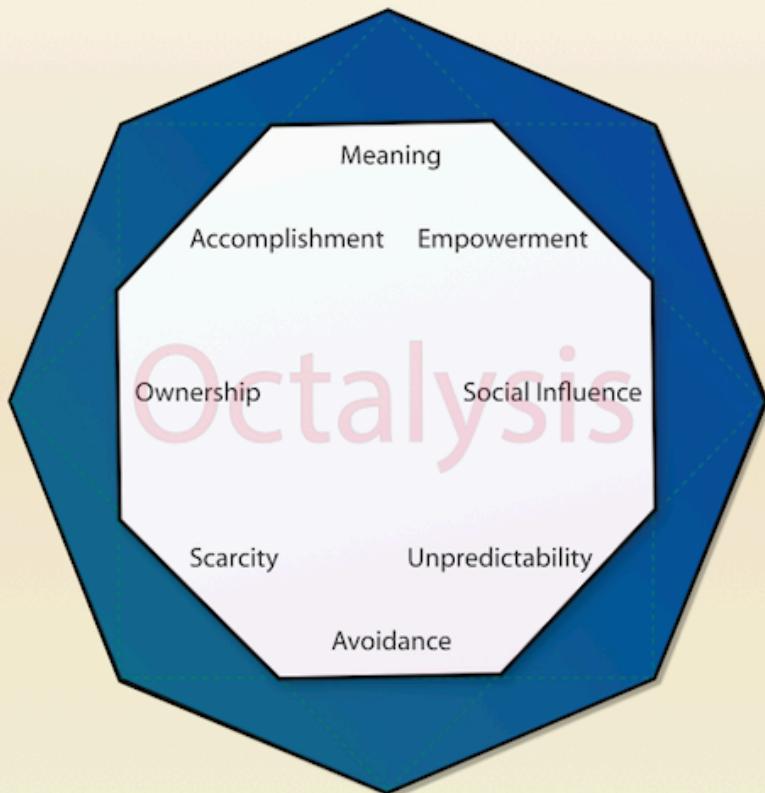


# ACTIONABLE GAMIFICATION

Beyond Points, Badges, and Leaderboards



# YU-KAI CHOU

Gamification Pioneer & International Keynote Speaker

# Actionable Gamification

Beyond Points, Badges, and Leaderboards

Yu-kai Chou

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*This book is dedicated to those who passionately believe in something and have the courage to pursue it in the face of circumstantial obstacles. We are surrounded by social and economical systems that are designed by others long ago to fulfill their own dreams, but some individuals manage to take a leap of faith, risk social rejection and even persecution in order to create more meaning in their own lives and the lives of those around them.*

*You inspire the world and move humanity forward. I salute you for doing what I continuously strive for but may never fully reach. I hope this book helps you on your journey towards making a difference.*

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# Introduction

This book is not about why gamification is amazing. It is not about how gamification is the future and how inspiring life could be with it. It is not necessarily for the late adopters who are simply curious about what gamification is. It also does not focus on what the gamification industry is doing as a whole, especially when that is continuously changing every month. Rather, this book is about implementing good gamification design into your products, workplace, and lifestyle.

The book is a deep exploration into what makes a game fun and how to apply those fun and engaging elements in real-life productive activities. It is about how you can use gamification and scientifically proven methods to improve your company, your life, and the lives of those around you.

Effective gamification is a combination of game design, game dynamics, behavioral economics, motivational psychology, UX/UI (User Experience and User Interface), neurobiology, technology platforms, as well as ROI-driving business implementations. This book explores the interplay between these disciplines to capture the core principles that contribute to good gamification design. I will be sharing my observations in multiple industries and sectors based on my 12-year journey of passionately and relentlessly pursuing the craft of Gamification.

Chapters of this book tend to build on previous chapters, so skipping around is not suggested. That said, if you have been an avid reader of Yu-kai's work and viewer of his videos, you might already have a firm grasp of the 8 Core Drives within the Octalysis Framework. In that case, feel free to skip to a section that you want to hone in on.

If you are extremely busy (which chances are: you are) and aren't

sure if you want to commit to this book, I recommend starting off with Chapters 3, 5, 10, and 14 to decide whether you would like to read the entire book.

Within the book, there will be many every-day scenarios to illustrate the potential of these Core Drives and the flexibility of their applications beyond traditional “gamification” examples. I myself still constantly gain new insights and revelations when I reflect and speculate upon the various possibilities contained in the 8 Core Drives. I hope you do too.

As this book is titled “Actionable Gamification,” my goal is for this to become a strategy guide to help avid readers master the games in their lives that make a true difference. If you master the contents of this book, you will have literally obtained what many companies pay tens of thousands of dollars to acquire.

My ultimate aim is to enable the widespread adoption of good gamification and human-focused design in all types of industries. I care deeply about creating a world that is sustainably more enjoyable and productive. In that world, there no longer will be a great divide between what people have to do and what they want to do - our lives become better as we spend time enjoying everything we do.

I’m excited for you to dive into the contents of this book so that we can start to build a world that harnesses the power of play together. Let’s begin.

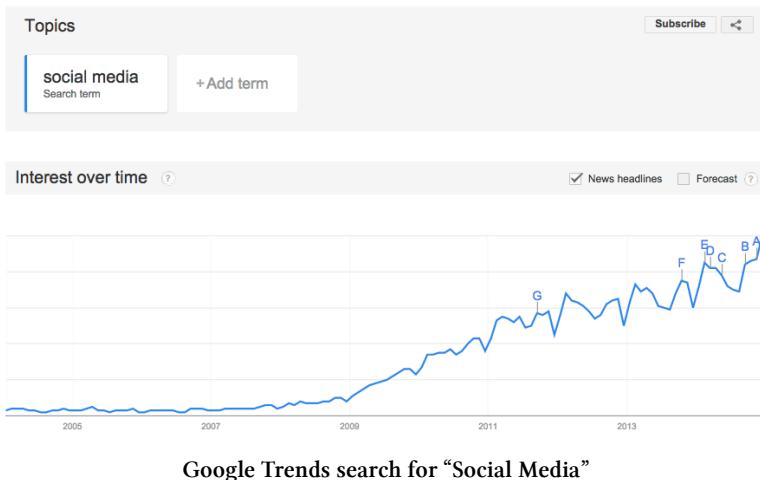
Yu-kai Chou (Written February 14th 2014)

# Chapter 2: The PBL Fallacy

## A Story about Social Media

The landscape of gamification development must be understood within a historical context to see why gamification mechanics themselves don't ultimately lead to good design.

Let's take a look at social media<sup>1</sup>.



Google Trends search for “Social Media”

Due to the proliferation of blogs, Facebook, and Twitter, the versatile term “social media” overtook “social networking” in 2007 and became a new buzzword. When enough interest and excitement in an industry hits critical mass, there will always be people and agencies that self-proclaim as experts to capitalize on the buzzing trend. It almost doesn’t matter what the new buzzword is – SEO, SaaS, Cloud, Big Data, you name it- the subjects are so new that

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<sup>1</sup>Google Trends search, “social media”, accessed 12/15/2014

while no one can truly be an expert, everyone is in the running to be considered one.

And so these “experts” saw the growth in “social media” platforms and services as heralding the dawn of a new era in technology, business, and culture. They made sure to demonstrate the importance of its influence through viral growth models and by collecting case studies that show companies obtaining huge successes due to their social media savviness. “Everyone is now a publisher” becomes the motto, and how companies leverage the phenomenon becomes the focus. The pitch is very inspiring and logical.

Unfortunately, being an “expert” only went so far - when companies actually hired these social media experts to run their marketing campaigns, they found that all these “experts” could do was create Twitter profiles and Facebook Fan Pages (I’ve even seen services that charge thousands of dollars just to create these accounts).

However, the real question wasn’t *how* to publish but *what* to publish. Content strategy was still a mystery in the early days of the social media revolution. For content, the “experts” would simply ask their companies to send them worthy updates for posting. Every once in a while they might even provide some customer support using the companies’ Twitter accounts or share pictures on their Facebook Fan Pages. But overall, the industry felt a little disillusioned by this new “fad,” as the miracle they were expecting in ROI (Return on Investments) just wasn’t being realized.

What most people didn’t recognize then was that social media is much deeper than simply possessing and posting on profile accounts. That’s just the outer shell of its influence and impact. We now know today that great social media campaigns focus on how to create value for the audience by sharing information that is insightful and engaging; has a personal voice; engages and sincerely interacts with each potential customer; and much, much more. In essence, the beauty of social media was in how you designed and implemented a campaign, not in the bells and whistles

you used. It was the informal and formal dialogue you had with your community that ultimately taps into the platform's unique possibilities.

Having knowledge of good social media principles does not necessarily mean someone can execute them correctly. Take for example popularity. Everyone knows the principles to become "popular" – be outgoing, funny, confident, maybe compassionate, etc. – but when you look around your community or network, you find that there are still only a few people who are truly "popular," while some may even appear sleazy as they try. Helping a brand become popular is exactly what true social media experts would be doing if both principles and execution were aligned.

Fortunately, because social media does have the power to make a company radically successful (and there are still dozens of successful social media case studies coming out on a monthly basis) the trend stuck around. In 2014, most companies now subscribe to the belief of, "If your company doesn't have a social strategy, it will become irrelevant."

What does this have to do with gamification?

We will see soon that the early days of social media mirrors the gamification industry today.

## An Obsession with Grunt Work

As I mentioned in the last chapter, games have the amazing ability to keep people engaged for a long time, build relationships and communities among players, and cultivate their creative potential. Still people often ask, "Do games really have the power to motivate people?" Consider this: many feel that children today do not have strong work ethics. They complain that kids nowadays don't have discipline, are easily distracted, and don't show persistence when encountering challenges.

But when it comes to playing games, kids have what most people would consider amazing work ethics. Many of them wake up secretly behind their parents' back at 3AM in the morning, just to play a game and level up their fictional characters.

What's the motivation behind this? If you have ever played RPGs (Role-Playing Games) before, you would know that the act of "leveling up" often requires defeating the same monsters over and over again in the same stage for hours on end. Even mobile games like Candy Crush or Angry Birds require the same repetitive action (bird-throwing and gem-matching) for weeks or months in order to level up and progress. In the gaming world, this is rightfully called "grinding," and it is fun and addictive for children and adults alike.

In the real world, this is often defined as "grunt work." Generally, no one likes to do grunt work, and it requires strong work ethic and will to complete it. But kids, who again are assumed to have no discipline or work ethic, are somehow sacrificing sleep and risking punishment to complete seemingly pointless grunt work for fun.

Why? Because they are excited about leveling up their character; they want to get that extra +5 strength; and they want to gain a new game skill and beat a challenging boss that they couldn't defeat until they reached a high enough level. They do it because they see the big picture, the "why" they are doing it, and they like that sense of accomplishment, as well as the use of their creativity in developing and optimizing certain strategies. They want these feelings enough that anything that stands in the way, be it grunt work or otherwise, is worth doing and doing urgently.

Now, imagine a world where there is no longer a divide between what you need to do and what you want to do, where everything is fun and engaging, and you actually want to wake up every morning to tackle the challenges ahead. Grunt work takes on a new meaning when understood as an affect of powerful motivational factors. This is the promise and vision that good gamification design can create.

## Secondhand Sushi Making

Despite the many case studies on gamification that show and promise a great impact in the world, there are still many more examples of poor practice, failed attempts, and numerous misconceptions. When I started my career in gamification in 2003, it was a topic that no one really understood or believed in. People thought I was just creating more excuses to play video games.

Fast-forward ten years and gamification is now a leading design methodology for industries across the globe. Though it gives me great pleasure to see that my once lonely passion became mainstream, it troubled me that experts who were working in gamification didn't seem to understand games very much. Yes, they might have played Candy Crush a little, or even Angry Birds and Fruit Ninja, but if you ask them what games have they been completely immersed and obsessed with for long periods of time, you get very short answers.

As with social media, once gamification became a buzzword, it attracted many who saw it as an opportunity to corner an emerging industry. I'm a firm believer that you should immerse yourself in an experience in order to best understand it. Yes, you can derive insight in closely observing those who are going through the experience, but that is like watching someone eat sushi and asking them to take a survey about it, rather than eating the sushi yourself. You're not going to get the same findings, and if you try to replicate that experience just based on the survey, you're going to impart a "superficial sushi taste" to the product you're designing.

As a result, a lot of gamification professionals focus only on developing the superficial layer of games. I call this the shell of a game experience. This is most often manifested in the form of what we call the PBLs: Points, Badges, and Leaderboards. Many gamification professionals seem to believe that if you put points on something boring, add some badges, and provide a competitive

leaderboard, that once boring product will automatically become exciting.

Of course that's also what a lot of gamification platforms specialize in: adding PBLs into various products in a scalable manner. And as a result, many less informed people curious about gamification start to believe that the sum total of gamification methodology and philosophy is merely the phenomena of adding points, badges, and leaderboards to products. This rightfully makes them believe that gamification is a shallow fad and not very impactful.

This has also generated a backlash from the game development community, as they claim that gamification is a bastardization of the true essence intrinsic to good gaming. And who can blame them? Foursquare seems to be nothing more than points, badges, and leaderboards based on going to places, while Nike+ seems to be the same thing based on running. Is this as deep as gamification goes?

Of course, points, badges, and leaderboards do have a place in game design. That's why you see them in so many different games. They have the ability to motivate behavior and push people towards certain actions. But gamification is so much more than PBLs. Many gamification professionals are only familiar with how to implement PBL mechanics and even though these do create value, most of them completely miss the point of engaging the user. It is not unusual for users to feel insulted by shallow shell mechanics.

If you ask any gamer what makes a game fun, they will not tell you it is because of the PBLs. They play it because there are elements of strategy, because it is a great way to hangout with friends, or they want to challenge themselves. The points and badges are often an added bonus that's nice to have depending on the context. This is the difference between extrinsic motivation – where you are engaged because of a goal or reward, and intrinsic motivation – where the activity itself is fun and exciting, with or without a reward. We'll dive deeper into these distinctions in Chapter 13 on

Left Brain vs Right Brain Motivations.

## A Trojan Horse without Greek Soldiers

Generic game mechanics and poorly constructed game elements such as levels, boss fights, or quests often fall into the same hole as PBLs. Simply put, applying traditional “game elements” ubiquitous in popular gameplay without diving deeper into user motivation contributes to shallow user experience: it’s all flash and no bang. An almost-humorous example of this is when people I meet call something a “quest” instead of a “task” thinking that this automatically makes the same original actions fun and engaging. Sure, having a playful attitude can make a big difference, but it only goes so far, especially when your customers and employees may already distrust your motives.

**The truth is, simply incorporating game mechanics and game elements does not make a game fun.**

Games aren’t necessarily fun because of high quality graphics or flashy animations either. There are many unpopular, poor-selling games with state-of-the-art 3D high-resolution graphics, and there are also games with very basic (such as Minecraft) or even no graphics (such as MUDs – multi-user dungeon games that use purely text with no graphics), that have a large community of players addicted to them. Clearly, there are more to games than “meets the eye.”

Unfortunately, a lot of people who work in gamification incorrectly think that applying game mechanics like points, badges, and leaderboards – elements that you can also find in boring and unsuccessful games - will automatically make the product or experience fun and engaging. Unfortunately, it’s not just what game elements you put in; it’s how, when, and most importantly, why these game elements appear.

If a modern army commander said, “Hey! The Greeks sent a big wooden horse to the Trojans and won the war. Lets send our enemies a big wooden horse too!” That would just be foolish if he didn’t understand the true design behind the Trojan Horse but only copied the shell of it. Instead, it would be much more effective if he created a virus that pretended to be a normal file to corrupt enemy computers. Learn from the design; don’t copy the shell.

## The Threat and Opportunities in Gamification

Even though gamification has become accepted in the mainstream, poorly designed applications threaten its long-term viability and impact development. I am genuinely afraid that in a few years, companies will look at gamification and say, “Hey, we tried the points stuff and it didn’t work out. I guess gamification was just a short-term fad.”

*That would be a huge loss for the world.*

Based on my years of researching, observing, and designing for gamification, I am a hundred percent certain that good gamification design can unlock tremendous potential and improve many lives in the process. There are hundreds of case studies that illustrate this also. And so it is my job (and hopefully yours one day) to continue protecting and innovating the core essence and promise of gamification.

In the long run, the term “gamification” might actually fade and eventually disappear. Currently, no one describes a website’s design as being “so Web 2.0!” Gamification may just become the normal way we design, implement, and interact with the world around us. It’s my hope that the principles that optimize for human motivation becomes the standard for good design across the board.

Luckily there are enough good gamification examples out there

that continue to show how thoughtful design can improve core business metrics and inspire new ways of thinking and acting in the world. Besides the 90+ Gamification Case Studies listed on my site mentioned in the last chapter, it is interesting to note that some of the best historical examples of gamification such as eBay or Woot.com have not been categorized as gamification by most people in the industry. There are dozens, if not hundreds of companies that became extremely successful because (regardless of what they originally called it) they applied great game mechanics and game-play dynamics to their processes. I've included some of these examples in the following chapters.

Because of these success stories, I believe that gamification will continue to evolve to meet real needs if practitioners and the general gamification community also evolve in their understanding of its principles and practice.

So if “game mechanics” alone are not the true reason why games are so engaging and sometimes addictive, then what is?

## **The Story of the Good Designer vs. Bad Designer**

To understand the core of good gamification design, let's start with an example of how a bad game designer might design a game.

In designing a game, a bad designer might start off thinking, “Okay, what popular game mechanics and game elements should I use? Well, of course we need monsters in the game. We also need swords so where should I place those? How about crops that friends can fertilize? What about some birds that show a lot of attitude? I'm sure people will love it!”

As you can see from the exaggerated depiction above, a game might have all the “right game elements” but still be incredibly boring or stupid if they do not focus on their users' motivations first. It

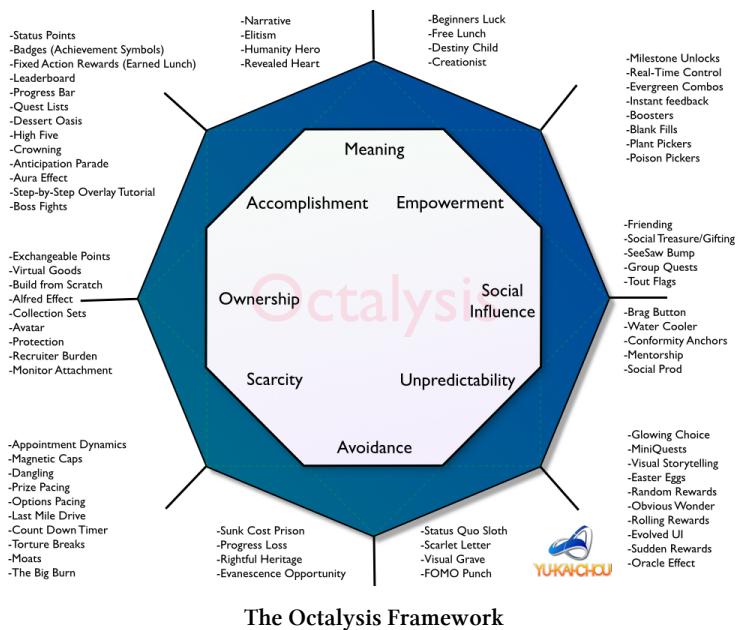
is worth remembering that, every single game in the market has what we call game mechanics and game elements in them, but most are still boring and financial losers. Only a few well-designed games become engaging and even addictive. Are you designing your experience to be the failing game or the successful game? How would you know?

So let us look at how a good game designer might tackle the problem. Instead of starting with what game elements and game mechanics to use, the good game designer may begin by thinking, “Okay, how do I want my users to *feel*? Do I want them to feel inspired? Do I want them to feel proud? Should they be scared, anxious? What’s my goal for their intended experience?

Once the designer understands how she wants the users to feel, *then* she begins to think, “Okay, what kind of game elements and mechanics can help me accomplish my goals of ensuring our users feel this way.” Maybe the solution lies in swords, maybe plants, or perhaps word puzzle games. The whole point here is that game elements are just a means to an end, instead of an end in itself. Game elements are simply there to push and pull on their users’ behavioral core drives.

As a result, in order to further explore, systemize, and scale methods of combining game mechanics with our motivational core drives, in 2012 I decided to share my original gamification design framework called Octalysis to the world. The Octalysis Framework embodies my life’s work, and the majority of this book will be about how to use Octalysis to design experiences that are fun, engaging, and rewarding.

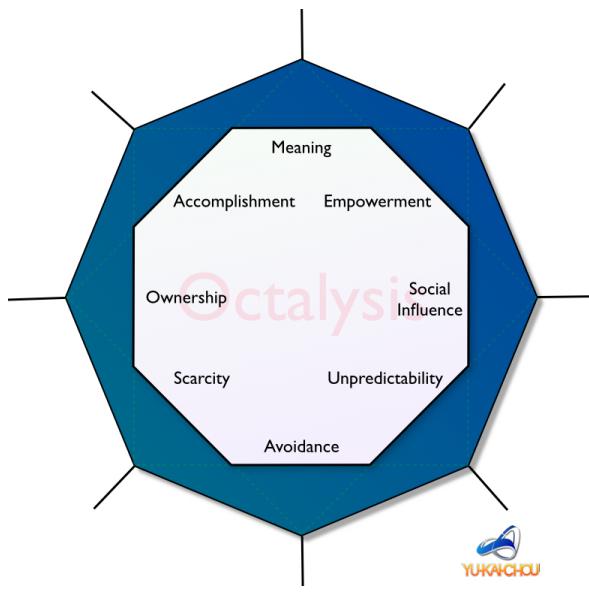
# Chapter 3: The Octalysis Framework



## A Gamification Design Framework for Everyone

Because of the issues discussed in the past chapter, I spent the past decade working to create a complete framework to analyze and build strategies around the various systems that make games engaging. I saw that almost every successful game appeals to certain Core Drives within us and motivates us towards a variety of decisions and activities. I also noticed that different types of game

techniques push us forward differently; some through inspiration and empowerment, some through manipulation and obsession. I drilled down to find what differentiates one type of motivation from another. The end result is a gamification design framework called *Octalysis*, which derives its name from an octagonal shape with 8 Core Drives representing each side.



Octalysis with only 8 Core Drives Present

In the past decade, I have been blessed in many more ways than I could anticipate. My lonely passion in gamification became something that various industries paid attention to. I could have easily stumbled upon a passion that remained a desert land throughout my life. Similarly, when I published the Octalysis Framework on my blog YukaiChou.com, it was also extremely well-received by the industry. Many brilliant pieces of work stay unnoticed or unappreciated for most of the creator's life, let alone a design framework I simply put up on my personal blog. To my delight, within a year the Octalysis Framework was organically translated

into over fourteen different languages (I had to stumble upon most of them one at a time), and I quickly received many opportunities to speak, teach, and consult globally.

With many years of experiments and adjustments, I believe that everything we do is based on one or more of the 8 Core Drives within Octalysis. This is important to keep in mind because it also suggests that if there are none of these Core Drives behind a Desired Action, there is no motivation, and no behavior happens.

Below we will quickly examine what these 8 Core Drives are.

## **The 8 Core Drives of Gamification**

### **Core Drive 1: Epic Meaning & Calling**

Epic Meaning & Calling is the Core Drive that is in play when a person believes she is doing something greater than herself and/or was “chosen” to take that action. An example of this is when a player devotes a lot of her time to contribute to projects such as Wikipedia. We are familiar that people don’t contribute to Wikipedia to make money, but they don’t even do it to pad their resumes. People contribute to Wikipedia because they believe they are protecting humanity’s knowledge – something much bigger than themselves. This also comes into play when someone has “Beginner’s Luck” – an effect where people believe they have some type of gift that others don’t or believe they were “lucky” to get that amazing sword at the very beginning of the game.

### **Core Drive 2: Development & Accomplishment**

Development & Accomplishment is our internal drive for making progress, developing skills, achieving mastery, and eventually overcoming challenges. The word “challenge” here is very important,

as a badge or trophy without a challenge is not meaningful at all. This is also the core drive that is the easiest to design for and, coincidentally, is where most of the PBLs: points, badges, leaderboards mostly focus on.

### **Core Drive 3: Empowerment of Creativity & Feedback**

Empowerment of Creativity & Feedback is expressed when users are engaged in a creative process where they repeatedly figure new things out and try different combinations. People not only need ways to express their creativity, but they need to be able to see the results of their creativity, receive feedback, and adjust in turn. This is why playing with Legos and making art is intrinsically fun. If these techniques are properly designed and integrated to empower users to be creative, they often become Evergreen Mechanics: a game-designer no longer needs to continuously add more content to keep the activity fresh and engaging. The brain simply entertains itself.

### **Core Drive 4: Ownership & Possession**

Ownership & Possession is where users are motivated because they feel like they own or control something. When a person feels ownership over something, he innately wants to increase and improve what he owns. Besides being the major core drive for the desire to accumulate wealth, it deals with many virtual goods or virtual currencies within systems. Also, if a person spends a lot of time customizing her profile or avatar, she automatically feels more ownership towards it too. Finally, this drive is also expressed when the user feels ownership over a process, project, and/or the organization.

## **Core Drive 5: Social Influence & Relatedness**

Social Influence & Relatedness incorporates all the social elements that motivate people, including: mentorship, social acceptance, social feedback, companionship, and even competition and envy. When you see a friend that is amazing at some skill or owns something extraordinary, you become driven to attain the same. This is further expressed in how we naturally draw closer to people, places, or events that we can relate to. If you see a product that reminds you of your childhood, the sense of nostalgia would likely increase the odds of you buying the product.

## **Core Drive 6: Scarcity & Impatience**

Scarcity & Impatience is the Core Drive of wanting something simply because it is extremely rare, exclusive, or immediately unattainable. Many games have Appointment Dynamics or Torture Breaks within them (come back 2 hours later to get your reward) – the fact that people can't get something right now motivates them to think about it all day long. As a result, they return to the product every chance they get. This drive was well utilized by Facebook when it launched: at first it was just for Harvard students, then it opened up to a few other prestigious schools, and eventually all colleges. When it finally opened up to everyone, many people wanted to join simply because they previously couldn't get in.

## **Core Drive 7: Unpredictability & Curiosity**

Unpredictability is the Core Drive of constantly being engaged because you don't know what is going to happen next. When something does not fall into your regular pattern recognition cycles, your brain kicks into high gear and pays attention to the unexpected. This is obviously the primary Core Drive behind gambling addictions, but it is also present in every sweepstake or lottery program that

companies run. On a lighter scale, many people watch movies or read novels because of this Core Drive. The very controversial Skinner Box experiments, where an animal irrationally presses a lever frequently because of unpredictable results, are exclusively referring to the core drive of Unpredictability & Curiosity (although many have misunderstood it as the driver behind points, badges, and leaderboard mechanics in general).<sup>2</sup>

### **Core Drive 8: Loss & Avoidance**

This Core Drive should come as no surprise –it's the motivation to avoid something negative from happening. On a small scale, it could be to avoid losing previous work or changing one's behavior. On a larger scale, it could be to avoid admitting that everything you did up to this point was useless because you are now quitting. Also, opportunities that are fading away have a strong utilization of this Core Drive, because people feel if they didn't act immediately, they would lose the opportunity to act forever (e.g. "special offer for a limited time only!")

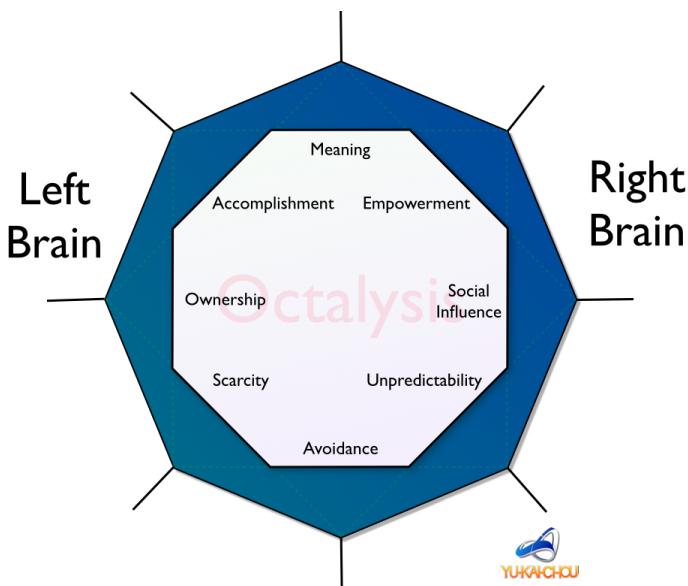
## **Left Brain (Extrinsic Tendency) vs. Right Brain (Intrinsic Tendency) Drives**

I will repeat multiple times in this book that, because everything you do is based on one or more of these 8 Core Drives, when there are none of these 8 Core Drives behind a Desired Action, there is *zero* motivation and no action takes place. In addition, each of these 8 Core Drives have different *natures* within them. Some make the user feel powerful, but do not create urgency; some create urgency, obsession, and even addiction, but make the user feel bad; some

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<sup>2</sup>Skinner, B. F. (1983). *A Matter of Consequences*. p116, 164. Alfred A. Knopf, Inc. New York, NY.

are more short-term extrinsic focused, while some are more long-term intrinsic focused. As a result, these 8 Core Drives are graphed on a Octagon not simply for aesthetic purposes, but because the placement determines the *nature* of these Core Drives.



Left Brain vs Right Brain Core Drives

The Octalysis Framework is arranged so that the Core Drives that focus on creativity, self-expression, and social dynamics, are organized on the right side of the octagon. In my framework, I call them Right Brain Core Drives. The Core Drives that are most commonly associated with logic, calculation, and ownership are graphed on the left side of the Octagon and are termed Left Brain Core Drives.

It is worth noting (especially to the science-y readers who are now shaking their heads) that the Left Brain and Right Brain references are not literal in terms of actual brain geography, but merely a symbolic differentiation between two distinct functions of the brain. It provides a nice structure for us to make Octalysis more

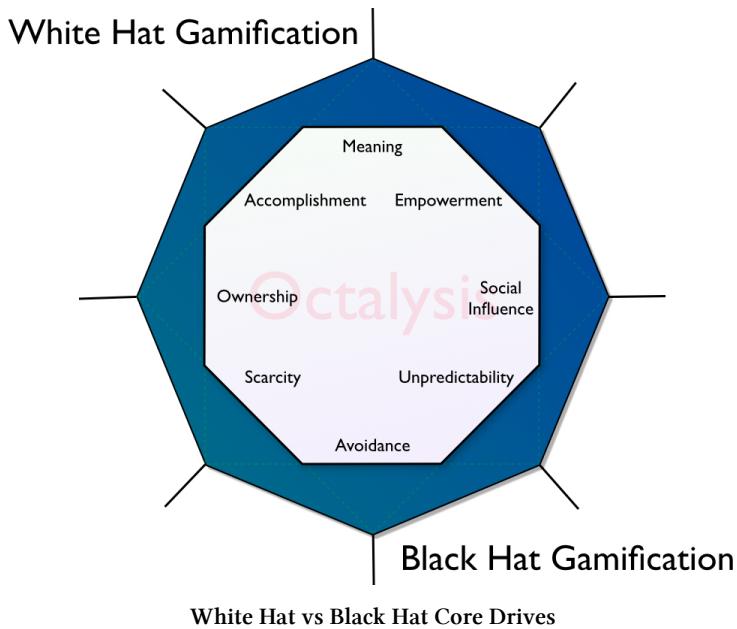
actionable, which is the main purpose of the framework.

Interestingly, Left Brain Core Drives tend to rely on Extrinsic Motivation—you are motivated because you want to obtain something, whether it be a goal, a good, or anything you cannot obtain; on the other hand, Right Brain Core Drives are mostly associated with Intrinsic Motivations—you don't need a goal or reward to use your creativity, hangout with friends, or feel the suspense of unpredictability—the activity itself is rewarding on its own.

This is important, because many companies emphasize designing for Extrinsic Motivators, such as providing users a reward when they complete a task. However, many studies have shown that extrinsic motivation impairs intrinsic motivation. Why? Because once the companies stop offering the extrinsic motivator, user motivation will often plummet to much lower than before the extrinsic motivator was first introduced. We will examine this tendency, termed the *overjustification effect*, in Chapter 13.

It is much better for companies to design experiences that motivate the Right Brain Core Drives, making something in of itself fun and rewarding so users can continuously enjoy and engage in the activity. Motivation is often better when it sticks.

## White Hat vs Black Hat Gamification



Another factor to note within the Octalysis Framework is that the top Core Drives in the octagon are considered very positive motivations, while the bottom Core Drives are considered to be more negative. I call techniques that heavily use the top Core Drives “White Hat Gamification,” while techniques that utilize the bottom Core Drives are called “Black Hat Gamification.”

If something is engaging because it lets you express your creativity, makes you feel successful through skill mastery, and gives you a higher sense of meaning, it makes you feel very good and powerful. On the other hand, if you are always doing something because you don’t know what will happen next, you are constantly in fear of losing something, or because you’re struggling to attain things you can’t have, the experience will often leave a bad taste in your

mouth- even if you are consistently motivated to take these actions.

From an Octalysis perspective, the problem with Zynga games (as of 2014) is that they have been very successful with implementing many Black Hat Game Techniques. Of course, they don't have the framework to understand it as "black hat," but they refer to it as "Data Driven Design."<sup>3</sup> Because of the Black Hat Motivation, for a long time their games drove great numbers off each user in terms of retention, addiction, and monetization. However, because most Zynga games do not make users *feel* good when playing, when the user is finally able to wean themselves from the system, they will. That's just like the situation with gambling addictions: they don't feel like they are in control of themselves, and when they quit they actually feel empowered. In recent years, Zynga further proved out my theories based on Octalysis by "double-downing" on a suite of gambling games such as the Slot Machine Game *Treasures of Olympus*, which further draws their design methodology away from White Hat Core Drives.<sup>4</sup>

It's important to note that just because something is called Black Hat doesn't necessarily mean it is bad, these are just motivators and they can also be used for productive and healthy results. Many people voluntarily submit themselves to Black Hat Gamification in order to go to the gym more often, eat healthier, or avoid hitting the snooze button on their alarm clock every morning. We will talk about the ethics and positive Black Hat Gamification Design in Chapter 14.

Based on the Octalysis Framework, a good Gamification practitioner should consider all 8 Core Drives in promoting positive and productive activities so that everyone ends up happier and healthier afterwards.

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<sup>3</sup>"Zynga's high-speed, data-driven design vs console development"

<sup>4</sup>"Zynga Inc (ZNGA) Unveils 'Riches of Olympus' Slots Game"

## The Hidden Ninth Core Drive: Sensation

Beyond the 8 Core Drives that will be explored in depth within this book, there is in fact a hidden ninth Core Drive called “Sensation,” which is the physical pleasure one obtains from taking an action. People do drugs, get massages, or have sex (hopefully along with many other Core Drives) because of the *sensation* Core Drive. If you choose one food over another, it is often merely because one tastes better than the other, which is primarily *sensation*. The key differentiation here compared to other Core Drives is that *sensation* deals with physical feelings that bring pleasure to our touch, hearing, sight, smell, and even taste; the other Core Drives bring pleasure to us through psychological means - the meaning and context behind what we see, hear, or taste.

The reason why I don’t have it included in the main set of the framework is that the Octalysis Framework primarily focuses on psychological motivators instead of physical ones. For instance, in *most* cases I cannot design an interactive experience where the user gets the feeling of physical acceleration while being on a roller coaster. Massages can be designed as *rewards* or *incentives* within the Octalysis Strategy Dashboard (covered in Chapter 16), but the behaviors would usually still be motivated through Core Drives such as Scarcity, Accomplishment, and Ownership.

Even though we don’t include sensation as part of the 8 Core Drives of Octalysis, we recognize its presence and understand how certain behaviors are driven by it. However, *sensation* by itself also has limitations without the 8 Core Drives accompanying it. Even pleasurable activities such as sex, when it lacks *curiosity*, *relatedness*, *creativity*, and *scarcity*, can possibly become rather unappealing.

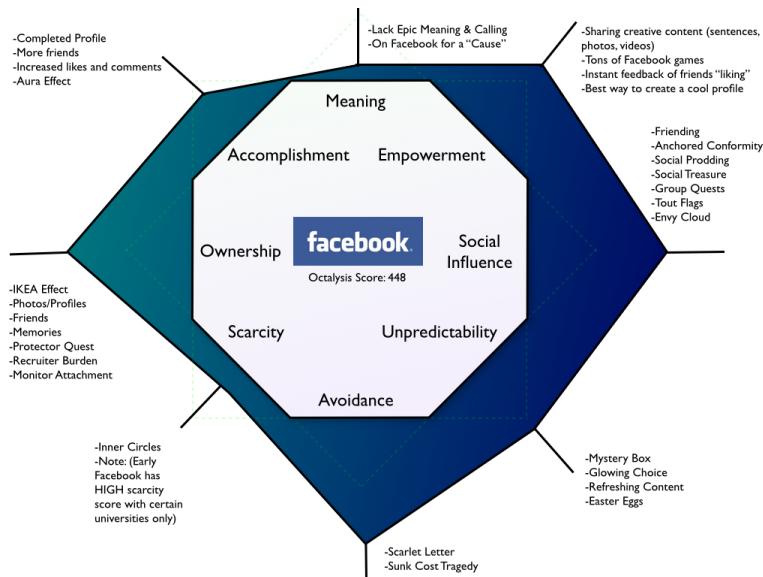
## **How to apply Level 1 Octalysis to actual systems**

Now that we have the Octalysis Framework laid out, the next step is to figure out how to utilize it. Since everything a person does is based on one or more of the Core Drives, generally any engaging product or system will have at least one of the Core Drives listed above. If none of the Core Drives are present within a system, there is no motivation, and users will drop out.

The first application of Octalysis is to use it to analyze the strengths and weaknesses of various products and experiences in regards to motivation. The key here is start thinking about how that product or experience utilizes each of the 8 Core Drives, and identify all the game mechanics and techniques that are used to appeal to them.

### **A few Gamification examples with Octalysis**

Here's an Octalysis done for a few games and online products:

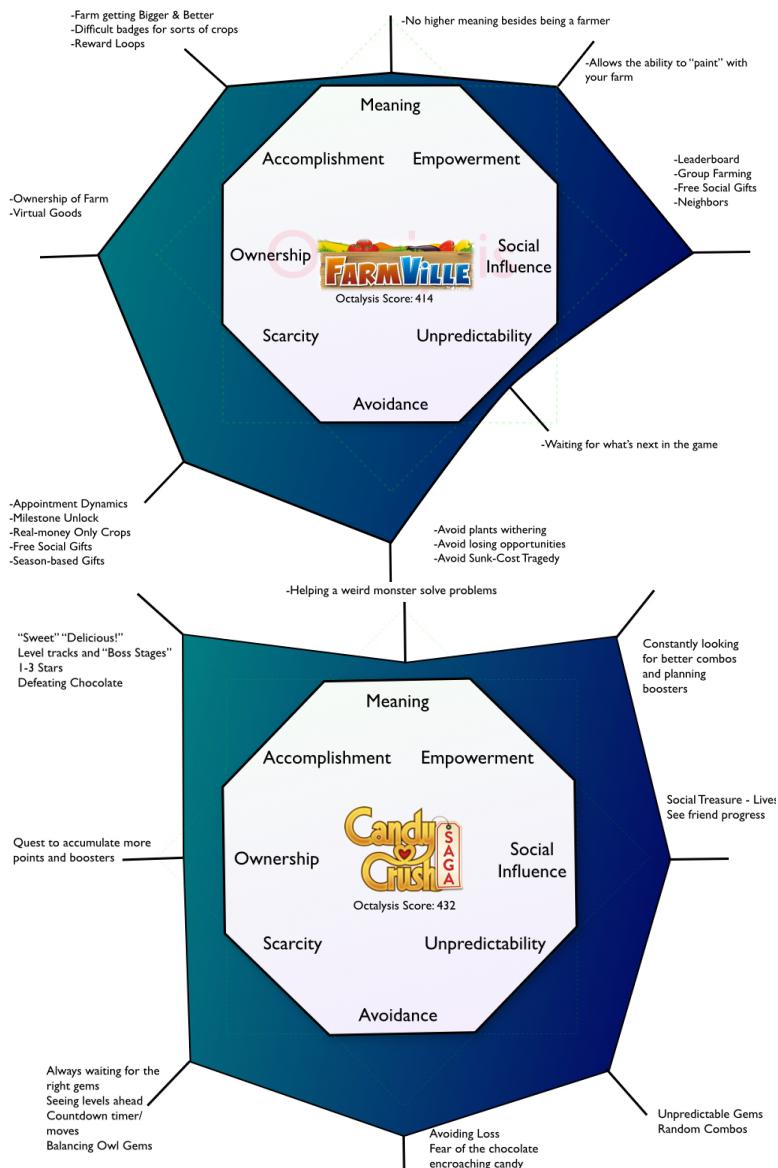


As you can see from the chart, Facebook is very strong in many of the 8 Core Drives, but rather weak on Core Drive 1: Epic Meaning & Calling - there is generally no higher purpose on using Facebook unless you are the few who are actively contributing to a cause on Facebook.

It is also weak on Core Drive 6: Scarcity & Impatience, as these days there are very few things that users want to do on Facebook but are barred from doing it.

The graph tells us that Facebook mostly focuses on Right Brain Core Drives, which focus on Intrinsic Motivation. It also trends more into the Black Hat zone, which means that it is more prone to drive obsessive behavior that gets users to return on a daily basis.

Among the Left Brain Core Drives, we see that people are extrinsically motivated on Facebook, not so much to feel accomplished or gain exclusivity, but because of Core Drive 4: Ownership & Possession - to collect, customize, and improve what we think is ours.



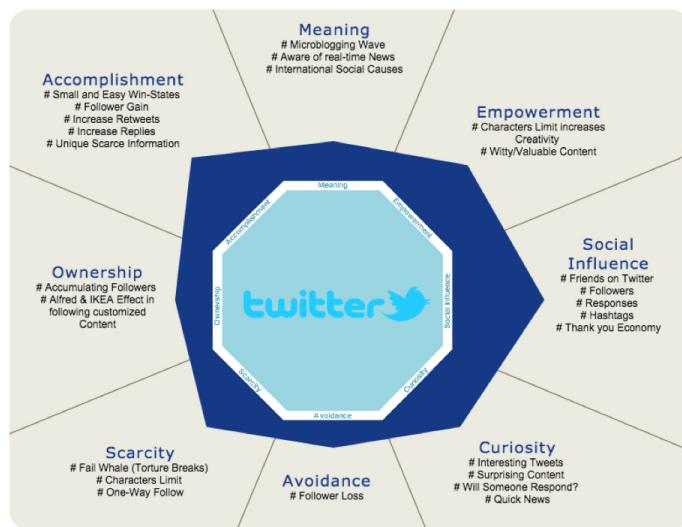
Here we see a couple game examples that contrast against each other.

Like Facebook, Farmville and Candy Crush also lack Core Drive 1: Epic Meaning & Calling within, but Farmville also lacks Core Drive 7: Unpredictability & Curiosity - there are not that many surprises in the game. You go back on Farmville simply to harvest the crops that you planted a few hours ago. Candy Crush is a little more balanced, but a little skewed towards the Right Brain Core Drives.

Previously, I crafted each Octalysis shape by hand on Keynote. Fortunately, a fan of Octalysis, Ron Bentata from Israel, graciously offered to build an easier Octalysis Tool for everyone.



(Accessed from [www.yukaichou.com/octalysis-tool](http://www.yukaichou.com/octalysis-tool)) With the Octalysis Tool, let's see a few more examples with Octalysis.



Here we can see that Twitter is also fairly well balanced but skews

more towards Right Brain Core Drives. In contrast, LinkedIn is heavily focused on the Left Brain Core Drives, with a White Hat emphasis. This makes sense, because LinkedIn is all about your career, your life, your accomplishment. Those are very extrinsic goals, and as a result, everyone feels like they need to have a LinkedIn Account. However, because it lacks Right Brain (intrinsic tendency) Core Drives, there's not a lot of enjoyable activities on LinkedIn. And this has been the challenge that they have had for many years. Users create their profiles, and then there is nothing left to *do* on LinkedIn. The account just sits there.

In the past couple of years, LinkedIn has been working very hard to increase engagement on the site, especially on Core Drive 5: Social Influence & Relatedness through Game Techniques such as Social Prods and Social Treasures (we will talk about how LinkedIn uses these Game Techniques in Chapter 9). However, through the Octalysis Framework we can see that LinkedIn could benefit massively if they put more effort into Core Drive 3: Empowerment of Creativity & Feedback, as well as Core Drive 7: Unpredictability & Curiosity.

## **Quick Intro to Level II Octalysis and Beyond**

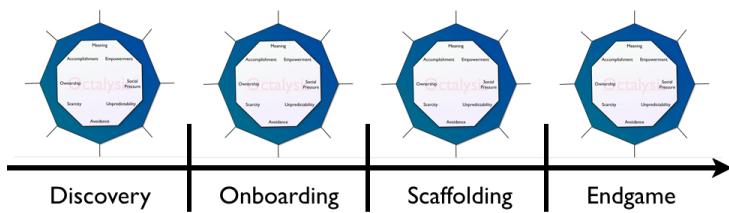
Ten years of Gamification study and implementations result in a fairly robust framework that can become actionable towards driving better motivation and metrics. As you can see, creating a rich gamified experience is much more than simply slapping on various game-mechanics to existing products. It is a craft that requires a nontrivial amount of analysis, thinking, testing, and adjusting.

As you become more and more advanced in Octalysis beyond the contents of this book, you will start to learn the higher levels of Octalysis design. (Up to *five levels*. There are only a handful

of people in the world who know what is Level IV and above). These advanced levels incorporate much more sophisticated design principles and in-depth analysis.

Once one has achieved mastery in Level I Octalysis, they can then apply it to Level II Octalysis, where we try to optimize experiences throughout all four phases of a player's journey: *Discovery* (why people would even want to try out the experience), *Onboarding* (where users learn the rules and tools to play the game), *Scaffolding* (the regular journey of repeated actions towards a goal), and *Endgame* (how do you retain your veterans).

## Level 2 Octalysis Design for All 4 Phases

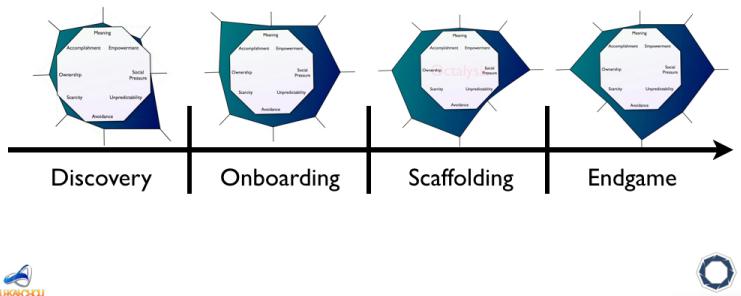


Level II Octalysis: Factoring in the 4 Phases of a Player's Journey

Most people treat their product as one experience, which makes sense, but in terms of motivation, I believe it is a mistake because the reason why you are using a product on Day One is often very different from Day One Hundred. Since everything you do is because of one of these 8 Core Drives (besides the 9th hidden Sensation Core Drive), if at any phase there isn't any of the 8 Core

Drives present, then there is no reason for the user to move forward to the next phase and the user simply drops out.

## Level 2 Octalysis Design for All 4 Phases

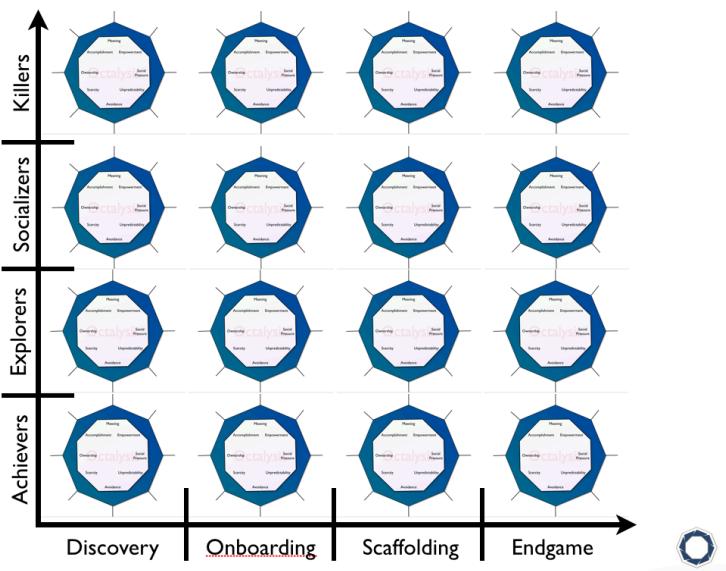


Sensing the pulse of what players feel across the journey

In the above, you can evaluate how different Core Drives are more prominent during each Experience Phase of the player's journey, whether it would be *unpredictability*, *development*, or *social influence*. For instance, most people *Discover* a product because of Core Drive 7: Unpredictability & Curiosity – they read about it on the news or hear about people talking about it. During *Onboarding*, they might be motivated by Core Drive 2: Development & Accomplishment – feeling smart and competent during the early levels. During the *Scaffolding* Phase, they might be motivated because of the social dynamic (Core Drive 5) as well as trying to go after the goal they could not reach yet (Core Drive 6: Scarcity & Impatience). In the *Endgame*, they might continue to be engaged because they don't want to lose their status and achievements (Core Drive 8: Loss & Avoidance).

How you design for all four Experience Phases through the 8 Core Drives will strongly demonstrate your ability as a Octalysis Gamification Designer. Of course, never forget to design for the proper *nature* of the Core Drives, understanding when you want to have more Black Hat, when to have more White Hat, and when to use Extrinsic/Intrinsic motivators.

Once you mastered Level II Octalysis, you can then push it one level higher to Level III and factor in different *player types*, so you can begin to see how different types of people are motivated at different stages of the experience.

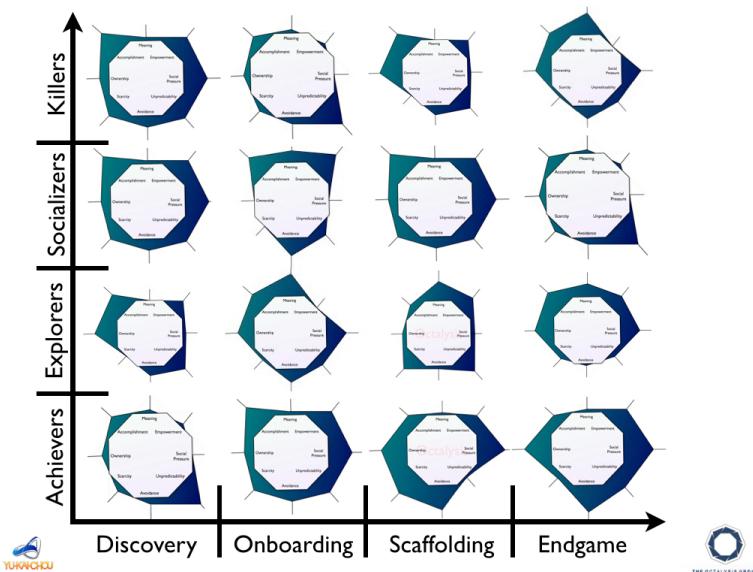


Pushing up a level further: Level 3 Octalysis with Bartle's Player Types

In the above diagram, I applied Richard Bartle's Four Player Types (Achievers, Socializers, Explorers, and Killers) to Level III Octalysis mostly because it is the most recognized model in game design, but Level III Octalysis does not need to use Bartle's Player Types<sup>5</sup> (in

<sup>5</sup>Richard Bartle (1996), "Hearts, Clubs, Diamonds, Spades: Players Who suit MUDs"

fact, Richard Bartle himself claims that his Four Player Types may not be suitable for gamification environments<sup>6</sup>. It could be Sales vs. Marketing Staff, Male vs. Female, Loyal Customers vs. Nonchalant Customers vs. New Customers etc. The point here is that different types of people are motivated differently, so Level III Octalysis allows the designer to understand and design for how everyone is feeling at different stages. We will also examine Richard Bartle's Four Player Types with Octalysis in Chapter 15).



Sensing how each Player Type is motivated at each Experience Phase

It is incredibly difficult to design something that pleases everyone, but with this framework, you can start to identify where the weaknesses within your system are and work on improving for motivation at various places. Once you become familiar with Level III Octalysis, you can almost *feel* how motivation moves in your system and understand where motivation is lacking or whether there are too much Black Hat or Extrinsic Motivation in the system.

<sup>6</sup>Slideshare: “A game designer’s view of gamification” by Richard Bartle

For instance, through Level III Octalysis, one can reach conclusions such as, “Looks like the Achievers start the experience in Discovery well, Onboarding is fine, but in Scaffolding they lose motivation and drop out. The Explorers will try out the product because of Core Drive 7: Unpredictability & Curiosity, but during Onboarding they feel confused and would leave. Socializers wouldn’t even try out the experience because there is no Core Drive 5: Social Influence & Relatedness advertised in the product. Finally, the Killers seem to be the ones in the case to stay through Discovery, Onboarding, Scaffolding, and Endgame, possibly showing off to the new players.”

While there are five levels of Octalysis in total, Level I is often sufficient for the majority of companies seeking to understand why their products are not engaging their users. Higher-level Octalysis processes are useful for organizations that are truly committed to making sure that they push their metrics in the right direction and improve the longevity of a gamified system. Many games are only popular for three to eight months, but ones that have impeccable Endgame design can last over decades—or even centuries.

This book will be about examining the 8 Core Drives, how to design for them, and how they all come together to create a phenomenal experience for any user. If the above does not interest you so far, it is safe for you to put the book down and do better things with your time. But if the above excites you and you choose to go on, I promise you there will be an exciting journey of discovery, empowerment and awakening ahead. I’m even feeling excited just thinking about it.

**To get the most out of the book, Choose only  
ONE of the below options to do right now:**

**Easy:** Think of a game that you enjoyed playing for a very long time. Can you identify which among the 8 Core Drives are present in the game?

**Medium:** Think about why you are reading this book. What Core Drives motivated you to read this book over other activities?

**Share what you come up with on Twitter or your preferred social network with the hashtag #OctalysisBook and see what ideas other people have.**

# **Chapter 5: The First Core Drive - Epic Meaning & Calling**

Now that we have established a foundational overview of the Octalysis Framework, it is time to dive deeper into each Core Drive and discover the power and enchantment within.

If there is only one thing you remember after reading this book, it should be to focus on motivation by thinking through the 8 Core Drives instead of focusing on features and functionalities. Of course to do that, you need to be familiar with the 8 Core Drives to wield them correctly, otherwise you may even end up hurting user motivation.

## **The Core Drive High Above**

Epic Meaning & Calling is the First Core Drive of Octalysis Gamification. This is the drive where people are motivated because they believe they are engaged in something bigger than themselves.

Games often trigger the Epic Meaning & Calling Core Drive. In many games, an intro narrative communicates that the world is about to be destroyed, and somehow, you as the player are the only one qualified to save the world. That immediately creates excitement and motivation towards the adventure.

What about real life? Do we ever encounter scenarios where we are driven by Epic Meaning & Calling?

- Have you ever wondered why people contribute to the non-profit website Wikipedia? What would make someone spend

hours updating a site that doesn't pay her or even help her build her resume?

- Why are people so loyal to Apple products, to the extent that they know they want to buy the next product, even before they know what it is?
- Why are school rivalries so engaging, driving radical behaviors such as pranks, streaking, violence, while also leading to profit for the schools?
- Can higher purpose also be designed into parenting styles beyond the usual reward and punishment system?

Interestingly, these questions can all be answered by the powerful White Hat Core Drive of Epic Meaning & Calling. In this chapter, we'll attempt to address many of these questions and provide more understanding of this selfless Core Drive.

## The Encyclopedia that Pwned Me

"Pwn is a leetspeak slang term derived from the verb own, as meaning to appropriate or to conquer to gain ownership. The term implies domination or humiliation of a rival used primarily in the Internet-based video game culture to taunt an opponent who has just been soundly defeated (e.g., "You just got pwned!")." - Wikipedia<sup>7</sup>.

When I founded my first startup company in 2004, I was really excited about finally being an entrepreneur and wanted to promote it everywhere. I learned that anyone can update Wikipedia because it is user-generated, and thought it would be a stellar idea to have my company included within the vast knowledge of Wikipedia. I excitedly spent an entire day crafting a great and informative section about my company - describing when it was founded, by which amazing prodigies, and the problems it set out to solve.

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<sup>7</sup>Wikipedia Entry: "pwn". Accessed 12/18/2014.

Once completed, I proudly clicked the “publish” button. And there it was: I saw my own company as a Wikipedia article. Woohoo! We were officially on Wikipedia now! What an Epic Win!

However, my bliss of “finally making it in life” was short-lived.

About three minutes after my posting, my post was flagged by a “member of the Wikipedia community,” stating that this entity was not significant enough and therefore does not deserve to be on Wikipedia. Five minutes later, a couple others agreed to that point of view, and my post was deleted.

Just like that, my full day’s worth of work disappeared within ten minutes.

The first question that came to my mind after the many “dot dot dot” moments and the three ||| lines across my forehead was, “Who are these people? Do they even have lives??”

It sure seems odd that a fairly large group of volunteers go on Wikipedia regularly, not to be enlightened with mind-blowing knowledge, but to police the platform for pests like me who are trying to sneak irrelevant or unimportant content into the Wikipedia.

If you have ever hired interns or entry-level employees, and have paid attention to their motivations and feelings, you may know that asking people to do “auditing work” on mountains of pages and to flag outdated content can present an awkward situation. You know that no one enjoys this type of grunt work. These bright young interns and employees really want to learn great skills from you and your company so they can grow as professionals. But there is negligible learning associated with such mundane work. *Someone* in the company has to do the work, and the entry level interns naturally should be the ones that perform the tasks that no one else wants to do.

As a result, you try to tell them to do it as a matter-of-fact, so they may go with the flow without thinking about the demoralizing nature of it. Or you may choose to spend a lot of time explaining

to them how this is important to the company and how their work creates great impact. You could also try to make the project sound fun and exciting. At the end of the day, you know in your heart that this is dreadful work, and the young colleague simply needs to “pay their dues” before they can get other interns to do the same.

But when it comes to Wikipedia, people are volunteering their precious time outside of their jobs to do the exact same thing without getting any “real” benefits! When you come home from work, there are lots of things you can do - practice your daily boss-complaining ritual, watch TV, Skype with your significant other, or even play games. People choose to police Wikipedia above all those other activities because they feel like they are protecting humanity’s knowledge - something greater than themselves.

When it comes to Epic Meaning & Calling, it’s not about what you want as an individual, nor about what makes you feel good. Individuals participate in the system and take action not because it necessarily benefits them, but because they can then see themselves as heroes of a grander story. It’s about playing your part for the greater good.

And if playing my part does not require me to sacrifice my life as a martyr, but simply involves me to spend a couple hours a day monitoring weird activities on Wikipedia, that’s a huge bargain and something worth doing.

According to an MIT study, obscenities that are randomly inserted on Wikipedia are removed in an average of 1.7 minutes<sup>8</sup>. These unpaid guardians are definitely keeping *humanity’s knowledge* in check diligently.

However, based on my later acquired understanding in human motivation, I also had the hunch that instead of getting paid for pouring hours of their precious labor into Wikipedia, they are also more likely to *pay* Wikipedia instead.

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<sup>8</sup>Don Tapscott and Anthony D. Williams. *Wikinomics*. P75. Portfolio Publishing. September 28, 2010.

After some research, *whoopee*, I discovered that people who have spent time editing Wikipedia are almost nine times more likely to donate to Wikipedia compared to people who only benefit off it by consuming the valuable information (28% vs 3%)<sup>9</sup>. What's more, donors who don't edit the site have all donated for fewer than three times, while a whopping 80% of donors who have also put labor into Wikipedia have donated five times or more.

Time and time again, we see that, when your system or product demonstrates deep and sincere passion towards a higher vision, others will want to believe in it and get on the journey with you, even if it means foregoing financial compensation (which is Core Drive 4: Ownership & Possession).

Even to this day, when people ask me, “Why don’t you enter yourself and your Octalysis model onto Wikipedia? You’re fairly well-known in your industry right?” I usually try to sidetrack the conversation, as the mere thought of doing so brings back scarring memories of having such an authoritative community unanimously vote that I was not worthy of being mentioned.

“Nah, I’m not that well-known.”

## Newton’s Legacy is Not Just a Fruit

Core Drive 1: Epic Meaning & Calling is generally best communicated during the Discovery and Onboarding Phase of a Player’s Journey. You want to communicate very early on exactly why the user should participate in your mission and become a player.

Apple is one of the rare companies that understand this Core Drive, and they managed to instill this into consumers without being user-generated, being an open platform, or pushing for “a charitable cause.” Every once in a while, I’ll have friends who excitedly tell me, “Hey Yu-kai, I am saving up to buy the next *iPhone*.” I would

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<sup>9</sup>Wikimedia Blog. “Who are Wikipedias Donors”. 02/05/2012.

respond, “But you don’t even know what’s in the new iPhone! What if it sucks?” My friends would then respond with, “I don’t care. I’m going to buy the next *iPhone*.”

Isn’t that a strange phenomenon in a world where electronic consumers are spoiled by a plethora of options out there, with many alternatives touting the same or better capabilities than the iPhone but only a fraction of the cost?

Why are people so crazy about Apple products?

What we are seeing here, is that these friends of mine (and I suspect yours too) have first self-identified as an “Apple Person.” Therefore, they need to do what “Apple People” do, which is to buy the newest iPhones and Macbooks, as well as act like “Apple Snobs” by walking around and making comments such as, “Oh, I never have that problem because I use a Mac.” I myself have also been guilty of this.

When confronted with the topic of many Android phones having better specs and lower prices than the iPhone, my response has usually been, “Well, I don’t know about the specs, but I do know that, when I’m using an Android phone, I feel frustrated; but when I’m using an iPhone, I feel happy. That’s probably worth something.” (By the way, in my opinion, it is often unfair to compare the market share of iPhones to Android Phones as a success measurement, since the iPhone is sold by one company, while Android Phones are sold by over a dozen companies throughout the world. When people freak out about “Oh look! There are more Android users than iPhone users now!”, that’s basically saying that all these non-Apple smartphone companies combined have surpassed Apple. Big deal.)

So the multi-billion dollar question is: So, how did Apple do this?

Besides offering stellar products with elegant design and meticulous engineering, Apple has been one of the few electronics companies that actually try to sell a higher meaning.

Lets examine two of the most successful commercials in history -

both from Apple.

## The Crazy Ones in 1984

The first Apple commercial that reached massive fame and success, is the “1984” commercial, aired in 1984’s Super Bowl XVIII on CBS<sup>10</sup>.

This is a build-up of the popular novel “Nineteen Eighty-Four” by George Orwell, published in 1948 about a futuristic dystopian world where a unified society is controlled and brainwashed by a centralized government<sup>11</sup>.

The ad presents a drab, depressive setting - representing a diabolical, yet orderly society; seemingly under the repressive control of a totalitarian influence. In a large room filled with gray, cheerless individuals dress in monotonous grey uniforms, an authoritative voice booms. The masses stare blankly at a huge screen displaying the colossal image of a “dictatorial figure”. “Big Brother” is addressing the minions, demanding their obedience, their loyalty, their minds.

Suddenly, a woman in full color runs in and throws a sledgehammer at the big screen, completely shattering it. Then, a deep male voice says, “On January 24th, Apple Computer will introduce Macintosh. And you’ll see why 1984 won’t be like ‘1984.’”<sup>12</sup>

Through this commercial, Apple reassures viewers that the world wouldn’t be controlled by “Big Brother” - IBM, but would be liberated by Apple’s computers.

Though Apple’s Board did not really approve of this commercial and it was almost thrown into the garbage bin, when finally aired, it became one of the most successful commercials in history. In

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<sup>10</sup>Maney, Kevin. “Apple’s ‘1984’ Super Bowl Commercial Still Stands as Watershed Event”. USA Today. January 28, 2004.

<sup>11</sup>Orwell, George. Nineteen Eighty-Four. Secker & Warburg. 1949.

<sup>12</sup>Youtube: “Apple - 1984”

his book, *Electric Dreams: Computers in American Culture*, Ted Friedman discusses how powerful the commercial was:

*Super Bowl viewers were overwhelmed by the startling ad. The ad garnered millions of dollars worth of free publicity, as news programs rebroadcast it that night. It was quickly hailed by many in the advertising industry as a masterwork. Advertising Age named it the 1980s Commercial of the Decade, and it continues to rank high on lists of the most influential commercials of all time.* <sup>13</sup>

Afterwards, Apple's internal team calculated the amount of free airtime that the commercial garnered. They estimated that the total value was about \$150 million worth of derived airtime. Within three months of the commercial's appearance, Apple would sell \$155 million worth of Macintoshes, establishing itself as the revolutionary computer company on the block.

The second extraordinarily successful Apple marketing campaign to resonate with people was the "Think Different" campaign. This commercial ran in 1998, not long after Apple's Founder, Steve Jobs returned to the board at the end of 1996. <sup>14</sup>

At the time, Apple was a struggling company, and a dying brand. Jobs not only trimmed Apple's product line from over 350 items down to 10, he knew he had to reinvent the Apple brand.

While there are many shorter versions of the ad, the original full text runs:

*Here's to the crazy ones. The misfits. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo. You can quote them, disagree with them, glorify or vilify them.*

*But the only thing you can't do is ignore them. Because they change*

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<sup>13</sup>Friedman, Ted. *Electric Dreams: Computers in American Culture*, 2005.

<sup>14</sup>Hormby, Tom. Low End Mac. "Think Different: The Ad Campaign that Restored Apple's Reputation". 8/10/2013

*things. They invent. They imagine. They heal. They explore. They create. They inspire. They push the human race forward. Maybe they have to be crazy.*

*How else can you stare at an empty canvas and see a work of art? Or sit in silence and hear a song that's never been written? Or gaze at a red planet and see a laboratory on wheels? We make tools for these kinds of people.*

*While some see them as the crazy ones, we see genius. Because the people who are crazy enough to think they can change the world, are the ones who do.*<sup>15</sup>

The series of commercials was a gigantic success. It won dozens of prestigious advertisement awards and made the Apple brand “cool” again. It tangibly spearheaded the transformation of Apple from a dying company into literally the most valuable company in the world within a decade.

*Have you noticed something unique and interesting about these ads?*

Neither of these campaigns actually talks about computers or electronics. They don’t talk about specs, RAM, color screens, or computers. You’re not even sure what they sell if you are unfamiliar with the company.

They sold a vision.

When people connect with a statement like, “Because of Apple Computers, 1984 will not be like Nineteen Eighty-Four,” many started to think, “Wow! That’s amazing! I don’t know what they do, but I want to be part of this!”

How do you “be part of it”? You buy the Macintosh computer.

Similarly, when people hear the deep wise voice concluding with, “Because the people who are crazy enough to think they can change

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<sup>15</sup>Siltanen, Rob. Forbes. “The Real Story Behind Apple’s ‘Think Different’ Campaign”. 12/14/2011

the world, are the ones who do,” they become inspired and think, “Yes! I’ve always been hiding my true passions to conform with what people expected of me. I want to be one of the crazy ones that changes the world!” And of course, the way to think different and change the world is to buy an iPod and have a thousand songs in your pocket.

See the power of Epic Meaning & Calling? When every other company is selling how amazing their computers are, Apple sells a vision worth believing in. Interestingly, when Apple was developing the Think Different campaigns, the first rule was that there would be no products in the commercials. This is so counterintuitive, yet so *Human-Focused*.

As long as Apple can continue to make people think that it is a vision worth believing in, their customers will continue to be “Apple People” and buy Apple products. But if one day Apple does something stupid and breaks the trust of being a vision worth believing in, people will stop blindly purchase their products and will begin to look at the specs again.

## Mjolnir is Not Just a Tool

Some companies have approached me during my all-too-good-sounding soapbox, and asked me, “Yu-kai, this Epic Meaning & Calling thing is great and all, but our product is just a tool. It’s not meant to change the world and solve global warming. How can we add Epic Meaning & Calling to a simple tool?”

For this, one of my favorite examples is the mobile app Waze<sup>16</sup>. Waze is a GPS-based mobile navigation app that provides a wealth of user-generated information about travel conditions from the Waze community.

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<sup>16</sup>[Waze Website](#)

When you think of a GPS, it is purely functional as a tool. You turn left, turn right, and get to your destination - very functional as a tool, but not very epic. So how does an app like Waze create Epic & Meaning & Calling? And how do you instill that meaning without giving users long videos to watch or huge amounts of text to read?

What Waze did was brilliant. In the early days of Waze, when you first download the app, it would show you one image. On the left side of that image, there is a huge snake monster, consisting of a street with many cars stuck on it. This snake monster's name was *Traffic*. On the right side of the image, there were cute little Waze knight characters with swords, shields, and armor, working together to fight this big snake monster.

So now, when you are driving with Waze, you are not just getting to your destination, you are helping a community of brave Wazers fight this Traffic monster! This resonates on a subconscious level because, deep in our hearts, everyone hates traffic with a passion.

Of course, the actual way to beat this Traffic monster is to drive with Waze on. Since Waze is a user-generated system, as you drive with the app on, it will start to gather valuable information about the road conditions that will help the overall driving experience of the community.

The powerful thing about Epic Meaning & Calling, is that it turns otherwise passive users into powerful evangelists of your mission. They are even highly forgiving of your flaws. Because Waze is user-generated, sometimes it is not as accurate. Consequently, in its early days, it took me to the wrong location about three times, and I became apologetically late for my meetings.

You would think that the only purpose of a GPS is to take you to the correct destination, and when it fails in that one purpose, most users would say, "This is a piece of crap. I'm going to delete it!" However, because of the Epic Meaning & Calling Waze has instilled in the hearts and minds of people, when it takes people to the wrong

location: instead of deleting it in anger, many people start to panic. “Oh no! The map is broken! I need to go fix it!”

How powerful is that? When you fail in your core competency, instead of deleting the app in anger, users actually rush to solve the problem for you. Again, when it comes to Epic Meaning & Calling, what makes you happy is irrelevant. It’s about the bigger meaning and higher vision. And when you see a crack in that higher vision you believe in, you become fearful that others will see that crack and lose faith in the vision. As a result, you take it upon yourself to fix it.

This ties back to the core of Human-Focused Design. You play a game not because you have to, but because you enjoy doing so. You use Waze not because there aren’t any other good GPS apps out there that can report to you traffic conditions, hazards, and watchful policemen; you use it because it’s fun and you enjoy the experience the most. And just like Mjolnir, Thor’s mighty hammer known for leveling mountains<sup>17</sup>, this is no ordinary tool- it evens slays traffic!

Despite the many errors and frustrations leading to inaccuracy, within a few years of its founding, the company was acquired by Google for over \$1 Billion Dollars. Not bad for selling a vision.

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<sup>17</sup>In Norse mythology and the Comic Book Marvel Universe, Mjolnir is the divine thunder hammer of Thor.

## Your Parents are Bigger Than You!



Some people mistake Octalysis and Gamification as technology solutions that are expensive to implement. In reality, they are design systems focused on motivation. So if the activity relates to motivation, you can apply gamification to it. Just like games – you can play with a complex 3D Virtual World technology like World of Warcraft, or you can play Hide-And-Seek, something that requires no technology at all. Children these days have both World of Warcraft and Hide-And-Seek available, and the last time I checked they still enjoy Hide-And-Seek.

Because of that, we can even apply Octalysis Gamification to things a bit more abstract, such as parenting. Parents often use two main Core Drives to motivate their children to behave well - Core Drive 2: Development & Accomplishment (reward when the child behaves), as well as Core Drive 8: Loss & Avoidance (punish/ground when the child does not behave).

However, the Chinese culture has “figured out” how to implement

Core Drive 1: Epic Meaning & Calling into parenting, through the meaning behind a term known as “孝”. Pronounced “Sheeow,” (or “Xiao” in correct Pinyin spelling, but most people don’t know what to do with the X). It has no direct English translation, but it is a concept that translates into a belief that since the first day of your birth, you are indebted to your parents who you owe your life and existence to. As a result, “孝” mandates that you need to do everything possible to honor them and lift them up.

There are even popular expressions and idioms in Chinese literature such as “不孝之子，天地不容,” which means, “For a son without ‘孝,’ there is no space/tolerance for him in heaven or earth.” This means that if you do not have “孝,” you are such an epic scumbag you don’t even deserve to have ever existed; both the heaven and the earth are so disgusted by your existence they are literally spitting you out of their presence.

Some sources translate the character “孝” to mean “Filial Piety” – “a virtue of respect for one’s parents and ancestors.” Yet, having grown up with this term I feel it goes a long way beyond the word “respect.” When I was little and just started to comprehend the world, I remember reading or listening to the thrilling and sometimes gruesome stories of the well-known children of “孝” in Ancient China. These children would fight tigers to protect their parents, warm up their parents’ mattresses before bedtime, or cut off their own flesh in order to feed their hungry parents. In one story, a sixty year old man of “孝” pretends to play on the ground in a humorous way in order to entertain his eighty-year-old parents. (Note: regardless of the tactics to educate such Epic Meaning & Calling, “孝” is truly a great virtue that is slowly being lost in a globalized “flat world” of instant gratification and self-centeredness).

Other examples of “孝” in the *24 Paragons of Filial Piety*<sup>18</sup> include:

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<sup>18</sup>Jujing, Guo. *The Twenty-four Paragons of Filial Piety*. Yuan Dynasty (1260–1368).

- a man sells himself into slavery to pay for his father's funeral
- a man tastes his sick father's stool to understand the health of his father
- a woman cooks part of her own liver to feed her mother
- an eight year old boy attracts mosquitoes to suck his blood so they won't bother his parents
- a father decides to bury his three year old son so he can afford to care for his own mother. While digging the hole, he finds treasure and doesn't have to kill his son.

While some of these actual stories are disturbing, it illustrates how important "孝" is as a value within the culture. Of course, parents aren't just hypocritically manipulating their children. The children who see their parents treat their grandparents poorly, regardless of whether these stories are told to them, will most likely not buy into the Epic Meaning of 孝. This is an important factor in using the motivation elicited through Core Drive 1 - it must feel authentic.

In Traditional Ancient Chinese Culture, when one's parents pass away, they need to dress in mourning attire, abstain from all entertainment and sometimes meat, as well as exclude social relationships for three entire years to express his grief. This act is called "守孝", which literally means "guarding 孝" and was traditionally set to be three years because Confucius stated that it takes three years for us to leave our parents' arms; hence, it is proper to spend three years mourning for them. Of course, in today's modern society, much of the three-year mourning is lost and reduced to days or weeks as a symbolic gesture to honor one's parents.

And because of this culture of "孝," Asian children grow up feeling that they have to do a lot for their parents – they have to study hard, they have to get into a good school that their parents can be proud of, they have to support their parents throughout life, they should live with their parents to always be available and make sure everything is taken care of for their parents' life-long wellbeing. As

an example, I have a close relative in his fifties who has left his wife and son in the United States for close to a decade now - so he could live with and take care of his aged mother in Taiwan; only visiting his immediate family a few times each year.

In contrast, in many Western societies where the concept of “孝” is not as prevalent, people still respect their parents immensely. However, once they form their own families, they generally become more disconnected and simply bring their children to grandpa and grandma once or twice a year, instead of constantly making life decisions that are tailored to their parents.

Even today, if my parents told me I don't have 孝 because of any behavior, it would crush me emotionally and motivate me towards almost anything to amend for it. Just because I understand the nature of the motivation does not mean I am exempt from it. It is something deeply ingrained within me and my values. In similar faith, my parents have never made that accusation towards me, because it would be one of the greatest insults a parent could give a child. It is that serious and tangible when it comes to this type of motivation.

## **Game Techniques within Epic Meaning & Calling**

Now that you have the main concept of Core Drive 1: Epic Meaning & Calling, the question is how to implement it into your experiences. Below I introduce a few Game Techniques that, if designed correctly, can bring out the sense of Epic Meaning & Calling. Keep in mind, in my terminology, when I mention Game Techniques, I mean techniques that incorporate Game Elements (which includes Game Mechanics) to drive motivation.

You will also start to notice many “Game Technique numbers (#s)” that follow each Game Technique mentioned. These Game

Technique #s are part of a scavenger hunt that originated from my website YukaiChou.com. My readers would try to collect all the numbers, which will one day result in some fascinating things that one can do with Octalysis down the road.

One key thing to remember is that the entire premise behind the Octalysis Design Framework is that one should not be too stuck on game mechanics, game techniques, or any outer appearances of a design. Rather, one should focus on the Core Drives and how it brings out motivation in an actionable manner. The Game Techniques, as well as the associated #s, are all just bells and whistles for great motivational design. If you do not focus on the Core Drives, it will simply have the *Shell* of an engaging game, not the *Essence*.

## Narrative (Game Technique #10)

Most games start with a narrative that gives the player some context about **why** they should play the game. Many of them are related to saving the world, a princess, solving a case, or even just helping a dragon or crocodile take a bath. So why don't we use narrative to give people context in other things?

One of the more effective ways to instill Epic Meaning & Calling into your user base is through an engaging Narrative. This allows you to introduce a story that gives people context for a higher meaning through interacting with your company, product, or website.

Zamzee, a “wearable technology” company for children, uses narratives to instill epic fantasies into children to motivate them to exercise more. Through its online software interface, Zamzee gives kids fantasy quests, such as becoming a sorcerer’s apprentice. In order to learn your first spell, you run up and down the stairs 15 times. Even though the action itself is disconnected from the narrative, just having them make-believe a magical meaning inspires the kids to exercise more because they are now motivated by their

own imaginations. Zamzee shows that kids who participate in these imaginary missions move 59% more than kids who don't<sup>19</sup>.

## **Humanity Hero (Game Technique #27)**

If you can incorporate a world mission into your offerings, you can gain even more buy-in during the Onboarding process. One company that does an incredible job of instilling a sense of Humanity Hero is TOM's Shoes, which sends one pair of shoes to a child in a third-world country whenever you place an order with them<sup>20</sup>. The idea that you can help underprivileged kids every time you make a purchase is extremely motivating. Additionally, when customers wear the shoes, they let others know that they are helping the world, which is a form of Trophy Shelf (Game Technique #64) within Core Drive 5: Social Influence & Relatedness.

*FreeRice* is another example that utilizes the Humanity Hero technique. FreeRice.com is a website that donates 10 grains of rice for every correct answer to the educational questions posted on their site. The funding comes from the ads and the number of page views they generate from those answering the questions. To date, FreeRice has donated 6100 metric TONS of rice, consisting of 93 billion grains of rice and enough to feed 10 million people.<sup>21</sup>

Often, if you can tie your system to a cause that many people care about, you can build an entire business on the goodwill of others.

## **Elitism (Game Technique #26)**

Allowing your users or customers to form a prideful group based on ethnicity, beliefs, or common interests also makes them feel

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<sup>19</sup>Zamzee Blog. "New Research Shows Zamzee Increases Physical Activity by Almost 60%". 09/06/2012

<sup>20</sup>Groden, Claire. Times. "TOMS Hits 10 Million Mark on Donated Shoes". 06/26/2013

<sup>21</sup>Burbano, Jaime. Gamifiers Blog. "Gamification for a Better World". 10/27/2013.

like they are part of a larger cause. Elitism instills group pride, which means each member tries to secure the pride of the group by taking specific actions. The group also attempts to frustrate its rivals, which can lead both groups upping their actions to beat the competition.

This is why University Rivalries are so engaging. When I was attending UCLA (University of California, Los Angeles), it was very difficult to not feel the strong rivalry against USC (University of Southern California). Starting from orientation as a Freshman (Onboarding), there is no lack of content and jokes that sets the scene of the USC rivalry. During sports seasons, this rivalry reaches its pinnacle, with both sides aggressively, sometimes violently, insulting each other. There are even T-Shirts printed with the text, “My 2 favorite teams are UCLA, and whoever is playing USC.”



Both sides believe that this rivalry is bigger than themselves, and with this newly instilled sense of Elitism, they engage in many irrational activities because they “should” as a proud representative of that school.

Even though rivalries are engaging or even fun for students, who actually benefit the most from these rivalries? More often than not, it is the universities themselves. By creating an outside enemy that students “should hate with a passion,” it creates more “school spirit” where students bond together and commit *Desired Actions* in frenzies. Tickets to games against USC sell out quickly, with everyone gearing up with UCLA merchandise and war paint. More importantly, students feel a stronger tie towards their Alma Mater,

which means that later on in their careers, they are more prone to donate to their schools since that's what successful alumni "should" do.

Similar in effect to the concept of "孝," I too implicitly feel that I "should" donate to my Alma Mater. Not because of any personal gains, but for a purpose beyond my own selfish and family matters. In one of my speeches, an attendee asked me, "I would like to figure out how to add more alumni participation for our university. Academically, we rank really well, but for some reason, our alumni don't feel proud coming here and just see us as a stepping stone. They rarely participate or donate!" My response to him was, "Sounds like you need to add more *school spirit* to students while they are still attending. I'm guessing you don't have competitive athletic teams or big school rivalries?" "No, we don't! How did you know?"

Even a colleague of mine, Jerry Fuqua, chose to attend UCLA many years ago over having a full scholarship into Harvard and other Ivy League schools because he loved UCLA's basketball team. Another friend of mine who aced all his Calculus exams as a Freshman in High School also chose to attend the University of Kansas over other more prestigious school because he grew up being a fan of the KU Jayhawks. If you ever wondered if it was worth an educational institution's budget to support an expensive athletic team, now you at least see the justification.

Another great example of Elitism is demonstrated by the microlending platform Kiva.org, which allows developed countries to pseudo-donate their money to help third world country villagers start their small businesses and help sustain their families. To create a sense of Elitism, Kiva.org created groups and published statistics that allowed Christians and Atheists to compare their giving against each other, to see who contributes more money in helping third

world countries.<sup>22</sup>

The Christians believed that, since the Bible tells them to love God and love one another beyond all things, they should demonstrate generosity to the world and help those in need. As a result they increased their contributions. The Atheists, on the other hand, wanted to prove that one does not need to believe in a god to simply be kind to fellow human beings, so they also increased their contributions. Again, both sides contributed more than they would have otherwise, simply because they felt they were doing it for a greater purpose than themselves - protecting their group's reputation. (Disclaimer: I am myself a person of Christian faith).

## **Beginner's Luck (Game Technique #23)**

Beginner's Luck focuses on the *Calling* part in Epic Meaning & Calling. Calling makes people think they are uniquely destined to do something. With Beginner's Luck, people feel like they are one of the few chosen to take action—which makes them much more likely to take it. If a gamer, upon the first day of playing a game, randomly earns one of the most powerful swords in the game, one that even veteran players couldn't easily obtain, chances are he isn't going to quit on day one. He'll likely be using that powerful sword to kill monsters fanatically until the next hook in the game shows up.

The game designer would likely also add in Social Influence & Relatedness (Core Drive 5) by designing in Tout Flags (Game Technique #64), which are mechanisms that allow the user to implicitly show off what they are proud of. If the game designer also adds Scarcity & Impatience (Core Drive 6) through Moats (Game Technique #67) by telling the user he can only equip this sword once he defeats all the adversaries at a particularly difficult level,

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<sup>22</sup>Lebo, Lauri. ReligionDispatches.org. University of Southern California."Atheists and Christians Compete to Give More". 1/19/2011

the user now becomes obsessed and tries to figure out all sorts of ways to conquer that level.

## **Free Lunch (Game Technique #24)**

Along the lines of the “Calling” theme, giving freebies (that are normally not free) to selected people in such a way that it binds them to a larger theme can make customers feel special and encourage them to take further action.

For example, Spoleto, a Brazilian restaurant chain with over 200 restaurants throughout Brazil, Spain, and Mexico, gave a literal free lunch to any female who told them she was beautiful, in celebration of International Women’s Day.<sup>23</sup> This helped promote a positive message and made women feel special for that day. This will likely bring them back in the future too, as this venue is now associated with a positive memory that makes them feel unique.

## **Believability is Key**

Even though Epic Meaning & Calling is powerful “beyond measure,” it can also backfire and fail in epic proportions. As you use these concepts, keep in mind that you can really turn people off when you’re appearing disingenuous in your efforts to create Epic Meaning and Calling.

For example, if a major gasoline company that was known to “profit from evil” tried to convince people to use their brand by saying, “pumping with us protects the planet.” Customers would not only be unimpressed, they would likely feel insulted. Or if a certain fast food conglomerate that is known for cheap unhealthy foods (that happen to never decompose) runs a marketing campaign that says, “Eating our food protects your health and your family,” people would likely see that as a manipulative slap in the face.

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<sup>23</sup>AOTW. “Spoleto Restaurant: Beautiful women don’t pay”.

Even in fantasy make-believe settings like *Zombies Run*, where users are motivated to run more because they are trying to save their village from hypothetical zombies, you want to make sure the user is prepared to believe in the higher fantasy meaning in that context. Pretending that there are zombies in the room during large corporate board meetings in order to get everyone to stand up more often would likely not fare all that well. (So please don't tell your Board Directors that you did it because you read my book on Epic Meaning & Calling).

Once you have firmly established believability in your Epic Meaning & Calling, you will have a good chance of applying this Core Drive effectively to bring out the fun and selflessness out of people.

## Core Drive 1: The Bigger Picture

Core Drive 1: Epic Meaning & Calling is the prime White Hat Core Drive within the Octalysis Framework, and is often very powerful in the Discovery and Onboarding Phases of a player's journey. It underlines the purpose behind the activity and strengthens all the other seven Core Drives when it is introduced correctly. In later chapters, we will also explore how some companies utilize Epic Meaning & Calling (among other White Hat Gamification Core Drives) to inspire their employees to work with more passion and stay in the organization, even when other companies offer them greater monetary incentives.

Core Drive 1: Epic Meaning & Calling's weakness lies in the difficulty of implementing believability, as well as the lack or urgency within the motivation. While people constantly inspire to become part of something bigger and would feel great if they actually took the actions, they will often procrastinate and delay those very actions. Thus, to create desirable behavior, the gamification designer needs the help of the other Core Drives within Octalysis.

**To get the most out of the book, Choose only  
ONE of the below options to do right now:**

**Easy:** Think of an example where Core Drive 1: Epic Meaning & Calling motivated you or others to take certain actions. Does it make people act more selflessly?

**Medium:** Identify a project you are working on. Think about whether there are ways to install Core Drive 1: Epic Meaning & Calling into the experience. Can you tie the experience into a bigger theme?

**Share what you come up with on Twitter or your preferred social network with the hashtag #OctalysisBook and see what ideas other people have.**

**New Section Unlocked! - Get Inspired**

Now that you are becoming familiar with the Octalysis Framework, check out my TEDx talk on how eight different world-changing products utilize each of the 8 Core Drives to make the world a better place. The TEDx talk can be accessed at <http://bit.ly/YukaiTEDx<sup>24</sup>>, or you can simply go on Google and search “Gamification Tedx.”

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<sup>24</sup><http://bit.ly/YukaiTEDx>

# **Chapter 10 - The Sixth Core Drive: Scarcity & Impatience**

Scarcity and Impatience is the sixth core drive of the Octalysis Framework, and is the drive that motivates us simply because we are either unable to have something immediately, or because there is great difficulty in obtaining it.

We have a natural tendency to want things we can't have. If a bowl of grapes were sitting on the table, you may not care about them; but if they were on a shelf just beyond your reach, you would likely be thinking about those grapes: "Are they sweet? Can I have them? When can I have them?"

Personally, Core Drive 6 was the last Core Drive I learned about and is the one that intrigues me the most, particularly because this core drive can feel completely unintuitive, irrational, and emotionally difficult to utilize.

In this chapter we'll explore this Black Hat/Left Brain Core Drive, understand its powers, and learn about some game techniques that harness it for behavioral change.

## **The Lure of being Exclusively Pointless**

*South Park*, a popular American animated sitcom created by Trey Parker and Matt Stone, has many lessons to teach us about human behavior (once you get past the potty-mouth cursing and gory scenes).

In one of the episodes, *Cartmanland*<sup>25</sup>, the controversial main character Eric Cartman inherits \$1 million from his deceased grandmother and decides to use almost all of it to buy a struggling theme park just to entertain himself there without being stuck in lines.

Instead of trying to improve its business, Cartman makes a full 38-second TV commercial to show how amazingly fun “Cartmanland” is and emphasizes that no one besides him can enjoy it. “So much fun in Cartmanland, but you can’t come!” is the catchy slogan.

After realizing he needs more money to hire a security guard to keep his friends out, Cartman starts to accept two customers a day to pay for the security costs. Then he starts to realize that he needs to pay for more things such as maintenance, utilities, and other operations, so he began to open it to three, four, tens, and then hundreds of people everyday.

Since people all saw how they couldn’t get into Cartmanland, when they learned that it was starting to accept more people, they rushed to get in.

Eventually, everyone wanted to go to Cartmanland and it went from a near-bankrupt theme park to one of the most popular ones in the region. Experts within the episode even called the “You Can’t Come!” campaign a brilliant marketing ploy by the genius millionaire Eric Cartman.

Unfortunately, with more people in his precious park, Cartman became miserable and eventually sold the park back to the original owners, and then lost his money afterwards due to tax mishandling (typical Cartman).

What you see here is a classic example of scarcity through exclusivity. Even though this is an exaggerated example, in this chapter you will see how our brains naturally have a tendency to pursue things just because they are exclusive.

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<sup>25</sup>Wikipedia Entry: “Cartmanland”. Accessed 1/19/2015

On the other side of popular media, in the movie Up in the Air<sup>26</sup>, protagonist Ryan Bingham, played by George Clooney, is a corporate “downsizer” that flies all over the place to help companies lay off employees. In a conversation with the young and ambitious status quo disruptor Natalie Keene, played by Anna Kendrick, Bingham gives us a lesson about the value of scarcity, status, rewards, and exclusivity, as he talks about his obsession with airline miles.

*Ryan Bingham: I don't spend a nickel, if I can help it, unless it somehow profits my mileage account.*

*Natalie Keener: So, what are you saving up for? Hawaii? South of France?*

*Ryan Bingham: It's not like that. The miles are the goal.*

*Natalie Keener: That's it? You're saving just to save?*

*Ryan Bingham: Let's just say that I have a number in mind and I haven't hit it yet.*

*Natalie Keener: That's a little abstract. What's the target?*

*Ryan Bingham: I'd rather not...*

*Natalie Keener: Is it a secret target?*

*Ryan Bingham: It's ten million miles.*

*Natalie Keener: Okay. Isn't ten million just a number?*

*Ryan Bingham: Pi's just a number.*

*Natalie Keener: Well, we all need a hobby. No, I- I- I don't mean to belittle your collection. I get it. It sounds cool.*

*Ryan Bingham: I'd be the seventh person to do it. More people have walked on the moon.*

*Natalie Keener: Do they throw you a parade?*

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<sup>26</sup>[Up in the Air Official Website](#)

*Ryan Bingham: You get lifetime executive status. You get to meet the chief pilot, Maynard Finch.*

*Natalie Keener: Wow.*

*Ryan Bingham: And they put your name on the side of a plane.*

*Natalie Keener: Men get such hard-ons from putting their names on things. You guys don't grow up. It's like you need to pee on everything.*

Beyond the collection, status, and achievement (Core Drives 2, 4, and 5), one thing that was very important for Ryan was that “I’d be the seventh person to do it. More people have walked on the moon.” This shows that because it’s something that he (along with billions of others) couldn’t get right now, he valued obtaining it more. It was simply more appealing because of how exclusive it was.

## The Value of Rare Pixels

In the previously mentioned game *Geomon*, gamers try to capture monsters in order to fight against each other. The game is similar to Pokemon, but influenced by the environment where the gamers are physically based, such as being next to a river or a desert.

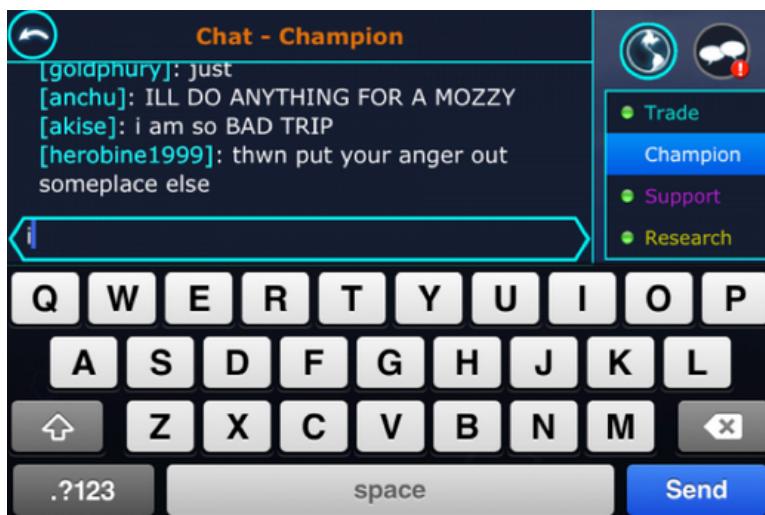
In *Geomon*, there are certain monsters that can only be found in very limited or special situations. Because some of these monsters are extremely rare, people are willing to spend real money in order to obtain them.

One such example is the Mozzy, a blazing fox made out of fire.



The Mozzy can only be caught on hot days and close to an office run by the Mozilla Organization (creators of Mozilla Firefox). This means, for a game that has players throughout the world, it is extremely difficult, sometimes impossible for the average person to capture a Mozzy. In the forums, people sometimes say, “This summer my parents are taking me to San Francisco. I’m going to rent a car and drive down to Mountain View. Maybe I’ll catch a Mozzy. So excited!”

In the screenshot I randomly took below, notice how desperate users are towards getting a Mozzy. All caps – “I’LL DO ANYTHING FOR A MOZZY.”



Even though that seems pretty extreme, the desperate plea above is surpassed by the conversation below:



Here, you see *Vincent7512* claim (adjusted for capitalization), “I wish I had a single Mozzy, then, at this point in my life, I could

die happy.”

Now you would expect that when someone says this, others would be like, “Come on... get a life! It’s just a game!” But no. Three lines down, you see *Valeriefox18* echo the same sentiment, “me too vincent :( me too.”

Here is a community of players who are so desperate about getting Mozzys that instead of playing the game more, they hang out on the chat board just to mope about it and feel “connected” to one another (CD5 Relatedness). Pretty extreme right?

Another example of this within Geomon is the *Laurelix*, the magnificent golden phoenix.



In order to catch a Laurelix, you need to be at a location that has an extremely high temperature, possibly over 110 Fahrenheit or 40 Celsius. The result of this design is that, at one point there were only 3 players in the entire world that had a Laurelix. As you can imagine, everyone wanted one too. Once the game studio actually received a call from the mother of a player, saying, “My son has been sick for two whole weeks, and he said nothing could cheer him up unless he had a Laruelix. I don’t know what that is, but he

said you had it. I'm willing to pay \$20 for a Laurelix. Can you give that to my son?"

Interestingly, the Mozzy and Laturalix are not the most powerful geomons in the game – there are plenty of geomons that are more powerful than they are, but because they are so hard to get, the perceived value increased immensely, helping the company better monetize their game.

What's amazing is that when something is this scarce, it has a tremendous amount of stickiness to it too. As an advisor for the company, I played the game for a while (okay, more than a while), facilitated the online communities, and helped the company redesign and rebalance their entire ability skill trees and combat systems. After that, I became a passive advisor, quit the game, and moved on to my "other work."

So for an entire seven months, I haven't been playing, nor thinking about the game (unless I'm having a meeting with their CEO and advising them on management and monetization strategies). But one day I was traveling for work and found myself at a place that was excruciatingly hot, to the point where if I was under the sun, I felt like I was burning.

At that moment, instead of shouting or complaining about it, the first thing that came to my mind and mouth was, "I wonder if I could catch a Laurelix here..." This of course confused my client who was giving me a tour of his great country.

Even though, again, I didn't care about playing the game anymore and haven't played for over half a year, because a Laurelix is so scarce, a person naturally thinks that, "when I *can* capture one, I probably *should* capture it."

## The Leftovers aren't all that's Left Over

Most of us would like to believe that we make purchasing decisions based on the price and quality of the good. A purchase is seen as a very rational exchange of money for a valuable that we desire. If the price was above the “utility,” or happiness that we derive from the valuable, then we don’t make the purchase.

However, psychology has shown again and again that this is only partially true. We buy things not because of their actual value, but buy them based on their *perceived* value, which means many times our purchases aren’t very rational.

In 1975, researchers Worchel, Lee, and Adewole conducted an experiment to test the desirability of cookies in different cookie jars<sup>27</sup>. The experiment featured two cookie jars, one with ten cookies in it, and the other with only two. Even though the cookies were exactly the same, the experiment showed that people valued the cookies more when the cookies came out of the jar with only two cookies. They valued those cookies more mainly because of two reasons: 1) Social Proof – everyone else seems to prefer those cookies for some reason, and 2) Scarcity- people felt that the cookies were running out.

In a second experiment done by the team, subjects watched as the ten-cookie jar got reduced to two cookies, and the two-cookie jar got filled up to ten cookies. In this case, people started to value the former more and devalue the latter. When people saw that there was now an abundance in the jar which earlier had only two cookies, they valued these even lower than the first experiment where there were ten cookies to begin with.

Here we see that, when there is *perceived abundance*, motivation starts to dwindle. The odd thing is, our perception is often

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<sup>27</sup>Stephen Worchel, Jerry Lee, and Akambi Adewole. Journal of Personality and Social Psychology, Vol 32(5),906-914. “Effects of supply and demand on ratings of object value”. 11/1975.

influenced by relative changes instead of absolute values. People with \$10 million would perceive their wealth differently (and feel differently) if they only had \$1 million the year before, versus if they had \$1 billion.

## Persuasively Inconvenient

As the above shows, our brains intuitively seek things that are scarce, unavailable, or fading in availability.

Oren Klaff is a professional pitcher and fundraiser who claims to close deals through a systematic way he calls *neuroeconomics*, a craft that combines both neuroscience and economics. By digging deep into our psychology and appealing to what he calls the “croc” brain, the method utilizes various Core Drives such as Social Influence & Relatedness, Scarcity & Impatience, as well as the upcoming Core Drive 7: Unpredictability & Curiosity and Core Drive 8: Loss & Avoidance. (The discerning Octalyst may identify that there is a heavy focus of Black Hat Core Drives here. We will return to why sales and closing deals mostly appeals to Black Hat Core Drives, while workplace motivation mostly appeals to White Hat Core Drives in Chapter 14.)

In Klaff’s book *Pitch Anything*<sup>28</sup>, he explains the concept of Prizing, and how it ties into three fundamental behaviors of our “croc” brains:

1. We chase that which moves away from us
2. We want what we cannot have
3. We only place value on things that are difficult to obtain

His work suggests that, instead of ABS – Always Be Selling, salespeople should practice ABL – Always Be Leaving. If you are

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<sup>28</sup>Oren Klaff. *Pitch Anything*. P64. 1 edition. McGraw-Hill. 02/16/2011.

always leaving the discussions, it means that you are not desperate, are highly sought after, and do not depend on this deal. You are the Prize. Klaff claims that, when you correctly do this, money will flow in.

Through his methods, Klaff has raised over \$450 million and claims to continue so at a rate of \$2 million a week.

It is oddly true that as we place limitations on something, it becomes more valuable in our minds. In *Yes! 50 Scientifically Proven Ways to Be Persuasive*, the authors share how Colleen Szot revolutionized her infomercials by simply changing the call-to-action line from “Operators are waiting, please call now,” to, “If operators are busy, please call again.<sup>29</sup>”

Why would this be? In the first case, viewers can imagine operators sitting around, waiting to answer calls and take orders for products that may be of marginal value. In the second case viewers will perceive that the operators are struggling to answer a flood of calls just to keep up with the demand on orders.

Even though this message suggests an inconvenience to buy a product, the perceived scarcity is enough to get people motivated to quickly make a call before the product potentially runs out. My father is a diplomat for Taiwan, and I once heard his colleague who was deployed to a former-communist country in Eastern Europe say, “If you see a line on the street, don’t even waste time finding out what they are in line for. Just get in line. It must be something essential like soap or toilet papers. It doesn’t matter if you have money. If there are no toilet papers in the country, your money is useless.” Here, the *sheer inconvenience* driven by scarcity and social proof can drive a comparably wealthy person to stand in line for hours.

In *Pitch Anything*, Oren Klaff also brings up another example where BMW released a special-edition M3 that required the buyer to sign

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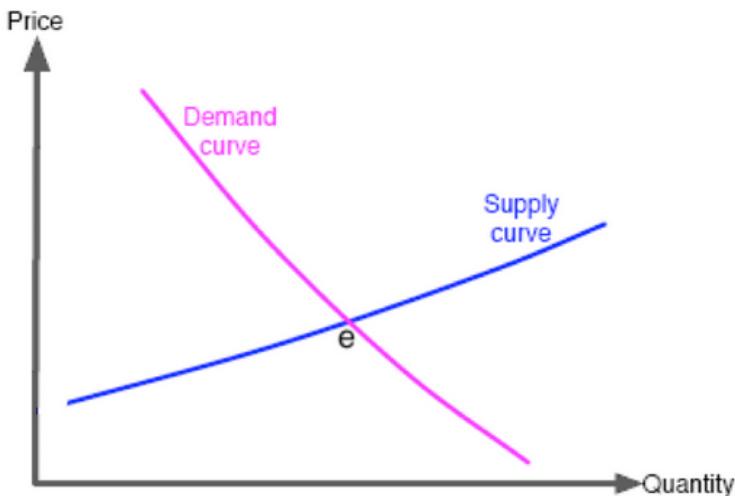
<sup>29</sup>Noah Goldstein, Steve Martin, and Robert Cialdini. *Yes! 50 Scientifically Proven Ways to Be Persuasive*. P9. Simon & Schuster. New York, NY. 2010.

a contract promising to keep it clean and take care of the special paint. Without this promise in writing, they won't even allow you to buy the car! In this case, BMW is inflating its value so that the buyer will believe it is a special and exclusive privilege to drive the car. Maybe that's why the hard-to-get strategy in dating culture is so prevalent. Through Core Drive 6: Scarcity & Impatience, you can keep your prospective partner on their toes.

## Curves are better than Cups in Economics

When I was studying Economics at UCLA, the one fundamental lesson that the professors regularly talked about was the Supply and Demand curve. It basically explains that if the price of an item drops, the demand will increase.

If the item becomes completely free, the curve will indicate the maximum number of buyers that will acquire it.



But if you study behavioral psychology, gamification, and/or Human-Focused Design, you will find that there's another side to the story. It turns out that, Scarcity is another driving force of consumer behavior. In economics theory, scarcity is well understood, but only in the sense of objective limits matched against the consumer's *utility* derived from a purchase.

This is different from the Scarcity we are talking about in this chapter, which is related to *Perceived Scarcity* instead of Objective Scarcity. Sometimes there is objective scarcity without a person ever feeling or knowing it, and sometimes there is a sense of perceived scarcity without a true limit being there.

The difference here is that neo-classical economics theory starts off with three key assumptions<sup>30</sup>:

1. Consumers behave rationally
2. Consumers have full and relevant information
3. Consumers try to maximize their utility (or happiness derived from economic consumables)

But in the real world, the first two assumptions almost never hold true - people are often irrational and never have perfect information. Sometimes they react to pricing in another, more surprising way: the more expensive something is, the higher the value (utility) is placed on it. This leads to increased demand. As a result, sales may actually increase with pricing.

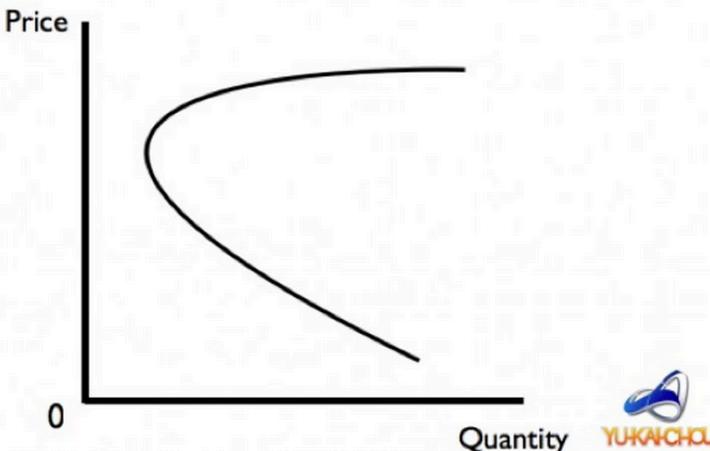
Normally, if an item were free (the extreme right of the demand curve), everyone who would want this product would obtain it for free. Say hypothetically, 100 people want this product for free. But in certain scenarios, if the product is unusually expensive, people who previously didn't care might suddenly now want it. Now sales may exceed 150 items! Because of this scarcity effect, a modified

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<sup>30</sup>E. Roy Weintraub. *The Concise Encyclopedia Of Economics*. Neoclassical Economics. 2007.

demand curve in some products might produce a C-Shape instead of a diagonal line moving down to the right.

## Economic Demand Curve with Behavioral Scarcity



Scarcity works because people perceive something to be more valuable if it is more expensive or less attainable. Because people don't have "perfect information," they generally do not fully know the utility of a certain good. Therefore, they rely on cues - such as how expensive or limited something is - to determine its value. If everyone wants it, it must be good! This goes hand-in-hand with the last chapter on Core Drive 5: Social Influence & Relatedness.

Of course, at one point, the C-Curve needs to curve back again towards the left (zero in quantity) as the item becomes unaffordably expensive which would end up creating a reverse S-Shape in the graph. Objective Scarcity (of money) ultimately still wins over Perceived Scarcity at large extremes.

## **"This guy's not expensive enough."**

I've personally seen numerous examples, both first and second hand, where increasing the price actually allowed people to sell more.

In 2013, one of my clients was trying to choose between two Public Relations service providers, one who charged \$8,000 per month and the other \$10,000 per month. I informed him that I thought the \$8,000/mo provider would deliver better services. However, my client remained doubtful, feeling that the \$10,000/mo provider must know what he is doing to charge that price. I told him that just because one service has the audacity (I used a more vulgar term) to charge more doesn't mean he is better. But my client still couldn't decide.

Ultimately my client decided to use both of the services for a period of three months. Though expensive, this was great for me personally because it allowed me to gather valuable data on their actual performances and make comparisons. After the period was up, it was clear that the \$8,000/mo provider was exceptional, while the provider at \$10,000 per month was very disappointing. My client fired the \$10K guy and retained the \$8K guy after that.

What's odd is that if the weaker service provider recognized that he was less fit for the project and only charged \$6000 instead of \$10,000, he might not have been given a second thought. His aggressive pricing strategy got him a new opportunity and \$30,000 more! Of course the ultimate lesson here should be to focus on creating strong value for your client- so you don't lose your job after 3 months.

On another occasion, I had a client that needed a Cost Per Click (CPC) campaign audit. I contacted a friend from Eastern Europe who was the best in the industry. Since I had done some favors for him in the past, I was able to persuade him to help my client with a free audit, which he would have charged thousands for otherwise. Though my client was excited about the arrangement, he hesitated

and moved very slowly. I pressed my client on this and he said, “What worries me is the free price ... is he really as good as you say he is?” He had perceived that my friend’s service was not really valuable because it was offered for free. That’s why it might have been more advantageous to charge a smaller fee such as \$500 for the audit instead of doing it pro bono.

## **“I Don’t Feel Good When My Pocket Is Too Full After A Purchase”**

This situation doesn’t just happen with high-end services. In the book *Influence: Science and Practice*, Robert Cialdini also describes a story of a friend he has who was running an Indian jewelry store in Arizona that tried to sell some high quality turquoise pieces during the peak tourist season<sup>31</sup>.

Despite her constant efforts to promote, cross-sell, and emphasize these pieces to the shop visitors, no one wanted to buy them. Finally, the night prior to an out-of-town buying trip, the owner concluded that she needed to lower the prices and make the pieces more attractive to her customers. As a result, she left a note for her head salesperson with instructions to reduce the prices by “x½.”

However, the salesperson misunderstood the note, and mistakenly doubled the price instead. Upon returning a few days later, the owner was pleasantly surprised to learn that all the pieces had been sold. Doubling the price on each item had actually allowed her to sell more because the perceived value of them had increased.

Since you don’t *do* anything with jewelry besides showing it off to others (or yourself), the value of it is usually based on perception as opposed to functionality. You may quickly dismiss the value of an ugly and cracked pottery on a shelf, until someone told you

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<sup>31</sup>Robert Cialdini. *Influence: Science and Practice*. 5th Edition. P2. Pearson Education. Boston, MA.

the pottery was made 1,200 years ago for a historical event. The pottery itself did not functionally or aesthetically become more valuable, but its *perceived value* immediately went up because of the principles of scarcity.

Up to this point, you may have observed that the high-price principle within Core Drive 6 works great for luxury items that serve little functional purpose such as jewelry, or expensive service providers that provide essential expertise. Surprisingly, it also works with everyday functional purchases.

Just a week prior to writing this chapter, upon realizing my knee pains were getting worse, I decided to visit a sports utility store to pick up some knee braces for when I'm hiking or walking up and down the stairs during phone-call meetings. When I entered the store, I saw that there were two types of knee braces, a \$24.99 one and a \$49.99 one.

I thought to myself, "Well, my knees are very important to me. I better not spare a few extra bucks and end up with broken knees down the road." As an extension to this thought, I reached out for the \$49.99 one and bought it.

It didn't occur to me until writing this chapter and searching for examples, that I automatically assumed that the more expensive knee braces were better than the cheaper one. I didn't even read the descriptions of the items. If you asked me right now how the \$49.99 one was better than the \$24.99 one, I wouldn't be able to give you an answer. I would likely say something along the lines of, "Well, the \$49.99 one is more expensive, so I'm sure it protects my knees more or feels more comfortable. Probably both."

This was very powerful because, in my head, I was not thinking about the actual differences between the two knee braces. I was simply thinking whether I wanted to, "save money and get the lower quality one," or "not skimp and invest into quality goods for my long-term health."

Since the processing capabilities of our brain's neocortex (what Daniel Kahneman, author of Thinking: Fast and Slow calls our "System 2" which controls, among other things, our conscious thinking and logical thought-processing<sup>32</sup>) is limited, we regularly rely on mental shortcuts (known as *heuristics*) without noticing them. In this situation, the mental shortcut was that "expensive equals quality" when it may not have necessarily been the case.

Another mental shortcut can be, "The Expert said it with confidence-I will assume it to be true without looking too deeply into it." Sometimes people let pass some obvious blunders and oversights simply because the authoritative expert or scientist said so. They let their *System 2s* go lazy and simply become motivated by Core Drive 5: Social Influence & Relatedness.

Perhaps I am alone in my silliness and financial irresponsibility in buying knee braces simply because they were more expensive. But the chances are, at some point in your life you have also made mental shortcuts based on assumptions that may not always hold true. Perhaps you have bought wine or detergents based on very little information besides the price, and disdained some selections simply because the merchant labeled it at a low price.

## **Game Techniques within Scarcity & Impatience**

You have learned more about the motivational and psychological nature of Core Drive 6: Scarcity & Impatience, but to make it more actionable, I've included some Game Techniques below that heavily utilize this Core Drive to engage users.

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<sup>32</sup>Daniel Kahneman. "Thinking, Fast and Slow." P41. Farrar, Straus and Giroux. New York, NY. 2013.

## **Dangling (Game Technique #44) and Anchored Juxtaposition (Game Technique #69)**

Many social and mobile games utilize game design techniques within Core Drive 6: Scarcity & Impatience to heavily monetize on their users. One of the more popular combinations among games are what I call Anchored Juxtaposition (Game Technique #69) and Dangling (Game Technique #44).

For instance, when you go on Farmville, you initially may think, “This game is somewhat fun, but I would never pay real money for a stupid game like this.” Then Farmville deploys their Dangling techniques and regularly shows you an appealing mansion that you want but can’t have. The first few times, you just dismiss it, as you inherently know it wouldn’t be resource-efficient to get it. But eventually you start to develop some desire for the mansion that’s constantly dangled there.

With a little bit of curiosity now compelling you, you do a little research and see that the game requires 20 more hours of play before you can afford to get the mansion. Wow, that’s a lot of farming! But then, you see that you could just spend \$5.00 and get that mansion immediately. “\$5 to save 20 hours of my time? That’s a no-brainer!”

Now the user is no longer paying \$5 to buy some pixels on her screen. She is spending \$5 to save her time, which becomes a phenomenal deal. You see how game design can mess around with people’s sense of value?

The strange thing about this phenomenon is that most of these games can be played for free, and people are spending money so they could play less of the game. In that sense, it is hard to determine if the game itself is truly considered “enjoyable” or “fun.” As opposed to Core Drive 3: Empowerment of Creativity & Feedback, this Black Hat Left Brain Core Drive is more about being persuasive and obsessive, but users don’t necessarily enjoy the process.

An important factor to consider when using the Dangling technique is the pathway to obtaining the reward. You have to allow the user to know that it's very challenging to get the reward, but not impossible. If it is perceived as impossible, then people turn on their Core Drive 8: Loss & Avoidance modes and go into self-denial. "It's probably for losers anyway."

For example, if there is an exclusive organization banner that is dangled in front of you, but you find out that the prerequisite to join is that you must be a Prince or Princess through royal blood, you might not even look at what the organization does, but instead think, "Who cares about a bunch of stuck up, spoiled brats?" There is no motivation, and in fact, it activates Core Drive 8 as an Anti-Core Drive – the drive to *not* participate.

However, if the banner said, "Joining Prerequisite: Prince/Princess by royal blood, OR individuals who have previously ran a marathon." Now you are motivated, and might even ponder the effort required to run a marathon. As long as there is a realistic *chance* to get in, the Scarcity through exclusivity is enough to engage you. The interesting thing is, at this point you still haven't even figured out what the organization actually does! Without any information on the function of it, the human-focused motivation of scarcity is compelling you to consider running a marathon.

This leads to a game technique I call *Anchored Juxtaposition*, where you place two options side by side: one that costs money, and the other that requires a great amount of effort towards accomplishing the Desired Actions that benefit the system.

For example, a site could give you two options to get a certain reward: a) Pay \$20 right now, or b) complete a ridiculous number of Desired Actions such as "Invite your friends," 'Upload photos,' or "stay on the site for 30 days in a row."

In this scenario, you will find that many users will irrationally choose to complete the Desired Actions. You'll see users slaving away for dozens or even hundreds of hours, just so they could save

the \$20 to reach their goal. At one point, many of them will realize that it's a lot of time and work, and at that point, the \$20 purchase option becomes more appealing and they end up purchasing it anyway. Now your users have done both: paid you money, and committed a great deal of Desired Actions.

It is worth reminding that rewards can be physical, emotional, or intellectual. Rewards don't have to be financial nor do they need to come in the form of badges (people hardly pay for those). In fact, based on Core Drive 3: Empowerment of Creativity & Feedback principles, the most effective rewards are often Boosters that allow the user to go back into the ecosystem and play more effectively, creating a streamlined activity loop in the process.

With Anchored Juxtapositions, you *must* have two options for the user. If you simply put a price on the reward and say, "Pay now, or go away." Many users will go back into a Core Drive 8 denial mode and think, "I'm never gonna pay those greedy bastards a single dollar!" and leave. Conversely, if you just put on your site, "Hey! Please do all these Desired Actions, such as invite your friends and complete your profile!" users won't be motivated to take the actions because they clearly recognize it as being beneficial for the system, but not for themselves.

Only when you put those two options together (hence Juxtaposition), do people become more open to both options, and (at times) eventually commit to doing both consecutively. But does this work in the real world, outside of games? You bet.

Dropbox is a File Hosting Service company based in San Francisco that has obtained extraordinary popularity and success. When you first sign-up to Dropbox, it tells you that you could either a) pay to get a lot of storage space, or b) invite your friends to get more space. In the beginning, most people started inviting their friends.

<a href="#">Refer friends to Dropbox</a>	<b>16 GB</b>
Spread the love to your friends, family, and coworkers	500 MB per friend
<a href="#">Get started with Dropbox</a>	<b>250 MB</b>
Take a tour of the basics of Dropbox	
<a href="#">Connect your Facebook account</a>	<b>125 MB</b>
Share folders with your friends and family in a snap	
<a href="#">Connect your Twitter account</a>	<b>125 MB</b>
Invite your friends to Dropbox with a tweet	
<a href="#">Follow Dropbox on Twitter</a>	<b>125 MB</b>
Stay up to date with the latest Dropbox tweets	
<a href="#">Tell us why you love Dropbox</a>	<b>125 MB</b>
We'd love to hear your feedback	

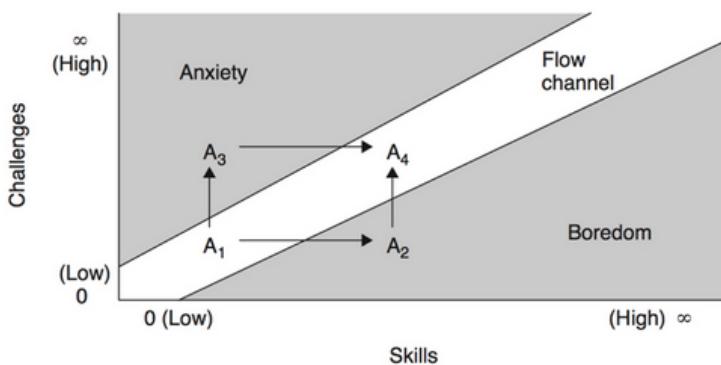
Dropbox's viral design, along with a great seamless product, accelerated the company to reportedly raise over \$300 million with a valuation of around \$10 billion and revenues above \$200 million in 2013. Not too shabby for a company that didn't exist seven years prior.

## Magnetic Caps (Game Technique#68)

When I consult with my clients, I often remind them that they should rarely create a feeling of abundance. The feeling of abundance does not motivate our brains. Scarcity, on the other hand, is incredibly motivating towards our actions. Even if the user committed the ultimate Desired Action by paying a lot of money, a persuasive system designer should only give people a temporary sense of abundance, and after a few weeks or months, the feeling of scarcity should crawl back again with new targets for the user to obtain (or perhaps they have used up all their virtual currencies and need to purchase their next batch).

A great system designer should always control the flow of scarcity, and make sure everyone in the system is still striving for a goal that is difficult, but not impossible, to attain. Failure to do so would cause a gratifying system to implode and users abandoning it for better grounds.

This nicely plugs into Mihaly Csikszentmihalyi's Flow Theory<sup>33</sup>, where the difficulty of the challenge must increase along with the skillset of the user. Too much challenge, and it leads to anxiety. Too little challenge, and it leads to boredom.



The Flow. After Mihaly Csikszentmihalyi, *The Flow* (1990), p. 74

There have been many interesting studies that show that simply placing a limit on something increases people's interest in it. If you introduce a feature that can be used as often as people want, often times very few actually use it. But once you place a use limit on the feature, more often than not, you will find that people will enthusiastically take advantage of the opportunity.

In Brian Wansink's book *Mindless Eating: Why We Eat More Than We Think*, Wansink describes that when a grocery store just displays a promotional sign that says, "No Limit Per Person," people

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<sup>33</sup>Wikipedia Entry: "Mihaly Csikszentmihalyi". Accessed 1/20/2015

often just buy a few of the promoted item<sup>34</sup>. However, if the sign said, “Limit 12 Per Person,” people started to buy more – in fact, 30%-105% more, depending on other variables. That’s another odd nature of scarcity: by drawing limits, we’re drawn *towards* the limit.

This means that you should place a limit on an activity if you want to increase a certain behavior. Of course, you don’t necessarily want the Magnetic Cap to limit the activity so much that you lose more than you gain. The best way to set a limit is to first find the current “upper edge” of the desired metric, and use that as the cap to create a *perceived* sense of scarcity but doesn’t necessarily limit the behavior. A behavior designer could speculate “Even though we want users to select an unlimited amount of hobbies, 90% of our users choose less than five hobbies on our website” which means it would be appropriate to set a limit at five of six hobbies instead of having no limits.

What about the 10% power users that would go beyond six hobbies you ask? Aren’t they important? Yes they are (and if you asked that question, it means you have been thinking about user motivation and experience phases, which is great). This is when you let the power users unlock more capabilities and have the limit rise as they continue to prove their commitment, which is described as the Evolved UI technique below. Again, you still want to let these power users to confront a Magnetic Cap at the top, so that they always feel a sense of Scarcity, but not have it truly limit their activities.

## Appointment Dynamics (Game Technique #21)

Another way to reinforce this Core Drive is to harness the *scarcity of time*. The most well-known game technique that leverages this is the Appointment Dynamic. Popularized by Seth Priebsch’s TEDx

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<sup>34</sup>Brian Wansink. *Mindless Eating: Why We Eat More Than We Think*. Bantam. 10/17/2006.

Boston talk on The Game Layer on Top of the World<sup>35</sup>, Appointment Dynamics utilize a formerly declared, or recurring schedule where users have to take the Desired Actions to effectively reach the Win-State.

One of the most common examples are Happy Hours, where by hitting the Win-State of showing up at the right time, people get to enjoy the reward of 50% off appetizers and beer. People expect the schedule and plan accordingly.

Appointment Dynamics are powerful because they form a trigger built around time. Many products don't have recurring usage because they lack a trigger to remind the person to come back. According to Nir Eyal, author of Hooked<sup>36</sup>, External Triggers often come in the form of reminder emails, pop-up messages, or people telling you to do something.

On the other hand, Internal Triggers are built within your natural response system to certain experiences. For instance, when you see something beautiful, it triggers the desire to open Instagram. Facebook's trigger, on the other hand, is boredom.

A friend once told me how one day he was using Facebook and he suddenly felt bored, so he instinctively opened a new tab on his browser and typed in "Facebook.com." Once the site loaded, he was shocked, "Oh my. I was already on Facebook. Why did I open Facebook again?" Again, this is the power of an Internal Trigger that connects to a feeling as common as boredom (for instance, what do you do when you are waiting in line?)

With Appointment Dynamics, the trigger is time. My garbage truck comes in every Tuesday morning, so on Monday nights, I automatically have an internal alarm clock reminding myself to take out the garbage. If the garbage truck comes out every day, I may procrastinate more until my garbage overflows before taking it out.

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<sup>35</sup>Seth Priebatsch. TEDx Boston. "Game Layer on top of our world". 07/2010

<sup>36</sup>Nir Eyal. *Hooked*. Kindle Version v 1.0. Chapter 2: Trigger. 2014.

One extremely innovative example (and I rarely call things “innovative”) of a company utilizing the Appointment Dynamic is a large Korean shopping center named eMart.

eMart realized that their traffic and sales are usually great during most hours of the day, but during lunch time, foot traffic and sales drops significantly. They wanted to figure out how to motivate people to show up during lunch time (Desired Action), and they mustered up the principles of Core Drive 6: Scarcity & Impatience and a bit of Core Drive 7: Unpredictability & Curiosity. They ended up launching a campaign called “Sunny Sale” and built an odd-looking statue in front of their stores.



On its own, this statue looks fairly abstract and doesn't seem to resemble anything. During noon time, however, the magic starts to happen. When the sun reaches the top of the sky at noon, the shadow of this statue suddenly transforms into a perfect QR Code where people can scan with their mobile phones and see unique content.

Isn't that cool? Because the QR Code can only be scanned within a

limited window between 12PM to 1PM, people are now rushing to get there in time.

Honestly, at that point, it doesn't matter what the QR Code is about – the scarcity and intrigue (stemming from Core Drive 7: Unpredictability & Curiosity) is enough to get people to show up. In the case of eMart, the QR code links to a coupon that consumers can redeem immediately for a purchase online. This tactic reportedly improved eMart's noon time sales by 25%. Not bad when you are already the largest player in the industry.

## **Torture Breaks (Game Technique #66)**

By now you may have noticed that another kind of game technique of Core Drive 6: Scarcity & Impatience can utilize "Impatience", which means not allowing people to do something *immediately*. In the old days, most console games tried to get users to stay on as long as possible. If a player is glued in front of the screen playing the game for five hours straight, that's a big win for the game. Nowadays, social mobile games do something completely different.

Many social mobile games don't let you play for very long. The game will let you play for thirty minutes, and then tell you "Stop! You can't play anymore. You need to come back 8 hours later because you have to wait for your crops to grow/you need to wait for your energy to recharge/you need to heal up."

For some parents who don't understand Core Drive 6, this design makes them very happy. "That's great! These game designers are so responsible – now my son's play time will be limited!" But in fact, what they don't recognize is that the game is implementing what I call *Torture Breaks* to drive obsessive behavior.

A Torture Break is a sudden and often triggered pause to the Desired Actions. Whereas the Appointment Dynamic is more based on absolute times where people look forward to (Every Monday morning the garbage truck will come; on July 4th when you open

the app, you will get a huge bonus), Torture Breaks are often unexpected hard stops in the user's path to the Desired Action. It also often comes with a relative timestamp based on when the break is triggered, such as "Return 5 hours from now."

My differentiation between the two Game Techniques may differ from Priebatsch's definition, and though they often work hand in hand together (oftentimes after a Torture Break is triggered, an Appointment Dynamic follows), it is important to note the difference so you can plan your gamified systems accurately.

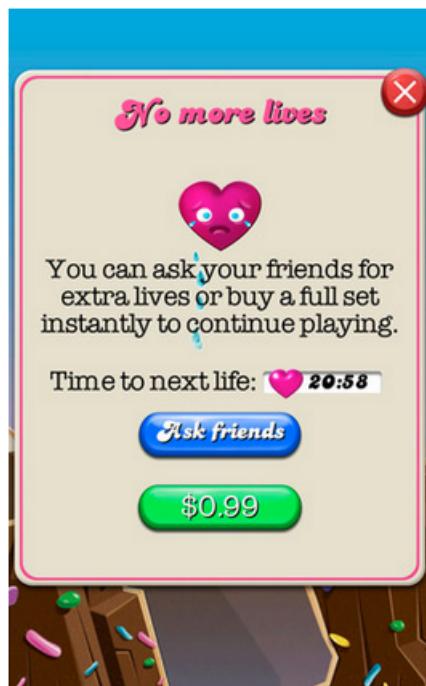
In the example of social mobile games, because the player was forced to stop playing, she will likely continue to think about the game all day long. Often times, she will log back in after three hours, five hours, six hours, just to check if she is finally able to play, even though her brain knows as a fact that the allotted eight hours haven't passed yet.

If the player was allowed to play for as long as she wanted – lets say three hours- she would likely become satisfied, stop playing, and not think about the game for a day or two. Therefore, the brilliant game designer who understands this would allow her to play for two hours and fifty-nine minutes, and then trigger the Torture Break. At this point, she will be obsessively trying to figure out how to play that final one minute (this is when the game provides another option – pay \$1 to remove the Torture Break).

Another game, *Candy Crush*, which in many metrics is considered one of the most successful games in the world and making approximately \$3 million per day<sup>37</sup>, incorporates the Torture Break very well. After losing a life, the game pauses and forces you to wait 25 minutes before you can gain another life and proceed to the next level.

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<sup>37</sup>MarketWatch. "Candy Crush Maker Reports Lower Revenue Earnings". 11/06/2014.



This draws players to constantly think about those slow-passing 25 minutes, and makes it difficult to plan other things to do while being occupied by the obsession.

Of course, the game also gives you two options: ask your friends to give you a life (Social Treasure), or pay right now (Anchored Juxtaposition). See how all these game techniques work together to become a holistic motivational system towards Desired Actions?

### **Accidental Fails sometimes become a Blessing**

Another good example of the Torture Break is the “Fail Whale” in the early years of Twitter. The Twitter site was often down in 2007. Even though this frustrated many users, they waited more eagerly for the service to return (and talked about it on Facebook).

When the site was down, users would only see a “404 Error Page” displaying the iconic Fail Whale – a large whale being pulled out of the water by many struggling birds.



Twitter's combination of “limitations” – can't go over 140 characters, can't tweet over X times a day, can't access the site 60% of the time – compelled many to spend countless hours on Twitter, even though there truthfully wasn't much to do there in the early days.

I've seen other cases where people were planning to retire from playing a game, but then encountered issues due to massive servers problems, and instead of quitting, checked the app every day to see if they could play it or not. Even though they planned to quit, they needed to quit on their own terms. When these players were prevented from playing because they “couldn't,” their desire to play actually increased.

Often times what made a situation worse was that occasionally the players would be able to play the game, only to experience another

crash. If it was just indefinitely down, people would lose interest, but the “sometimes working” game would take on an addictive appeal. Remember, for Core Drive 6 to work, users have to perceive that obtaining the goal is possible, or else they fall into a Self-Denial Mode driven by Core Drive 8: Loss & Avoidance.

This is also similar to some relationships I’ve seen, where one person wanted to break up with the other, planned the breakup for months, and suddenly gets dumped by the other person. Even though the person wanted the break up to begin with, when he gets dumped, he may become obsessed with wanting to get back with the other person. He wanted the separation to be on *his* terms (note: I’ve seen this behavior among both males and females), but when he was *forced* to separate, it becomes a Torture Break that makes him want to come back.

This behavior is much like how people pull on a slot machine hoping for, but not necessarily expecting, good results. The same effect happened with Twitter, where users became obsessed with checking the site each minute to see if service had been reestablished and becoming delighted when it ultimately came back.

## **Evolved UI (Game Technique #37)**

One of the things I’ve regularly recommended to my clients but have faced resistance on is the Evolved UI, short for Evolved User Interface. The problem with most user interfaces is that they’re too complex in the Onboarding stage, and too basic for the Endgame.

In the popular gaming phenomenon World of Warcraft, if you look at top-level players play, the interface could make you dizzy. There are close to a dozen little windows open, all with different stats, options, and icons. It shows a lot of information about how your teammates are doing, how the boss is doing, where everyone is, your own resources- so much information that you can barely see the animation of your own character fighting! It truly is one of the

most complex user interfaces around.



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However, World of Warcraft, along with many well-designed games, never start off with this level of complexity. At the beginning they only provide a few options, buttons, and icons. But as you reach more Win-States, you unlock more options, skills, and capabilities. A beginner player, also with the help of great Step-by-step Onboarding Tutorials, Narratives and the Glowing Choices, never gets confused about what to do at the beginning.

Based on the concept of Decision Paralysis, if you give users twenty amazing features at the beginning, they feel flustered and don't use a single one. But if you give them only two or three of those features (not just one, since our Core Drive 3 loves choice), and have them slowly unlock more, then they begin to enjoy and love the complexity.

However, the Evolved UI concept is very difficult for a company to implement emotionally, because it feels weird to withhold great

<sup>38</sup>Image taken from ShamusYoung.com. Posted by Shamus

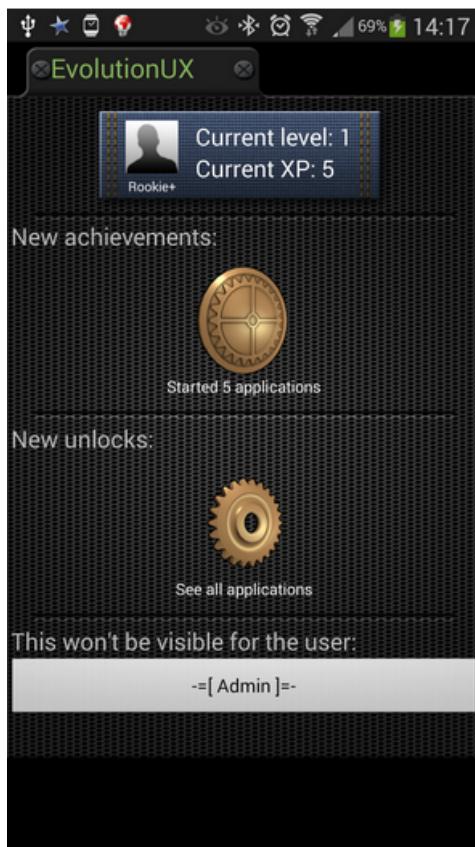
features and functionalities from the user. For the designer though, it is important to acknowledge that withholding options can drive more behavior towards the Desired Action. Just because it makes users *feel* uncomfortable doesn't mean it's necessarily bad for you, nor for the user.

One company that did implement the Evolved UI concept is Sony, calling it *Evolution UI*<sup>39</sup>(in fact, I modified my game technique name to fit theirs just to avoid semantics complexity in the industry).

Sony noticed that even though the Android smartphone system developed by Google was very powerful, it had a high learning curve that could fluster beginning users. They therefore launched the Evolution UI, which in the Onboarding process showed very limited core options.

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<sup>39</sup>Daniel Cooper. Engadget. “Sony’s Evolution UI tries to make learning Android fun”. 04/30/2014.



Once users have shown that they have mastered the basic UI, such as opening 5 apps, they unlock an achievement, which unleashes new features. In this way, the difficulty of the user experience never surpasses the skillsets of the user, following the principles of Mihaly Csikszentmihalyi's Flow Theory mentioned earlier.

So what's the consequence of having an UI that is too complex at the beginning? *Google Plus*. As mentioned earlier, even with a lot of great functions, Google Plus did not have sticky traction because of the learning curve it required. Most mainstream users feel confused when they are accidentally pushed onto Google Plus when using

Youtube or Gmail, thus quickly leaving the platform.

Gmail, on the other hand, implements a small form of Evolved UI, which manifested itself in the form of *Gmail Labs*. In Gmail, users are provided a basic set of features and functionalities as the default, but there are many cool features that they can unlock in the “Labs” tab, opening up complex but helpful features once they feel ready.

## **Great! So now what?**

Of course, understanding Scarcity & Impatience doesn’t mean startups should shut down their servers on purpose, or set up fake and corny limitations in their systems. Some users may become obsessed, but you could likely turn away many other users who quickly jump into denial mode and never come back.

The most obvious application for start-ups based on Core Drive 6 principles is to launch with a confident pricing strategy. Instead of just offering everything for free or making them easily available, a more premium pricing model or well-structured exclusivity can increase the confidence of users/buyers resulting in increased conversion rates.

Of course, if you price an item outside of your target market’s capacity to afford, then this would obviously backfire. But more often than not, when customers don’t buy your product, it’s not because they can’t afford it, it’s because the perceived value they have for your product is not worth the cost (and sometimes that cost is in the form of time or energy investment).

Beyond pricing, you may want to create a sense of exclusivity for each step during the Discovery and Onboarding stages, where the service makes them feel that it’s uniquely for them and that they only qualify for the access (e.g. Facebook’s early marketing strategy).

Every step of the way, you want to display to users what they may want but can't have just yet. Scarcity only exists as a motivator when people know the reward exists, so *when in doubt, always be Dangling* (but don't say you learned that from my book during court). For actions that lead to rewards and investments, consider using more restrictive options. Placing a cap on how many actions a person can take (or investments that they can make) will cause them to desire the actions more.

By increasing perceived value, customers and users are more likely to stay engaged and take greater interest in your venture. This will also make sure you don't give out all your hard-earned work for close to nothing.

## The Big Picture

Scarcity and Impatience is considered a Black Hat Core Drive, but if used correctly, it can be very powerful in driving motivation. Often times, Core Drive 6 is a first source of generating Core Drive 3: Empowerment of Creativity & Feedback in the system. Overcoming scarcity can cause a higher sense of Core Drive 2: Development & Accomplishment. When fused with Core Drive 7: Unpredictability and Curiosity, Core Drive 6 becomes a great engine to drive online consumer action. Finally, working alongside Core Drive 8: Loss & Avoidance, Scarcity and Impatience becomes a powerful force that not only pushes for action, but pushes for action with extremely strong urgency.

### To get the most out of the book, Choose only ONE of the below options to do right now:

**Easy:** Think about a time where you wanted something, mostly because it was exclusive, or because you felt you were uniquely

qualified. Try to describe the nature of that feeling from Scarcity & Impatience.

**Medium:** Think about a time when a company attempted to implement a corny form of Scarcity, and it backfired because it caused people to go into denial. What could the company do to actually implement principles of Scarcity correctly?

**Hard:** Think about how you can implement combinations of Dangling, Torture Breaks, Evolved UI, and Anchored Juxtaposition into one of your own projects. Does it automatically increase the desire of other Core Drives? Or does it hamper it? Does it drive long-term engagement, or short-term obsession?

Share what you come up with on Twitter or your preferred social network with the hashtag #OctalysisBook and check out what ideas other people have.

## Share your Knowledge!

Beyond sharing my own research and interests, I regularly have guest bloggers posting their research on gamification, motivational psychology, behavioral design and much more on my blog Yukai-Chou.com<sup>40</sup>. If you have interesting knowledge to share through your experiences and research, consider sending a message through the site and offer a guest piece to promote your work. I've done all this work so you could learn a little bit from me. I would love to get the opportunity to learn from you too!

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<sup>40</sup>My Blog YukaiChou.com

# **Chapter 14: The Mysteries of White Hat and Black Hat Gamification**

In the last chapter, we looked at how Left Brain Core Drives and Right Brain Core Drives differ in the *nature* of their motivation as well as their design methodologies, resulting in various short-term and long-term effects.

In this chapter, we will examine the fascinating intricacies of White Hat and Black Hat Core Drives, and how to balance them within a design.

The White Hat Core Drives are represented by the Core Drives at the Top of the Octalysis diagram:

- Core Drive 1: Epic Meaning & Calling
- Core Drive 2: Development & Accomplishment
- Core Drive 3: Empowerment of Creativity & Feedback

The Black Hat Core Drives are represented by the Core Drives at the Bottom of the Octalysis diagram:

- Core Drive 6: Scarcity & Impatience
- Core Drive 7: Unpredictability & Curiosity
- Core Drive 8: Loss & Avoidance

## **Origins of the Theory**

Up to this point in the book, you should have a fairly good understanding of how White Hat and Black Hat Core Drives function,

so in this chapter we will discuss when and how to use them for optimal motivational systems.

Though every single Core Drive in the Octalysis Framework has been researched and written about individually (including the differences between intrinsic and extrinsic motivation), I believe my work on White Hat versus Black Hat Gamification theory is fairly original and provides a unique design perspective.

I began developing the White/Black Hat concepts while I was studying the Endgame Phase of different games. I became curious as to why the majority of successful games were obsessively addictive for many months, and then experience a huge user dropout with large numbers of players moving on with their lives.

On the other hand, I looked at how a few games such as Poker, Chess, Mahjong, and even Crossword Puzzles stood the test of time and never got old for their players. Video games like Starcraft, World of Warcraft, Defense of the Ancients (abbreviated as DotA<sup>41</sup>, eventually spinning off the even bigger hit, League of Legends<sup>42</sup>), and re-skins of similar shooting games like Counter Strike<sup>43</sup> or Call of Duty<sup>44</sup>, continue to be popular and engaging no matter how many years a player plays them.

Upon further research and observation, I realized that there was a big difference in how these games were designed and what Core Drives motivated their users in the late Scaffolding and Endgame Phases. It seemed like the games that go viral but then have shorter shelf-lives utilize Core Drives that create obsession, urgency, and addictiveness. Players would become glued to the game but then towards the Endgame Phase, the joy and fun no longer persists as strongly, yet the player mechanically continues to grind through many hours “laboring” through them. Due to the Sunk Cost Prison

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<sup>41</sup>Wikipedia Entry: “Defense of the Ancients”

<sup>42</sup>Wikipedia Entry: “League of Legends”

<sup>43</sup>Wikipedia Entry: “Counter Strike”

<sup>44</sup>Wikipedia Entry: “Call of Duty”

covered in Core Drive 8, players feel demoralized, but are unable to quit.

Eventually, some people do finally find the strength to quit and move on with their lives, perhaps to manage important responsibilities, or shift to newer games that hit them hard with epic Discovery Phase marketing. Once that happens, Social Influence & Relatedness dictates a big exodus of people finally leaving the game, in hopes of finding that joy and passion again.

But for the games that are quite timeless (until their own sequels come out), when players are in the Endgame phase, there seems to be a continuous sense of wellbeing and satisfaction, just like the joy one has when playing an instrument or being called to a purpose.

Based on this research, I started labeling a few Core Drives “White Hat” and a few others “Black Hat,” which borrows from my background knowledge in SEO (Search Engine Optimization<sup>45</sup>).

In Search Engine Optimization, “White Hat SEO” refers to designing and promoting your site the way search engines like Google intend you to do it, and as a result, they rank your site highly when users search for related terms. “Black Hat SEO” on the other hand refers to methodologies that dishonestly exploit the rules, rigidness, and weaknesses of the search engines to get your site highly ranked.

Needless to say, search engines hate Black Hat SEO, and they have massive teams of engineers that continuously make the engines smarter and harder to exploit, while severely penalizing any website that is caught utilizing Black Hat SEO techniques, such as completely banning them off search results forever. In the realm of SEO, just don’t do Black Hat – it’s not worth it.

Unfortunately, our brains cannot continuously update themselves to become harder to exploit like Google can, nor can we as efficiently blacklist people who constantly apply black hat motivation techniques on us (nor do we want to, since some of them have

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<sup>45</sup>[Wikipedia Entry: “Search Engine Optimization”](#)

good intentions that ultimately benefit us). The end result is that we become subconsciously motivated by things that make us stressed, worried, and obsessed, while feeling that we are not in control of ourselves.

## **The Nature of White Hat vs Black Hat Core Drives**

White Hat Core Drives are motivation elements that make us feel powerful, fulfilled, and satisfied. It makes us feel in control of our own lives and actions.

Black Hat Core Drives, make us feel obsessed, anxious, and addicted. While it is very strong in motivating our behaviors, in the long run we often end up with a bad taste in our mouths because we feel we've lost control of our own behaviors.

The advantages of White Hat Gamification are obvious and most companies who learn my framework immediately think, "Okay, we need to do White Hat!" They would mostly be right, except there is a critical weakness of White Hat Motivation: it does not create a sense of urgency.

For example: if I approached you with great enthusiasm and exclaimed, "Go out and change the world today!" You may become very excited by this Core Drive 1 trigger and may echo, "Yes! I'm going to go out and change the world! But I'm going to first have a nice breakfast, brush my teeth, and get prepared for the day!" As you can see, there is no urgency at this level of White Hat excitement.

However, if I took out a gun and pointed it at your head, while quietly whispering, "Go out and change the world, or I'm going to kill you" - you are likely still going to change the world, but you are probably not going to enjoy your nice breakfast or brush your teeth while being pushed by my threatening Core Drive 8: Loss & Avoidance motivation.

Of course, at that point you also no longer *feel* good about changing the world, and once you can leave my grasp, you will likely stop caring and drop the noble cause altogether, until and unless the Epic Meaning & Calling regenerates from within.

Black Hat Gamification creates the urgency that system designers often need to accomplish their goals and change behavior and this often cannot be accomplished through White Hat Gamification alone.

If a company simply implements White Hat Gamification while the user is constantly exposed to Black Hat stimuli from other sources such as email, appointments, or distractions from Facebook, then they will most likely not have the opportunity to test out the experience. Of course, this user will feel terrible too, because she continues to procrastinate instead of doing the things that are more meaningful and make her feel good, but she will continue behaving that way nevertheless.

## Zynga and Black Hat Gamification

My theories on Black Hat vs White Hat Gamification can often be utilized to explain or predict why certain companies are successful or fail at different stages.

One such example is the social gaming company Zynga<sup>46</sup>, which is known for games like Farmville, Words with Friends, and Zynga Poker.

Zynga has mastered how to implement all sorts of Black Hat Game Techniques – of course, they don't have a framework to think about the techniques as “Black Hat.” Instead, they consider it “Data-Driven Design<sup>47</sup>,” which on the outset seems to be extremely clever

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<sup>46</sup>Zynga Official Website

<sup>47</sup>Mike Williams. Gamesindustry.biz.“Zynga’s high-speed, data-driven design vs console development”. 08/06/2012.

and legitimate. Because of the Black Hat designs, all their immediate metrics looked good: Monetization, Viral Coefficients, Daily Active Users, User Addiction, etc.

However, because people don't *feel* good playing Zynga games after awhile, when they *can* drop out of the system, they will. This is especially true for the late Scaffolding stage as well as the Endgame phase, since all the novelty, creativity, and true sense of development run out in these phases. This make it even harder for all their new re-skinned games (basically Farmville in a city, in a castle, in kitchen, and so on) to become long-term successes because it's almost like the users are still playing the same Endgame – right during Onboarding phase!

Because of these Black Hat mechanics, users quickly get tired if they have already been burnt out by older Zynga games. Farmville 2 was doomed from the start unless they can implement much better White Hat designs into it to ensure long-term success.

Early in 2014, Zynga proved my Octalysis theories accurate when they decided to “double-down” on Casino Slot Machine games like *Riches of Olympus*<sup>48</sup>. Of course, since they are committed to stick to Black Hat game design (which shows quick data-driven results), the only long-lasting engagement element they can use is the Right Brain Core Drive 7: Unpredictability & Curiosity. Nonetheless, even if a person is addicted to gambling, they don't feel awesome about themselves and their activities. This could still lead to later burnout.

In a Venturebeat article that accompanied the *Riches of Olympus* launch, the journalist Jeffrey Grubb asked then Head of Zynga's Casino franchise, Barry Cottle, what he meant when he said Zynga was focusing on “quality in experiences and excellence in execution.”

Cottle explained that Zynga wanted to make things that look and feel good. Cottle specifically brought up the game Candy Crush

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<sup>48</sup>Jeff Grubb. *VentureBeat.com*. “Zynga sticks with what works: Riches of Olympus is its next mobile slots game”. 02/06/2014.

Saga, which “has a simple puzzle mechanic that players respond well to due to the extra animations and special effects.”<sup>49</sup>

If Zynga thinks extra animations and special effects is what made Candy Crush successful, it’s no wonder they have been struggling as a “game design company.” If extra animations and special effects are so important, why would a game like Minecraft become so successful? The graphics for Candy Crush aren’t even that stunning, compared to other games that look similar but don’t have even a tenth of Candy Crush’s success.

If you have been an active student of the Octalysis Framework, you will know that the reason why these games became so popular is because they were able to retain Core Drive 3: Empowerment of Creativity & Feedback for the longest. Most Zynga games do not have long lasting Core Drive 3, and therefore engagement burns out.

Of course, the two games that are consistently top-ranking within Zynga are *Zynga Poker* and *Words with Friends*<sup>50</sup>. If you notice, since they build on already timeless game designs like Poker and Scrabble<sup>51</sup>, Zynga accidentally copied sound Core Drive 3 design without necessarily recognizing it. Both games elicit a higher level of strategy and problem-solving that other Zynga games lack. As a result, they demonstrate long-term success well into the Endgame.

With a good understanding of White Hat and Black Hat game design, you can begin to analyze and predict the strengths and longevity of any motivation system. If there aren’t any Black Hat techniques, there likely won’t be any breakout success; if there aren’t any White Hat techniques, users quickly burnout and leave for something better.

According to the Octalysis Framework, Zynga will never achieve long-term success unless they start building in more White Hat

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<sup>49</sup>Ibid.

<sup>50</sup>Words with Friends Page

<sup>51</sup>Wikipedia Entry: “Scrabble”

game techniques and continue to empower their users, instead of putting so much emphasis on Black Hat manipulative techniques.

## Black Hat with a Clear Conscious

I want to clarify here, that just because something is called “Black Hat Gamification” doesn’t mean it’s necessarily bad or unethical. Some people voluntarily use Black Hat gamification to force themselves to live healthier and achieve their short term and long term goals. I would personally love to be addicted to eating more vegetables or confronting the tasks that I intend to procrastinate on.

The point of it being called Black Hat is that, once designed well, we are more compelled to take certain actions quickly without feeling completely in control.

However, whether it is “good” or “bad” depends on the intentions and final outcome of those actions. We could use Black Hat designs to motivate people towards good behaviors or we could use Black Hat designs to motivate people towards evil. Similarly, some of the most infamous people in history motivate people with Core Drive 1: Epic Meaning & Calling (among other Core Drives) towards evil and genocide, even though the *nature* of the motivation itself is White Hat.

As an example of Black Hat Motivation towards good behaviors, the SnuzNLuz<sup>52</sup> is an app alarm clock that automatically donates the user’s money to a non-profit they hate if they hit the snooze button (the “wake me up 10 minutes later” button - for my foreign readers).

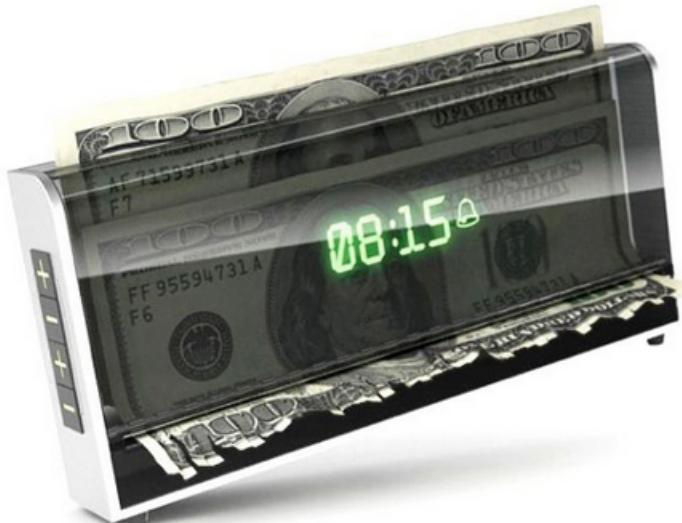
A more visually compelling (but illegal) concept is the Shredder Clock<sup>53</sup>, which physically destroys your money when you press the

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<sup>52</sup>John Balz. *The Nudge Blog*. “SnuzNLuz: The alarm clock that donates to your least favorite charity”

<sup>53</sup>Charlie White. Mashable.com. “Money-Shredding Alarm Clock Is Completely Unforgiving [PICS]”. 05/29/2011.

snooze button.



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In these products, people are waking up because of Core Drive 8: Loss & Avoidance – they don't want to lose their money, especially to a non-profit they hate! (The SnuzNLuz also has a weird Core Drive 1 angle...)

But people are okay with this Black Hat design, because it's for a goal *they* want. They are fine with designs that compel them to do things that they intend to do already but lack the willpower to do so.

What people hate is when companies, governments, instructors, or marketers utilize these Black Hat techniques to get them to buy things they don't need, succumb under tyranny, work overtime, and get grades they don't care about. Keep in mind that these people will often still do the Desired Actions because again, these tendencies are obsessive and/or addictive. They just won't feel good about the actions and will burn out or revolt as time goes on.

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<sup>54</sup>Ibid.

## Gamification, Manipulation, and Ethics

During my conference talks, I regularly get questions from people who ask me whether gamification is a form of manipulation and therefore unethical to use.

While there is no “correct” answer on this topic, and while the focus of this book is on effectively designing for behavioral change rather than ethics, I will attempt to share my own thoughts on the issue.

My quick answer: yes, gamification is a form of manipulation.

However, even though “manipulation” is a strong word with immense negative connotations, we regularly accept it in our daily lives and even expect it.

If you think about it, saying “please” is a form of manipulation. You weren’t going to do something for your friend, but your friend said “please” in a sincere manner (Core Drive 5), and even though nothing tangible has changed about the transaction, you now willingly and happily agree to do it for her.

That’s *manipulation*.

And when your friend says, “Thank You,” that’s an emotional reward that makes you feel like the action was worth it. If your friend offered you payment (somehow paying someone to do the activity is one of the only ways that people don’t complain as “manipulation” these days), you may even become offended.

And in our society, we don’t seem to have a problem with people saying “please” and “thank you.” In fact, we expect that, teach that, and get mad when people don’t do it. It makes our brains happy and improves our quality of life. We enjoy that sort of manipulation.

When you want your employees to work harder and you transform the work to become a lot more interesting and engaging (as opposed to paying them more) – is that exploiting them? What about

providing them a stronger sense of purpose, accomplishment or autonomy?

I have a litmus test to determine whether gamification or human-focused design is ethical or not:

- a) Is there full transparency on its intended purpose? b) Does the user implicitly or explicitly opt-in to the system?

If you have an extremely charismatic friend who is trying to persuade you to go to a party you are not interested in, you may reject him with a smile. He will then pour a lot more energy in, saying something like, “Come on! Everyone’s doing it! You got to show up!”

Even if you still didn’t want to do it, you are starting to be persuaded, but in no way do you think your friend is being unethical in doing so. There is full transparency in what he is trying to get you to do. You also “opt-in” by allowing your friend to persuade you, especially when you turn him down with a smile. You may or may not change your mind, but because there is transparency in his intention and you’ve opted-in to his continued persuasion, you don’t feel negatively manipulated.

However, I believe that gamification is completely unethical when there is a hidden agenda that users are not aware of (e.g. when users think they are signing up for something, but in reality they are signing up for something else).

False statements, lies, and a lack of authentic transparency create unethical interactions.

As a stunning example of whether transparent manipulation is bad, consider the field of hypnotism. Hypnosis can be considered the ultimate form of manipulation because, supposedly, once hypnotized, a person is fully compliant of whatever the hypnotizer wants them to do.

However, it is not generally considered unethical because a) there

is transparency in what the hypnotizer is trying to accomplish, and b) the person fully opts-in to being hypnotized.

At the end of the day, gamification is not mind control. When we see amazing case studies where gamification increased conversions by 100%, it's often only where these metrics increased from 8% to 16%. A crushing 84% of the users can and still choose to not engage with the Desired Actions. If an action does not create (emotional or physical) value for someone, they still won't do it.

But good gamification design motivates those who are on the fence, who are interested with the end-results but need a bit more motivation to push through.

The people who don't want a service to begin with won't sign up (unless the marketing is being dishonest), just like you don't have to agree with people who say "please" to you, nor do you have to finally consent to your charismatic friend who is persuading you to do things you hate. If you truly don't want to go to your friend's party, you still won't do it.

## **When to use White Hat Gamification Design**

Because of their natures, there are dominant strategies to determine when and how to use either White Hat or Black Hat gamification.

Since employee motivation and workplace gamification are about long-term engagement, companies should use White Hat designs to make sure employees feel good, grow with the enterprise, and are there for the long haul.

Workplace gamification is often about the top three Core Drives in Octalysis: creating *meaning*, providing a path to mastery, and ensuring meaningful autonomy. You may identify these as com-

ponents of Self Determination Theory<sup>55</sup> and the concepts within *Drive*<sup>56</sup>, which we will cover in more detail in the next chapter.

Most large corporations make the mistake in believing that, because they pay their employees, their employees *have* to do their work regardless of exploitative policies, unappreciative bosses, and bad workplace culture. As a result, employees only work hard enough to get a paycheck (Core Drive 4: Ownership & Possession) and not lose their jobs (Core Drive 8: Loss & Avoidance).

One company that challenged this trend is Google<sup>57</sup>. Very early on, Google started with the assumption that every one of their employees was either an entrepreneur, or wanted to be an entrepreneur. As a result, if these employees did not feel “happy” being at Google, they would simply leave and start their own businesses instead, maybe even becoming a Google competitor.

Remember I talked about how Gamification is Human-Focused Design and that games were the first to master it because no one *has* to play a game? When you design an experience with the underlying belief that, the moment your experience is no longer engaging, people will leave your system - you will likely create much better Human-Focused Designs.

In the case of Google, they implemented many White Hat designs into their company culture.

The first thing Google did was implement Core Drive 1: Epic Meaning & Calling. Google is widely known for having the mission statement, “Organizing the world’s information and making it universally accessible and useful” as well as the catchy slogan, “Don’t be evil.” Because of that, many talented engineers felt that, “I could earn a paycheck anywhere, but at Google, I’m creating an

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<sup>55</sup>[SelfDeterminationTheory.org](http://SelfDeterminationTheory.org)

<sup>56</sup>Daniel Pink. *Drive*. Penguin Group, New York, NY. 2009.

<sup>57</sup>David Vise & Mark Malseed. *The Google Story*. P93-96. Random House, New York, New York. 2005.

impact in the world. Not only that, I'm part of the good guys, and that's really valuable for me!"

In regards to Core Drive 2: Development & Accomplishment, besides the usual raises and promotions, Google realizes that not every engineer can become a manager, but every engineer needs to feel a sense of progress and development. As a result, they introduced eight levels of engineers so that engineers who either shouldn't or don't want to become managers can continue to "level up." In 2013, Google even introduced a ninth level titled "Senior Google Fellow," allegedly because they needed a way to give legendary engineer Jeff Dean a promotion<sup>58</sup>.

In terms of Core Drive 3: Empowerment of Creativity & Feedback, we discussed in Chapter 7 how Google introduced 20% time, which allowed employees to spend 20% of their time to work on anything they wanted, as long as the intellectual property belonged to Google.

They also use some Core Drive 4: Ownership & Possession by allowing employees to take full ownership of their projects (and of course taking home nice paychecks too). They utilize Core Drive 5: Social Influence & Relatedness by creating a university-like campus and a workplace culture that makes laziness and stagnation highly anathema and undesirable within their healthy social dynamics.

All these examples are White Hat influences that helps their employees to be engaged in the long run. Unfortunately, there seems to be weakening of Google's playful culture as Google becomes much larger and restructures their policies to be more like other large corporations that are efficiently focused on profits.<sup>59</sup>

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<sup>58</sup>Quora.com Entry: "What are the different levels of software engineers at Google and how does the promotion system work?"

<sup>59</sup>Patrick Goss. TechRadar.com. "Page: 'more wood behind fewer arrows' driving Google success". 7/14/2011.

## When to use Black Hat Gamification Design

On the other hand, when people are doing sales or running eCommerce sites, often times they don't care about long-term engagement and motivation (even though they should) – all they want is for the customer to come in, buy something as quickly as possible, and then leave.

As a result, they often involve Black Hat Gamification techniques: "What's going to be the surprise launch tomorrow? The chance to get this deal will expire in four hours. If you don't buy, you will end up being worse off than others!"

In an earlier chapter we looked at how Woot.com became an extremely successful eCommerce site based on two Core Drives: Scarcity & Impatience, as well as Unpredictability & Curiosity. Because Black Hat gamification creates urgency, when you need someone to make an immediate action or a transaction, Black Hat techniques often become the most effective solutions.

This dynamic also holds true for sales and fundraising. One of my clients, Morf Media, provides a gamified training platform that aims to make SEC compliance training more engaging and fun for employees of financial institutions<sup>60</sup>.

By nature, financial institutions are risk-averse (Core Drive 8), and they are not inclined to work with new technology companies. You can give them a great deal of White Hat motivation, and they will be interested, intrigued, even excited, but they will likely take forever to make a move because there is no sense of urgency to take a risk like that.

The key here is to convince the company that, none of their employees like doing SEC compliance training (hardly a difficult sell), and *every single day* their employees' aren't compliant increases their risk. Lawsuits are literally laid out ahead like landmines. In

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<sup>60</sup>[Morf Media Website](#)

that sense, it is riskier to *not* work with Morf Media than it is to work with them. We've turned that Black Hat Core Drive 8: Loss & Avoidance around (we will go discuss in detail how to turn Anti Core Drives around in a future book).

## **Black Hat Motivation within Fundraising**

In the realm of fundraising, I regularly get approached by startup entrepreneurs who are looking for some support to help them navigate fundraising from angel investors as well as venture capitalists (I also get approached by many investors too, but on entirely different sets of motivation challenges - mostly White Hat).

The thing about investors is that they are generally motivated by the forces of greed and fear: the greed of making a billion dollars (Core Drives 2 and 4), and the fear of losing all their money (Core Drive 8).

At the beginning, the entrepreneur may say many great things about the company, appealing to the investor's sense of Core Drive 1, 2, 4 and even 5 if you have good social proof (here you see the value of remembering the numbers of each Core Drive – don't worry if you don't remember these numbers now, but just take note that they are mostly on the White Hat side of things). The investor starts to show a lot of excitement, and the entrepreneur feels like the deal is sealed.

However, as the investor gets closer and closer to writing a check, they start to become preoccupied by the fear of losing all their money, which is now Core Drive 8: Loss & Avoidance. They start to ask for more metrics, traction, further social proof. Often times, six months go by, and still no funding.

From my personal experience, investors generally only close deals quickly when they are *convinced* that they will lose the deal if they don't. If an entrepreneur *convincingly* tells the investor that a lot of people are on the deal, and if the investor does not act this week the

round will be full, that's when they finally move quickly. Black Hat creates urgency and closes deals.

When I was trying to raise \$600,000 for my gamification startup straight out of college<sup>61</sup>, I found the experience to be extremely difficult and sobering. We were a very young team, and this “gamification” thing seemed like a half-baked crazy idea.

After struggling for awhile to raise a little bit of money here and there just to keep my small team afloat, we finally were able to get three investors who together put in \$650,000. At that point, I wrote an email to all our potential investors who for over a year continuously “wanted to see more” and “weren’t sure about this gamification thing.” I simply told them, “We are going to close the round, but thank you for your continuous (and non-existent) support!”

At that point, many of these investors who couldn’t commit for an entire year suddenly responded with passion, enthusiasm, and even anger, “Yu-kai. I thought we agreed that I could invest this much money into your company. Why are you telling me that you are closing the round without me?” I was thinking, “Well, you kind of had an entire year to do that...” but they oddly made it seem like I was burning bridges if I didn’t take their money.

As a result, we tried to cap the round at \$800,000 instead of \$600,000, and we couldn’t do it. We tried to cap it at \$900,000 and couldn’t. We tried to cap it at \$1,000,000 and we still couldn’t. Finally, I capped the round at \$1,050,000, while rejecting some investor money, just to show that we were serious about the cap (I’ve heard this same experience retold many times by other entrepreneurs too).

That’s the irrational power of Core Drive 6: Scarcity & Impatience as well as Core Drive 8: Loss & Avoidance (while also serving as a fine example of the limits of White Hat motivation). All these

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<sup>61</sup>If you are curious about some gamification companies I started during my younger youth, I document that in the post, “How Yu-kai Chou started in Gamification in 2003 and became a Pioneer in the Industry”

“potential investors” clearly liked what I was doing. They were encouraged whenever I gave them good news. They saw that it could potentially make the world a better place. But they never acted until they saw the deal was being taken away from them. With White Hat motivation alone, people will be always intending, but never actually doing.

For the curious, eventually my startup launched RewardMe, a product that gamified the offline commerce experience. RewardMe was performing eleven times better than the numbers our closest competitors published (sorry - since these companies are still in existence, I won’t cite sources here in respect to their current success). Towards the end of my time there, we even closed a \$1.5 million sales deal with a national chain.

Startups are risky, and the unfortunate thing is, just having a stunning product doesn’t mean a company will be successful. A few years after RewardMe’s launch, we hit a combination of personnel, funding, and legal issues. I stepped down as the CEO, and eventually the company folded. If only I had my Octalysis knowledge back then, many things would likely be different, which is why I am hoping my readers learn these elements on motivation before they run into issues in their own companies.

Fortunately, by stepping down as the CEO of RewardMe, it freed up a lot of my time to further study gamification, human-focused design, and develop the Octalysis Framework.

Today, even though my Octalysis Group organization is becoming busier and busier, I’m a lot happier than when I was running a technology startup. That’s because I am now mostly motivated by White Hat Core Drives, as opposed to the Black Hat Core Drives of constantly counting our runway before dying<sup>62</sup>.

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<sup>62</sup>StartupDefinition.com Entry: “Runway”: *The amount of time until your startup goes out of business, assuming your current income and expenses stay constant. Typically calculated by dividing the current cash position by the current monthly burn rate.*

## Bad Shifts from White Hat Design to Black Hat Design

When you switch from White Hat motivation to Black Hat Motivation, you need to make sure you understand the potential negative consequences.

As an example, there was a day care center in Israel that had a problem with parents being late to pick up their kids. Researchers Uri Gneezy and Aldo Rustichini decided to do an experiment and implemented a test policy where parents would be charged \$3 every time they were late<sup>63</sup>.

Now a typical economist will tell you that this penalty would result in more parents picking up their kids on time because they don't want to lose money.

However, the plan ended up backfiring - even more parents were now arriving late. Even worse, when the daycare center realized this wasn't working and decided to remove the penalty fees, more parents *continued* to be late.

The plan backfired because they transitioned the parents' motivation from Core Drive 1: Epic Meaning & Calling (as well as Core Drive 5) to a weak form of Core Drive 8: Loss & Avoidance.

Originally the parents tried to pick up their kids in a timely manner because they inherently wanted to be *good* and responsible parents. They also didn't want to burden the daycare center and its staff, so they tried hard to show up on time.

But when the daycare center put a monetary value on tardiness, it basically told parents that it was alright to be tardy as long as they paid the modest fee. Parents who were in business meetings or were preoccupied were therefore able to justify being late because a business meeting is worth more to them than the \$3. Loss &

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<sup>63</sup>Uri Gneezy and Aldo Rustichini. *Journal of Legal Studies* Vol. 29, No. 1. "A Fine is a Price". 01/2000.

Avoidance against leaving that meeting early was more powerful than Loss & Avoidance for losing \$3.

Returning to the concept of proportional loss, we see that despite Loss and Avoidance typically being a powerful motivator, the \$3 fee was just too low to properly motivate the parents in this situation.

Remember I talked about how when you use Loss & Avoidance, the loss needs to be threatening? If the daycare center charged a lot more money than \$3, then the Loss & Avoidance motivation will become more threatening and more parents would likely comply (begrudgingly of course).

Nowadays, there are some daycare centers that charge a \$1 late fee for *every minute* the parent is late. This design actively gets parents to be on time more often. This is not only because the loss is more threatening, but it also gives parents a combination of Core Drive 6: Scarcity & Impatience, as well as a bit of Core Drive 3: Empowerment of Creativity & Feedback since parents feel a stronger sense of agency over end results.

## Careful Transitioning between White Hat and Black Hat

So now that we've covered the nature and differences between White Hat and Black Hat gamification, how do we blend that knowledge together into our designed experiences?

In general (with some exceptions), it is better to first setup a White Hat environment to make users feel powerful and comfortable, then during times where you need users to take that one Desired Action for conversion, implement Black Hat designs. At that point, users will likely take the Desired Action, but won't feel very comfortable. This is when you transition quickly back to White Hat motivation to make them feel good about their experience.

An example of this is seen in the previously mentioned game Battle Camp. In Battle Camp, there are often scenarios where you are in a “Troop” with twenty-four other players and the whole group needs to battle a big boss.

Typically, you would have eight hours to fight this boss, where everyone needs to come back every fifty minutes when their energy is recharged (remember this technique is called a Torture Break), and then use that energy to attack the boss.

At times, after seven and a half hours, the boss still has 20% of his health, and you begin to realize that your troop will not be able to beat the boss. At this point, you have two options. Option one: you lose to the boss, and twenty-five players all waste eight hours of their time, not to mention falling behind other troops that will be ranked much higher after they defeat their boss. Option two: spend \$10 and purchase more energy in order to beat the boss.

Because it is such a devastating event when everyone loses eight hours of their precious time, there is a fairly high chance that you will feel forced to take option two and buy the energy needed to defeat the boss, especially if you were also the leader of the troop.

Now, we see that you were motivated by Core Drive 8: Loss & Avoidance when making this purchase – again, very compelling, but you feel pretty terrible afterwards. After you defeat the boss, if that was it and nothing special happened afterwards, you would feel pretty demoralized and perhaps you subconsciously wished you weren’t playing the game anymore.

However, this is when the game starts to shower you with White Hat Motivation by showing you how great of an achievement you accomplished (Core Drive 2: Development & Accomplishment), and the rewards or trophies you have obtained (Core Drive 4: Ownership & Possession) because you have beaten the boss. On top of that, your teammate will often start cheering for you (Core Drive 5: Social Influence & Relatedness), “Wow! You spent real money just to save our troop. You are our hero!” Being sprinkled by all

this emotional confetti, people often start to think, “Hmm, maybe that was \$10 well spent after all!” And this eventually trains their brains to be more open to spending the next \$10 to buy energy and defeating the boss when necessary.

## No Buyer’s Remorse from TOMS

Similar to the Battle Camp example, businesses should consider creating an environment of White Hat motivations, use Black Hat techniques to convert users, and then revert back to a White Hat strategy to make users feel more comfortable again.

The initial White Hat environment is for people to take interest and have a good opinion of your system in the first place. A venture capitalist wouldn’t want to invest in a startup if he didn’t first consider it world-changing and a smart investment (Core Drives 1 and 2), even if there was convincing tension that he may lose the deal (oddly, some investors still plunge under the pressure of Scarcity and Loss, even though they previously determined it to be a worthless idea with no future).

Once people feel comfortable in your system but aren’t necessarily taking the strong Desired Action, such as making a purchase, that’s when you use the Black Hat techniques within Core Drives 6 and 8 (and sometimes Core Drive 5), to close the deal. If the user ends up buying the product, you want to reassure them that, if true, this is indeed the smartest purchase possible (Core Drive 2), that legions of others also made the same decision (Core Drive 5), and that it positively improves the world (Core Drive 1). This will likely ensure that customers don’t feel buyer’s remorse.

When you buy a pair of TOMS Shoes and begin to feel a little regret for making an expensive purchase, they hit you with reaffirming information on how your purchase has made a tremendous difference to a poor child in Africa who couldn’t afford a pair of shoes and had

to walk barefoot to fetch water for her family. When you see that, you instantly feel good again about your purchase and whenever you see your shoes, it reminds you that you are a decent human being that benefits the world.

It is the same thing with donations to children in developing countries. When you make a commitment, the non-profit will continuously send you pictures, thank-you letters, sometimes even something written by the “adopted” child to make you feel that you have truly made an impact in their lives. Of course, there is nothing wrong with sending donors these pictures and letters for such a noble cause (unless they are falsely manufactured) as these donors are truly making a big difference in the lives of the less fortunate. In fact, it would be a mistake for any charitable organization to *not* show visual and social information on the impact they are making to the world. We would all like to see some Feedback Mechanics after taking Desired Actions.

As you design your experiences, never forget that if you want good Endgame design, you *must* immerse your users in White Hat Gamification techniques.

## What about Core Drives 4 and 5?

You may have noticed that I mentioned Core Drive 4: Ownership & Possession and Core Drive 5: Social Influence & Relatedness a few times in this chapter (in a White Hat context), and may wonder where they fit into all of this. They are in the middle of the Octalysis model, so are they Black Hat or White Hat?

Generally speaking, Core Drive 4 and Core Drive 5 have the duality of being able to be either White Hat or Black Hat.

Often times with Core Drive 4: Ownership & Possession, owning things make us feel like we are in control, that things are organized,

and our general well-being is improving. We feel powerful and enriched.

However, sometimes the stuff we own starts to own us instead. You can imagine a person who buys an extremely rare vintage car, and then becomes afraid of taking it anywhere because he is afraid to damage it or rack up miles. At the same time, he also doesn't want to leave it at home because he's afraid it might get stolen.

There are also people who are so obsessed about building more wealth that they neglect everything else that matters, such as family, health, and friendships. Then there are people who compulsively need to organize things to the point where they can't really focus on more important things that would bring them happiness.

At that point, Black Hat starts to take over and the individual no longer feels good about her behavior, but simply does it because she feels compelled to do it.

On the other hand, for Core Drive 5: Social Influence & Relatedness, we obviously enjoy and have fun when hanging out with our friends, building strong friendships, and expressing appreciation for each other. Even if we are making friends to network and build our careers (which adds certain Left Brain Core Drives such as Core Drive 2: Development & Accomplishment as well as Core Drive 4: Ownership & Possession), we feel pretty positive about the experience.

However, sometimes peer pressure can cause some of the worst moments in our lives. When we feel pressured by our environment to behave in certain ways or get into fights with our loved ones, it starts to drive us crazy in a way that few other things can.

In fact, from time to time, social pressure is so strong that people end up committing suicide simply because they cannot endure the judgment of others. For these people, choosing to end their own lives is easier than confronting the situation, even when it is something as trivial as being afraid to go home and tell parents

about a failed test. Clearly you can see the Black Hat influences that can arise from Core Drive 5.

At the end of the day, each of the Core Drives wields a tremendous amount of power, and a designer must think carefully about designing for ethical purposes - to make sure there is full transparency towards the Desired Behavior, matched with the users' freedom to opt in and out. If this is not carefully done, gamification design will fail the promise of making life more enjoyable and productive, and it would simply become a source of misery and bitterness (and then likely dropped altogether). No one wants that.

The cliché phrase is that, “with great power comes great responsibility.” When you understand how to motivate and change behavior, you can improve the world by helping others achieve *their* life, career, fitness, and relationship goals. Conversely, you can wield this knowledge to get people more addicted to harmful substances, create bad habits, and perpetuate broken relationships<sup>64</sup>. Ultimately, when your experience design becomes extremely successful, you must look in the mirror and ask yourself, “Is this the impact I want to have in the world?”

### To get the most out of the book, Choose only ONE of the below options to do right now:

**Easy:** Try to recite the three White Hat Core Drives and the three Black Hat Core Drives without looking at them. Are you able to explain their differences?

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<sup>64</sup>I myself was once approached by one of the world's largest tobacco and beer conglomerates to run a few workshops with them. After discussing with my team, we decided that even though it would be a fairly lucrative relationship - if we were extremely successful at our jobs and more people became addicted to tobacco and alcohol, that wouldn't be the impact we wanted to have in this world. We ended up turning that particular project down. Of course, we were also only able to do that because we were blessed with many great clients that more directly benefits society so we didn't need to be driven by Core Drive 8: Loss & Avoidance.

**Medium:** Think back on your own life and all the major decisions that you made: applying for schools, changing jobs, finding a significant other, moving to new locations. What Core Drives motivated you to make those decisions? Are they mostly for White Hat reasons, or Black Hat? Are you happier with the decisions that you made from White Hat Core Drives? Do you feel less comfortable with decisions that were driven by Black Hat Core Drives, but feel like you had little choice when the decision were made?

**Hard:** Think of a campaign that you can design for your own project. Try to come up with ways to use White Hat Gamification to create motivation and desire, then switch to Black Hat Gamification to trigger important Desired Actions. Finally, understand how to transition user motivation back to White Hat Core Drives so they enjoy the experience fully and feel emotionally rewarded after committing the Desired Actions.

Share what you come up with on Twitter or your preferred social network with the hashtag #OctalysisBook and check out what ideas other people have.

### **Share your Life reflections.**

If you picked the Medium Challenge above, share your life paths and choices as part of a self introduction to the Octalysis Explorers Facebook Group. Identify the Core Drives that motivated you along the way, and reflect on how you felt during those life choices. That way the community will get to know you better as well as learn a bit more about the 8 Core Drives through your experiences.

As you know, a community makes an experience engaging and fun, and it will make all the time you have invested into this book more fulfilling. Chances are, there will be others in the group that will also have similar life experiences and choices as you and can help you understand your life motivations more through the 8 Core Drives.

# **Chapter 15: Understanding Other Gamification and Behavioral Frameworks with Octalysis**

Up to this point we have covered almost everything there is to learn in Level I Octalysis design.

My goal for the book is to go deep on one methodology and framework (namely my own), and then once competency of that one framework is achieved, use it to understand other frameworks.

In 2012, when I attended the annual GSummit<sup>65</sup>, the largest gamification conference in the world, I was thoroughly impressed by the suite of knowledgeable panelists and speakers. However, I imagined that the average attendee could be flustered by all the various talks and frameworks presented at the conference from Richard Bartles' *Four Player Types*, Mihayi Chiksenmihayi's *Flow Theory*, Nicole Lazzaro's *4Keys2Fun*, and a plethora of others!

At the end of the day, while the attendee feels pumped and inspired about the world-changing potential of gamification, they may still feel confused about what to do next. All these frameworks, when pieced together, seem to communicate an abstract knowledge about the brain. But question of how we connect them together in a way that holistically reflects our minds is difficult to answer. It becomes even more challenging when one needs to determine which framework to use for various projects.

Because of this, I wanted to make sure that my readers have a deep understanding of my own model instead of a shallow knowledge

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<sup>65</sup>[GSummit Website](#)

of different concepts. However, I do not want my readers to be ignorant of other prominent gamification theories and key models in motivational psychology and behavioral economics, which are all great in their own rights. So in this chapter we will discuss these concepts and examine them using our “Octalysis Glasses.”

One of the things I enjoy about the Octalysis Framework is that it helps me understand other experts’ work better by putting their research and findings into perspective. As we all have the same brain, I believe that various studies on the brain and motivation can converge with each other to provide a richer understanding.

Hopefully your understanding of Octalysis will help you comprehend these other frameworks quickly. Of course, there are many excellent books that are highly encouraged if you’re keen on diving deeper into those other frameworks.

## Scientific Research and Game Studies

Every once in a while, someone asks me whether my Octalysis Framework was created based on a deep study of all the texts and scientific studies I’ve mentioned in this book.

In truth, the Octalysis was 100% derived from my experience and study of games. I wish there was a more impressive origin, but in reality, everything I needed to create the Octalysis Framework was found in my many years of playing and analyzing games. This is why I consider it a Gamification Framework (when some think it is just mere psychological and behavioral studies that is independent of games).

Once the Framework was created, I began to research behavioral economics, motivational psychology, and neurobiology to confirm (or extend) the principles behind the Core Drives. I knew that these Core Drives motivated us, but I didn’t have scientific publications to back it up until much later. Luckily for me, most people who hear

about my work on Octalysis can relate back to their own personal experiences and observations, which then prompts them to give me the benefit of the doubt before I could scientifically prove *why* it works. A Core Drive 5 victory on *relatedness*.

On this point, let me explain why I believe studying games is legitimate enough to obtain a full grasp of motivation theories and behavioral predictions (feel free to disagree with me; I won't be offended).

As repeated in previous chapters, an important aspect of games is that you never *have* to play them. Again, you *have* to go to work and you *have* to do your taxes. They can be awfully dreadful but you still just have to grind through them. I call this "tainted motivation."

But with games, no one *has* to play them<sup>66</sup>. The moment a game is no longer fun, people leave it to do or play something else.

In a sense every game can be considered an experiment in motivation and behavior.

We receive most of our understanding of behavioral psychology from experiments where participants (often times fifty to two hundred undergraduate students) are placed in controlled environments and tested for their reactions based on certain variables. The result of these peer-reviewed experiments become legitimate scientific research that gives us insight into the human mind.

On the other hand, every game can be thought of as a petri dish where hundreds of thousands (if not hundreds of millions) of "test subjects" voluntarily modify their behaviors based on changes in the environment. These mass "experiments" naturally show us how certain experiences and mechanics are effective or ineffective at impacting human behavior.

One of the things I like to do is study "clones" of games in order to understand why some clones are flops while others become

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<sup>66</sup>Much of my work can be understood through the differences between *can*, *have to*, *want to*, *compelled to*, *inspired to*, and *excited to* when it comes to Desired Actions.

more successful than the original. When two games look almost identical, but one (sometimes the uglier looking one) becomes a breakout success while the other becomes a failure, that creates a great opportunity to study the subtle elements within the design that make a big difference. Sometimes the differences are as small as how many seconds before a message pops up, the order of challenges are introduced, or how well scarcity is controlled in the economy.

From my own research, these subtle differences are not well covered in gamification or even game design literature, but I have found them to be among the most important for the success of an experience, beyond graphics, animation, or even theme. At the end of the day, it is not whether they have certain game elements (theme, group quests, badges, power-ups), but whether those certain game elements are designed in a way that bring out our Core Drives.

Now, the challenge is that there never is just one changed variable between two “similar” games. Often times there are hundreds or even thousands of differences between games, and so it requires a substantial amount of time and pattern-recognition to identify the behavioral impact of each element to the point that it can be predicted and replicated.

This requires studying scores of games through years of serious observation before patterns can be easily recognized and before predictions can be made on how behavior changes when game elements are shifted. You also need to go beyond the superficial changes to find what truly drives user behavior. This means digging into the experience, which, of course, ultimately means immersing yourself in those games to feel the forces of motivation first hand (which I must admit, consumed many joyful and some agonizing hours of my life).

One of the things I like to do when playing financially successful games is to try and play them as seriously as I can while purposely resisting the pressure from the game design to spend money. There

were many moments where I had an extremely strong urge to spend a few dollars just to save my time, save my troop, get through frustration, or eliminate some unpredictability.

And so I pay special attention to those moments in a game when I clearly feel a powerful compulsion to spend money in order to solve my problems (as well as boost my happy brain chemicals such as dopamine, endorphins, and oxytocin<sup>67</sup>)!

From these years of study I derived the 8 Core Drives and the accompanying concepts of White Hat/Black Hat and Left Brain/Right Brain Core Drives to demonstrate and reflect the tendencies and trends I've seen in games.

Later on I realized that each Core Drive had dozens of books dedicated to it and so I started reading more to understand their nature better.

Remember earlier we talked about how games are a combination of behavioral economics, motivational psychology, neurobiology, UX/UI (User Experience/User Interface) design, technology platforms, and the obvious game design dynamics? Again, you need all these elements to create a great game.

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<sup>67</sup>Thai Nguyen. *Huffingtonpost.com*. "Hacking Into Your Happy Chemicals: Dopamine, Serotonin, Endorphins and Oxytocin". 10/20/2014.



In this chapter, we will see how Octalysis applies to a variety of behavioral psychology and game design theories.

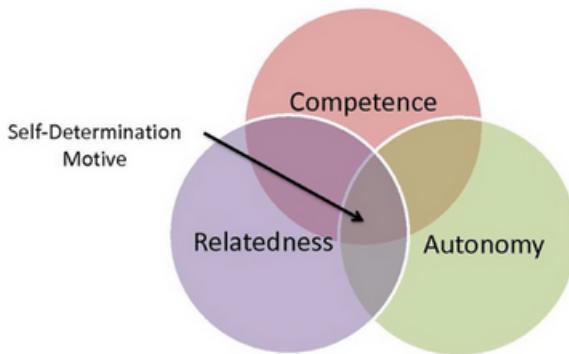
## Octalysis View of Self-Determination Theory

Up to this point we have mentioned Ryan and Deci's Self-Determination Theory a few times. The Self-Determination Theory is a theory on motivation to understand our natural or intrinsic tendencies to behave in effective and healthy ways<sup>68</sup>. The theory demonstrates that people are not motivated purely through rewards and punishment, but are actually motivated more through three elements: *Competence, Relatedness, and Autonomy*.

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<sup>68</sup>[Self Determination Theory Website](#)

### Three Innate Psychological Needs Comprise The Self-Determination Theory of Student Motivation



Source: Deci, E.L., & Ryan, R.M. (2000). The "What" and "Why" of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11, 227-268.

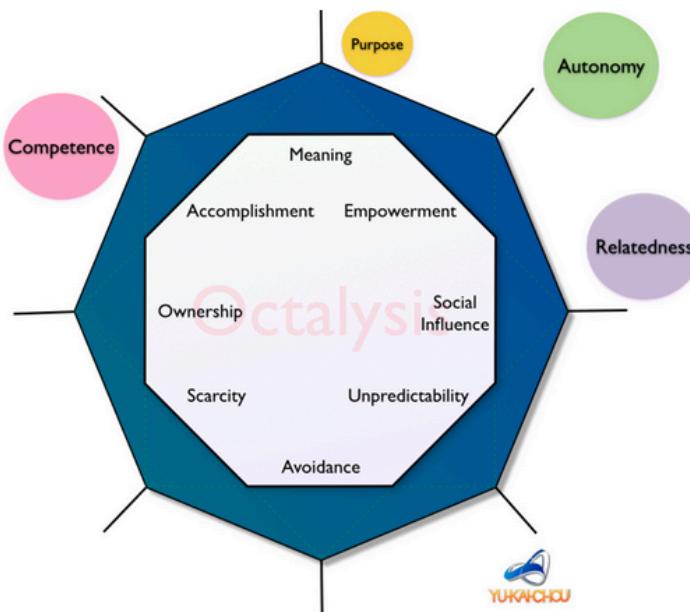
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If you look at the theory from an Octalysis perspective, you will notice that *Competence* is in line with Core Drive 2: Development & Accomplishment; *Autonomy* lends itself to Core Drive 3: Empowerment of Creative and Feedback; and *Relatedness* naturally falls within Core Drive 5: Social Influence and Relatedness.

In the book *Drive*, Daniel Pink demonstrates a fourth component to this theory, which is Purpose (he also re-terms *Competence* as the catchier *Mastery*).<sup>70</sup> Again, with our Octalysis glasses on, *Purpose* can be seen as directly connecting to Core Drive 1: Epic Meaning & Calling.

<sup>69</sup>Image Source: Edward L. Deci and Richard M. Ryan. *Psychological Inquiry*, Vol. 11, No. 4, 227–268. “The “What” and “Why” of Goal Pursuits: Human Needs and the Self-Determination of Behavior”. 2000.

<sup>70</sup>Daniel Pink. *Drive*. P107-128. Penguin Group, New York, NY. 2009.



What becomes very clear in the diagram is that these elements are also considered White Hat Core Drives. By focusing on *Relatedness*, the Self-Determination Theory also incorporates Right Brain (Intrinsic) Motivation through Core Drive 5: Social Influence & Relatedness.

The Self-Determination Theory is a very good model that recognizes the power behind positive, White Hat, and intrinsic motivation. However, it does not necessarily explain why people are addicted to gambling or why exclusivity itself often drive our behaviors.

Though the theory covers all the positive emotions within motivation, it does not include the “dark side” of behavior, which is demonstrated in the form of the Black Hat Core Drives (which are

generally considered “non self-determined” motivations<sup>71</sup>).

That actually makes a lot of sense, given that the Self-Determination Theory focuses on motivating employees and students, especially towards creative work. For that purpose, the theory is a tremendously good framework to help guide companies towards creating long-term White Hat motivational environments for their workers.

We learned from the Chapter 14 that since employee motivation requires long-term engagement, we should generally apply White Hat Core drives to its design. That said, there are some Black Hat motivational techniques that companies also use to motivate their employees towards short-term productivity bursts (e.g. scarcity of opportunities, deadlines, social pressure, competition). The Self-Determination Theory does not focus on these, as this type of motivation could lead to long-term burnout if applied incorrectly.

With that said, a framework like Octalysis allows you to put the Self-Determination Theory into broader perspective and understand what it covers and what it doesn’t cover in order to expand and fine-tune your understanding of human behavior.

## Richard Bartle's Four Player Types

Another very well known study in the realm of game design is Richard Bartle's Four Player Types<sup>72</sup>.

Richard Bartle is a game researcher and in the 1970's he invented the first MUD (Multi-User Dungeon) game, which evolved into the role-playing games (RPGs) we know today.

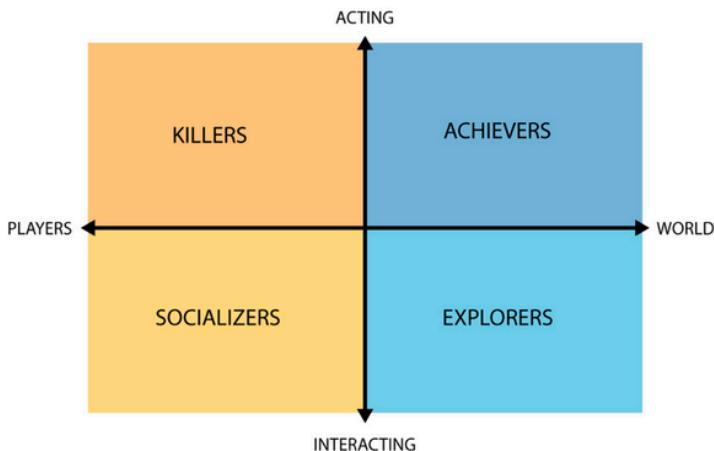
Bartle realized that within a virtual environment there tends to be four main groups of players doing four distinct types of activities.

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<sup>71</sup>Yves Chantal and Robert J. Vallerand. *Journal of Gambling Studies. Volume 12, Issue 4, Pages 407-418.* “Skill versus luck: A motivational analysis of gambling involvement”. Winter 1996.

<sup>72</sup>Richard Bartle. *Mud.co.uk.* “Hearts, Clubs, Diamonds, Spades: Players who suit MUDS”. April 1996.

There are the *Achievers* who try to master everything there is to do within the game system. There are the *Explorers* that just want to go out and explore all the content in the world but aren't as focused on overcoming challenges. There are the *Socializers* who are really in the virtual world just to interact with each other, have conversations, and build companionship. And then there are the *Killers* who are players that not only need to strive for the top, but need to do so by beating other players down so everyone can admire their victories.



Richard Bartle, *Designing Virtual Worlds*

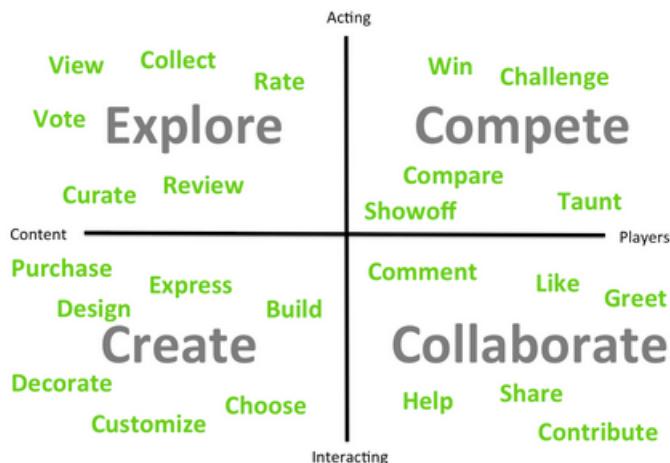
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Many people who work in gamification as well as game design build on Richard Bartle's Four Player types. Game designer Amy Jo Kim is known to use Richard Bartle's Player Types, evolving them into Kim's Social Action Matrix<sup>74</sup>. In this model, Kim assigns verbs and actions to various Player Types to determine how to design a fun and engaging environment within games. Those action verbs

<sup>73</sup>Image accessed from Gamasutra.com. "Designing Computer-Games Preemptively for Emotions and Player Types." 06/19/13.

<sup>74</sup>Amy Jo Kim. AmyJoKim.com. "Beyond Player Types: Kim's Social Action Matrix". 02/28/2014.

became: *Explore*, *Create*, *Compete*, and *Collaborate*. (Try to see how those action verbs correspond to various Core Drives).



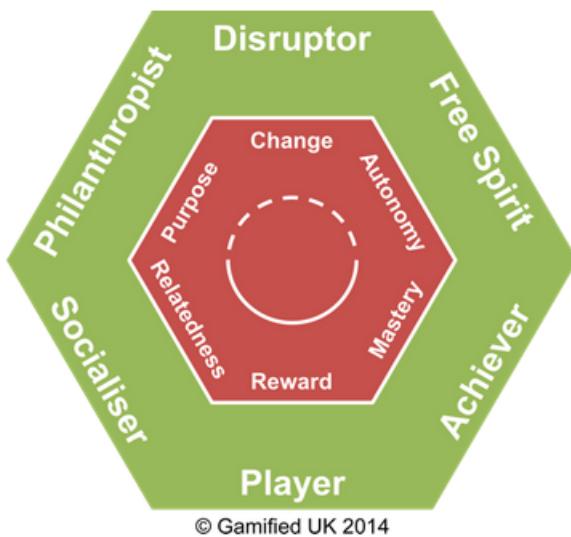
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Andrzej Marczewski is also an influencer in the gamification field who has done extensive research to build upon Richard Bartle's Player Types for the enterprise workplace and derived six User Types to design for: Disruptors, Philanthropists, Free Spirits, Socializers, Achievers, and Players<sup>76</sup>. Each of these User Types are more motivated by different activities and experiences.

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<sup>75</sup>Ibid.

<sup>76</sup>Andrzej Marczewski. Gamified.uk. "User Types. Accessed 2/17/2015"  
(<http://www.gamified.uk/user-types/>)



© Gamified UK 2014

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This model is often recommended for workplace environments, as Richard Bartle himself has said that his Player Types may not be appropriate for environments outside of voluntary virtual worlds<sup>78</sup>.

For simplicity sake, let's take an Octalysis look at Richard Bartle's Four Player Types to understand what Core Drives motivate each player type. This will help you determine how to better design for these player types.

*Achievers* are driven heavily by Core Drive 2: Development and Accomplishment as well as Core Drive 6: Scarcity and Impatience. They're always trying to complete their next goal, which makes them feel accomplished when they do. Of course, to some extent they also care about using their creativity to overcome challenges, as well as accumulating the results of their success (Core Drives 3 and Core Drive 4).

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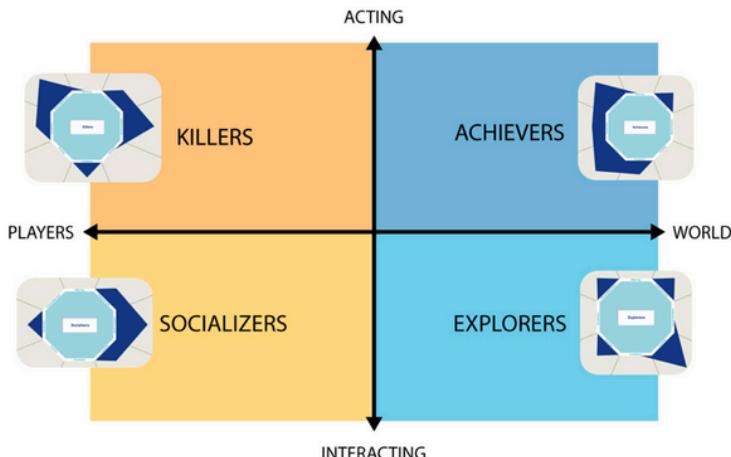
<sup>77</sup>Ibid.

<sup>78</sup>Youtube Video: “GSummit SF 2012: Richard Bartle - A Game Designer’s View of Gamification”. 9/27/2012.

*Explorers* are dominantly motivated by Core Drive 7: Unpredictability & Curiosity, which drives them to discover novel content that they haven't seen before. There are also seeds of Core Drive 2, 3, and 6. They continuously use their creativity to find new ways to test every boundary that constrains them, and when they succeed, they are fulfilled by a sense of accomplishment.

*Socializers* are primarily motivated by Core Drive 5: Social Influence and Relatedness. They like to mingle with others and bond. To a smaller extent, they are also driven by thinking up clever ways to engage others more (Core Drive 3), they enjoy new or unpredictable information or even gossip (Core Drive 7), and sometimes becomes territorial with their friends (Core Drive 4).

Finally, *Killers* are primarily motivated by a mix of Core Drive 2: Development & Accomplishment and Core Drive 5: Social Influence of Relatedness. They not only need to strive for high goals, but they need others to recognize their accomplishments and understand their superiority over others. In a smaller sense, they are also driven by coming up with the best way to defeat others (Core Drive 3), avoid being killed or being seen as weak themselves (Core Drive 8), and they like to count their wins and victories over others (Core Drive 4).



With the chart above, we can better understand what uniquely motivates these player types and can design appropriate Game Techniques for them. Later on in your Octalysis journey, you will begin to do extensive amounts of work in defining your own Player Types and designing systems that uniquely appeal to them with Level 3 Octalysis. (Unfortunately, we won't be able to cover that within the scope of this book).

So what about the other Core Drives that are not covered above, namely Epic Meaning & Calling, and to some extent Loss & Avoidance?

Core Drive 1: Epic Meaning & Calling can be utilized by any of the Player Types: to achieve their goals of reaching a higher target, becoming more respected by their friends, exploring new areas, as well as defeating weaker players.

Core Drive 1: Epic Meaning & Calling is simply the context to be in the game environment in the first place, but since Richard Bartle was creating an open virtual world, there doesn't seem to be any real sense of higher missions within beyond virtual world idealism. Sometimes a smaller sense of Epic Meaning & Calling is created when users within a virtual world band together for a higher

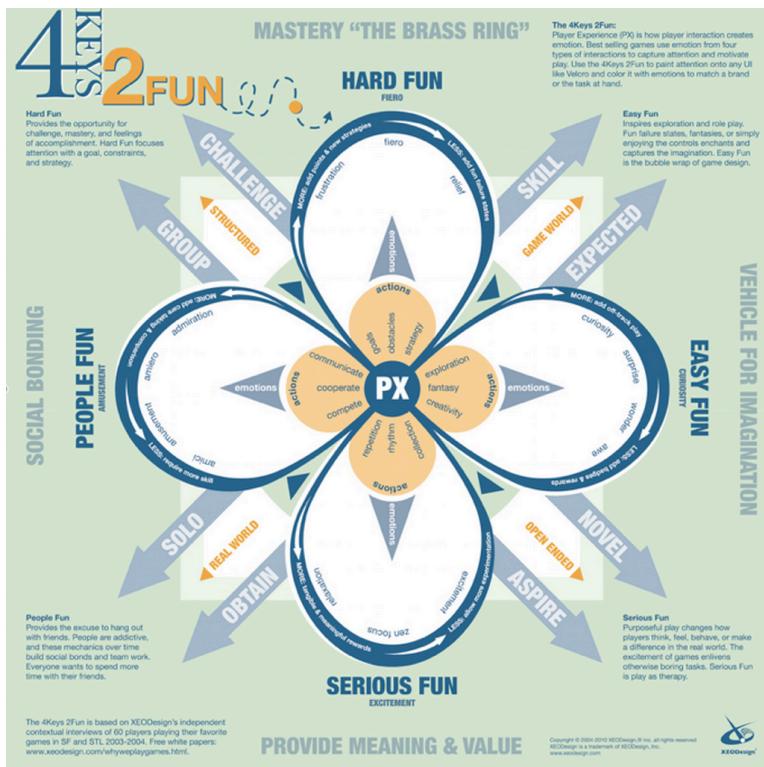
mission they believe in, but that is independent of the player types studied here.

In Andrzej Marczewski's model, there is a unique user type within the workplace called *Philanthropists*, which are individuals who derive joy (as well as play) from helping others. They are motivated by Core Drive 1: Epic Meaning & Calling, and companies should encourage behavior from Philanthropists to ensure more collaborative efforts and stronger teamwork. Unfortunately, most company environments punish Philanthropists while rewarding those who are exclusively going after their own extrinsic rewards. These *Players* in Andrzej Marczewski's model, are highly motivated by Core Drive 4: Ownership & Possession, where the aim is to maximize their bonuses, rewards, promotions, and raises.

In terms of Core Drive 8: Loss & Avoidance, there are always threats for not succeeding in all endeavors too, especially, as mentioned, when *Killers* try to avoid being humiliated. However, there is no real player type that focuses on avoiding bad things. As we have learned, if you are only motivated by Black Hat Drives, you will not want to be in an open and voluntarily virtual world in the first place. That's often a different story for the workplace.

At the end of the day, these eight Core Drives motivate all of us to some extent, as we universally crave these Core Drives in different measures at different times. The Octalysis Framework allows us to understand whether certain Core Drives are stronger with certain people, so that we can be aware and design for these differences appropriately.

## Nicole Lazzaro's 4 Keys To Fun



*4 Keys to Fun* is another design framework created by game designer and President of XEODesign Nicole Lazzaro<sup>79</sup>. Nicole Lazzaro spent many years researching and designing engaging games, and through her experience she has derived four types of fun that engages people within games.

The 4 Keys to Fun are: *Hard Fun*, *Easy Fun*, *People Fun*, and *Serious Fun*.

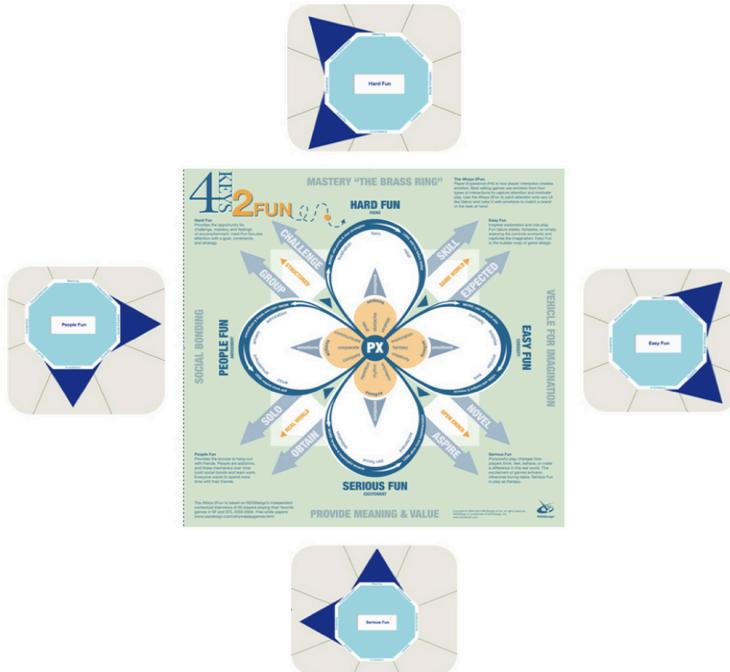
<sup>79</sup>Nicole Lazzaro. XEO Design. “Why We Play Games: Four Keys to More Emotion Without Story” 03/08/2004.

*Hard Fun* is joy that is derived from overcoming a frustration and achieving the Win-State. This puts players in a state of *Fiero*, the feeling of triumph over adversity.

*Easy Fun* is the fun from doing interesting activities where you don't need to try very hard and can simply enjoy the relaxing and playful experience. This is commonly seen in games children enjoy with their parents, such as board games or drawing.

*Serious Fun* is fun that is engaging because it makes real world differences such as improving oneself, making more money or creating an impact in the environment.

Lastly, *People Fun* is fun that you have because you are interacting with other people and forming relationships.



If you again try to understand this with your Octalysis Glasses

on, you will see that *Hard Fun* is a combination of Core Drive 2: Development & Accomplishment, as well as Core Drive 6: Scarcity & Impatience – the difficulty and frustration of reaching the Win-State is what drive user motivation as well as the sense of achievement after accomplishing it.

*Easy Fun* is like a combination of Core Drive 3: Empowerment of Creativity & Feedback as well as Core Drive 7: Unpredictability and Curiosity. It's like playing with clay or Legos where you can do anything you want and can't really lose. Whatever you do you are winning because you are enjoying your time and seeing feedback from your creativity.

Situations with inherent randomness also inspire curiosity and make things fun and easy. Playing games like Yahtzee or watching a cartoon makes us enjoy our time without really needing to put in a lot of effort and focus. In fact, in the game design industry it is known that one of the best ways to make a game easier (penalizing hardcore competitive players but benefitting mainstream casual players) is to add more randomness and chance to the game<sup>80</sup>. A father can play a dice game seriously with his five year old daughter without always winning, but he likely needs to go easy on her if he is playing chess against her.

On the other hand, *Serious Fun* can be interpreted as a combination of Core Drive 1: Epic Meaning and Calling as well as Core Drive 4: Ownership and Possession.

Epic Meaning & Calling is derived when one is engaged with an activity because she sees its real impact in the world. In the case of activities that are exhilarating because they make you money every time you engage with them, that's of course Core Drive 4: Ownership & Possession.

*People Fun* is generally a combination of the obvious Core Drive 5:

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<sup>80</sup>Jesse Schell. *The Art of Game Design: A Book of Lenses*. P183-184. CRC Press. Boca Raton. 2008.

Social Influence & Relatedness and also to some extent Core Drive 8: Loss & Avoidance.

This is because when you are collaborating with people, you are under a bit more stress when you are trying to avoid looking bad, saying the wrong things, being shunned, or losing position within a leaderboard. Fun competition also extends out of *People Fun*, and the thrill of *hide-and-seek* or *catch* is often derived from a moderate level of Core Drive 8: Loss & Avoidance.

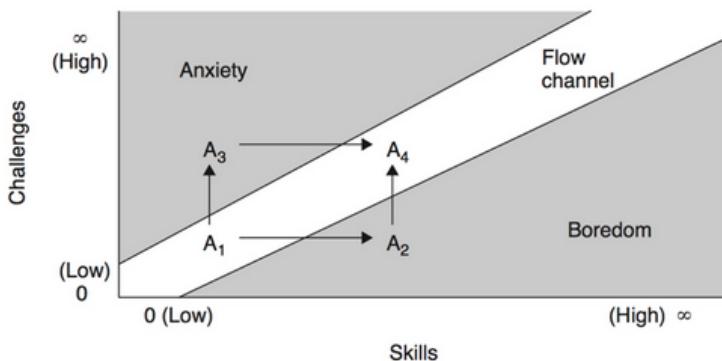
Of course, I was motivated by a sense of “completeness” (Core Drive 4) to match all 8 Core Drives into *4 Keys 2 Fun* with each type of fun corresponding to . If you feel that Core Drive 8: Loss & Avoidance isn’t unique to *People Fun*, I am willing to accept that too.

## Mihaly Csikszentmihalyi's Flow Theory

I think it is a good time to move on to Mihaly Csikszentmihalyi's *Flow Theory*<sup>81</sup>. Mihaly Csikszentmihalyi is a world-renowned scholar in the fields of psychology and management science, and is best known for creating the *Flow Theory* which combines the factors of a user's skill level to the difficulty of the challenge.

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<sup>81</sup>[Wikipedia Entry: "Flow Theory"](#)



The Flow. After Mihaly Csikszentmihalyi, *The Flow* (1990), p. 74

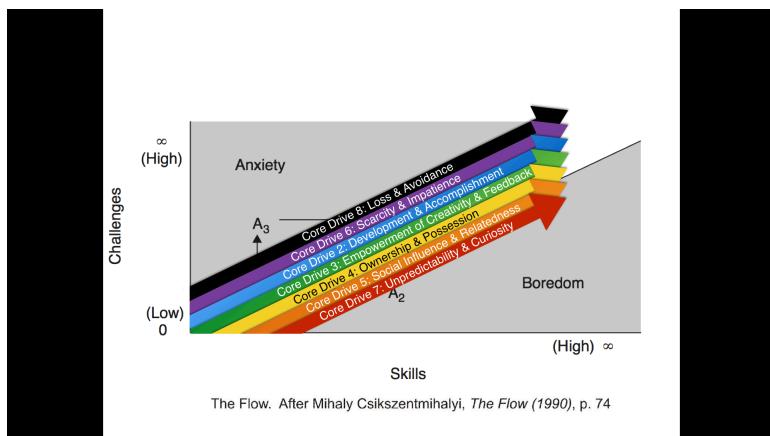
The *Flow* theory illustrates that when the difficulty of a challenge is too high compared to a user's skill level, the result is a sense of anxiety which may compel the user to drop out quickly. Similarly, if the user's skill level is dramatically higher than the difficulty of the challenge, the user will feel bored and may also drop out.

Only when the user's skill level is balanced with the difficulty of the challenge does she enter the state known as *Flow*.

During *Flow*, users become completely focused, they zone in on their activities, they lose a sense of self, as well as lose track of time. This is a moment of euphoria, excitement, and engagement.

The tricky thing here is that, more often than not, the player skill level increases as time goes by. So if the designer gives the exact same experience throughout the 4 Experience Phases (Discovery, Onboarding, Scaffolding, Endgame) that user quickly ends up being bored because they've outpaced the difficulty level.

Even though the *Flow* theory by nature feels a bit different from the other models we've discussed (as it is less focused on classifying types), we can still use Octalysis to comprehend what's going on.



As you can see here, the zone at the top of the Flow is where the challenge is way more difficult than the player can handle. This is driven by a feeling of Core Drive 8: Loss & Avoidance, where users are really just struggling to survive. As we already know, this puts people in the state of extreme anxiety.

Now if you slightly decrease the difficulty relative to the user skill level, we now enter the zone of Core Drive 6: Scarcity & Impatience. At this point the user feels challenged and occasionally frustrated. However, there is always a chance for them to overcome the challenge and achieve the Win-State, as long as the user takes action quickly and surpasses a Moat (Game Technique #67) through skill or planning.

Right below Core Drive 6 we have Core Drive 2: Development & Accomplishment. This is the zone where the challenge is moderate and the user feels accomplished and competent. The user is in the *Flow* and she feels like she is achieving her goals and building her confidence.

A little below that we have Core Drive 3: Empowerment of Creative & Feedback. This is at the core of *Flow* where again users are using their creativity and adjusting their strategy to figure out better ways to do things. This process puts many people in the state of *Flow*,

especially when it rotates quickly between Core Drive 3 and Core Drive 2 (when their creativity lead to accomplishments).

Move a level below Core Drive 3 and you have Core Drive 4: Ownership & Possession, which is often the mindless act of collecting things, organizing things, and putting things together - what you often do in Farmville-like games. This is usually a lot easier in terms of difficulty relative to the user skill set and it relaxes the mind.

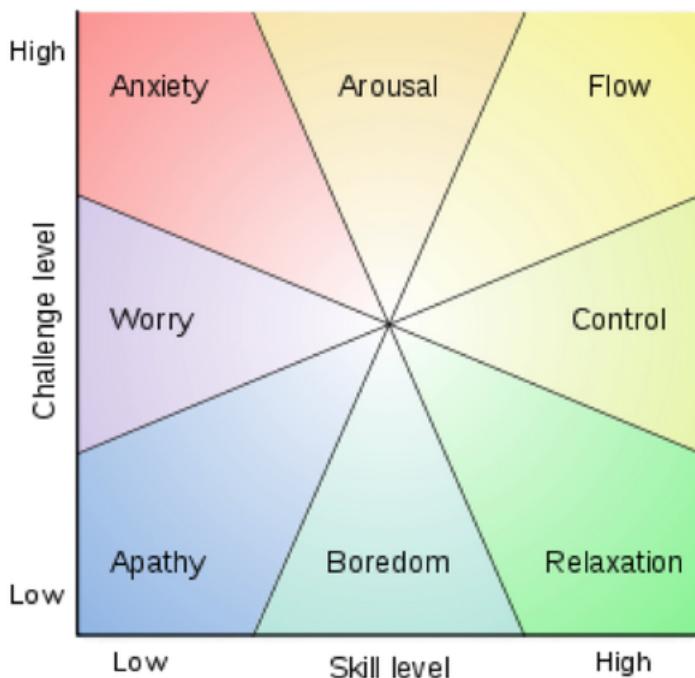
Most of the time to fulfill the Ownership & Possession Core Drive, all the user needs to do is to spend more time on it, to take actions based on moderate planning, or to organize her systems. There is no sense of anxiety. If not designed properly, this sometimes even creates boredom. Think about employees who do data-entry work just for a paycheck: the task is not very difficult, but there is not a strong level of engagement either.

What's below Core Drive 4 is Core Drive 5: Social Influence & Relatedness. This is basically like going to a chat room. You don't need too much skill, you say whatever you want to build connections, and you can even troll others. This is often seen in the Water Cooler game technique we discussed in Chapter 9. The activity could still be very fun but it is mostly very easy, and even if you don't see feedback from your witty comments (Core Drive 3) and impress others (Core Drive 2) the feeling of relatedness, acceptance, and bonding with others make the experience pleasant and relaxing.

If you look another level down, you could say that Core Drive 7: Unpredictability & Curiosity is at the lowest level of *Flow*. We mentioned earlier that adding chance and randomness is a good way to make a game easier. Most gambling games, sweepstakes, and lotteries don't require any amount of skill. You basically participate, take the Desired Action, and wait for the results. That's also why playing games that involve randomness like *Risk* or *Monopoly* (including the Chance Cards) often produce more laughter than pure skill-based games such as Chess.

Now you could argue that people engaged by Core Drive 7: Unpredictability & Curiosity are not really in a state of “boredom,” especially if they’re watching a movie or trying to finish a book. However, when you look at it from the perspective of skill versus challenge (the *Flow* chart), the user is not enjoying the activity because of skill usage. She is instead entertained in a different way that drives pleasure.

In one of Csikszentmihalyi’s charts seen below, he includes a state of “relaxation” as a result of having skills that greatly surpass the challenge. Core Drive 7 then does not result in boredom but rather appropriate relaxation.

<sup>82</sup>

You can see here that within the *Flow* model, the only Core Drive that is missing is Core Drive 1: Epic Meaning & Calling. That's

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<sup>82</sup>Image Accessed from Wikipedia

because Core Drive 1 is completely out of the context of player skill level compared to challenge difficulty, as those two factors are irrelevant when it comes to committing to something that is bigger than oneself. Core Drive 1 does not really fit into the *Flow* model but powers the reason why people may engage with any experience in the first place.

## Fogg Behavior Model

BJ Fogg, a professor of human behavior from Stanford, created a model that boils down all behavior into three factors: *motivation*, *ability*, and a *trigger*<sup>83</sup>.

*Motivation* is how much the individual wants to take the action or obtain the desired outcome. *Ability* is how equipped the individual is in taking that action; in other words, how easy or convenient it is for the user to perform the action. The third factor is a *Trigger*, or something that reminds the user to take action.

Fogg proposes that every action you do is a result of these three components coming together. If any one of them is absent, there can be no action.

He is an evangelist of what he calls “Tiny Habits.” For instance, Fogg explained a system where every time he goes to urinate, he does two push-ups before washing his hands. Urinating is the trigger, and since doing two push-ups is so easy, you don’t need a lot of motivation to do it.<sup>84</sup>

In this system, setting the goal at two push-ups instead of something more ambitious like eight or ten is very important. If you set your goal at ten, then at one point your brain will likely think, “I’m kind of busy or tired. I’m just going to skip this one time,” which then

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<sup>83</sup>Fogg Behavior Model Website

<sup>84</sup>Youtube Video: “Forget big change, start with a tiny habit: BJ Fogg at TEDxFremont”.  
12/05/2012.

happens again soon after. This weakens self-confidence and ensures that a positive habit does not form.

But when you design the goal to be two push-ups and you actually do them, you feel a sense of accomplishment (Core Drive 2), which builds up your confidence and allows you to eventually build a stronger habit.

In general, I like Fogg's Behavioral Model and often reflect on it within my own studies. The one area I differ with him on is his claim that the motivation piece is very difficult and unpredictable, and that companies or individuals shouldn't start with improving motivation. His conclusion calls for companies to focus on making sure the activity is extremely easy and that there is an appropriate trigger to do it.

From this viewpoint, Octalysis puts a much stronger emphasis on the *motivation piece*. As Fogg expresses in his own model, when there is no motivation, it doesn't matter how easy the task is, people won't do it.

We saw from earlier chapters that if we adjust the difficulty with Octalysis design campaigns, it is primarily because we either want users to feel smart and competent (Core Drive 2), or we want to make users sense that the opportunity is exclusive and difficult to obtain (Core Drive 6). In whatever way you adjust the experience, Octalysis brings the focus back to motivation. Games don't necessarily make things easy - they make things motivating and engaging. (In fact, one of the most respected definitions of a *game* is "the voluntary attempt to overcome unnecessary obstacles"<sup>85</sup>

Fogg himself says that, as you accomplish your tiny habits, your motivation increases because you feel accomplished, which becomes a positive cycle that builds on itself. Eventually doing more push-ups feels easier and you don't require as much motivation to maintain that higher level of activity. This line of thinking is aligned

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<sup>85</sup>Jane McGonigal. *Reality is Broken*. P22. Penguin Group. New York, NY. 2011.

with our understanding of Core Drive 2.

Fogg supports his strategy to focus on *Ability* by saying that, instead of “motivating” people to do what they don’t want to, companies should focus on what people already want to do, and just make that easier.

That makes a great deal of sense. However, from my own design experience, we see that even if a user has the motivation to become healthy, they don’t necessarily have the motivation to use your particular health app. Even if people want to connect with their friends, there is still no incentive for them to share your product with friends unless you design for it. And even if people already want to do great work, they don’t necessarily want to work hard for a micromanaging boss that treats them badly. In these cases, it is more productive to improve how the boss motivates his employees (via methods of appreciation, autonomy, clear purpose, etc.), instead of trying to make their dreadful jobs easier.

Tiny Habits work great for self-improvement goals from the individual standpoint, but it sometimes works less ideally with employee engagement or viral marketing systems. If you just focus on making things easier, users may or may not muster enough motivation to perform new behaviors that you want to create.

The flip side of generating motivation by making things easier is to make things more difficult. From the viewpoint of Core Drive 6: Scarcity & Impatience, we’ve already seen through many examples that when something is too easy, people don’t necessarily appreciate it.

What if you use the “make things easy” strategy for dating? Let’s say you want a certain person to become your significant other (the Desired Action), so you ask the person out (a *Trigger*), but their motivation is still very low at this point because they are just trying to figure out if you are a desirable mate. At this point, if you did everything you could to make it extremely easy for the person to go out with you - being always free at their convenience any day of

the week or sending dozens of texts a day so the person can respond easily (*Trigger* and *Ability* boost) - this would not work out very well according to my own experiences...I mean, my observations. Shhh. Don't laugh.

Sometimes holding back increases the anticipation and suspense, and as a result, creates motivation. The outcome is that despite the increased difficulty of the Desired Action, scarcity creates more of the desired behavior. We have seen in previous chapters that inconveniencing your users or walking away from a deal (if done right), can seriously boost motivation and actions too.

So while Fogg's Behavior Model itself is extremely useful in terms of understanding behavior and its implications, Fogg and I have slightly different conclusions on the actionable steps to improve the process (namely Fogg focuses on the *Ability* aspect of his model, while I focus on the *Motivational* aspect). Of course, I also work on improving the ease of each Desired Action too, and I'm sure Fogg also spends time on improving motivation, but our priorities are different.

With that said, it is true that most products are so complicated and difficult to use they make users feel stupid and demoralize user motivation (Anti Core Drive 2). This is especially an issue during the Onboarding Phase when users don't have enough motivation to commit much energy into figuring things out. As a result, making the activities so easy that they do not need to think hard about the actions to do commit the actions is still a high priority.

In terms of *Motivation*, Fogg states that Motivation is derived from six factors: Seeking Pleasure, Avoiding Pain, Seeking Hope, Avoiding Fear, Seeking Social Acceptance, and Avoiding Social Rejection<sup>86</sup>. This is a mix of Core Drives 2, 4, 5, 7, 8, and the Hidden Core Drive 9: Sensation.<sup>87</sup>

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<sup>86</sup>BJ Fogg. [Behaviormodel.org](http://Behaviormodel.org). "3 core motivators, each with two sides" Accessed 2/17/2015.

<sup>87</sup>As an optional exercise for the diligent Octalysis learner, can you figure out how these Core Drives match with BJ Fogg's motivation components?

For drives like Core Drive 6: Scarcity & Impatience, as well as with the Endowment Effect within Core Drive 4: Ownership & Possession, these are often not explained in other behavioral models. They are mental shortcuts we take in our heads and are academically known as *cognitive biases* and decision-making *heuristics*<sup>88</sup>. There is a list of dozens of heuristics<sup>89</sup>, including Anchoring (everything is relative in my mind), Illusory superiority (I am surely above average), IKEA effect (I value what I built), and Loss Aversion (I wouldn't risk \$10 to earn \$15) that we have discussed in many of the past chapters.

Fogg's six components of motivation plus a list of behavioral heuristics together become a fairly complete view of all our behaviors (though they also may not explain why we would sometimes die for a greater cause - Epic Meaning & Calling). For my own design work, I have preferred to have a general framework that is more inclusive of our psychological Core Drives and how they foster and interact with each other. It's easier to just go with one framework instead of thinking about a list of exceptions when we design for engaging experiences.

Lastly, if we look at the *Trigger* component through Octalysis, that's the role of Feedback Mechanics within the Octalysis Strategy Dashboard (something we will cover in more depth in future writings<sup>90</sup>). Feedback Mechanics allow users to pay attention to what they need to do, often via a received email or text message, user interfaces that show actionable information, or friends that "Like" your new photo on Facebook that prompts you to go back - those are all Triggers delivered by Feedback Mechanics.

All Feedback Mechanics also incorporate various Core Drives of motivation within them, based on what the trigger itself is. Points

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<sup>88</sup>Wikipedia Entry: "[http://en.wikipedia.org/wiki/Heuristics\\_in\\_judgment\\_and\\_decision-making](http://en.wikipedia.org/wiki/Heuristics_in_judgment_and_decision-making)". Accessed 02/17/2015.

<sup>89</sup>Wikipedia Entry: "List of cognitive biases". Accessed 02/17/2015.

<sup>90</sup>Yu-kai Chou. *YukaiChou.com*. "The Strategy Dashboard for Gamification Design". 07/14/2014

at Badges are Core Drive 2 Triggers, Countdown Timers are Core Drive 6 Triggers, Spinning Fortune Wheels are Core Drive 7 Triggers, and Friend-Likes are Core Drive 5 Triggers. When you design for Feedback Mechanics or Triggers, you need to understand whether they are meant to drive the users' curiosity, their sense of accomplishment, their internal social pressure, or other Core Drives - or else the Feedback Mechanics become empty signals that do not trigger towards any Desired Actions.

### Jane McGonigal's Theories

As the final touchstone of this chapter, we will look at Jane McGonigal's theories. Jane McGonigal is a game designer and the author of the book *Reality is Broken*<sup>91</sup>. She's most known for two TED talks on the power of games within the real world.

Jane McGonigal describes the four components behind how games make people better and more resilient: *Epic Meaning*, *Urgent Optimism*, *Blissful Productivity*, and *Social Fabric*.

There are a few components that we can easily match with Octalysis. Epic Meaning of course echoes Core Drive 1: Epic Meaning & Calling - something that makes you feel like you're changing the world. Social Fabric clearly aligns with Core Drive 5: Social Influence & Relatedness, which is about the trusting bond between people taking the same quests.

*Urgent Optimism* is slightly trickier to comprehend through Octalysis Glasses. In *Reality is Broken*, McGonigal defines Urgent Optimism as, "the moment of hope just before our success is real, when we feel inspired to try our hardest and do our best."<sup>92</sup> In my own interpretation, this is the sense where as long as you act immediately, you can accomplish your objective and hit the Win-State. In this sense, a gamer always trusts the game designer to provide a way to win, as long as the gamer is doing the right

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<sup>91</sup>Jane McGonigal. *Reality is Broken*. Penguin Group. New York, NY. 2011.

<sup>92</sup>Ibid. P69.

thing and is taking prompt action towards the obviously designed objectives.

Now with our Octalysis Glasses on, *Urgent Optimism* is generally a combination of Core Drive 2: Develop & Accomplishment as well as Core Drive 6: Scarcity & Impatience. Core Drive 2 is present because the player is optimistic that she is capable of hitting the Win-State and feeling accomplished. On the other hand, Core Drive 6 also comes into play because the player can't wait forever to commit the Desired Action- she has to do it now because it is urgent. Therefore, the White and Black Hat combination of these Left Brain Core Drives leads to a player who is truly engaged.

The last component is *Blissful Productivity*<sup>93</sup>, which was originally coined by a team of computer scientists at the Indiana University that were studying the unusually high stamina of World of Warcraft players. McGonigal defines Blissful Productivity as “the sense of being deeply immersed in work that produces immediate and obvious results.”

From my understand, Blissful Productivity is the sense that you are growing, accumulating, or improving something as you spend more time on it. Sometimes the task itself could seem a bit monotonous, but as long as the player feel like there is progress, the process will generate a sense of bliss and delight within.

Often times this is a combination of Core Drive 2: Development & Accomplishment, Core Drives 3: Empowerment of Creativity & Feedback as well as Core Drive 4: Ownership & Possession. The user is accumulating, growing, or organizing something (Core Drive 4), and is continuously shown feedback on those activities in order to adjust, optimize, and feel accomplished.

As you can see, these four Core Drive packages are great combinations that allow users to deeply enjoy games as well as experiences outside of games. As you progress further into your Octalysis

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<sup>93</sup>Ibid. P53.

Gamification learning journey, you will start to identify and define many more of these Core Drive combinations beyond the four components and pioneer your own work as an experience designer. For instance, we can see from the above analysis that Core Drive 7: Unpredictability & Curiosity isn't very prominent, and we can think about how to add more suspense, surprise, and unpredictability into the experience beyond the four components.

## The World is Your Playground

We all have the same brains, so all the sound studies on our motivation and behavior should have a way to converge with each other. The main point of this chapter is not that Octalysis is superior to any other framework, but at least to me, it can be a very useful tool to help comprehend and navigate the other models in behavioral science, games, and gamification. In my own experience, it is both convenient and rewarding to be able to use one framework to analyze them all and help refine our understanding of behavioral design.

There are obviously many other splendid theories and models on human behavioral out there, but to make this book's length manageable for the reader, we won't be able to flush them all out here.

I highly encourage avid Octalysis Learners who are filled by Core Drive 3 and Core Drive 7 to put on your Octalysis glasses and study Nir Eyal's *Hook Model*, Andrzej Marczewski's *User Types*, or Daniel Kahnemann's *Prospect Theory* and *Four Fold Pattern*. Works by behavioral psychology pioneers such as Dan Ariely, Michael Wu, or Robert Cialdini don't necessarily have graphical models, but you can also understand their research through the 8 Core Drives as well.

With a strong grasp of the Core Drives, you can illuminate the aspects of motivation that other works cover or don't cover and

determine how to best use these other models and frameworks for optimal experience design.

**To get the most out of the book, Choose only  
ONE of the below options to do right now:**

**Medium:** Pick a new model on human behavior (make sure it is related to actions, not necessarily emotions), and try to analyze it with Octalysis Glasses. What 8 Core Drives are present, and what are absent? Based on that, can you draw conclusions on what that particular model specializes in and when best to utilize it?

**Medium:** Try to recite all the models and frameworks covered in this chapter. You will need to take some time going back and forth before fully memorizing them. Can you remember how each is analyzed through Octalysis? Did your knowledge on Octalysis help you understand (hence remember) these models better?

**Hard:** Analyze Nir Eyal's *Hook* Model and try to understand how Octalysis fits into the cycles of *Trigger*, *Action*, *Reward*, and *Investment*. Does each component rely on a few of the 8 Core Drives? (For instance, *Investment* is often using Core Drive 4 to build up the Endowment Effect). Think about how the Core Drives change as we go through each Hook cycle throughout the Discovery, Onboarding, Scaffolding, and Endgame Phases. (For instance, during the Discovery Phase, the Trigger is often an External Trigger from marketing materials built on Core Drive 7. During the Endgame, the Trigger becomes an Internal Trigger, where the user is motivated through Core Drives 4 and 8.) Try to fully immerse your Octalysis understanding into the Hook Model.

Share what you come up with on Twitter or your preferred social network with the hashtag #OctalysisBook and check out what ideas other people have.

## Start Designing

You are getting close to the end of the book, and it is time to start designing your own project. Come up with a project related to Human-Motivation that you want to improve on.

Think about what are the *Quantifiable Metrics* you want to improve. Who are the *Users* you are targeting and what Core Drives motivate them? What are the Desired Actions you need them to perform? What mediums can you communicate with them, show them Feedback Mechanics, and display Triggers? Finally, what are the *Rewards and Incentives* you can provide users?

This together becomes the Octalysis Strategy Dashboard that will be useful in any gamification design campaign. This will be a good foundation for Chapter 17. More information on the Octalysis Strategy Dashboard can be found on my blog at:

<http://www.yukaichou.com/gamification-study/the-strategy-dashboard-for-gamification-design/>