is meant to imply is that when you develop your game, you should assume that the person playing the game will be playing it in earnest, with the intention of allowing the game to function at its highest possible level and provide the maximum amount of entertainment to those playing it. Cheaters diminish their credibility if caught, and even if not caught, they invalidate their victory in their own mind. Those not paying attention waste their own time, if not everyone's. Jokers and flirts might alienate their friends or potential friends as might overly competitive players.

You should, in my experience, design your game on the assumption that the person playing it will have good intentions in how they approach playing it. This is important when developing games because this will not be true all of the time. You will encounter playtesters of poor intent (hence why I'm dubious about testing with other developers), but you should disrupt your

game's design to disrupt these players. Assume whoever plays your game will not cheat (unless you want cheating tobe part of the play experience). Assume there will not be a married couple helping each other win. Assume there will not be a bored child trying to sabotage the game to get it to end faster. These things are not your responsibility as a designer, they are down to the players themselves to moderate.

Adding or modifying mechanics to attempt to reduce the impact of players of bad intent can corrupt the design or your game, feed bad designer habits and dilute the experience your game provides. If you can make small, non-intrusive adjustments to reduce the profitability of disruptive or ingenuine play, that's great, but don't warp the intended experience to fit these in (unless you're specifically designing the game for people who struggle with interactions, such as those with social disorders, which certainly goes beyond the scope of knowledge I can provide in this book).

Philosophy in Game Development

It is my belief that the attitude of a game creator matters at least as much as their technical abilities. There are a few principles within attitude towards design that I've picked up over time and think are universally beneficial to those who embrace them.

Shooting For The Moon

As a game develops and achieves increasingly greater quality and performance, there are two factors I like to keep in mind;

One, the payoff per 'ounce' of effort invested decreases. This isn't a fixed rule. Effort in new areas or with new understanding can have differing impacts, but the same effort in the same place will have diminishing positive impact.

Two, the margins for error narrow. The higher the immersion, the finer the balance, the deeper the mechanics, the more easily they are shattered by poor design decisions. The degree of quality creates a more visible contrast within which even tiny mistakes stand out a lot and disrupt the function of the entire product. I call this the 'concord effect', though as a metaphor I more often present it as a spaceship re-entering the atmosphere. One tiny imperfection in the thermal armour and the entire ship will burn up on re-entry. The more ambitious you are with your game, the more attention you'll likely need to pay to those very fine details.

Imagine the difference between spilling beans on a child's scribble and spilling beans on a famous high value artwork. The beans are the same, but the damage is very different.

How does this help us as designers?
It helps us understand the landscape with face when pushing the potential of our games. We can recognise that 'progress' becomes harder to observe, mistakes seem dramatically over-impactful and it might feel like the game is hostile towards change. It should be, it must be in a good place and wants to protect itself! But this doesn't mean there isn't more that can be achieved.

What is not matters as much as what is

Just because you can add something does not mean you should. This is one of the earliest lessons for me personally. A game is not what you add. A game is what you derive from life in its entirety, and if you attempt to recreate life, you're up against immense competition in that life is actually the most genuine and replayable game that can exist.

Always ask yourself: what does this add to the game? Followed by: do I want that in my game?

New! Agency of the Creator

Many developers seem to fall prey to what I call ‘design by democracy’, essentially basing their decisions on opinion polls and any suggestions that are well articulated and sound well justified. They seem to overlook the one very important part of their game that truly makes it unique; them.

The creator of a game has a vital connection to their game. Those who hand agency of design over to an amorphous ‘average opinion’ person will lose the one key thing that makes games an artform. They lose their individuality.

It’s also important to consider the element of *passion*. Don’t design what you think will be commercially successful, design what you’re passionate about. Two designers working at the same thing, where one is passionate about it and the other is not, will by my theory always result in the passionate developer coming out on top. There are people passionate about every type of game, so don’t deprive yourself of the advantage of passion.

Further to this, have confidence in your ability to decide what players might and might not enjoy. However good or bad that ability currently is, it has the potential to develop infinitely and if you don’t respect that, you might stunt your growth as a game creator. It is ok to disagree with playtesters, sometimes even *all* of your playtesters, if you think another path is the correct one. Our history is full of people whose actions completely ignored the opinions of every single one of their peers to reveal that their approach was actually much better. Famously the inventors of the first flying machines received a lot of criticism and doubt, but discovered flight nonetheless.

Part 4: Playtesting

The longest part of developing a game is probably going to be the playtesting. Ideally you want to playtest as soon as possible, as often as possible, for as long as possible. Easier said than done, but there are things you can employ to make the process more efficient. I'll note here that whilst I've separated rulebook and rule writing into a later section, you should be developing these aspects alongside your playtesting and development, as this will minimise delays and obstructions to testing.

This section is split into three parts; Preparing A Playtest, Conducting A Playtest and Processing A Playtest.

Preparing A Playtest:

1} Avoid trading playtests with other developers.

2} Have a rulebook. Have player aids / hint cards / reference sheets.

3} Be bold, put your game in front of strangers as well as familiar faces.

4} Make notes. (you could also record the playtest to watch it back later).

There are plenty of potential players out there if you invest a little effort in finding them, especially in the virtual environment. Play for play is a functional way to get playtests, you and another developer testing each other's project and giving feedback. There are however some significant issues with play for play that you should consider.

1} Avoid trading playtests with other developers.
Getting another developer's input can be great, but because developers and designer's operate in this field, they are better able to navigate it, speak convincingly and advocate for their own biases. They might propose you adopt some of their values and offer very logical and convincing arguments as to why you should, but without consideration towards your values and why those might also be relevant and important.

Trading tests also creates a number of social obligations that lead to an unnatural flow of

engagement and feedback. Someone playing your game for a confirmed reward is motivated very differently from someone playing it out of curiosity. The ‘I play your game and you play mine’ arrangement is not something you should entirely avoid, but for most of your testing I’d advise you to stay away from these arrangements. Player authenticity is low because of social contracts you have established with them and, in my experience, the vast majority of designers now (2022) lack the experience to be able to moderate their own biases, both in their tastes and in their emotions.

Enthusiasm is key

Try to avoid ever treating a playtest like a chore that you're bored of. If you're getting tired of the game, that might be a hint that it needs a new edge or something to spice it up a little. That said, after 1000+ playtests even a great game can become repetitive. Try and remember that even if you're only making minute improvements, the game is slowly edging towards that optimal state of quality. A positive attitude will indicate to playtesters that you are invested and confident in your game, presenting it as something worth taking an interest in. If you as the developer are not engaged, the playtester will have immediate concerns about the quality of the game.

Finding Playtesters

Any lack of clarity when looking for playtesters will cost you. Always add when / where the test is being held, a predicted duration and player interaction style (competitive, cooperative, solo). If possible include images and a description. Try to announce at least 40 minutes in advance as this gives people time to finish their current activities and join in.

Try to focus your advert on what the game offers more than what it is. Do not lie, but you can be kind in your description. Consider what experiences the game can provide that might appeal to players and focus on those.

Teaching new players can take up a lot of time, especially considering your game might have some amount of unusual rules they've never encountered before. People are often more willing to stray from their usual comfort zones when it comes to playtesting, so be prepared to have to completely explain foreign mechanics to people.

The best approach I've found is to not ‘info dump’. Don't explain how to play the entire game, and then play it expecting the player to remember everything. There are advantages to this approach, but on average I find it inefficient, especially if you are teaching a high volume of players.

Instead, clarify the objective of the game and player's purpose and then take them through gameplay step by step, explaining relevant rules as you go. This way they are still receiving the rules, but can also associate them with components and mechanics rather than trying to remember everything without any perspective or references.

Conducting A Playtest

Take Notes
Take Notes. Most people don't do this when they start out. You won't be able to develop without making notes so get used to doing so.

Approach to note taking
Notes are a vital part of testing a game, but there are several ways you can approach taking them and you should consider your options.

A video recording of the session is to my knowledge the most thorough (not efficient) way of taking notes. You can sit and watch through the video at your own pace, taking notes and giving consideration to what occurs at your own pace. Whilst this is often the assumed approach for developers, my experience leads me to believe that this is by far one of the least efficient ways of taking notes, essentially doubling your playtest processing time (since the recording will be the length of the playtest).

I only recommend video recordings for exceptional or unusual playtests, such as having accomplished designers play your game, or when testing it with an audience very different from the audience you typically test with. In this case the higher turnover time for notes can be a worthwhile investment for the increased diversity of experiences that will occur.

'Seated' note taking is something I see designers / developers either doing too much of, or too little of. When participating in a game, you will inevitably take different notes from when you're not seated. This isn't so much method of note taking as a vital consideration when note taking. Participating in the game will be critical in experiencing the player dynamics and social emotions the game inspires, as well as cognitive load and other aspects. Being an observer will help you assess decisions and player motivations far more broadly, and whilst generally I find this more efficient, a considerable amount of testing should still involve participating in the game in my opinion.

Feedback Forms are in my experience only useful if you have enough experience developing your game to create a custom tuned form specifically for that game, one that addresses

specific concerns you have and options you are considering. DO NOT use template forms from the internet. Also avoid census questions and market research questions such as 'what's your favourite type of game' and 'how much would you pay for a game'. Be specific to your game; 'is this game similar to games you usually enjoy?' and 'Would you buy this game for $20?'.

Getting Feedback

As much as your own notes you'll want to hear from your playtesters. You'll only ever be able to see so much from your own perspective, and it's especially important to consider going 'design blind', which is when the time you've spent working on a project makes it increasingly difficult for you to spot certain issues and opportunities.

You can ask questions during gameplay, such as why a player made a certain decision or why they seem to be perplexed or irritated, but you should always consider that this interferes with the Authenticity of the Play Experience. Alternatively you can write down your questions and ask them at the end.

Authenticity of the Play Experience

As a test host you'll be playing a role that is not naturally present when a game is being played. You must consider the play experience in the context of a game that has been purchased and played without you being involved in that process at all. Consider the impact your presence has on that experience.

People usually take the path of least resistance when encountering an issue, and with you present, you're essentially a voice activated sentient search engine specifically built for your game. They're going to ask questions they wouldn't ask if you weren't there. This is especially important when conducting a blind test.

It's also not uncommon for people to 'bully', or specifically not bully, the creator of the game.

Covert Testing

With consideration to all the above points, one highly effective method for testing is to never declare that the game is yours or even that it's in development. This requires a certain visual quality and some people pose questions regarding the ethics of misleading people, but I have yet to hear a sound argument as to why this should be a concern.

You can even conduct blindtests this way by asking for help 'learning a game you found'. Whilst again this might be considered deceptive, you should weigh up the benefits and drawbacks

and consider how harmful it might be to be deceived in such a way yourself. It is then down to you to decide whether you're happy employing this approach.

Maintain the integrity of the playtest

Firstly, try to maintain visual consistency across similar elements of the game. If something looks like it's had more time invested in its visual design, players might assume it is a firmer part of the game compared to something that looks like it was added an hour ago. This can affect their judgement of how valuable that element is within the gameplay, and may influence their decisions. This doesn't mean stronger things can't look stronger, but the quality of the visual design should be consistent.

Secondly, don't comment on balance or strategies. Players will assume you are fairly experienced in playing the game, and anything you say may influence their decisions or approach towards the game. As much as possible try to sit out of tactical / strategic discussion unless you are playing too. The importance of this is tenfold in a blindtest since you need to test the game as though you were not present.

If players lose interest they may start making illogical decisions to bring the game to a faster end. This is largely down to who is playtesting your game and the overall design of your game, but it is important that you recognise when a player is no longer invested in the gameplay. You will have to pretty much disregard their choices at this point, since they are more a prisoner than a willing player and though real players also do this, this is absolutely not a behaviour you want to design your game to cater to.

Respond to feedback

When a play tester freely gives their time to test your game, you must ensure that they feel their contribution is appreciated. Listen to everything they say and acknowledge that you understand it. Be seen to make notes whenever possible and indicate that you are listening either through visual or verbal confirmation, or by relaying their words back to them to clarify what was said.

This does not mean you need to agree with what they say, and it is fine to scrutinise their input and present counterpoints, but as a general rule do not disagree. Your opinion isn't relevant, you are the one who has invited them to come and offer their opinion, they have not come to hear your opinion. You can discuss their reasons but do not simply offer your own opinion in response, for example;

"I think it would be better if players took it in turns".

"No I don't think that would be as good."

Processing A Playtest Emotionally

Checklist;
1} Consider Target Audience
2}

4} Deduct 'Ambient' value
5} Consider overconfidence

As a newer designer I was convinced that when people enjoyed my game, it was evidence that it was good, and that when they didn't, it was evidence it was bad. Over time I learnt that this is a terrible way to assess your game and can only leave a designer drowning between a sea of opinions that will inevitably vary, regardless of how good the game is. I've since found it far more effective to monitor the player experience not as an overall experience, but as a number of smaller connected experiences delivered by the game I'm developing. In this way you can catch the individual issues and strengths within the game, where an overall feeling a tester converys doesn't offer specifics of what parts of the game made them feel specifically.

Whilst there are many nuances to processing feedback in a productive way, I'm going to quickly cover what I've experienced to be a good way to approach this process on an emotional level. This will include both encouraging and disheartening insights, but overall these will help you better steer the development of your project.

Firstly, target audience. This is a phrase you should be saying at least once every thirty seconds as a game designer / developer. Being aware that the human race is evolved to be varied and diverse is critical in understanding that no game can please everyone. Games that are massively popular are games that satisfy very common desires that are born from the culture and nature of a society. Children are vulnerable and thus enjoy combat and survival games. Office workers miss nature and thus often enjoy nature / outdoor simulations. Games that involve nurturing and growth such as the Sims and Animal Crossing seem much more popular with women than most games. Remember that people differ, what they enjoy differs, and thus you will inevitably get a range of positive and negative feedback on ANY game you ever create, no matter how good it is.

Secondly, do not trust popularity. This again touches on the point made previously; culture and modern living impact the distribution of audience types, probably far more than the quality of the involved games. If the public want cowboy games and designers are making really good racing games, consider whether the public is going to recognise the quality of the racing games and play those, or just find some mundane cowboy games and play those to fulfil their fantasy. In my experience, people are usually drawn to a bad version of what they want rather than a good version of what they don't, so avoid using mass popularity to gauge the quality of your game. Remember that tobacco and war are massively popular activities, and neither are typically good for anyone.

Thirdly, don't 'design by democracy'. Here's how it goes; Designer A makes a game about A because they love A. Designer B makes a game about A because A is very popular right now and a lot of games in that category are seeing a lot of success. Designer B's games never see any success because for each Designer B making A games, there is a Designer A making A games. Design towards the things you are passionate about and hope that you do such a good job that you contribute to a shift in the industry's tastes. MOST people can enjoy anything, they just haven't experienced an interaction of it they enjoy yet.

Fourth, be aware of 'Ambient Enjoyment' or room temperature fun. You've sat a number of people together in a room. They've all shown up. It's time to have some fun and not worry about other commitments. Before you've even opened the box, people are already in a good mood. They play and start laughing and arguing and having a great time. In a parallel universe there is no game, they're flicking grapes at each other and laughing and arguing and having a great time.

The point here is that in certain situations, people will create the fun themselves. I've seen consistently bad games given to people who are in a good mood, and they've found amusement in subjecting each other to the game's flaws, even in some cases reporting that 'they had a ton of fun' despite that it was the players generating the enjoyment, not the game. Games should be amplifying entertainment, not just initiating it.

Remain objective and remember that others won't.
People naturally want to be helpful and informative. As a result players will often draw conclusions of a game after only a single session, and some will even try to do so before having seen all of the gameplay / mechanics. This is normal, but can be risky. You will need to identify the difference between a contemplated and informed decision and a knee-jerk reaction. Remember that most people like to give their opinion, even on things they do not understand. Move slowly and gather multiple accounts before making any critical decisions.

Part 5: Blind Testing

Blindtesting differs from playtesting in that you'll play a much more passive role in conducting these tests, aiming to watch as players interact with your game in a scenario that resembles the reality of playing games as closely as possible. This largely requires that you avoid interfering with the process, though there are times where you will have to step in.

Author Note: If you'd like to financially support the development of this book there's the option to support me on patreon at https://www.patreon.com/AaronBeedle. If you'd like to get in contact or explore my other work, you can head to www.paperweightgames.co.uk

Part 6: Diagnostics

In this section I'll go over some of the techniques I've found especially useful in analysing games and determining what elements were hindering the game's ability to achieve its design objectives. I've presented this later in the book as this tends to occur when a project has 'hit a brick wall'; progress has slowed significantly and the developer can't seem to find a way forward.

These techniques are not exclusively useful once a project has stalled. They can, much like the development considerations, be employed during development to enhance the game's design and avoid issues before they arise. I've presented them separately later in the book only because they more commonly come into play later into development, however they are very much **Design Considerations.**

Is there a problem

I'm totally padding out the book by raising this very obvious, but incredibly important question; Is there actually a problem. Maybe some players complained about something in your design or maybe something about it feels off.

Consider that you might actually be designing a **very good game** that also happens to be a

game you aren't entirely keen on. At this point you have to ask yourself why you're doing this; are you building something for others to enjoy, or something for yourself? There's no right answer, but you probably do want an answer. I find it an especially prominent question considering people often don't decide they enjoy something until they experience a good version of it. Maybe your 1v1 pure-skill card game now has a little luck in it and you hate that, but you've also never experienced 'enjoying a duel game with luck elements'. Consider that problems and opportunities are very often (by which I mean always) the same thing.

For **newer designers**; be wary of **jumping to conclusions** or overreacting to things. One issue can consistently trigger the same piece of inaccurate feedback from multiple players. 95% of players saying "the combat system is broken" might actually be due to some of the cards having hard to understand rule phrasing leading to now one playing them.

Variables or Functions

Once your game is up and running there are two key aspects that influence how well it achieves its design goals;
1} The specific iterations of variables e.g. numbers, values, types, targets... In other words, the small details that don't impact the game much individually, but provide the bulk of the game material.
2} The mechanical concepts and how they function and interact with each other.

In **all** cases where you are approaching your game with the aim of resolving an issue, keep this in mind. I have found it to be useful in all situations, and being aware of these possibilities can save you massive amounts of development time.

So let's say you've completely re-designed the combat resource system in your card game (this is a universal concept but I need to use a specific example, try not to be put off by that). The new system doesn't work well during the next 3 playtests, so you revert back to the old system. What you didn't know was that the new system makes cars harder to play, making it harder to buy things. Because you hadn't considered the specific design of the 42 cards within the new system, the cards weren't balanced correctly. You later came back to this system convinced that it was a good idea, altered the card values, and found that this system was **much** better than the old one (yes, I'm speaking from experience, I'm a proficient maker of mistakes).

This problem can occur the opposite way; the balance is good, but the mechanical interactions are disruptive. Typically the balance sits on top of the mechanics, though not as much as I once thought. These two aspects are much more synergetic, and have a two-way influence on each other most of the time. They must thrive and function in unison to advance properly.

I've tested many games where the balancing was **so damn good** that it was extremely hard to identify issues in the mechanic composition of the game. The developer, having playtested it many times, was aware that **something** was wrong, but despite their efforts at fine-tuning the game could not work out what it was. This was because they had **masked** the mechanical incompatibilities of their design with high quality balancing.

By looking at the individual mechanics and asking the questions 'how does this interact with other mechanics and what impact does that have on the gameplay' we were able to identify and resolve mechanics that were disrupting the impact of each other, and though this invalidated some of the tuning and balancing the developer had achieved, it made balance improvements **much easier** and raised the maximum possible balance integrity of the game.

Mechanical Compatibility

Each mechanic in a game may serve to either amplify, enable or obstruct (or in the worst cases disable) the other mechanics it has been combined with. This 'arranging of mechanics' is a part of the art of designing games, however what you can do is individually assess each mechanic and the role it plays within the overall design of a game.

To explain this concept I'm going to use a metaphor. Imagine you want to deliver an experience using a set of mechanisms or devices. Maybe you want to throw a disco.
You spend a while going to discos and doing research and find three mechanisms you really like and think work well; discoballs, smoke machines and strobe lights. Think of the mechanics in a game like these elements in a disco.

First you try each of them alone: No issues. They're great, people like them, but they're not really anything that's going to break the news.
Next you try combining mechanics, which is where mechanical synergy becomes an important consideration. You try both the disco ball and the smoke machine together. People who like disco balls come to the disco and get upset because they can't see it through the smoke. You also wasted time and money on getting it to and from the venue.

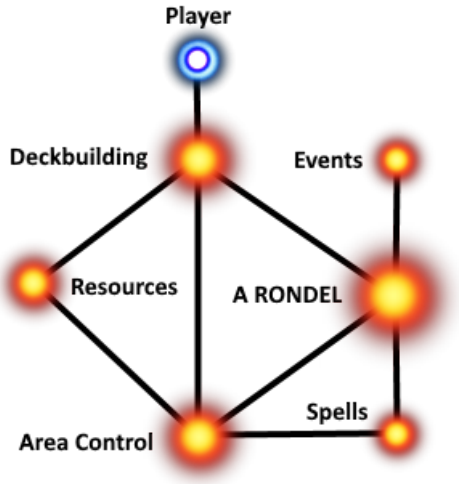
Next you put the disco ball with the strobe light. This has the opposite effect: The strobe light beams fill the room and no one can appreciate anything else going on. If two mechanics dominate too much of a player's attention, they might overlook the gameplay relevance of other mechanics, imbalancing the overall experience they receive.

Finally you put the smoke machine and the strobe lights together. That works pretty well. They compliment each other without obstructing each other's qualities. The strobes make cool lines

in the smoke and no one is missing anything they were told they would see. A game's mechanics will appeal to specific priorities in people looking for something to play. They will also shape a player's pre-judgment of the experience the game provides. If mechanics are present, but not able to impact the game fluently because other mechanics are obstructing them, this can result in an ambient 'not having the desired effect' to the game. This is often one of the more difficult conflicts to detect in a design, so give it some thought if you can't put your finger on what's not working; "How do the *characteristics* of the mechanics potentially support or hinder each other?"

NEW! Mechanical Interaction Mapping FINISH WRITING

Among game designers I might just refer to this as 'Interaction Mapping'. As the name suggests, this is the practice of mapping the interactions between mechanics within a game. This technique can massively enhance your *design awareness*, which is hugely helpful in improving your ability to locate issues. To illustrate this I'll use an image that you definitely might not have seen elsewhere in this book.



Note: Purchasable Victory points are a good example of one-way mechanical interactions.

Perceived Value and Attention Bias

I think it's beneficial to understand the relationship between these factors, so I've grouped them together, though not that they are two separate points. Perceived value isn't something specific to testing. It can impact the experience your game delivers and you might even find a way of using this to achieve your design goals, however perceived value has a very different and potentially more damaging impact during development and playtesting.

What a player sees when they look at a game element has a considerable impact on how they interpret that element and plan around it. There will often be items that you know through thorough testing are balanced, but that most players avoid using because they think they are weak. They may also avoid them because they don't understand the application.

If players are avoiding a game element because it confuses them, you should be wary of this as you may not receive any feedback on that aspect. If you're only drawn to things that receive negative feedback, you'll overlook things that receive no feedback.

Additionally, options that **seem** more powerful may be picked by players more frequently, subjecting them to greater scrutiny, but potentially also creating a proficiency bias towards that

element. Let's say a Turbo Hammer looks really cool, so players pick it, and after a few sessions they get good with it. Other players then see how effective the Turbo Hammer can be and witness frequent demonstrations of how to use it well, so they start using the Turbo Hammer and contributing the the communal knowledge base of how to get the most out of the Turbo Hammer.

In response to this you nerf (weaken) the Turbo Hammer so that it performs on par with the other options in the game. For a month or so it feels like the game is fairly balanced, before the Shimmer Scythe, the counter to the Turbo Hammer, becomes a dominant strategy and the game falls out of balance again. The initial nerf to the Turbo Hammer actually **imbalanced** the game, because there was an attention bias towards it.

As you process playtesting results and conduct playtests, keep an eye out for this and you can save yourself significant amounts of time that would have been spent plugging a seemingly unending amount of leaks.

Maps and Game Boards

Though this is a **specific** issue, I give it special attention because it is such a **common** issue. Designers often present their games on maps that are either inadequate or completely unneeded, because most of us understand the world as a geographical plane. We can walk around, move things, build things etc. Our understanding of the world is firmly cementing in the idea of it being a traversable plane, and abstractions of that usually take us outside of our comfort zone.

Firstly, question whether the reality which you have proposed for your game is one that would even occur on a geographical plane. If your game involves playing cards that represent god-tier powers that can control matter, would the land on which such a battle was fought even matter? Maybe it would have been obliterated as soon as the fight began? Instead of a geographical map with mountains and rivers, maybe the real battle being fought here is in the minds of the gods that the players are playing the role of? Maybe the map is one of anger, pride, fear and wrath, and instead of constructing bases and buildings the player constructs memories and fears?

Secondly, consider whether the interactions within your game even need a 2 dimensional (or 3 dimensional) map. If the player controls units that have range but no directional requirements, being able to move around your opponent means nothing. The only thing that is relevant is the distance between your units and your opponents, and thus the game can be played on a single

dimension, a line.

Action Economy

Games typically involve actions or decisions made by players that impact the game's state and / or outcome. You'll need to consider the overall value these actions have within the game in terms of their power to change or influence the game. This will help avoid hacks or metas that experienced players will exploit in the presence of newer players.

For a simple example: There are a limited number of lakes and forests. Forests produce 2 wood and lakes produce 1 fish, and you can only claim so many plots of land each turn. Fish can however be spent for an extra land claim each turn, meaning that whilst claiming forests will initially grant more resources, as the game progresses the only choice that makes sense is lakes, because fish has greater capacity for growth.

Example 2: In a game you can attack or defend. Attacking costs 1 action and defending costs 0. If the defender loses, they lose 1 action next turn, and this is the only consequence. In this situation, there is never any reason to attack, because even in the best case scenario you are spending 1 action, to take 1 action from an opponent. Consider all the consequences of the attack and its design, and why a player might want to attack. Does it open or restrict options? Does it exploit weaknesses? Does it slow growth?

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Part 7: Rule Writing

The creation of a ruleset for your game is both a crucial part of its development and also a challenge fairly distinct from the other challenges of creating a game. Here you'll need skills that you can get by without when developing the gameplay, and whilst I could not bestow those skills in any rapid way within this book, I can highlight a number of considerations that have helped me approach this part of the creation process.

As you approach writing your rulebook, keep in mind that it is both a *legal document* regulating

how your game is to be played, and also a *part of the gameplay experience*, potentially contributing to or degrading the experience based on its quality. Typically you will want to maximise the time players spend playing your game and minimise the time they spend learning it, but don't get too obsessed with pursuing this; Games need rules. You can't eliminate this aspect of tabletop games. Rule what you need to, and don't be afraid to ask the player to sit and pay attention to your rules.

Writing Rules

You always need to explain how something is done in your game, but you can when needed support this with strategic reasons to do it, a thematic context and why the rule is there. They need to know the mechanical function of the game to be able to play it, but some players also need to know why they are doing things because purpose is part of their learning process. Though it may seem inefficient, it can sometimes help a great deal to add a little thematic description / fluff to help a player visualise what they are trying to achieve on a conceptual level. This way even if the mechanic isn't too familiar to them, the effect it has on the game might be clearer if they can compare it to something they already understand from another context, such as real life.

1} You should not explain more than one rule or mechanic in a single paragraph. Not only does this make it hard to find a rule quickly if it's buried inside a paragraph, it also might lead to a player skipping over it. Some readers will assume each paragraph has a purpose, a rule on which it will educate the reader. In the case of less patient readers, once they feel they have obtained this knowledge from the paragraph they might move on to the next paragraph, even if there is additional text remaining.

2} Do not overuse bold or italic font, or alternate font size. The more you use these, the less importance they will appear to have within the rules, and the less likely it is that the reader will give them additional attention.

3} Use visual landmarks. When players are reading rules they might be distracted or look away to inspect another part of the game. To help ensure they return to where they left off and avoid skipping information accidentally, add the occasional visual feature to the rulebook to help them identify when they're returned to the wrong place. This can be anything from art work to small unique borders to separate paragraphs.

Play As You Learn

Aim to present your rules to the reader in the order they become relevant during gameplay. This

isn't always possible, but where it is possible it cuts down on page-flipping, and makes the book easier to navigate, which also reduces the need for references. The game will also be much easier to learn for those players who learn on the fly rather than pre-reading rules before playing. Generally players will pre-learn the rules in preparation for the game, but this is not always the case. It is often beneficial if you can make your rules more friendly to 'on the fly' learners.

Avoid repetition

In an attempt to ensure that players understand and remember the rules, less experienced writers will often repeat sections of the rule book a second time, and sometimes more. Whilst rule reminders might be appropriate in some places, each rule should ideally only have one entry in the rulebook and if needed an example of how it applies. It might seem like the extra clarity can only be a good thing, but it's just more material to write, read, proofread and playtest. You might also lose players. The difference between a 5 page rulebook and a 9 page rulebook might be 5-10% of your potential players.

Generally speaking, the bigger the rulebook and the more dilute the information with, the harder it is to navigate and use. Each rule you repeat contributes to the size of the rulebook.

Frequently Asked Questions

Often presented as FAQs, it is my belief that most rulebooks do not need an FAQ. Typically the player seems to search the relevant rule entry before heading to the FAQ if they can't find the answer. At best is seems an FAQ can serve as a 'questions you'll probably ask at some point so we'll give you the answer in advance' rather than 'a place to visit if you have a question', since the latter is less effective that using the rule entries, which definitely *should* have the information you're seeking.

Rule Refraction

This is a more nuanced means of ensuring your game is played properly long term. You should try and avoid any rules that could easily be mis-interpreted, but if for some reason such rules are present in your game and you are unable to ensure they are understood correctly at a high rate, you can consider using any common misunderstandings as unique rules in your game. For example, if 1 in 3 players think a rule lets them take 3 actions on their turn at all times, when in fact this is only on a moon phase, you can have an item that says 'you may take 3 actions on all of your turns, as you would on a moon phase'. Anyone who had incorrectly assumed you always take 3 actions would then see this card at some point and correct their rule understanding.

This is certainly a weak way to convey a vital rule, but can be an efficient way of ensuring players see a less vital rule by the end of their first playthrough. 100% rule comprehension on a first play is the goal when it comes to rule delivery, but it's not always a realistic ambition.

All vs Any

A small but crucial point to remember when writing rules, and one that may come naturally to some, is that any and all are significantly different criteria. For example 'any players with an axe gain 1 wood' will function the same as 'all players with an axe gain 1 wood', but 'Apply 2 damage to any of your poisoned heroes' is very different from 'Apply 2 damage to *all* of your damaged heroes'.

Delivering Rules

Visual Landmarks

Referencing when it comes to rulebooks is the act of seeking a specific phrase or reference that you (the player) believe will lead you to the information you need. Assuming you've correctly chosen to look for the phrase that details the rules you seek, you'll want to be able to easily navigate and scan through the rulebook to find that information.

People generally remember the 'visual landscape' better than they remember when a specific piece of information was in a piece of text. Big bold words, oddly shaped paragraphs, graphs, images and illustrations, spaces between page elements and unusual pages such as foldouts; these are all features that give each part of the rulebook a visual landscape unique from each other part of the book.

If the reader can't remember 'that they read about collisions on page 5' you'll have the additional support of them potentially remembering that 'they read about collisions on the page with the picture of a dreadnought', because that element is far more distinct and memorable on a visual level than just text. You don't even need to go as far as images, it's just about unique silhouettes (the outline of the information presented). You don't want a page to lack structure, but this doesn't mean the elements on it can't be laid out in an interesting and visually distinct way.

One method you can use is to look at each page and squint your eyes partially closed. You want to imagine the text isn't readable words, but instead just art. Then whilst doing that, ask yourself whether each page looks like a unique piece of art. In bigger rulebooks you can make compromises, it doesn't have to be perfect and having similar looking pages spread out though the book should be fine, but the more each page on an abstract level looks visually unique, the higher the odds the player will be able to re-location the information they need.

Optimising Referencing

When it comes to referencing, you can't know what assumptions the player will make each time, but with testing and experience you can build knowledge of the most common connections players make when seeking rule clarification. For example, if during testing players seek clarification on the 'collisions' rule, 75% might head to 'Movement', and 25% might head to 'Taking Damage'.

Developing Rules

Much as you must develop your game, you will need to develop your rules. Despite being very much a different entity, they are a vital part of your game and can potentially take just as long to develop as the gameplay itself.

The 'Rule Reader'

Most playtesters do not represent a typical 'rule reader'. When real life players present games to each other, in most cases they will have read the rules privately beforehand to make sure they can teach the game to their gaming partners, or at least attempt to. Alternatively they might present them to the group as a collaborative task, learning the rules together. Even in this situation, the most competent rule reader will usually jump into action.

Remember that as you playtest your game and develop your rules, playtesters tend to be more adventurous people. They're usually operating alone rather than in organised play groups, and they're usually optimistic about the experience they're jumping into ("Hey, play my game you know nothing about!" Isn't reliably good evidence of a fun experience). As such, playtesters don't consistently represent 'rule readers', and when developing and testing your rules you should consider which testers might and might not represent a typical rule reader within your game's **Audience**. Basing your rule development on 'the most common' or 'average' opinion of playtesters can lead to rules designed for *everyone*, and much like dancing, knitting or driving, rule reading isn't something *everyone* is good at or interested in. Design and develop your rules for the kind of person that will willingly approach, learn and teach your rules.

Knowing When They're Ready

You can't. No one can know when their work is done. Just ask yourself; 'if this product represents me in public / on the market, am I going to be happy with that?' Also keep in mind that we all have to start at the bottom. It's not wrong to set yourself an effort threshold rather than a quality threshold. Effort is very often quite easy to detect, and even if you've made mistakes here and

there, people will see that effort and appreciate it, often even offering advice and assistance as you continue to create content.

Part 8: Art

Of the many components from which a gaming experience consists, art might be the most frequently overlooked (yet ironically the most often looked at). There's having unique art and then there's having *intentionally designed* art.

Art goes so much further than just giving your game a face. I this section of the book I'm going to talk through how you can design your art in such a way that it amplifies the player experience delivered by your game.

Art Direction

Before anything else, you'll want to understand the basics of communicating with an artist / illustrator. My approach is always the same; describe what is happening in the image. 'Two bears timidly approach a picnic whilst humans run away and fall over their food'.

The Statement

Like all artforms, illustrations deliver a message, a meaning, a statement. If your typical fantasy theme is delivered with typical fantasy art, that statement is usually going to be 'I didn't think about the art, I just paid someone to make it'. A question I commonly ask early on when making art is "what do I want this to say?". I ask this not as a specific thing, but as a general message across the entirety of a game's art.

You *can* mix and match art styles, but just like with game mechanics, you'll want to think about how well these work together and avoid assuming 'more is merrier'. Typically one consistent style will be enough to deliver a message without being too distracting. Maybe you want to say 'this game is gentle and involves cooperative play'. In this case you might want to avoid stark colour contrast, sharp or jagged edges or broken boundaries.

If your game is about rapid, fast paced reactions and combat, you might wit art that shows blurred, distorted or sparse subjects to illustrate the speed of the game's proposed situation. Whatever message might work for your game, remember that what the player sees will shape their assumptions, both of what the game is and whether they will enjoy it, but also of each individual component.

Part 9: Pitching

Before I get into this section, I should clarify what I consider to be **Pitching**. This isn't the specific act of trying to convince a publisher or investor to invest in your game as a product. To me, pitching is the process of communicating your game's **value**, not just commercially, but as an experience and an idea.

The aim of a pitch is typically to help the recipient relate the presented qualities of your game to their own library of emotions and experiences. Simply outlining the game's features can serve this purpose if the recipient is already familiar with the values the game offers, but part of the art of pitching is being able to illustrate a value the recipient doesn't yet understand. This is more difficult, but if you can catch the listener's curiosity, it allows for you to engage a much wider audience.

To further elaborate, pitchability is how easily a parent can convince their child to play your game, or someone convince their partner to try it, or a local game shop to host it at an event night, or a playtester to give it a go

It might seem like a skill you should leave until later, but pitching helps a lot in getting playtesters, which can yield big benefits during development.

Micro-Pitches

This is essentially a text based elevator pitch, but one that still delivers the necessary details for someone considering whether to play your game. These are ideal for chat channels and appropriate groups / communities on social media as their purpose is immediately clear and their message is simple and compact.

A good approach here is to weave dramatic promotional material together with critical details to convey additional information through common assumption. Players want to know play time, player interaction type, weight and often theme. Thus you can deliver an intuitive message by saying 'this 4-8 player game of unpredictable chaos' for a game that would be considered casual. Be aware of how common assumptions and trends can both direct the reader towards the correct assumptions (allowing you to convey your message in fewer words) and also how they can steer them towards incorrect assumptions about your game.

The core strength of Micro-Pitches is that they're extremely easy to deploy. Usually around 40-50 words in length, they require exceptionally low effort from the reader and are very

un-intrusive.

Advert

The next step from a micro pitch is an advert, bringing visual and promotional elements into action.

Game Box

To paraphrase Reddit user girrafesareburning: "In this game you'll be simulating *this Theme* by using *these Game Mechanics*. Win by most effectively overcoming *these Challenges*, but watch out for these *Interesting Rules that distinguish the game from similar products.*"

Sell Sheet

The sell sheet is essentially a 'big' advert, but with additional information regarding the underlying details of the game. Sell sheets are typically used to attract publishers to a game to potentially sign it as a product, however in the same way sell sheets can encourage financial investment from publishers, they can encourage attention investments from potential players. I believe it helps to consider that once a publisher has invested in your game, they then have to convince **potential customers** to invest in the game, and your sell sheet is a demonstration of how easy or difficult that might be for them. Thus it is ideal if a sell sheet can both attract publishers and players.

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Glossary

Player Authenticity: How accurately the person testing the game represents the audience that will eventually be playing that game once it is published.

Playest Authenticity: How accurately the conditions of the playtest represent those the game is likely to be played in once it is published.

Audience: The people playing your game.

Intended Audience: The people you are attempting to entertain with your game.

Special Thanks

Rule of Carnage: For offering valuable critique of the content of this book.

The Bucket

Where I have dropped random things that need to be sorted into the relevant sections

Overcoming Design Challenges

There is no ambition within your design that doesn't have a good mechanic that can be put to it. The limitless capacity of game mechanics' ability to represent things within your game means that you should never be asking the question 'is this possible', but rather 'how is this possible'. You are searching for a solution that does exist, even if it is not easy to see.

There are a few things you can do to guide you along the obscure path that will lead you to the game mechanics you are seeking. Your first step when facing a seemingly impossible design challenge is to take a little break, if you've already spent a lot of time on it with success. Work on something else, take a break, clear your mind, detox your thoughts.

Next you should research how other games are overcoming their issues. Look into unusual and unique game mechanics, and explore the possibilities beyond. Consider all of your variables. Shapes, mathematics, cards, dice, voices, players limbs, the passage of time. Spinners, building blocks, puzzles. Do your research both within the gaming word and the world beyond. Your solution could be found anywhere, and could occur to you at any time. It won't always conveniently come as you need it.

Relevance of Presented Material

The act of presenting something to a player, anything, card, counter, dice, carries meaning. It means the designer decided for it to be there. It means it is relevant. Or at least, that's what the player will assume. If they then find that a lot of what they're looking at is often not relevant, part of the gameplay experience is then 'remembering which things don't matter at which times'.

This may not be an issue depending on your game and its design, but it is an area of general concern. A game is a lot more engaging when more of the places the player can look involve relevant information.

Diagnosing Problems: Option Viability
How often the options the player has access to are applicable to their current situation.

Good ideas

Games are made of a variety of elements, but two that heavily impact its gameplay design are the concept and the mechanics. As you go about life as a designer, various themes, concepts and mechanics will occur to you and you might think 'hey that's cool' and then forget about it forever. Don't. Write every interesting idea down in a notebook or some other archive you can easily access again at a later date.

There will come a time in the future where you're unsure where to go or what to work on. You might be in the mood for a certain type of game you want to develop. If you then have a good library of conceptual and mechanical ideas, you have a broader selection with which to create something that represents what you want to create. The alternative is that you hope your mind can naturally draw together good concepts and ideas from all corners of your memory, and has all the fuel you need on standby, which isn't to my knowledge how brains work.

The tricky thing about taking notes when it comes to game design is that *anything* can be relevant. If we look at submarine design, you can probably distinguish relatively easily what knowledge is and is not relevant to that pursuit. A visionary might be able to see connections between submarine design and how meteors enter the atmosphere or how fish digest food or some other strange thing, but for general progress you could probably confidently say whether something is submarine related or not.

The more I learn about a subject, the more blurred this distinction seems to become. Game design however begins at this point. Anything could be relevant, and how could you know what? You really have to EDITOR NOTE: CARGNAGE said that "it's not very helpful to say 'take notes', explain how to do that. apply your own style, character and values when deciding what has

relevance to the game design you wish to conduct.

Time is Money (and everything else) – Mechanics NEEDS REVISION
Consider the things in your game that carry value, and what those values are. A weapon might be worth a lot in a wargame or a mild decoration in a farming simulator. One thing that connects these is that they cost something within the game world, and ultimately this can be reduced to someone's time. Like in life, everything you see and feel and touch and hear is a manifestation of someone's time. This is your 0 coordinate, your anchor point or sea level.

It can help greatly to use time as the prime resource of your game. You can undermine this if the player can distort the passage of time, and that is neither a good or bad thing in general. You can allow the player to pause, rewind, slow time, or alter the rate at which time passes in specific locations or situations. You can also do none of these. If accessing the pause menu or changing a weapon costs time, it becomes part of the player's decision making process. They have to make decisions such as do I stick with this weapon or change to one that can deal with a situation I see up ahead.

Understanding Victory and Defeat
For a player to feel validated in victory and humble in defeat they must understand the overall reasons for that outcome. They must be able to recall specific things they did that were impressive or lacklustre. This may not even be an authentic experience. Your game might simply trick the player into thinking that they overcame a challenge when in reality the variables presented to them were not as variable as they appeared.

A good example of this is in Sid Meier's Civilisation where code was added to ensure that a player could not lose more than 2 battles in a row where the odds of winning the battle were 33%. This convinces the player that they made sound decisions by pandering to the natural assumptions made about probability. The reality of the situation is much less pleasant. The player could have potentially lost 3 battles in a row and this single instance of misfortune could ruin the entire experience.

At the same time if the player becomes aware of this whilst playing the game then they will again revert to the mindset that their input has less meaning within the game, and any victory or defeat is less a result of their decisions and more to do with fortune and the way the game is built.

Objectives / victory conditions
These elements of a game often take a back-seat as we focus on core gameplay. It's easy to overlook how much potential objectives have in making the game more fun. When designing this aspect of your game you should consider what type of objective will suit your game best.

Score is one option for determining who wins a game. This can be harmful to immersion since it's very difficult to tie into the game's alternate reality, but it's also a simple option that is relatively easy to balance.

Conditional objectives can tie deeply into the game's mechanics and involve hidden objectives and victories based on achieving a specific game state. For example in a competitive business game you might win by actually driving the other players out of business. This functions without the player having to leave the reality of the game, but could be difficult to balance when trying to give the game a fairly consistent runtime.

Try to ensure that the fun parts of your game are also the parts that improve the player's chances of victory. This helps to structure and focus the game on its strengths and avoid lulls in pacing or narrative. Whichever approach you take to objectives, try not to string parts of your game that are not fun into the victory conditions. Generally being able to directly 'buy' victory points can make a game feel distinctly like a game and less like an experience.

Power adjustment
Playing a game usually involves attempting to shift the balance of power in your favour. When adding the mechanics that relate to this, consider how they actually alter the balance of power. Is the active player increasing their own power, decreasing 1 other player or decreasing all other players? In some situations these may seem like they would have the same effect, but this is actually very rare. There is almost always a difference between giving yourself power and taking power for someone else.

Genre Specifics: Competitive 3 or more players

Consideration 1: Overall position
Moving yourself forward is similar to moving everyone else backward. Moving someone else backward is the same as moving all others (including yourself) forward. This is a frequently missed point in competitive games.

Some more learning

A variety of cognitive bias theories relates heavily to game design (and life in general) and you

are advised at the very least to make yourself aware of their presence if you intend to design games with fluency;

Variety of Workload – The Process of designing a game
If there is a repetitive task that needs doing, use it as filler work to go between other more unique tasks. Trying to take it all on in one go will inevitably lead to boredom, which is never good for quality. Make sure you make adequate notes so that you can return to the task on a whim without having to relearn your own work.

Things don't have to be predictable
Unless you specifically want a realistic simulation of a reality, it's worth remembering that things don't have to follow their typical behaviours. Here are a few examples;
Purely cosmetic:
A boulder except when it reaches you it opens its mouth like pacman and eats you.
A bullet that turns you into a fish.
Mechanical:
A powerup that makes you strong, but also makes you bigger, meaning you might not fit through certain areas. (Mario used this).
A kraken where the kraken balances the boat on its head and the crew has to balance the ship. (rather than just tentacle assaults on the ship which would be predictable)

Game Mechanics: Actual Nature vs. Popular Iteration

Each mechanic has a 'most popular iteration', which most often seems to be based on the first significantly commercially successful interaction of that type of game or mechanic. Dominion defined deck breakers, Magic The Gathering defined card duel cards, Monopoly defined Roll and Move (illustrating that how well it's done doesn't matter so much as how many times it's already been done).

Learning to separate 'the most common iteration' from what the mechanic actually is in its nature is a powerful ability that aids you in assessing gameplay and identifying good mechanics for a game.
Much like the concept discussed in the section **Perceived Value and Attention Bias**, we as developers might assume a mechanic is bad because the only attempts at using it have been poorly executed or were received badly in the gaming culture into which they were released. The opposite can also be true, in which a mechanism is iterated so well and sees such good

public reception that we assume it will work well in far too many situations, in which it might feel like a good choice because of how well our species understands and has refined that mechanic, whilst the underlying nature of that mechanic is not actually a very good fit for many of the ways we're using it.

Game Mechanics: Validity of options

Presenting players with **exclusively** viable options is often a good approach to game design, but the challenge of discovering which options are and are not valid can absolutely be an enjoyable experience as well, especially if the validity is based on variables that change with each play of the game.

One thing I consider here is the thematic context of the game. Am I a farmer trying to make my way through the obscure landscape of medieval vegetable economics, or the rule of a vast kingdom making critical decisions that impact millions of lives? Consider the position of the plater within the presented game world and what kind of decisions that would entail. If I'm the leader of an entire nation, I'm going to assume upon approaching the game that there's someone (imaginary, somewhere in the game) filtering and cherry picking which options I'm being presented. If I'm a pioneer colonising a planet that no one is sure is even habitable yet, or a child exploring a world I found in a wardrobe, I might not have that protection against bad choices yet.

It comes down to what the player is being lead to expect of that experience, and it's important to consider what role theme plays in that.

Building a Community; Champions

Highlight the inherent appeal of being 'that person who was there from the start before you got big'. Every developer has 2-5 of these slots associated with them. Beyond that it gets a little crowded, unless the developer is investing a lot in their community and project, and then more people can find ways they can contribute. But this usually comes later on, and is in response to

the developers actually demonstrating that they are creating something great.

To you as a developer, it is important to understand how these champies represent the popularity of your game. They will really like it, but to some degree, people are also simply attracted to the idea of 'having a friend who is doing something ambitious'. There's nothing wrong with this, those people aren't parasites, it's simply that some people like to lead and others like to follow.

So consider the distinction between 'someone who sees **you** as an investment for their own future opportunities and connections'
and
'Someone who sees **your game** as an investment for the community, at least the part of it they play games with'.
This latter motivation is the one that represents *actual* interest in your game and can reflect how well it is being received. To complicate this, supporters of your project can, and often will be motivated by both of these factors, but it is still beneficial to consider what *portion* of their enthusiasm for your project comes from each of the above two motivations.

Victory Points: Isolated or Integrated

Considerations as to whether victory points should be an independent resource that is purchased / 'cashed in for' OR tied into the player's economic engine / output potential.

In other words, in a game about making efficient cars, is a played scored on how much they actually manage to travel with their car (isolated scoring) or the quality / potential of the car they have created 'integrated'.

Compound or Contest Your Strengths

Within your current design any additions wil ideally complement the strengths of the current design, rather than attempt to disguise it's weaknesses. You might wish to mitigate the impact those the game's weaknesses are having on the experience it provides, but you don't want to try and make a game *good at the thing it's not good at*. Don't try to make a diplomacy that runs in under 30 minutes. A print and play with good table presence.

Or do exactly that, maybe you'll find something really special.

Strategic Narrative

(This is the concept I use in a LOT of my games such as Grudges Void, Sinvestments and Feral Dark. And Death Tracks).
Some games present a narrative / story or chain of events to players, and some give the players the tools to *create their own story*. This latter approach is what I call a **Strategic Narrative**. Every game has a strategic narrative, however as is often the case, we wouldn't identify it in a game that doesn't intentionally invest in and capitalise on this part of the experience of playing it.

Some games do. By identifying the presence of the strategic narrative we can evaluate its impact on the game experience; whether it is part of the core value, whether it has the potential to provide more and whether it even fits.

A game that is designed to provide this will take on the nature of a creative tool box, providing players with a variety of tools they can combine and modify in their attempts to overcome the game's challenges. This can yield many benefits, but there are also some downsides to be wary of;

Players seem to reach strategic competence slower than other games. Games built around the formation of strategic narratives can present a very broad strategic scope that makes it difficult for a player to judge whether their choices are productive or not.

Balancing can require a lot of additional testing, since the variability of strategic approach

Advantage / disadvantage lean

It's often beneficial to lean heavily towards pro-advantage options in a game. This is because players are much more prone to accidentally or intentionally forgetting or overlooking the costs / penalties of their available options. If all the cards a player can play are exclusively offering bonuses, they're incentivised to read the cards fully, remember those advantages, and not worry about checking other player's cards to ensure they're applying all of their disadvantages.

That said, choosing disadvantages can be a lot of fun and a great challenge for a game to provide. Again be aware that this can demand that players 'police' each other to ensure they are correctly applying the costs and penalties of their choices, which can sometimes be a price worth paying, but has a differing impact depending on the overall gameplay.

I would speculate that games that are intended to be fast paced, high action should avoid optional penalties and focus on what you can make happen' as opposed to options that stop things from happening. In slower, more contemplative games I suspect decisions around interesting penalties compliment the overall gameplay better, or at least don't impact it as negatively.

Game Concepts: Linked Actions

It can often greatly increase the interesting choice within a game if player's Actions are linked. Maybe moving and attacking are a single action, or building and gathering are a single action. This can present interesting challenges in pursuing optimal strategies. You can use fixed links as just described, or benefit links where using certain actions together enhances them (through a set rule or through emergent benefits within the gameplay), or shifting links where players are given opportunities to link their actions this way during the game.

Difficulty Modifiers

When possible present the game in its easiest ruleset (as appropriate for the target audience) and then offer modifiers that increase the difficulty. People might feel that they're cheapened the challenge by making it easier, but I dn't think anyone would feel bad for not sing available difficulty modifiers.

Credits

Glenn Ford (Man O' Kent Games) - Technical Editing
Glenn's comments on this document have been not only a massive commitment of his own time and skills, but a vote of confidence and support for the potential value of this book. I hope honour is investment in this document by using his comments to maximum effect and delivering something the game design community can critically benefit from.