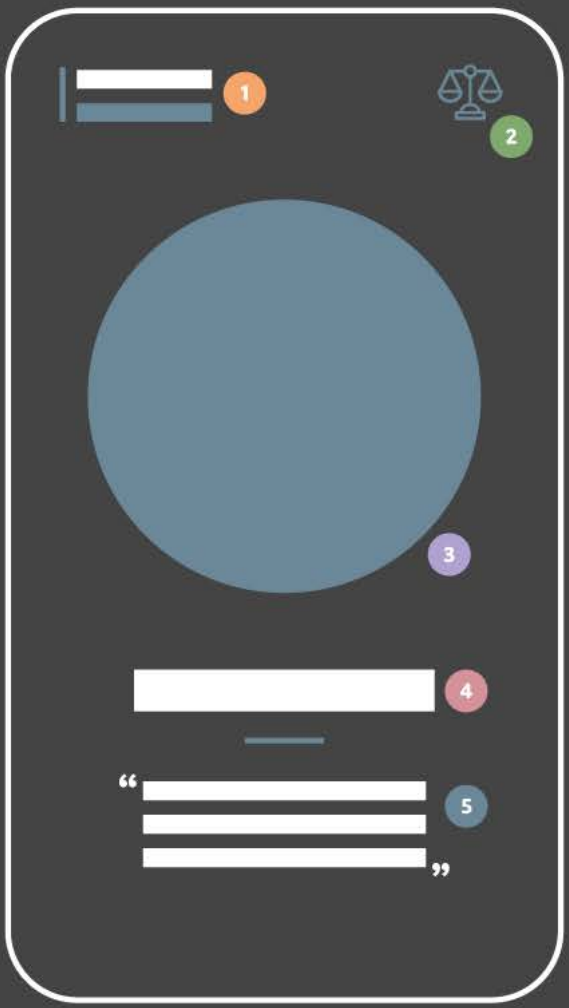
THE CARDS OF GAMIFICATION

Designed by Evi van der Linden

THE CARDS



1. The title of the card with the card number or chapter
2. The icon that represents the chapter of the card
3. An illustration that illustrates the card
4. The title/subject of the card
5. A quote that summorizes the card in a few sentences

Card Reference | 01

A card reference is always bold, colored, and includes the card number

ICONOGRAPHY

Positive notes about the card subject

Negative notes about the subject (things to keep in mind or downsides)

A reference to another card / a related card

A tip / suggestion to help you understand the subject

THE CARDS OF GAMIFICATION

The Cards Of Gamification is a carddeck that summarizes the fundamentals of Gamification design. The gaming industry has brought us many great insights about human behavior, what motivates users and how to make a product more fun to use in general.

I've made this carddeck so you can use it as a **toolbox** whenever you want to implement some of that awesome gamification in your designs. Or if you just want to learn more about the subjects.

The Cards Of Gamification contains **44 cards** that are split up in **5 chapters:**

01 | The Octalysis Framework
In this chapter we will take a look at the different Core Drives to discover different types of motivators.

02 | Cognitive Biases
In this chapter we will discover how humans are influenced in their decision-making processes.

03 | Game Design Techniques
Here you can find a few Game Design Techniques.

04 | Behavioral Design Principles
These are some behavioral design principles that can be useful when using gamification.

05 | Persuasive Technology
In this chapter I included a couple models that help you understand or research a human's behavior.

Side note: *Please keep in mind that I didn't include everything in these cards, if you want to know more about a certain subject I recommend looking it up.*

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CORE DRIVES OF GAMIFICATION

COGNITIVE BIASES

GAME DESIGN TECHNIQUES

BEHAVIORAL DESIGN METHODS

PERSUASIVE TECHNOLOGY

OCTALYSIS: 8 CORE DRIVES

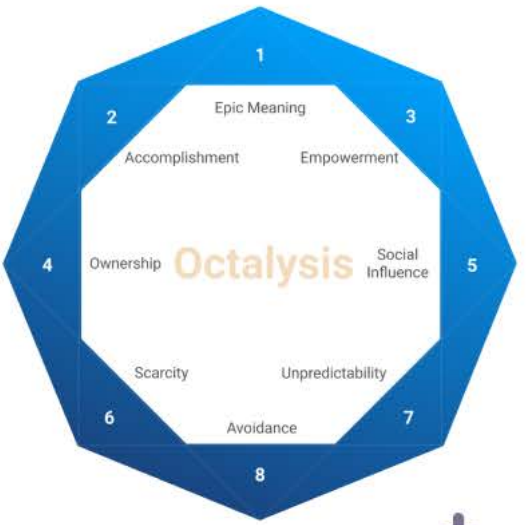
"almost every successful game appeals to certain Core Drives within us and motivates us towards a variety of decisions and activities." [1]

OCTALYSIS: 8 CORE DRIVES EXPLAINED

The Octalysis: 8 Core Drives is a framework designed by designer Yu-Kai Chou, who wrote an entire book about gamification (Actionable Gamification, 2019). The name 'Octalysis' derives from an octagonal shape with 8 core drives representing each side.

The core drives describe what motivates a user to make a decision or perform a certain action. different types of game techniques push us forward differently; some through inspiration and empowerment, some through manipulation and obsession. In this chapter of the carddeck I will zoom in on each Core Drive and how to implement them in your design. You can find the 8 core drives below:

1 - Epic Meaning
2 - Accomplishment
3 - Empowerment
4 - Ownership
5 - Social Influence
6 - Scarcity
7 - Unpredictability
8 - Avoidance.



How to use

Yu-Kai Chou designed the Octalysis framework for designers to create meaningful and effective gamification based designs. It should help you understand the user's behavior in a better way and helps you make the right decisions for your own design and/or products.

Want to know more about Yu-Kai Chou's vision on Gamification?
His book: Acionable Gamification
His workshop: Octalysis Prime

DEVELOPMENT & ACCOMPLISHMENT

"The Core Drive where people are driven by a sense of growth towards a goal and accomplishing it." [3]

DEVELOPMENT & ACCOMPLISHMENT EXPLAINED

The Development & Accomplishment drive Is the second Core Drive. This Core Drive is all about giving users a sense of **growth towards a goal**. This can be in the shape of points, badges, leaderboards (PBL's), or any other form of reward.

This is the most common implementation of gamification we see; the product will reward the user for completing certain goals and give them a **feeling of accomplishment**; This can be a workout app that gives you a badge for every day you did a workout. An example often used in games is getting better items as you level up or getting better rewards for defeating a difficult boss.

Our brains have a natural desire to feel progress and see numbers go up. However, just because you see progress towards something does not mean you feel accomplished. The key is to make sure users are **overcoming challenges they are proud of.**

> **Why use this in a design?**
>
> By giving your user the feeling they are accomplishing and developing in the progress, they feel like they are putting their effort into a goal they will actually achieve.

A Good way of giving people a sense of progression is with rewards
Rewards | 19

Gives motivation | Makes users feel proud of their accomplishments | Helps building confidence

Research the user's desired behavior | Show growth the user cares about | Every user develops in their own way

EMPOWERMENT OF CREATIVITY

"Empowerment of Creativity & Feedback is when users are engaged in a creative process where they have to repeatedly figure things out and try different combinations." [4]

EMPOWERMENT OF CREATIVITY EXPLAINED

The Empowerment Drive Is the third Core Drive. This Core Drive is all about **empowering a user's creativity** and giving them feedback for it. People don't only need ways to express their creativity, but they should also be able to see the results, get feedback on those results and respond in return.

When a user can continuously use their creativity and **infinitely come up with new ways to use the product**, the designer of the product no longer needs to keep creating new content to make the experience as engaging as it was when they used the product for the first time.

A few examples of products that implemented this Core Drive perfectly; the famous Lego blocks, which provide endless building fun. Games like chess, poker, golf, etc. that have been around for centuries and are still wildly populair. But also the famous videogame Minecraft that is still being played by millions all across the world, a decade after it's release.

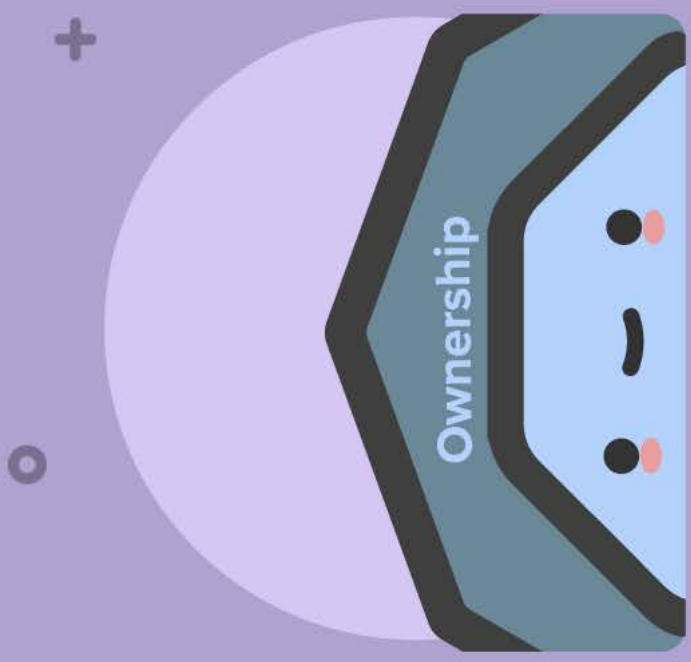
These products may have had some minor tweaks, updates or improvements, but the core of the design always stayed the same.

> **Why use this in a design?**
>
> This is the most difficult Core Drive to implement in a correct and effective way, but if you manage to pull it off, your product will probably maintain it's popularity for a long time.

A good technique of giving people a the power of creativity and new ways to use a product are **Boosters | 22**

Makes a product long-lasting | Adding new content isn't necessary | Boosting creativity of the user

Very difficult to implement succesfully | Changing the product after it's succes will upset users



OWNERSHIP & POSSESION

"This is the drive based on the principle that because you own something, you want to improve it, protect it, and get more of it." [5]

OWNERSHIP & POSSESION EXPLAINED

The Ownership & Posession Drive Is the fourth Core Drive. This Core Drive is about motivating the user with the feeling that **something is their own.**

You will automatically feel more attached to something if you **invested a lot of time** into customizing it to your own liking, like when you pick an outfit for your own character in a game. Or you get something that is **made especially for you** based on your likings/preferences, like a personalised training program or a music playlist with songs picked out for you (Spotify does this a lot).

You will feel ownership for those things because they feel yours. When a user feels this 'ownership', they would feel the urge to **improve what they own** and expand their collection.

Why use this in a design?

When you give the user the feeling that they own something, they will start getting attached to those things and will more likely return to the product or game. This is because they will develop a strong motivation to change it, increase it, and improve it or even care for it (Tamagotchi did that very well). Users will start developing an emotional connection.

A technique to give users a powerful feeling of ownership is
Build From Scratch | 23

User values product more | Creates feeling of attachment | Creates urge to collect things

Don't make collections impossible to complete | Don't make users feel bad for abondoning their things

SOCIAL INFLUENCE & RELATEDNESS

"All the social elements that drive people, including: mentorship, acceptance, social responses, companionship, as well as competition and envy." [6]

SOCIAL INFLUENCE & RELATEDNESS EXPLAINED

The Social Influence & Relatedness Drive Is the fifth Core Drive. This Core Drive incorporates all the **social elements that drive people**, including: mentorship, acceptance, social responses, companionship but also competition and envy. It is based off the human desire to **connect and compare with one another.**

It also includes the drive to **draw ourselves closer to what we can relate to**, such as a product that reminds us of our childhood, or a person you were close to. The nostalgia of these things increase the odds of you buying/using a product that contains those elements. This is why we see a lot of older games being recreated so that users can relive their childhood again. Or why Facebook makes sure you can connect to all the people you might've not spoken to in years.

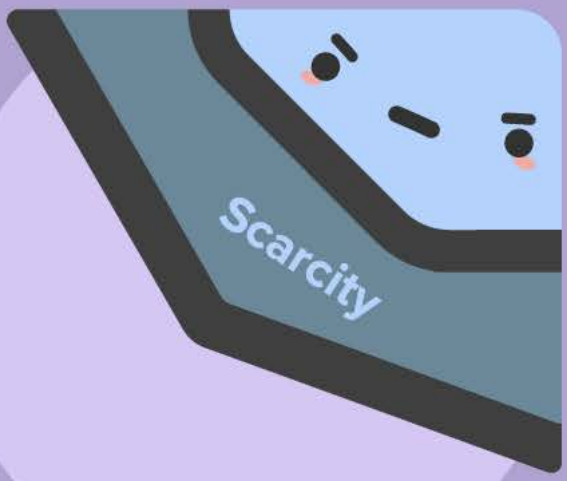
Social Influence can also be used to convince people to buy a product. This is why we see celebrities in commercials or famous Youtubers making videos of a new game.

> **Why use this in a design?**
>
> There are many ways to use social influence to attract and motivate users to become connected and engaged. It can serve as one of the strongest and long-lasting motivations.

A fun Game Design Technique to incorporate social influence is **Group Quests | 24**

Users are able to connect with other users | Can lead to a community being built | Feeling of togetherness

Don't force interaction on users | Make sure the social aspect is an addition to the product



SCARCITY & IMPATIENCE

“our brains naturally and intuitively seek things that are scarce, unavailable, or fading in availability.” [7]

SCARCITY & IMPATIENCE
EXPLAINED

The Scarcity & Impatience Drive Is the sixth Core Drive. This Core Drive is awakened when we want something but it is diffcult obtaining it, or we aren't able to obtain it immediatly. It will motivate people to think about it all day long, because we have **a natural tendency to want things we can't have**.

This technique is used in many different ways and we see them on a daily basis. A common one is VIP seating at a show with the best views; because this seating is often very limited, the urge to obtain such a seat is very high. Another example is stores that claim there is a limited suppply of a certain item. It makes the customer want it even more, because the item is scarce and can become unavailable if the customer doesn't buy it straight away.
But scarcity can also lead to **obsessive behavior, stress, fear of missing out, etc**. So be careful with how you use it.

> **Why use this in a design?**
>
> making a certain aspect of your product scarce or unavailable for certain users will most likely increase the curiousity about your product. It can also motivate a user to be a part of something that other's maybe can't. It can make them feel special and succesful when used in the right way.

A good way to trigger both scarcity and impatience in a product are **Appointment Dynamics | 25**

Stimulates curiousity | Feeling of accomplishment after obtaining something scarce | Hooks users

Beware of making the user obsessive or stressed | Don't tease a user's patience too much

LOSS & AVOIDANCE

"we act based on fear of losing something that represents our investment of time, effort, money, or other resources." [9]

LOSS & AVOIDANCE EXPLAINED

The Loss & Avoidance Drive Is the eighth and final Core Drive. This core drive is based on the urge to **avoid something negative from happening**. We don't want everything we have done, up to 'this' point, to be useless in the end. so we act based on that fear of losing any progression in any way.

This drive is often triggered in games; in some games you will get a setback whenever you die or injure your character. You could lose coins, an item, completely start over, or other setbacks to make it more difficult for you. This drive can also be triggered through **temporary opportunities** like coupons or discounts. When you let a coupon expire, you may have the feeling you 'lost' something that was once yours to spend. All these examples are based on that 'fear' of loss.

Why use this in a design?

Using Loss & Avoidance can motivate a user to take a Desired Action. For example; in games it can cause the player to become proactively involved in avoiding a negative outcome to their situation. Like harvesting their crops in time before they wither and die. Or making sure your house doesn't get attacked by other players. These can also be seen as **virtual responsibilities**.

A game design technique that creates the feeling of losing something is **Rightful Heritage | 27**

keeps user involved in the experience when they could lose something | Makes an experience very intense

Avoid rage quitting users (quitting a game or app out of anger/frustration) | Too much loss can create depression

UNPREDICTABILTY & CURIOSITY

"the main force behind our infatuation with experiences that are uncertain and involve chance." [8]

UNPREDICTABILITY & CURIOSITY EXPLAINED

The Unpredictability & Curiosity Drive Is the seventh Core Drive. This core drive is about **wanting to find out what will happen next**, and if you don't find out what's going to happen, your brain is engaged and you will probably think about it often. This is generally a harmless drive; It's one of the reason people like reading stories, watch a movie or play a video game. We love these things because they are **expected triggers** (something we assume/hope will happen) or **unexpected triggers** (something that is a complete surprise).

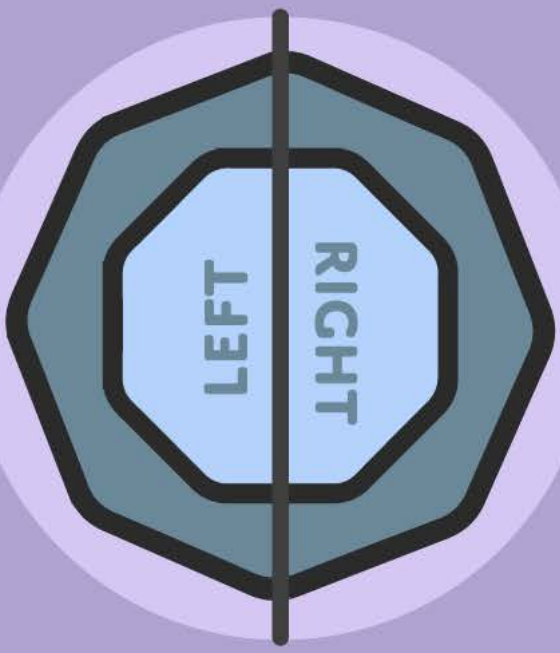
On the other hand this core drive is also a primary factor behind gambling addiction. Gamblers are addicted to the unpredictable chance of winning a lot of money; with the right **risk/reward incentive**, a game can suddenly become very attractive to play.
The element of surprise and not knowing when you could get the reward is what makes things like gambling interesting.

> **Why use this in a design?**
>
> Besides from the drive being related to gambling addiction, it can actually be used in many user friendly ways. Curiosity can be a great way to help navigate your user in complex situations or environments. Curiositiy in combination with unpredictability can create very interesting and fascinating experiences.

a game design technique that triggers curiosity, unpredictability and the element of surprise are **Easter Eggs** | **26**

Curiosity helps the user learn new things | Unpredictablity makes product fun to use and discover

Implementing gambling can create addictions | Make sure to reward curiosity



LEFT BRAIN VS RIGHT BRAIN

"the Left/Right Brain framework structure allows us to differentiate and design for the differences between extrinsic and intrinsic motivation." [10]

LEFT BRAIN VS RIGHT BRAIN EXPLAINED

Left Brain vs Right Brain represents the left and right side of the Octalysis Framework (they don't represent the left or right side of the actual human brain).

The Left Brain Core Drives involve habits related to logic, ownership, and analytical thought. Which are;
- **Core Drive 2: Development & Accomplishment**
- **Core Drive 4: Ownership & Possesion**
- **Core Drive 6: Scarcity & Impatience**

The Right Brain Core Drives are characterized by creativity, sociality, and curiosity which are;
- **Core Drive 3: Empowerment of Creativity & Feedback**
- **Core Drive 5: Social Influence & Relatedness**
- **Core Drive 7: Unpredictability & Curiosity**

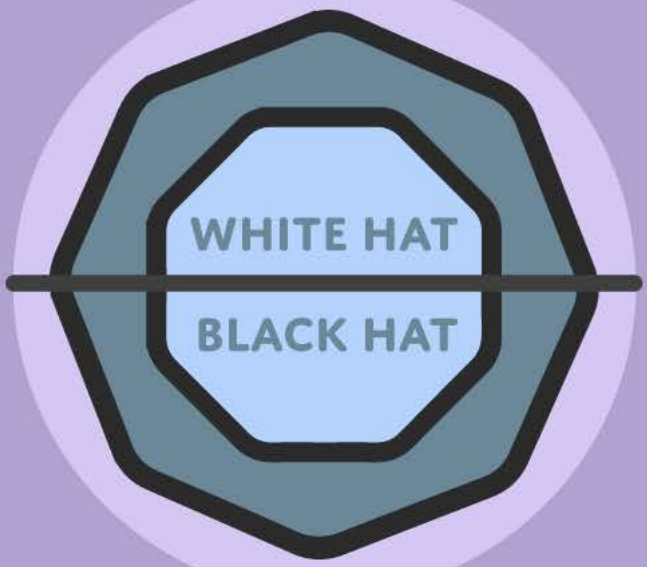
Intrinsic vs Extrinsic Motivation

The Left Brain Core Drives are based on **Extrinsic Motivators** - you are motivated because you want to obtain something. This can be a goal, a purpose or a reward; going to work everyday is often an extrinsic motivation, because people expect to achieve something from their hard work, like money, a better career, being recognized, etc.

The Right Brain Core Drives are based on **Intrinsic Motivators** - you are motivated because you enjoy doing the task itself, you don't need a reward for doing these tasks. For example; hanging out with friends, using your creativity or feel the suspense of unpredictability (going to a casino). These are also often tasks you would consider spending money on.

A good way to find out if a motivation is Intrinsic or Extrinsic, is to consult **BJ Fogg's B=MAP**.

If you want to find out what motivates a user to do a certain task, you can use the **SUE Influence Framework**.



WHITE HAT VS BLACK HAT

"the top Core Drives in the octagon are considered very positive motivators, while the bottom Core Drives are considered negative motivators." [11]

WHITE HAT VS BLACK HAT EXPLAINED

White Hat vs Black Hat represents the top and bottom of the Octalysis Framework.

The 3 top Core Drives are considered very positive motivators, also known as 'White Hat Gamification'. These are;
- **Core Drive 1: Epic Meaning & Calling**
- **Core Drive 2: Development & Accomplishment**
- **Core Drive 3: Empowerment of Creativity & Feedback**

The 3 bottom Core Drives are negative motivators, also known as the 'Black Hat Gamification'. These are;
- **Core Drive 6: Scarcity & Impatience**
- **Core Drive 7: Unpredictability & Curiosity**
- **Core Drive 8: Loss & Avoidance**

White Hat Core Drives are motivation elements that make us feel **powerful, fulfilled, and satisfied**. They help us feel in control of our own lives and decisions.

Black Hat Core Drives are in contrast of the White Hat Core Drives; they make you feel **obsessed, anxious, and addicted**. These motivations are often very strong, and make us lose control of our own behaviour.

The Black Hat side isn't necessarily bad though. It can help motivate users towards good behaviour and push them to complete certain goals and tasks. It is also essential when trying to change a user's behaviour or habbit. A well designed product implements and balances both the White and Black Hat side.

A lot of the black hat Core Drives are related to the **Cognitive Biases | Chapter 2**

White Hat Core Drives are stimulated by the different **Game Design Techniques | Chapter 3** , that make a game more fun.

COGNITIVE BIASES

"A cognitive bias is a systematic error in thinking that occurs when people are processing and interpreting information in the world around them and affects the decisions and judgments that they make." [12]

COGNITIVE BIASES EXPLAINED

Cognitive Biases are often a result of your brain's attempt to **simplify the processing of information**. Biases mostly act like mental shortcuts that allow you to make decisions faster. If you wouldn't have biases, making decisions would take a lot of time. Other factor's that contribute to biases are: emotions, individual motivation and social pressure.

Cognitive biases can also lead to **distorted thinking**, like judging a person for how they look. Or maybe change your political view based on other's opinions. A bias can also be vital when you have to make a quick decision in dangerous situations, like when you decide to call the cops after seeing a an accident. Understanding these biases will make you understand a user's behavior and choices better.

How to use

There are over a 100 different biases, and some of those biases can really change the way the user will use your product. It can influence the way the users think and act. It could also give you a better understanding of why users act in a certain way and what influences their decision making.

Biases are based on **System 1** from the **System 1 & System 2 Thinking | 39** theory by Daniel Kahneman

Understand decision-making better | Influence decisions when you understand biases | Become aware biases

There are a lot of biases to learn | Remember that biases aren't always bad | Easy to learn, hard to master

AUTONOMY BIAS

"Also described as "Self-determination," autonomy describes an individual's ability to shape their own circumstances." [13]

AUTONOMY BIAS EXPLAINED

The Autonomy Bias is all about a user's desire to **be in control of their lives and the decisions they make**. Users will be more likely to make decisions that preserve their control over their lives. Therefore it's important to put the user in control.

A product that can deliver that feeling of control will create a **feeling of certainty**, reduced stress and has an influence on the intrinsic motivation (which makes this bias apply to the Right Brain Core Drives 09). Once a product has restrictions on a user's autonomy, it can lead to dissatisfaction and frustration.

A good example is being able to cancel a subscription service, like a Netflix subscription. It's important that Netflix offers a cancelation anytime, to give the user trust in their service.

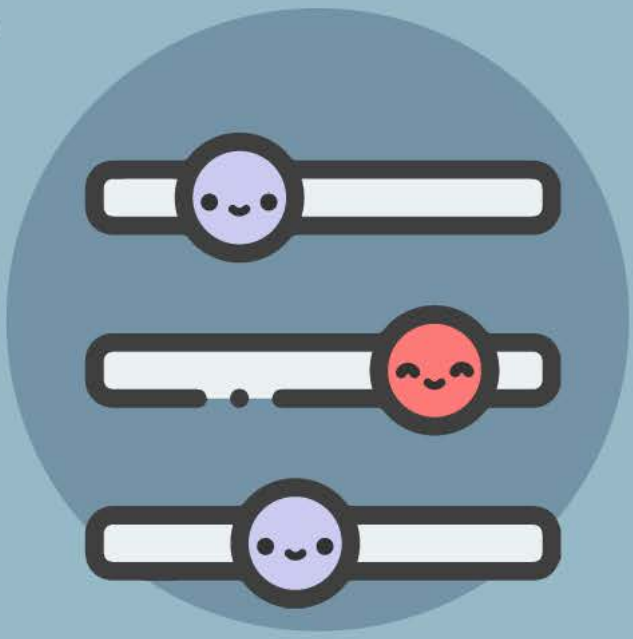
How it's used in games

In games it's always important to put the user in control, they control the character, make the decisions or progress through a story. Just like in real-life, players feel the urge to decide about their 'virtual' lives as well. Games that don't offer such autonomy usually don't get played as much.

This cognitive bias is related to **Right Brain Core Drives | 09**

Puts user in control | User will be more likely to return to the product | Creates feeling of certainty and trust

Always putting the user in control can be difficult | Control can make users possesive



DEFAULT BIAS

or Status Quo Bias

"People prefer to carry on behaving as they have always done even when the circumstances that might influence their decisions change." [14]

DEFAULT BIAS / STATUS QUO BIAS EXPLAINED

The Default Bias is about **sticking to your current choices, decisions and preferences**. This bias is what makes it so diffcult to change a user's habit or behavior, because sticking to those 'default' choices don't involve much mental effort; changing a default choice would push a user to think rationally and consider all the available options.

A **default option is a safe space for users**, and can be used as a powerful **Nudge | 34** towards a Desired Behavior. A very common example are the default options in settings (on your phone for example). User's will most likely stick to those default settings, because they see the default as an advice, and accept what has been chosen.

People also create their own default options, like what phone brand they use; Apple has hooked so many users on their products, that some of them won't even look for alternatives, they will always choose Apple. It's a difficult task for companies to change those habits and convince user's that there might be a better alternative.

How it's used in games

In games the default bias is often used to guide (new) players in making the right decisions. Some games can be difficult to understand as a beginner, and because of the lack of expertise these players will most likely stick to the default options of a game. They trust that the default options are like an advice.

This cognitive bias also helps balancing the **Cognitive Load | 31**

Powerful nudge towards Desired Behavior | Gives user trust in product | Users will stick to a certain product

Changing a user's default option is difficult | User's sticking to product can be bad for the economy

OWNERSHIP BIAS

"The ownership bias describes how people tend to value items that they own more highly than they would if they did not belong to them." [15]

OWNERSHIP BIAS EXPLAINED

The Ownership Bias (also known as Endowment Effect) is a bias about **valuing your own items more than other's**. So when we sell something that's ours, like your own art, we put a higher price tag on it might be actually worth. Selling it for less would feel like losing out.

But the ownership bias works both ways; when salesman make buyers feel any psychological ownership over a product, it can encourage the buyers to spend more on it. This works great with the **Build From Scratch | 23** Game Design Technique; Ikea makes their customers feel ownership over their furniture, by letting them build it with their own hands. This way Ikea will be able to ask a bit more than other companies, but still promote that their furniture is 'cheap'.

This bias isn't always about buying and selling though. It could also be about emotional attachment; Things that have a sentimental value, like photos, can have a high value for you personally.

How it's used in games

Game companies often use this bias to persuade players to spend extra money on items, upgrades or boosters to help improve the things players own in their game. These come in many shapes and forms; cosmetics (outfits for a character), booster packs, mystery boxes, special edition weapons, etc.

This cognitive bias is related to **Core Drive 4: Ownership & Possesion**

Users love the feeling of ownership | Makes product emotionally meaningful | Valuing your own items is good

Sellers often overvalue things | Makes it easy for sellers to persuade buyers | Users can feel scammed afterwards

AUTHORITY BIAS

"Authority bias is the tendency to attribute greater accuracy to the opinion of an authority figure (unrelated to its content) and be more influenced by that opinion." [16]

AUTHORITY BIASES EXPLAINED

The Authority Bias is a bias that shows that we are **easily influenced by an opinion from someone (or something) with a high authority.** This could be a famous celebrity promoting a perfume in a tv commercial, or a doctor's advise about what medication is best for you.

We are more likely to let our opinions get influenced by matters that we lack expertise of, like a doctor's advise. But someone who has more knowledge about medicine will be more likely to question the advise or stick to their own opinion.

When a celebrity is used to promote something it has less to do with expertise, and more with social liking. If someone you care about, or someone you adore suggests something, you are very likely to change your opinion based on theirs. This could also be a friend suggesting a book. This is called **Social Proof** | **35**.

How it's used in games

Games are being promoted in many ways, awards for example; The biggest award is the 'Game Of The Year Award' which basically means the best game of that year. That Award is probably one of the biggest authorities you can get. But there are also many famous video game publishers like Activision, EA Sports, Rockstar, etc. When a game is released or promoted by one of those famous publishers, a lot of people would be interested in buying it.

This cognitive bias is related to **Core Drive 5: Social Influence**

Good way to sell a product | Could help credibility of a product | User enjoys buying/using product more

Abusing the authority bias could harm the product's credibility | Authority figure might not work for everyone

EXPECTATIONS BIAS

"Expectation bias occurs when an individual's expectations about an outcome influence one's perceptions of one's own or others' behavior." [17]

EXPECTATIONS BIAS EXPLAINED

The Expection Bias explains the **user's expectations about an outcome**. This can either be a negative or positive expectation, based on the situation.
A positive expectation bias is when we mistakenly think that eventually, our luck has to change for the better. We have a **hard time accepting bad outcomes**, so we keep going until we get positivive outcomes (results). This is what you often see when people gamble, they keep gambling believing that eventually they will win something.

This also works the other way around, when we mistakenly think that **something will turn out for the worst**. For example, if you get sick from riding a rollercoaster, you would probably expect getting sick each time you ride one. Which could result in you being scared of going on a rollercoaster again.

The expectation bias is strongly connected to the **placebo effect**, where sometimes medicine can 'work' even if it's fake. Just because you strongly believe or expect it will work.

How it's used in games

Games often use the positive expectation bias in order to get players to buy more in-game stuff, like mystery boxes. These boxes are just like gambling; you buy a box and you get random items from that box. This could range from a standard item to an ultra rare one. There are players who buy hundreds of boxes in the hope they will find those ultra rare ones.

This cognitive bias is related to **Core Drive 7: Predictability & Curiosity**

User's determination is high because of the expectations | Having positive expectations can make you happy

Positive expectations can lead to obsessive behavior | Using placebo effect to sell products isn't right

ATTENTIONAL BIAS

"The attentional bias involves the tendency to pay attention to some things while simultaneously ignoring others." [18]

ATTENTIONAL BIAS EXPLAINED

The Attentional Bias shows that, in most cases, our attention won't allow us to take every alternative or option into consideration when making a decision. We like to think we take every possible option into consideration, when in fact **we often overlook some options** and possible outcomes.

This bias is **influenced by a person's emotional state**, for example; People going through a hard time will unconciously focus on the negative outcomes, but someone who is very happy will be more likely to pay more attention to the positive outcomes.
This is also what could happen when you're recollecting memories; when thinking about a certain event, your memory could be inaccurate or incomplete, because you focussed on something you liked, but neglected to notice other aspects in the situation.

How it's used in games

It's important for game designers to keep in mind that players might overlook certain quests or side missions, when they're completely focussed on the main quest or mission in the game. This is why you're often **reminded** in a game that there are other things to do besides what you're doing right now. This could be a piece of dialogue saying: 'Hey! You should check this out!', or 'Are you sure you want to do this?'. To really push the player to consider their options more.

The attentional bias is heavily influenced by the **Cognitive Load** | **31** of a certain situation. If the Cognitive load is too high, the bias will kick in.

Helps you focus on what's important | Attentional bias is a relatively easy bias to help users with

Makes getting out of addictions or other habits hard | Influenced by emotions | A difficult bias to notice

SUNK COST BIAS

"Individuals commit the sunk cost fallacy when they continue a behavior or endeavor as a result of previously invested resources (time, money or effort)." [19]

SUNK COST BIAS EXPLAINED

The Sunk Cost Bias is a bias where people will **stick to their ongoing behavior or commitmen**t, when they invested either time, money or effort into it, even when they might not want to. We do this because we don't like the feeling of missing out on something.

An example is eating at an all-you-can-eat restaurant; you might have the tendency to order way more food than you usually would, eventhough you might already be full, just to get your 'money's worth'.

This bias is also strongly connected to the **Default Bias | 12** when it comes to changing habits; you would rather stick to your already developed habits, than developing new ones all the time.

> **How it's used in games**
>
> There are a lot of players that will stick to a game just because they invested a lot of time, money or effort into it. This is a feeling that game developers try to trigger more by using Game Design Techniques to persuade players to keep playing. This makes this bias part of the **Black Hat Core Drives | 10** and in particular **Core Drive 8: Loss & Avoidance | 08.**

The sunk cost bias is also related to **Nir Eyal's Hook Model | 38**

Keeps users hooked | Creates determination | Sticking to a commitment is a good thing

Having a lot of determination can be obstructive | Can lead to obsessive behavior | Triggers loss & avoidance

STORYTELLER BIAS

or Narrative Bias

"The storyteller bias refers to people's tendency to interpret information as being part of a larger story or pattern, regardless of whether the facts actually support the full narrative." [20]

STORYTELLER BIAS EXPLAINED

The Storyteller Bias is about how it's easier to persuade people when using a story or narrative. There are two specific story elements that have strong influence on our behavior:

1. Specific Details, this is what makes a story realistic and memorable.

2. Cause and Effect explanations, which helps us to understand why certain effects (cause) lead to certain outcomes (effect).

When something random or inexplicable happens, people will still **feel the urge to find an explanation** for what happened and fill in the gaps with our imagination. We interpret the information as being part of a larger story or pattern. Just like when you flip a coin, and you get tails 5 times in a row. You'll probably think that the chances of getting heads next time is getting bigger, when in fact it's always a 50/50 chance, because it's random. But in your mind you are unconsciously turning it into a story about how lucky you must be.

How it's used in games

Stories and narratives are a big part of games, it creates an immersive experience for the player. That wouldn't have worked if it weren't for the storyteller bias. Whenever a game has a narrative, it's up to the player to place themselves in that story and connect the dots. It's what makes playing a game fun.

This cognitive bias is related to the game design technique **Narrative** | **21**

Gives depth to a situation or a game | Makes product fun to use | Helps understanding certain situations

Could make you believe things that aren't true | Could be used to make people feel bad about a situation

GAME DESIGN TECHNIQUES

"The game design techniques can be used to attract and engage users in non-game environment." [21]

GAME DESIGN TECHNIQUES EXPLAINED

Game Design Techniques are techniques (or methods) to **attract and engage users more in a non-game environment**. These 'environments' can be along the line of websites, apps, product design or maybe even real life situations.

In chapter 4 of the carddeck I will highlight a few of the Game Design techniques that Yu-Kai Chou explains in his Octalysis Framework®. Each technique is based off of one of the 8 Core Drives in the Octalysis Framework. On my cards you will find what Core Drive each technique stimulates, why the technique works and an example of how to use the technique.

All the Game Design techniques from Yu-Kai Chou can be found in his workshop: **Octalysis Prime**.

How to use

When you learn and understand how these Game Techniques are used in games (and how they attract and engage users), you can start implementing them in your own products. This way you can start creating gamification techniques that actually work and benefit your user. If you want to learn more techniques than I will be mentioning in the card deck, I recommend checking out Yu-Kai Chou's book; Actionable Gamification.

To understand the Octalysis framework and the Core Drives better, I recommend looking at the cards from **Octalysis: 8 Core Drives | Chapter 3**

Engages users | Makes non-game environments more attractive and fun to use | Motivates users

Not every technique works for every product/user | Don't overuse techniques | Less is more

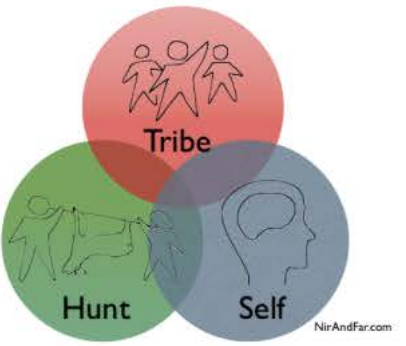
REWARDS

"A user senses the cue in their environment that they can learn to associate with an action (behaviour), which leads to a reward (consequence)." [22]

REWARDS
EXPLAINED

Rewards are **immediate positive consequences (feedback)** as a reaction to a certain action. When you implement an effective reward system in your product, it can motivate the user. Because of how the brain works, more rewards aren't more effective than fewer rewards; When you feed your dog too many treats, he won't understand what behavior you're praising him for anymore. It's the **surprise element** that makes a reward more valuable and effective.

There are three main type of rewards to delight users; Rewards of the **Self** (desire for self-mastery & proficiency), Rewards of the **Hunt** (desire for conquests), Rewards of the **Tribe** (desire for belonging). These are all based off of **Nir Eyal Hook Model 05.** [6]



How to use for gamification

Rewards can be a great way to keep your users motivated, help them achieve goals and keeping them hooked on their journey and development. This could be giving coupon codes, unlocking a new level, getting better gear, achieving points, etc.

Want to know more about Nir Eyal's Hook Model? Check Out;
Nir Eyal's Hook Model | 38

This technique is related to **Core Drive 2: Accomplishment**

Increases usability and fun | Makes user feel accomplished | Gives meaning to a task or goal

Don't overuse rewards | Use rewards that work for your user | Reward systems can also be demotivating

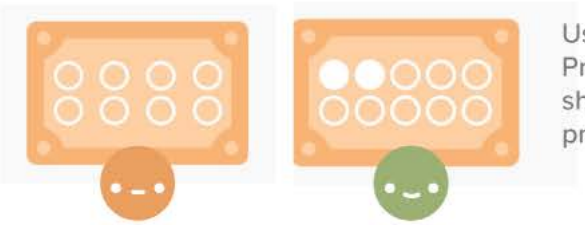
ENDOWED PROGRESS EFFECT

"If you provide some type of artificial advancement toward a goal, a person will be more motivated to complete the goal."
23

ENDOWED PROGRESS EFFECT EXPLAINED

The Endowed Progress Effect is giving your users the idea that they are progressing towards a goal, which gives them more motivation to complete that goal. They key to the progress effect is providing some type of **artificial advancement** towards the goal, where you give the user the feeling that they have already completed the first steps.

For example: The store you love shopping at has a new point system where you get a free product if you achieve 100 points. You get 1 point for each euro you spent at that shop, but you get 20 points for free because you are a loyal costumer. Now you think you already completed 20% of the goal and makes you want to get those other 80 points!



Using the Endowed Progress Effect to show the user 'artifical' progress.

How to use for gamification

When you tell the user they already completed the first step of a task, they will feel motivated to reach the end-goal. It's a great way to prevent a user from feeling overwhelmed with steps or tasks they have to complete.

This technique is related to **Core Drive 2: Accomplishment**

Feeling of achievement | Motivates to reach the end-goal | Shows progression in a visual way

Completion shouldn't take too long | The reward has to be worth the trouble | Avoid feeling of scam or betrayal

NARRATIVE

"allows you to introduce a story that gives people context for a higher meaning in terms of interacting with your company, product, or website." [24]

NARRATIVE EXPLAINED

Narrative is used to give context to a user in the shape of a story. There are 2 main methods used in games to tell a story;

String of Pearls - A non-interactive story shown through text, dialogue, cutscenes, or a different format *(string)*. In between these strings are periods where the user interacts with the game and feels in control *(pearl)*. These are games with a fixed storyline that can't be influenced by a player's choices.

Story Machine - The elements of the game act as a story generator for the player; the player can create stories by interacting with the game world or simply playing the game. This method is used in exploration games and open-world games, where the player has a lot of influence on the development of the story.

> **How to use for gamification**
>
> You can use narrative - and those methods - in almost every product to make the user feel special. An example is an app for kids to train their math skills. The kids are being told that they have to defeat an evil monster and that they have special magic powers to do that. With each correct answer they will cast a spell and eventually defeat the monster. This will make doing those math quizzes way more fun and meaningful.

This technique is related to **Core Drive 1: Epic Meaning**

Makes product engaging | Being part of something bigger | One of the biggest motivators

Make sure you create a story that targets the user | Don't make it tedious | Developing a story takes time

BOOSTERS

"That feeling of being empowered with new but limited power-ups is exhilarating and is an extremely strong motivator towards the desired action." [25]

BOOSTERS EXPLAINED

Boosters are a way of giving a user the feeling of being **powerful, accomplished** (**Core Drive 2 | 02**), and being **empowered** with new and stronger capabilities. A very famous booster is the Mushroom used in the Super Mario Bros games, a game by Nintendo. When Mario finds a red mushroom he will get bigger and stronger. And when he find a star he even becomes invincible!

But all these Boosters are usually **limited and have certain conditions.** For example; when mario gets hit by an enemy, he will lose his red mushroom and become small again. And the star of invincibility only lasts for 10 seconds. Without all these different boosters and power-ups, games wouldn't be as engaging.

How to use for gamification

Implementing boosters in a product will make the user crave for that power, which motivates them to use your product.
The feeling of empowerment feels so special to a user that they are even willing to pay for it. A lot of apps use mechanics that involve monetization, where the user can purchase powerful Boosters. A booster often used is getting extra time to complete a level. Candy Crush is a famous app that has a mechanic like that. Your product shouldn't be pay-to-win though: an unfair mechanic where people that spend money win the game.

This technique is related to **Core Drive 3: Empowerment**

User feels strong and powerful | Puts the user in control | Could stimulate an adrenaline rush.

Beware of pay-to-win situations | Give user the feeling they buy a booster, not a victory

BUILD FROM SCRATCH

"When you create a product or service, its often good to get your users to increase their invested ownership and possession." [26]

BUILD FROM SCRATCH
EXPLAINED

Build From Scratch is a technique that **involves users in their development processes.** If you give the user the feeling they were involved in building something - and they could customize and interact with it in the process - they will get attached to it. This is a technique you often see in games and real life.

Ikea is famous for using this technique; they let their customers assemble their own furniture. This way the customer will often **feel more attached** to their Ikea furniture than other furniture, because they put their own time and effort into building the Ikea furniture.

This technique is also often used in games where the player can design, build and develop their own story. There are a lot of games where you have to build your own civilization, theme parks, characters, etc. But also more subtle things in games like choosing cards to build a powerful carddeck in a cardgame; it doesn't always have to literally involve building something.

How to use for gamification

When you implement the Build From Scratch technique in a product, the user will feel more attached to the thing they created or built. This will make the experience or journey of the product more meaningful to the user. This is often a user friendly way to trigger **Core Drive 4: Ownership & Possesion**.

This technique is related to **Core Drive 4: Ownership & Possesion**

Emotional attachment | Puts the user in control | Creates a meaningful experience/journey.

Could lead to possesive behavior | Give user time to enjoy what they made | Don't make the process difficult

GROUP QUESTS

"Group Quest is very effective in collaborative play because it requires group participation before any individual can achieve the Win-State." [27]

GROUP QUESTS EXPLAINED

Group Quests is a technique that stimulates the **fifth Core Drive: Social Influence & Relatedness**. A group quest is a task, challenge or goal that you have to complete with a group of other users. The key to completing group quests is often **collaboration and cooperation**. Group quests also trigger social pressure, because most of the time you are responsible for your part of a 'quest'.

A group quest is a great way to **keep a group of users motivated to reach an end-goal**. You often see this technique used by charities; e.g. 'If we reach $100.000 we can feed 1000 children.' In this example the *quest* is reaching that amount, and all the people donating are part of the *group*.

Group quests are a well known thing in games, also known as playing co-op (short for cooperative). A lot of games make it possible to play in a group where you all have the same end-goal. This could be finding treasure, defeating a boss, beating a difficult level, escaping a jail, and so much more.

How to use for gamification

If a product contains group quests, it will often create a community or a feeling of togetherness. This is great for the motivation and obtaining (new) social contacts. It could also give a product meaning to a user because they are part of something bigger. Which triggers **Core Drive 1: Epic Meaning & Calling**.

This technique is related to **Core Drive 5: Social Influence**

Being part of something bigger | Discover new social contacts | Create a feeling of togetherness (community)

Group quests could lead to exclusion | If it's hard to find a group to do the quest with, it will demotivate

APPOINTMENT DYNAMICS

"Appointment Dynamics utilize a formerly declared, or reoccurring time where users have to take the Desired Actions to effectively reach the Win-State." [28]

APPOINTMENT DYNAMICS EXPLAINED

Appointment Dynamics is a powerful trigger based on time. It r**eminds users to return to a product**, this can be an internal trigger or an external trigger.

An example of an **external trigger** is a restaurant that offers a different menu every week, or a certain hour of the day where a shoe store offers 20% off. All these offers are connected to time and triggers the user because something's scarce or limited, and therefore also trigger **Core Drive 6: Scarcity & Impatience**.

When Appointment Dynamics are based around habits, it's often an **internal trigger**; such as taking out the garbage each monday because the garabage truck comes on tuesday, opening Facebook whenever you are bored, or using a journal app before bedtime. All these habits are also triggered by time and (unconsciously) make the user return to the product.

How to use for gamification

When a product is able to trigger users to return after a certain amount of time, it usually means it's a succesful and powerful product: it's part of a user's life. Especially when you can create new habits the user will be very motivated to use the product more often. A game that does this really well is Animal Crossing, a game based on real-time. When you plant a tree, it takes 3 real days to grow, the shops close at 18.00h, and the villagers will start missing you if you don't return to the game for a while. These are all triggers to make the user return to the game daily.

This technique is related to **Core Drive 6: Scarcity & Impatience**

Can create new habits | Powerful motivation | Makes it easier to take the Desired Actions

Could lead to obsessive behavior | Don't punish users if they don't return to the product | Fear of missing out

EASTER EGGS

"Sudden rewards incentivize customers to keep coming back in the hopes that they can inadvertently feel the same excitement again." [29]

EASTER EGGS
EXPLAINED

Easter Eggs are **unexpected rewards (secrets)** that can be found in products, without the user knowing about it beforehand. Users love the **element of surprise** and because these rewards are so unexpected, the added feeling of excitement makes the experience very enjoyable. Sudden rewards like easter eggs trigger the user to return to the product, in the hope they will experience that excitement again.

Easter Eggs are a well-known principle in the gaming industry. Programmer Warren Robinett implemented one of the first easter eggs in a video game in 1979. Easter eggs in games can be secret rooms, secret menus, a joke or reference hidden in the game, or a silly quest that you have to do to obtain a secret weapon. It can be something very small, but still **trigger that feeling of excitement.**

Easter eggs are also gaining popularity in other industries. It's used to keep users on their website or trigger them to buy something; like when there is a coupon code hidden on a website.

How to use for gamification

If a product manages to surprise their users with fun easter eggs, the user will be more likely to return to that product. The key to creating a good easter egg is revealing them to the user when they least expect it. This way you get the most out of that element of surprise.

This technique is related to **Core Drive 7: Unpredictability & Curiosity**

User wil experience excitement | Will trigger user's curiosity | The user will be looking for more easter eggs

Not every easter egg is equally effective | Don't overuse easter eggs | Don't force the user to look for the easter egg

RIGHTFUL HERITAGE

"when a system first makes a user believe something rightfully belongs to them and then makes them feel like it will be taken away if they don't commit the Desired Action." [30]

RIGHTFUL HERITAGE EXPLAINED

Rightful Heritage is a technique that makes users feel like **something rightfully belongs to them**, and then give the user the feeling it could be taken away from them. By doing this, Core Drive 8: loss & avoidance will kick in. The user will be more likely to take the Desired Action when they feel they could be losing something that's theirs.

This technique is often used to convince users to sign up for something. Like when you buy something from a shop and you receive an email 'Congratulations, here is your 20% off coupon.' But when you want to activate it, it says you have to sign up, or else the coupon will expire. You will be more likely to sign up now, because you will lose something that was 'rightfully' yours if you don't.

This is a **Black Hat technique**, because you're trying to **pursuade the user to take the Desired Action** by playing with their emotions; they are afraid of losing something. But once the user takes the Desired Action, they will feel rewarded.

How to use for gamification

In the gaming industry this technique is often used to persuade people to play a new game; this is called a demo. In the demo the player can play a portion of the game for free to try it out, where you can already progress and complete parts of the game. After the demo you will get the chance to buy the full game and keep your progress, and you will lose your progress if you don't. This is comparable to free trials in apps.

This technique is related to **Core Drive 8: Loss & Avoidance**

User can feel rewarded after taking Desired Action | Great way to introduce new people to a product

Playing with the users emotions | The user could feel betrayed if they lose something | Black Hat technique

BEHAVIORAL DESIGN PRINCIPLES

"How can we design for human change? How can we influence people to make certain decisions yet in an ethical way? And how can we keep customers engaged and retained with products and services?" [31]

BEHAVIORAL DESIGN PRINCIPLES EXPLAINED

Behavioral Design Principles are principles that help designers understand **how people think, feel and react**. With that knowledge it will be easier to influence a user's behavior and help them change habits or take a Desired Action.

A few things to keep in mind when using these principles:
1. Designing for a user's behavior is about **persuasion**, not coecion.

2. The user's **needs and satisfaction** should be the focal point of improving the engagement and user experience.

3. The more you learn about behaviors, the more you can meet your **target audiences' intrinsic needs**. Which makes it easier to trigger their intrinsic motivation. (or the **Right Brain Core Drives | 09**)

How to use

When you want to apply gamification in a product, knowledge about the user's behavior is a must. Learning about what motivates them, how to persuade them and how to make the product focused on the user's needs will result in user friendly products that the user will enjoy using.

There are a lot of behavioral design principles besides the ones in this carddeck. But these are useful for gamification.

Makes a product targeted on the user | Helps triggering intrinsic motivation | Learn about the user's needs

Don't use the knowledge to create tactics that go against a user's best interest | Every single user is different

TEMPTATION COUPLING

"Hard tasks are less scary and easier to fulfill when coupled with something users desire or something they find tempting." [34]

TEMPTATION COUPLING EXPLAINED

Temptation Coupling is a principle where you **tempt the user to do a difficult task**, by offering something the users desires in return. This could be a reward for completing the hard task or something fun they get to do while doing the task.

There are a lot of tasks that users could find difficult to do, like changing a habit, filling in a survey, leaving a review, downloading an app, or buying a new game. These are tasks that are hard to do because they are either boring, energy consuming or because they cost you money. So there's often **something in return for the investment** you put into these tasks, like a coupon code or the enjoyment of playing something new.

How to use for gamification

Temptation coupling is often used in games, like when there is a difficult mission the players have to do, the reward have equally as good; A very difficult mission will probably get you very unique items. If this wouldn't be the case, players wouldn't want to invest their time in a difficult mission, because it wouldn't be worth the trouble.

A good Game Design Technique to couple with this principle is **Rewards | 19**

Makes hard tasks easier | A very good motivator for the user | Rewarding the user for a hard task is always good

Not every user will be tempted by the same rewards | Make sure the reward isn't repeptitive

PROGRESSIVE DISCLOSURE

"Progressive disclosure follows the typical notion of moving from "abstract to specific," including the sequencing of user behaviors or interactions." [35]

PROGRESSIVE DISCLOSURE EXPLAINED

Progressive Disclosure is an **interaction design pattern** that should encourage the user to move from completing simple actions or tasks to comleting more complex ones, by **disclosing information progressively**. By doing this, the user is only revealed to the essential information.

Using progressive disclosure to hide secondary (often more advanced) features, **helps the casual user** to still take their Desired Actions without getting frustrated or overwhelmed, while keeping the advanced users satisfied by offering higher-end functionalities. Your phone is an example of this, the casual user will be more likely to keep the default settings, while advanced users might want to use utilities (gestures), optimise storage usage, etc.

In the physical world, progressive disclosure is used in theme parks; long waiting lines scare visitors away, so only a small segment of the line is made visible, and as they move ahead they keep seeing small portions of the entire line. This makes waiting more bearable.

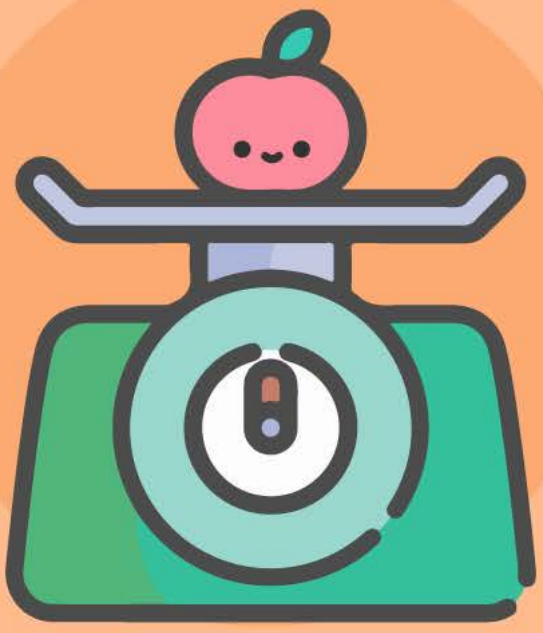
How to use for gamification

In games this is often used to prevent new players from getting overwhelmed with the controls and all the features. This is one of the reason why levelling exists; as the player levels up and learns, more will become available for them.

A cognitive bias that is connected to progressive disclosure is the **Default Bias | 12**

Makes hard tasks easier | Satisfy casual and advance users simultaneously | Makes product user friendly

Don't hide higher-end functionalities too much | Advanced functionalities should still be easy to use



COGNITIVE LOAD

"since working memory has a limited capacity, instructional methods should avoid overloading it with additional activities that don't directly contribute to learning." [36]

COGNITIVE LOAD EXPLAINED

Cognitive Load refers to the amount of information the working memory of the human brain can hold at one time. Our brains process a ton of information each day. All this incoming information is first filtered by our **sensory memory**; this will help you keep the most important information, and discard the rest. Like when you have a conversation with someone, and the sensory memory of other people talking will be discarded.

Once the information is processed by the sensory memory, it reaches your **working memory**, where it is either processed or discarded. The working memory can hold between 5 and 9 chunks of information at one time (the cognitive load). This information can be categorized in 3 different types of 'loads:

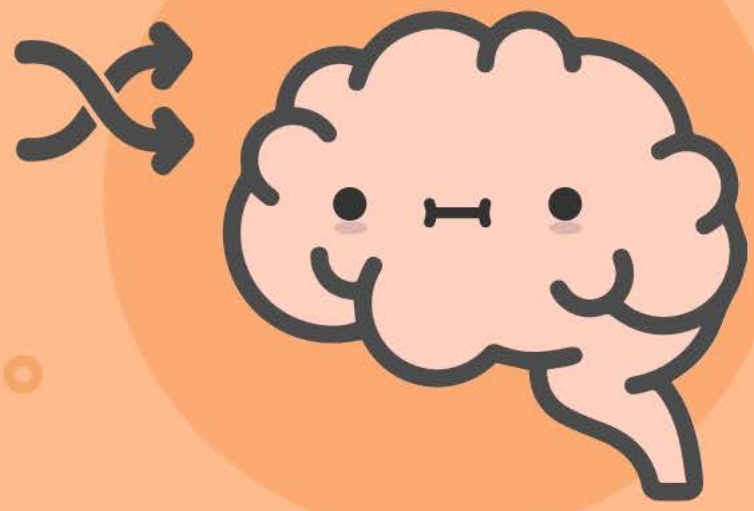
- **Intrinsic Load:** The Complexity of the Load
- **Germane Load:** Linking new info with current info
- **Extraneous Load:** Unnecessary and Distracting info

When the brain processes information, it categorizes that information and moves it to the **long-term memory**. This knowledge is structured in 'schemas' or 'behavioral schemas'. Because of these schemas you're able to ride a bike, drink from a glass and know what a dog is. The more you practise using those schemas, the more effortless these behaviors become. This is called automation. (also known as System 1 from **System 1 & System 2 | 39**)

It's important to balance the cognitive load in a product, so the user doesn't get overwhelmed by information chunks.

Understanding the cognitive load can help you balance it | Gives a better understanding of how we process info

Balancing the cognitive load can be very difficult | Getting info in the long-term memory can be difficult



OUTSIDE-IN THINKING

"outside-in thinking is looking from the customer's perspective and subsequently design processes and make decisions based on what's best for the customer and what meets the customer's needs." [37]

OUTSIDE-IN THINKING EXPLAINED

Outside-in Thinking is benefical for **creating user friendly products**. It's a way of User Centered Design where all the decision making is **based on your user's desires and needs**. The key to operate in an outside-in manner is understanding the user by doing research and prioritize what's most important for them.

So when an app wants to help people lose weight, the simple 'generic' solution might be working out. But to get a solution that works, you have to look at it from the customer's perspective. If the user hates working out, they won't be able to lose weight; a solution focused on that user's needs can be having a 10 minute conversation everyday about their feelings, sending motivational texts, personal training, etc.

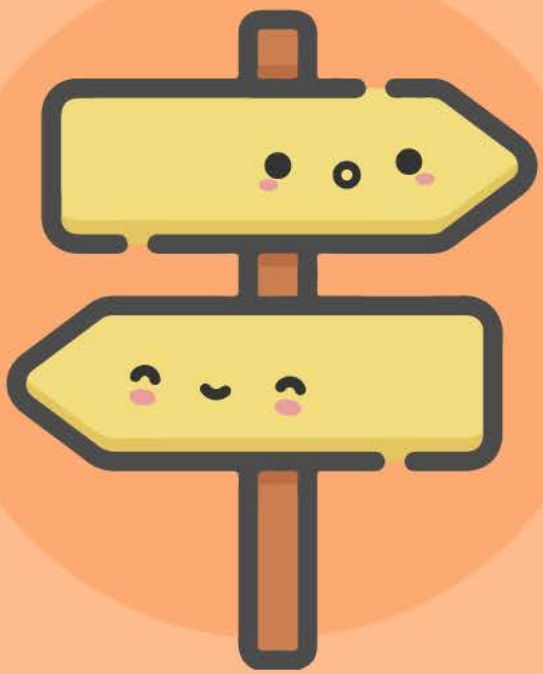
How to use for gamification

Temptation coupling is often used in games, like when there is a difficult mission the players have to do, the reward have equally as good; A very difficult mission will probably get you very unique items. If this wouldn't be the case, players wouldn't want to invest their time in a difficult mission, because it wouldn't be worth the trouble.

Discover the desired behaviour of your user is by filling in this framework:
SUE Influence Framework | 36

increase user's satisfaction | Reduce complaints | Makes the product more user friendly

Beware of assumptions of the user's needs | Researching the desires and needs of a user takes time



HICK'S LAW

"Delivering a good user experience requires that first you find out the functionalities that will answer their needs; second, you need to guide them to the specific functions they need most." [38]

HICK'S LAW
EXPLAINED

Hick's Law (or the Hick-Hymen Law) is named after a British and an American psychologist team of William Edmund Hick and Ray Hyman. The law is a simple idea that says that **the more choices you present your users with, the longer it will take them to reach a decision**. Hick's law is about less is more, and simplicity is the key for a system to work in the best way.

Generally, the application of Hick's Law is simple; reduce the number of stimuli and get a **faster decision-making process**. But there are exceptions to the rule; for example, a user may already have made a decision before seeing the options. In that instance, the time it takes for the user to act is likely to be less than if they had not already determined a course of action. Like when you go to the grocery store with a shopping list you made beforehand.

How to use

Hick's law is a great principle that you can couple with other principles to create user friendly products. A couple of principles that are connected to Hick's law are;

Attentional Bias | 16
Progressive Disclosure | 30
Cognitive Load | 31

Using Hick's Law can greatly increase the probability of users using your product for a longer period of time, without getting frustrated.

Keeps users satisfied with the product | Creates a user-friendly environment | Makin choices will be easier

Applying Hick's law in a succesful way takes time | Make sure you test your products with the users

NUDGE

"A nudge is any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives." [39]

NUDGE
EXPLAINED

A Nudge are **indirect (and often subtle) suggestions** that influence a user's behavior and decision-making. A nudge makes it more likely that a user will **make a particular choice, or behave in a particular way** by triggering cognitive biases, habits and other processes. Nudges are in general not a way of forcing a user to take a Desired Action, but more an implication that they could. This makes nudging a user-friendly behavioral principle.

Nudges can be implemented in a lot of different ways. One of them is using **Defaults** (as explained in **Default Bias | 12**) or **Social-Proof**, where users look at the behavior of other people to help guide their own behavior. (**Core Drive 5: Social Influence | 05**). This could be a 5 star review for a product, or an app in the Appstore that's #1 on most downloaded apps.

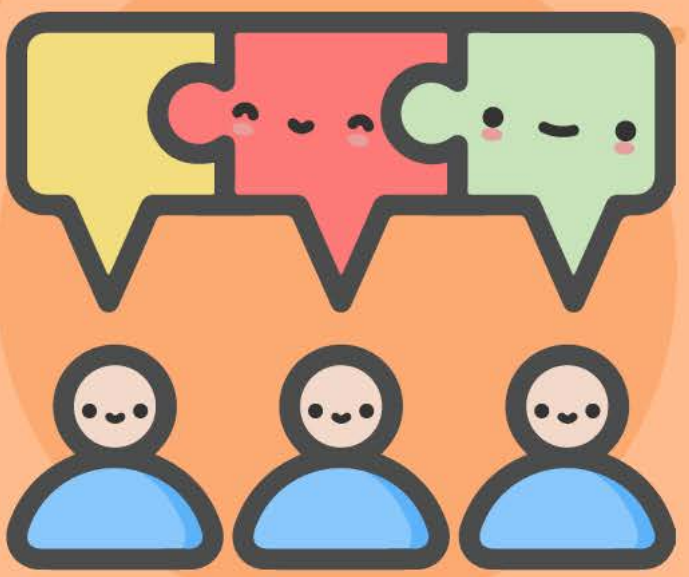
An example in the physical world is seen in grocery stores; they often put snacks or deals next to cash register to grab your attention while you wait for your turn.

> **How to use for gamification**
>
> Some things might be too difficult for a user when they use a product for the first time, especially with gamification in it. A nudge in the right direction could be really helpful. This is something puzzle books often do by using a star-rating for the difficulty and changing the color or the book; A beginner will be less likely to buy a red colored 5-star sudoku book.

It's important to learn about the **Cognitive Biases | Chapter 2**, so that you can learn when a nudge is most efficient.

Nudges are usually user-friendly | Helps the user in their decision-making | Great way of guiding a user

Nudges can be exploited to gain profits | Nudge can be too subtle and go unnoticed |



SOCIAL PROOF

"Social Proof is a psychological phenomenon where people assume the actions of others in an attempt to reflect correct behavior for a given situation." [40]

SOCIAL PROOF EXPLAINED

Social Proof is a psychological and social principle where **users copy the actions and behavior of others**, in an attempt to determine their own appropriate action or behavior. This is a principle heavenly influenced by **Core Drive 5: Social Influence & Relatedness**.

A couple of common examples of Social Proof are user reviews on websites. When a product is highly rated, you are more likely to buy it. It could also be a chart with the 40 most popular songs at the moment, because it shows what other's listen to. Or a game your friends suggest playing is also considered social proof.

Social Proof could also lead to 'Herd Behavior', where people will blindly copy each other's behaviors without considering their own thoughts and opinions. This is what often happens in wars, where a big group of people will blindly follow a leader.

How to use for gamification

Social Proof like reviews, recommendations or friend suggestions are also very common in the game industry. There are always a couple of games that are played by a lot of people at the same time, which is referred to as a 'hype'. A lot of people will purchase a game when it's very hyped to participate and feel part of the experience.

Social Proof is a great way to combine with the behavioral principle **Nudging | 34**

Makes selling a product easier | Can create communities or a feeling of togetherness | Word-of-Mouth advertising

Social Proof can turn against you (e.g. negative reviews) | Could lead to herd behavior

PERSUASIVE TECHNOLOGY

"Persuasive technology is broadly defined as technology that is designed to change attitudes or behaviors of the users through persuasion and social influence." [41]

PERSUASIVE TECHNOLOGY EXPLAINED

Persuasive Technology are technologies, such as frameworks and models, that are designed to change (or have influence on) the user's behavior. These persuasive strategies can be grouped in 4 categories (or types):

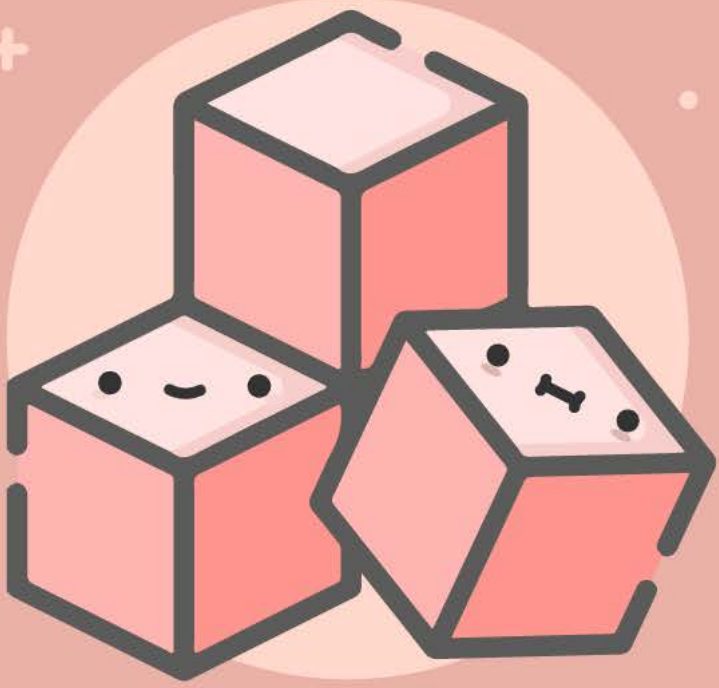
1. Instruction style
Core Drive 5: Social Influence
Authoritative: Persuades user through an authority figure (Your teacher giving homework, **Authority Bias | 14**)
Non-authoritative: Persuades user using neutral authority (A 5-star review about a product, **Social Proof | 35**)

2. Social Feedback
Core Drive 5: Social Influence
Cooperative: Persuades user with cooperation and teamwork. (Like cleaning a beach, **Group Quests | 24**)
Competitive: Persuades user with competition. (Like during the Olympics, **Core Drive 6: Scarcity | 06**)

3. Motivation Type
Right Brain & Left Brain Core Drives
Extrinsic: Persuades user through external motivators. (A notification from an app)
Intrinsic: Persuades user through intrinsic motivators. (Opening Facebook when you're bored)

4. Reinforcement Type
Core Drive 4: Ownership, Core Drive 8: Loss & Avoidance
Negative reinforcement: Persuades user by removing an unpleasant stimulus. (cleaning up a room)
Positive reinforcement: Persuades user by adding positive stimulus. (Adding ornaments to a christmas tree)

The methods and frameworks in this carddeck fit well with gamification. There is a lot of other different persuasive technology as well.



SUE INFLUENCE FRAMEWORK

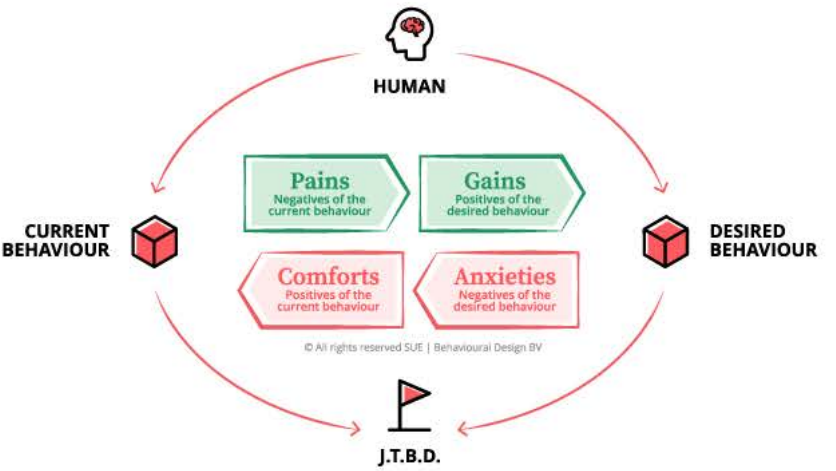
"This model brings all the forces to the surface that influence the behaviour of the people for whom we need to design interventions." [41]

SUE INFLUENCE FRAMEWORK EXPLAINED

SUE Influence Framework is a great way to take **the human behind the customer as your focal point**, and try to figure out what this human needs to get the job done. With the canvas you focus on their **anxieties, habits, pains and gains** that influence their desired behaviour. By filling in the canvas you will start to understand your user's needs and desires.

How to use for gamification

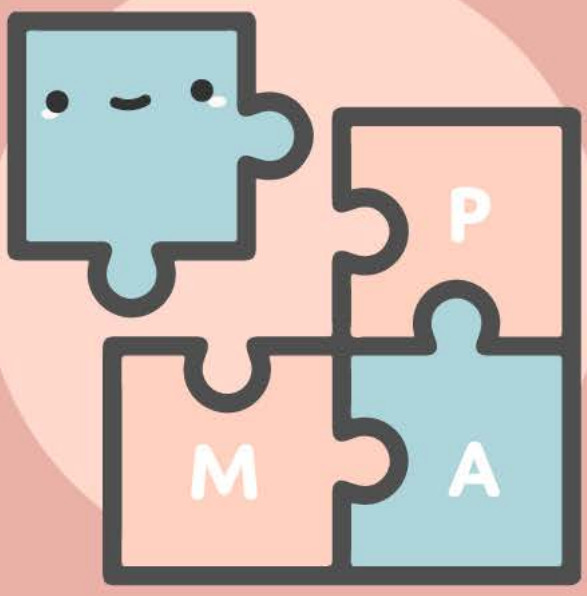
You want to understand what's holding the user back to succeed in his desired behaviour. That way you can help them become (more) successful when using your product.



Filling in the SUE Influence Framework is a good first step to start using **Behavioral Design Principles | Chapter 4**

Organizes the acquired information | Discover new needs and desires | Understand the user | in-depth insights

Be aware of making assumptions | Requires taking several interviews | research is time consuming

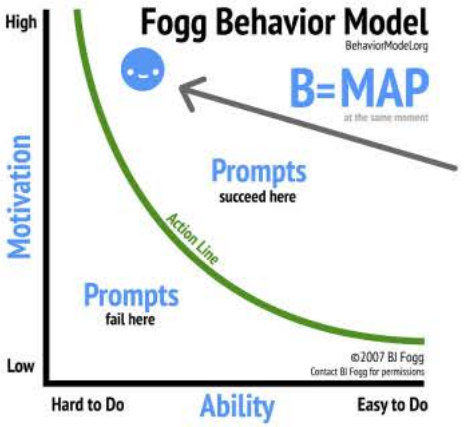


BJ FOGG'S B=MAP(T)

"Three elements must converge at the same moment for a behavior to occur: Motivation, Ability, and a Prompt." [42]

BJ FOGG'S B=MAP(T) EXPLAINED

The Fogg Behavioural Model (B=MAP(T)) makes it easier to understand human behavior. The model shows that you need 3 essential elements for any **desired behavior** to occur; the M for Motivation, the A for Ability and the P for Prompt (or a T for Trigger). In the B=MAP model you can find all these elements and an **action line**, showing when behavior will happen.



An example: When there is a very rare item in a game which is difficult to get (A), but when the user gets it he will be very strong and powerful (M), he will be more likely to get the item (P).

But when the item is hard to obtain and isn't more powerful than any other item, the motivation will be too low and the prompt will most likely fail.

How to use for gamification

When you want your user to succeed in their tasks, the most effective way will be concluding the 3 elements from the Fogg Behaviour model. This way the user will be most likely to take the Desired Action.

When a prompt succesfully happens, it could be the first step to hook a user using the **Nir Eyal Hook Model | 38**.

Certainty the user will take Desired Action | Helps you understand why prompts fail or succeed

Using the Fogg Behavior model can be difficult | Never a 100% guerantee a prompt will succeed

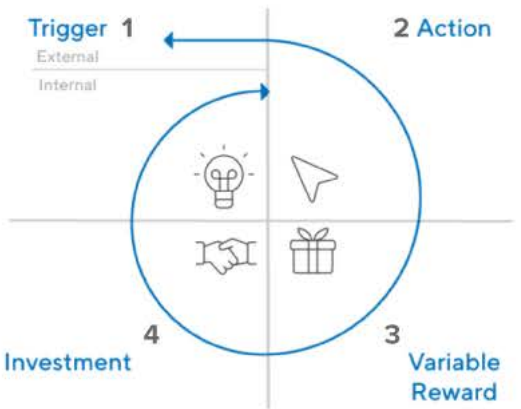
NIR EYAL HOOK MODEL

"As infinite distractions compete for our attention, companies are learning to master new tactics to stay relevant in users' minds and lives." [43]

NIR EYAL HOOK MODEL EXPLAINED

The Nir Eyal Hook Model is a model based on **how users get hooked** (or addicted in a stronger term) on a product. In the Hook Model the user's interaction with a product are described with 4 main phases; **(1) a trigger** to begin using a product, **(2) an action** to satisfy the user, **(3) a variable reward** for the action, and **(4) some type of investment** that (eventually) makes the product more valuable to the user. When the user loops through these phases several times, he will start building new habits.

The phase 1 trigger can be either **External** or **Internal**. External triggers are like e-mails, notifications, an app icon, etc. Internal triggers come from within yourself; emotions, habits, behaviors.



An example: (1) you open an app because you got an invite from a friend (external trigger), (2) you join his game and you win together, (3) as a reward you get some cosmetic items that are part of a set (4) to complete the set you buy the rest of the items in the shop. Then the user closes the app until the next trigger will happen.

Discover if a trigger is internal or external by checking out the Right and **Left Brain Core Drives | 9**

A good hook helps users return to product | Fundamental for creating loyal customers

Hooking a user could lead to addictive behavior | Hooking a user can make them more demanding

SYSTEM 1 & SYSTEM 2

"Daniel Kahneman explained the terms system 1 and system 2 in his bestselling book that there is a distinction between automatic and deliberate thought processes." [44]

SYSTEM 1 & SYSTEM 2
EXPLAINED

The System 1 & System 2 is a model explained by Daniel Kahneman in his book "**Thinking Fast and Slow**" (2011). He explains that the human mind processes things in two distinct systems:

System 1 is the brain's fast, automatic and intuitive approach. These include knowledge we are born with, like talking, fleeing from danger, recognising objects, but also activities that we learn through practise, like writing with a pen or using a phone.

System 2 is the mind's slower, analytical mode, which is activated once we do something that is unnatural or requires our consciousness. This part is activated when try to solve a difficult puzzle, do your homework or learn a new skill.

System 1
Unconscious
Fast
Associative
Automatic Pilot

System 2
Takes effort
Slow
Logical
Indecisive

95% of the time we make our decisions using System 1, and 5% of the time we use System 2. This is only 5% because it would drive us insane if we have to consciously think about every little thing you do every day; it's in our nature to work on auto-pilot most of the time.

A good example of how unconscious we make our decisions are the **Cognitive Biases | Chapter 2**

Doing most things unconscious makes life more efficient | Helps you make fast decisions when you need to

Leads to people having assumptions | Thinking too fast can cause errors in your decision making

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OCTALYSIS PRIME

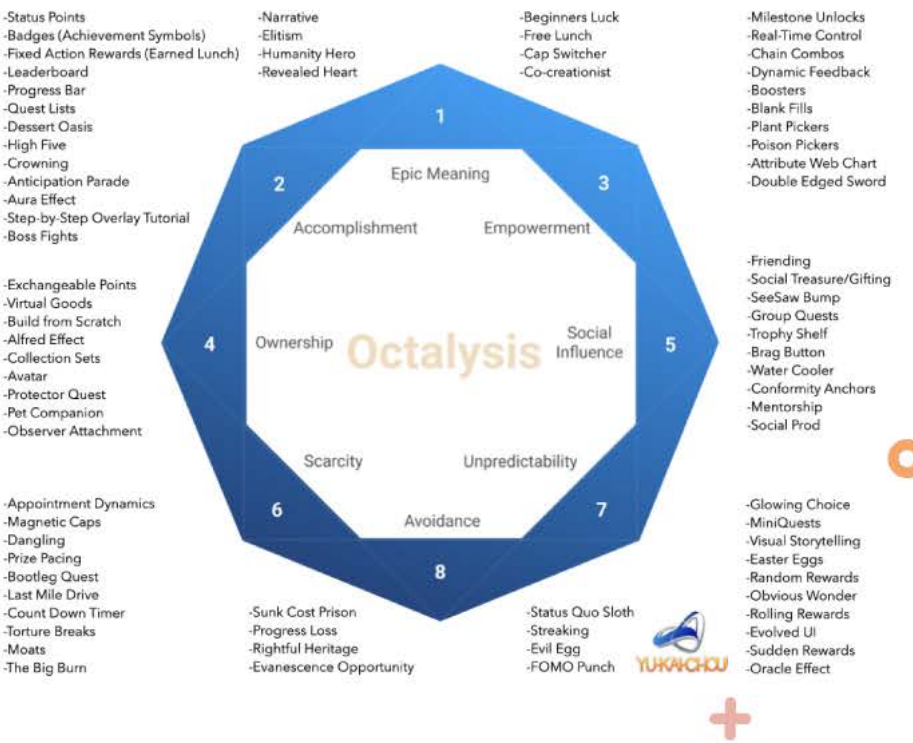
Octalysis Prime is a workshop about gamification by Yu-Kai Chou. This workshop has been a big inspiration for this card deck; The cards Of Gamification. The workshop is an interactive experience with all sorts of gamification aspects to make it more fun to do. I recommend checking it out if you are also interested in Gamification.

ACTIONABLE GAMIFICATION

Actionable Gamification is the book Yu-Kai Chou wrote in 2019 about gamification, which also also been a big part of this card deck. His book is an addition to his workshop. I also recommend reading this if you have an interest in gamification.

OCTALYSIS FRAMEWORK

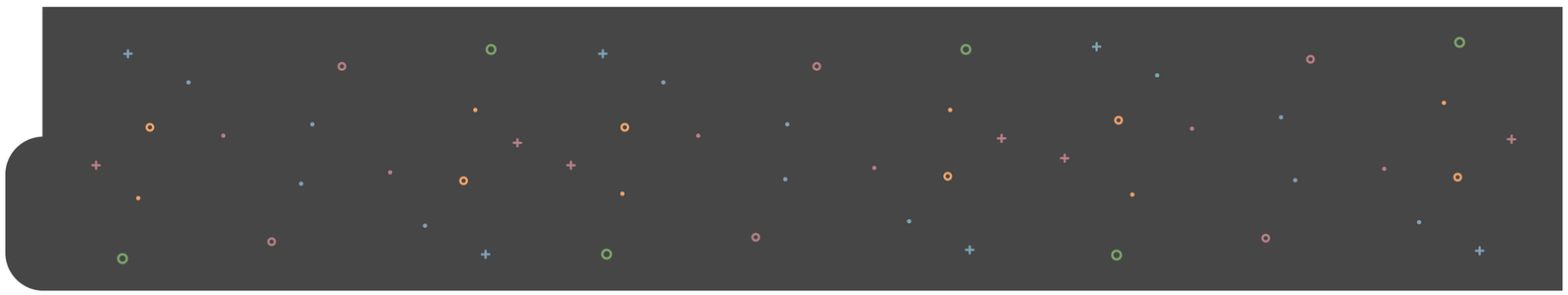
By Yu-Kai Chou

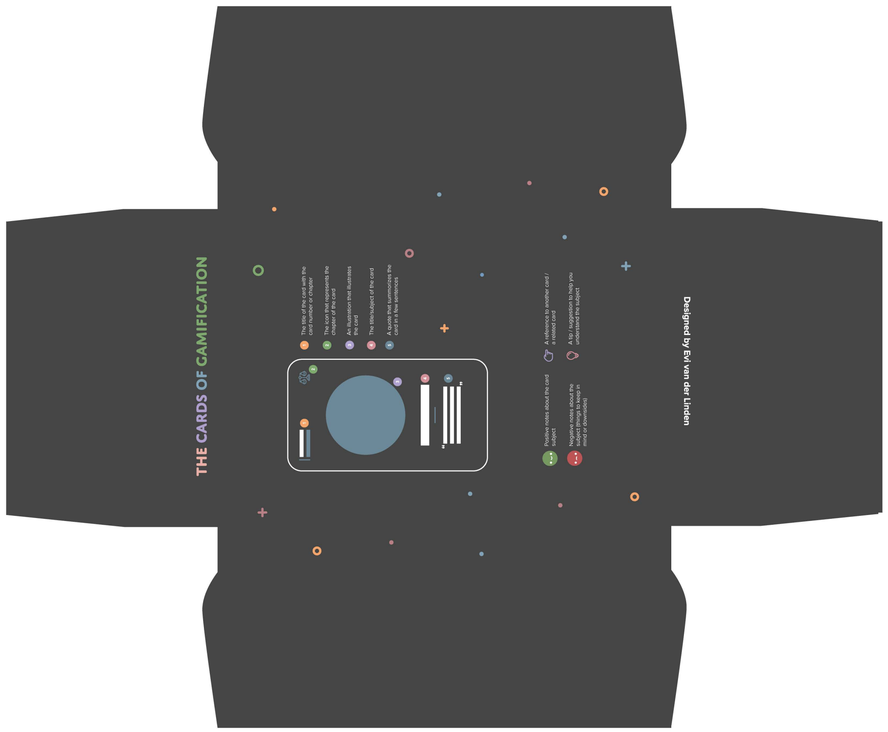


Designed by Evi van der Linden


44 Tarot Sized Cards
Designed by Evi van der Linden
THE CARDS OF GAMIFICATION
THE CARDS OF GAMIFICATION


THE CARDS OF GAMIFICATION
The Cards Of Gamification is a carddeck that summarizes the fundamentals of Gamification design. You can use this carddeck as a toolbox whenever you want to do something with gamification. It includes 4 chapters:
01 | The Octalysis Framework
02 | Cognitive Biases
03 | Game Design Techniques
04 | Behavioral Design Principles
05 | Persuasive Technology
44 Tarot Sized Cards




THE CARDS OF GAMIFICATION
The title of the card with the card number or chapter
The type of the card represents the chapter it belongs to
An illustration that illustrates the card
The title/subject of the card
A quote that summarizes the card in a few sentences
A reference to another card / a related card
A tip / suggestion to help you understand the subject
Positive notes about the card subject
Negative notes about the subject and things to keep in mind or downsides
Designed by Evi van der Linden


GAME DESIGN TECHNIQUES
CHAPTER 4
GAME
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OCTALYSIS: 8 CORE DRIVES
CHAPTER 2
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THE CAR
COGNITIVE BIASES
CHAPTER 3
COGNITIVE BIASES
"A cognitive bias is a systematic error in thinking that occurs when people are processing and interpreting information in the world around them and affects the decisions and judgments that they make." 8
THE CARDS OF GAMIFICATION