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Coursera - Gamification

- Material
- Assignments
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Material

- Gamification - Notes on Section 01 - What is Gamification?
- Gamification - Notes on Section 02 - Games
- Gamification - Notes on Section 03 - Game Thinking
- Gamification - Notes on Section 04 - Game Elements
- Gamification - Notes on Section 05 - Motivation & Psychology I
- Gamification - Notes on Section 06 - Motivation & Psychology II
- Gamification - Notes on Section 07 - Gamification Design Framework
- Gamification - Notes on Section 08 - Design Choices
- Gamification - Notes on Section 09 - Enterprise Gamification
- Gamification - Notes on Section 10 - Social Impact and Behavior Change
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Assignments

- Gamification - Assignment 1
- Gamification - Assignment 2
- Gamification - Assignment 3

Literature

James P. Carse: Finite and infinite games.
Bernard Suits: The Grasshopper. Games, Life and Utopia.
Johan Huizinga: Homo Ludens.
Jane McGonigal: Reality is broken. Why games make us better and how they can change the world.
Julian Dibbell: Play Money.
Jesse Schell: The art of game design. A book of lenses.
Ralph Koster: A Theory of fun for game design.

Gamification - Assignment 1

Assignment

Definition

You are an employee of Cereals Incorporated, a large manufacturer of breakfast food products. Your supervisor, Madison County, approaches you because she knows you recently took a course on gamification, which she has heard will revolutionize marketing.

She tells you that Cereals Inc. is about to release a new line of ready-to-eat breakfast pastries, and she wants to know whether to use gamification as part of the marketing strategy. The breakfast pastries will be aimed at the 18-35 age bracket. Surveys show members of this demographic often skip breakfast because they don't want to eat the typical cereals of their youth, and they are too active to cook their own breakfasts. Market research indicates that the pastries are likely to appeal more to women than men by a 65%-35% ratio. Cereals Inc. has a 35% share of the overall breakfast food market, but only a 10% share of the fragmented ready-to-eat segment.

Provide as many reasons as you can why gamification could be a useful technique to apply to the situation your manager has presented to you.

Explain why these reasons address the specific scenario provided. At this stage, focus on the problem rather than the solution. In other words, describe the goals of the project, not the particular game elements or other techniques you plan to use. We strongly encourage you to watch this week's lecture segments before attempting this assignment.

Format

Maximum of 300 words. A normal answer will be 1-2 paragraphs of text, and/or a set of bullet points. Your submission should be self-contained (not requiring the grader to view any outside materials) and should provide sufficient details for the grader to understand the basis for your statements. Please remember that you have agreed to the Coursera Honor Code as part of your enrollment for this course. Your submission must be your own work, and not copied from another student or an online resource such as Wikipedia. Graders will be instructed to assign a score of "0" to plagiarized work.

Answer

There is an engagement gap for people in the target group to eat breakfast (time-consuming, "retro", etc.). Gamification can help to engage people in breakfast and make it more fun. Here is a list of reasons why gamification could be useful:

- **The target group is a good fit for gamification**. People playing video games are 30 years in average and 47% of them are women. The target group will thus be open for gamification.
- **Gamification can fill the engagement gap**. It can introduce an element of fun and make breakfast an experience. Just like dodgeball wasn't fun because it was check-ins only, breakfast isn't fun because it's only food. Gamification can add an "experience layer" to breakfast.
- **Gamification can make breakfast a win turn in a game**. While it currently doesn't matter to the target group whether they eat breakfast or not, it will become important to them if breakfast is a game and eating pastry is a win move.
- **Gamification can add a social component to breakfast**. Sharing your game status in an online community makes breakfast a social experience and connects players to one another.
- **Gamification can lead to a real life value**. Points collected could be linked to rewards, adding extra utility to breakfast like a voucher for every 10 pastries one eats. Gamification can lead to a value beyond the game.
- **Gamification can turn breakfast into a habit**. Once the player has been on-boarded into the game, breakfast will become a habit. There's a chance he will still eat pastries once the game is over.

Note: Giving people points for eating pastries is not enough - it's neither a challenge nor diversified. One has to think of a conceptual path for people through the "breakfast game".

Gamification - Assignment 2

Assignment

Motivation

You are approached by Ryan Morrison, the mayor of a medium-sized city in the Midwest of the United States. He has heard that you know a lot about gamification and believes that gamification techniques can transform city government.

He would like to start with the health of city employees. The city has 50,000 employees and they happen to have exactly the same rates of obesity as the U.S. average: 34.4% overweight (but not obese) and 33.9% of them are obese. 53.1% of the city's employees do not meet the U.S. Physical Activity Guidelines for aerobic physical activity and 76% of them fail to meet the Guidelines for muscle-strengthening activity. The city pays for health benefits for its employees and this cost is a huge part of the city budget. Economists in Mayor Morrison's office have estimated that a 3% improvement in the average physical fitness of city employees would amount to a US$94 million reduction in annual city health costs; a 5% improvement would save US$188 million.

Describe in general terms a gamified system that could effectively motivate behavior change to address the challenge presented above. Specifically, explain how the system would effectively incorporate intrinsic motivation, extrinsic motivation, or both. Your answer should address the fact that this is an internal gamification project, targeted at the institutional goals of the city government. The system can use any technology (or no technology!), so long as the resources required seem justified by the scope of the opportunity.

Format

Maximum of 500 words. A normal answer will be 2-3 paragraphs of text, and/or a set of bullet points. Your submission should be self-contained (not requiring the grader to view any outside materials) and should provide sufficient details for the grader to understand the basis for your statements. Please remember that you have agreed to the Coursera Honor Code as part of your enrollment for this course. Your submission must be your own work, and not copied from another student or an online resource such as Wikipedia. Graders will be instructed to assign a score of "0" to plagiarized work.

Answer

Recap

The challenge we're facing is that 53% of the city's employees are physically not active enough which leads to an overweight rate of 34% and high health costs. Our gamified system has to focus on the physically inactive to engage more in physical activities so that they lose weight and health costs decrease.

Description of gamified system

We will create an „acitivity game“ in the city’s intranet portal. The game will allow players to upload avatars and offer communication channels like chat, email and forums. The game takes the player on a journey of being physically active and will remind him that physical activity is fun. He can earn points for participating in activities and mastering challenges. We will also award badges for achievements and feature profiles of players that are successful on the intranet dashboard.

Activities and their relationship to motivation

- A series of talks from celeb speakers during office hours about positive effects of physical activity: Calling on the identification type of extrinsic motivation
- Distribute pedometers for free, rewarding certain daily and total steps and thus physical activity: Establishing a constant feedback loop for desired behavior.
- Sporty employees act as mentors and host sports classes for their co-workers, non-sporty employees can become course leaders once having successfully taken part in classes: Power dimension of SAPS typology, successful players can be instructors.
- Participation in local sports events are subsidized with corporate uniforms: Access dimension of SAPS typology, players get stuff.

Involvement of intrinsic and extrinsic motivators

- The proposed system incorporates both, extrinsic and intrinsic motivators. While the short-term goal is to engage employees in physical activity, the long-term goal is to remind them that sports is fun.
- At first, people won’t feel a strong intrinsic motivation - otherwise they would already be more active. In this stage we make use of extrinsic motivators. As we know that tangible rewards can substitute intrinsic motivation, we will use them little and carefully. The subsidizing of uniforms and permission to lead courses are examples. Free healthy meals in the lunchroom and sports-related “stuff” are further examples.
- After that, we will call on the identification type of extrinsic motivation through a series of talks from celeb speakers.
- Finally, by making taking part in physical activities easy and the activities themselves fun, we will let our employees experience that sports is fun, so that it will become an intrinsic goal for them to be physically active.

The context of internal gamification system

- People will be more motivated to show what they have to co-workers they already know than to strangers.
- We already have a community we can use as a social layer in the game.
- We have an existing intranet portal to build our game upon.
- We can set up game elements like fitness centers and make them available to our eomployees only.
- We know the players and can run surveys upfront to learn what they like and dislike.

Gamification - Assignment 3

Assignment

Design Document

Now that you know the essential concepts about gamification and game design, it's time to use them. For this task, we ask you to bridge this gap as you meld creativity and structure to match peoples' needs with technical feasibility and business realities.

You are approached by Cheyenne Kendrick, the CEO of Go Digital Press (GDP), a global publisher of electronic books for devices such as the Kindle, Nook, and iPad. She knows you are one of the top experts on gamification, which she has heard can revolutionize publishing. She asks you to present a proposal for a gamified system to take her business to the next level.

GDP concentrates on the trade segment of the book market, i.e. non-fiction publications that would traditionally appear in bookstores, rather than mass-market paperbacks. Approximately 50% of its titles are targeted at business professionals; 25% are educational resources on technical topics such as computer programming; and the remainder address a variety of different subjects.

As a pioneer in e-book publishing, GDP faces the challenge that many users, even in the U.S., do not yet own reader devices. As of April 2012,

only 21% of American adults reported that they had read an e-book in the past year, although those numbers are increasing rapidly. Kendrick tells you that another concern is that the device manufacturers and their associated distribution platforms control the sales process, making it difficult for publishers such as GDP to obtain data or develop direct customer relationships. On the positive side, an e-book is a flexible digital asset, which can offer interactive features beyond any physical book. Kendrick asks you to propose a way to gamify the distribution or consumption of e-books, or both.

Provide a detailed description of your proposal, organized according to the design framework described in the lectures in Unit 7:

1. Define business objectives
2. Delineate target behaviors
3. Describe your players
4. Devise activity loops
5. Don't forget the fun!
6. Deploy the appropriate tools

Format

Maximum of 1500 words. A normal answer will have descriptive text, and/or a set of bullet points, for each of the six sections of the design framework. Please remember that you have agreed to the Coursera Honor Code as part of your enrollment for this course. Your submission must be your own work, and not copied from another student or an online resource such as Wikipedia. Graders will be instructed to assign a score of "0" to plagiarized work.

Answer

Goals

GDP publishes ebooks read primarily by business professionals (50%) and students (25%). They are facing the challenge that the market of potential customers is still relatively small, although it is growing rapidly. *Goal number 1* is to convince people that ebooks offer a superior reading experience over paper books, to win them over as long-term customers. GDP also suffers from the fact that they don't have strong relationships with their customers because the distribution plattforms are controlled by the device manufacturers. *Goal number 2* is to build better relationships with the customers.

Here is a proposal to gamify the distribution and consumption process of GDP ebooks by reference to the design framework.

(1) DEFINE BUSINESS OBJECTIVES

1. More people read ebooks: The market for ebooks is still small. The more people we get to read ebooks, the larger the market grows. That will be good for our business as it means more potential customers.
2. People read more ebooks: The more familiar people become with ebooks, the more ebooks they will buy. If reading an ebook is a better experience than reading a paper book, people prefer the one over the other.
3. People spend more time with their ebooks: The more time people spend with their ebooks, the more accustomed they will grow and the deeper a relationship they will develop to their ebooks. That will result in bigger sales.
4. People enjoy the ebook experience: If reading an ebook is an enjoyable experience, people will do it more often. Adding fun elements to the reading experience will make the users like ebooks.
5. People find extra value in reading ebooks: As our main target groups are business professionals and students, features in the ebooks that promote the learning experience will be a big plus.
6. We get feedback from our readers: As we get no data from the device manufacturers, we need our readers to give us feedback directly. The feedback will allow us to make the ebooks experience even better.

Tradeoffs because of conflicting goals:

People buy more ebooks and people pay more for ebooks: As the customer base is small but growing, we don't not make selling more ebooks or raising the prices for our ebooks short-term goals. It is more important for us to convince people that the experience of reading an ebook is superior to that of reading a paper book. We need to win them over as customers. This seems to be particularly important as the market is growing rapidly and people are trying out ebooks. Selling a lot of ebooks for a high price is what we aim for long-term. Short-term, it is more important to make people realize what ebooks can do for them.

(2) DELINEATE TARGET BEHAVIOR

1. We want readers to download a lot of GDP ebooks. To support this behavior we will award badges for a certain number of downloads (1, 5, 10, 25, 50, etc.). For now, free downloads will also count against the goals because engagement is our primary goal.
2. As we want to grow our customer base, we need our existing customers to go viral and beat the drum for us. Here are three viral elements which can be gamified:
    a. We want our readers to tell their friends when having downloaded an ebook. Whenever someone downloads a new ebook and tells his friends about it on facebook or twitter, he will receive a rewards badge. For every two rewards

badges, he can download an ebook from a selected range for free.
    b. We want our readers to share copies of downloaded ebooks with friends. When somene has downloaded an ebook, he can give us the email adress of a friend to whom we will send a link that allows to download a free copy of the ebook he has bought. For every free copy given away, the user receives karma points.
    c. We want our readers to give away vouchers to friends. Karma points can also be earned when giving away gift vouchers to friends. Personalized vouchers can be bought in our web shop, with every purchase, karma points are added to one's profile.
3. We want our readers to like reading our ebooks. As business and educational books are often demanding, we will give our readers positive feedback when they finish a chapter. We will tell them how many pages they have read, how many more are to go, and we will give them a proverbial clap on the back by acknowledging their hard work. "Well done. You have finished the first chapter (24 pages). Now let's move on to chapter two (19 pages). Keep moving!"
4. We want our readers to discuss ebooks. We will allow readers to post questions on ebooks in a forum in our web portal. The posts can be sent from the e-reader (if technically possible) and the forum can be accessed via a mobile app. People who have bought the same ebook title can receive questions on those titles via email (if they have opted in). Answering questions will give you karma points.
5. We want our readers to give us feedback. Karma points will also be awarded to users who give us feedback via a small survey. If users let us talk to them in an 15 minute interview regarding their e-reading experience, they will receive a big karma points plus a coupon for a free download.

Tradeoffs because of technical restrictions:

We want our readers to spend time reading ebooks. This is a valuable goal, but we will not be able to track it due to technical restrictions (reading takes place third party apps).

Analytics we plan to measure:

- Level of usage (number of downloads, number of registered user, unique buyers)
- Engagement (number of questions asked, number of answers posted, number of chapters read)
- Virality (number of shares on facebook and twitter, number of free copies given away, number of coupons sold)

(3) DESCRIBE YOUR PLAYERS

The most important part of the player description is to explain the motivation of players. We have to find out more about our players through market research, for now here is our best guess:

- Our readers are motivated by gaining knowledge in their respective areas through reading our titles. They consider themselves experts and want to stay at the pulse of what is happening in their field.
- In Bartle's player type model, most of them will either be achievers (acting in their world, collecting knowledge) or explorers (interacting with their world, looking for useful information). Some of them might be socializers, interested in discussing the content of ebooks.
- Using the approach Amy Jo Kim recommends, our readers are motivated by exploring our book shelves and expressing themselves better by what they have learned.

(4) DEVISE ACTIVITY LOOPS

Progression Loops:

The progression loop consists of awarding badges for downloads and making it harder to earn those badges the more you have downloaded. The ultimate goal are hardcore user badges for huge download numbers.

Our karma points are progression loops, too. While badges for downloads are simple, karma points are more sophisticated. They address the characteristics of intrinsic motivation, i.e. competence, autonomy and relatedness. Readers do good when sharing their purchases; they can choose freely to take part in an interview; and they need skills to answer questions from other users in the forums. Karma points are our equivalent to points in Stack Overflow.

Engagements Loops:

As for engagement loops, end of chapter cheers, free copies of downloads and download badges were already mentioned. An idea for another engagement loop is a goodbye note when the ebook is closed and applause when a book is finished.

(5) DON'T FORGET THE FUN

Only time will tell if readers find our gamification system fun. We do our best by incorporating several categories of fun: Winning (reward badges), recognition (download badges), collecting (karma points) and sharing as well as teamwork (discussion forums). We might want to add an element of surprise by awarding unknown badges for good answers in the forum.

As the very core of our business is hard fun (reading professional texts), we will add some people fun (sharing, vouchers, forums) and easy fun (end of chapter cheers, finish applause) to balance things out.

(6) DEPLOY THE APPROPRIATE TOOLS

The tools we find appropriate for the first round of gamification in our system have been described above. Here is a summary to wrap things up and visualize the gamified system:

- Website with general information about the GDP ebook experience, an overview of purchased titles, badges and karma points overview, and discussion forums
- Mobile app with the same content
- Badges for downloads (different in style depending on the number of total downloads)
- Free give-away copies of purchased ebooks
- Reward badges for facebook and twitter posts
- Karma points for social behavior (making presents, answering questions, giving feedback)
- Immediate feedback (end of chapter cheers, end of book applause, end of session respect)

Gamification - Notes on Section 01 - What is Gamification?

DEFINITION OF GAMIFICATION

- Definition of gamification: The use of game elements and game design techniques in non-game contexts.
- Game elements: Design patterns that make up a game, e.g. points, levels, resources, quests, avatars, social graph, rewards, etc. You can pull those elements out and reuse them.
- Game design techniques: There is more to games than their sole elements. Games are designed thoughtfully to be a fun experience.
- Non-game context: The objective is not success in the game, the impact has a validity independent from the game.

WHY STUDY GAMIFICATION

- Gamification is an emerging business practice, used by lots of big companies in a work context.
- Games are powerful things. People are engaging with games and spend a lot of time playing them.
- Lessons from psychology, design, strategy, technology can be derived from games. Understanding how games work requires to look into other disciplines.
- Constructing a good game is harder than it appears. To make a game work, it needs to be thoughtfully constructed, which is not a trivial task.

HISTORY OF GAMIFICATION

- Cracker Jack put a toy surprise in every box ca. 100 years ago.
- 1980: Robert Bartle, MUD
- 1980: Thomas Monroe, What Makes Things Fun to Learn
- 2002: Serious Games Initiative - Building a simulation for a particular real world purpose (military, academia, private sector)
- 2002: Games for Change - System learning to understand the complexity of issues
- 2003: Conundra, Gamification consultancy
- 2007: Bunchball, Gamification offers
- 2010: Gamification takes off
    - The description of a gamified world in a famous talk is uploaded to Youtube (Jesse Shell).
    - Jane McGonigal, Reality Is Broken, how game elements can be used to save the world, TED talk
- Today, gamification has been widely adopted by big companies (50-75%) and is listed in the Gartner Hype Cycle.

EXAMPLES AND CATEGORIES

- Three different contexts for gamification: External, Internal, Behavior change
- Examples for gamification:
    - (a) Club Psych
    - (b) Windows Language Quality Game
    - (c) Speed Camera Lottery in Stockholm, Sweden (average speed decreased from 32 to 25 km/h)
- Gamification can motivate and encompasses many techniques

Gamification - Notes on Section 02 - Games

GAMIFICATION IN CONTEXT

- Gamification is not:
    - Making everything a game - it means using game elements in real world challenges
    - Playing at work without a work related context
    - The use of games in a business context if it's not integrated into the business process itself

    - Simulations of real life situations
    - Just marketing and PBL (Points, Badges, Leaderboard)
    - Game Theory
- Gamification is:
    - Listening to games
    - Learning from game design and the underlying disciplines
    - Appreciating fun
    - Deterding: Gamification Matrix (whole/partial vs. play/games), Gamification are partial games.

WHAT IS A GAME

- Ludwig Wittgenstein: Games cannot be defined.
- Bernard Suits: A game has three defining criteria, (a) a pre-lusory goal, (b) constitutive rules, (c) a lusory attitude. Players voluntarily overcome unnecessary obstacles.
- *"Players voluntarily follow the rules because they have the attitude that the game means something."*
- Johann Huizinga: Homo Ludens. The game takes place in a magic circle, the real world is outside. In the game, the rules of the real world don't count, the rules of the game do.
- *"The challenge for gamification is to put the player as much as possible in the magic circle. If they feel like the game matters, they will be motivated to play and respond to the incentives."*

GAMES AND PLAY

- Roger Callois, Paidia vs. Ludus
- Play: Aimless expenditure of exuberant energy. Spontaneously and for its own sake. Free movement within a rigid structure.
- Games: Closed, formal systems. Series of meaningful choices. Interpretable outcomes. A problem solving activity with a playful attitude.
- Play List: Exploration of new plugins. Brainstormings for current problems. Reading classes.
- Games List: Quarterly target agreements. Scrum sprints. Pomodoro sessions.
- Takeaways for gamification: voluntariness, learning and problem solving, balance of structure and exploration.
- *"Whoever must play, cannot play."*

VIDEO GAMES

- 1972, Pong. The first digital game that let one interact with a computer.
- *"Video games have developed a sophisticated language of how to entertain and engage people."*
- 2011, Cityville (Zynga), 100M users after 41 days.
- Memorable: Fantastic worlds with a whole universe of stories and history. Taking on an alter ego.
- Coming back: Points and highscores. Getting better and better. Competition with friends.
- Differentiation: Extraordinary things not possible in real life. Special effects.
- Video game industry: 66B USD revenue in 2011 (twice as big as Hollywood). Online sales to surpass retail in 2013. Virtual goods make 7B USD in revenue. 44% of US adults have played mobile games.
- True mass medium: A lot of people spend a lot of interactive time with video games, e.g. 50B minutes from 10K users per month for WOW.
- 97% of kids play video games, average age is 30, 47% are women.
- Not just blowing up stuff: Sandbox, building, social building, puzzle.
- *"Games are diverse, they are about different forms of interaction, individually and socially."*

JUST A GAME

- Video games are built on real world business trends:
    - Digitally, in regards to analytics, cloud, mobile as well as social media.
    - Non digitally, in regards to loyalty programs, management research and marketing research.
- Games get real:
    - The reality is turned into a game, America's Army, the most successful recruiting tool in Army history.
    - Games are turned into reality, Gold Farming, digital goods are farmed and sold on WOW, 400M people in China make a living out of it.
- Games were always real: Sales competitions are challenges, Frequent flyer programs are levelling, Weight watchers are groups, Free coffees at Starbucks are rewards, AMEX platinum is a badge.
- *"Gamification is using and applying familiar game concepts with the power of digital technologies."*

Gamification - Notes on Section 03 - Game Thinking

WHY GAMIFY?

- The case of dodgeball, checkin app for bars.
- Chicken and egg problem, no one will check in if no one has checked in.
- Dodgeball was bought by Google, but not further developed. Dennis Crowley, the founder, left Google and built Foursquare.
- What can gamification do for Dodgeball:

        - Engagement gap: It wasn't fun using the app, so there was no motivation to engage
        - No choics: It was either check in or not check in, the app left the user no choices to be made on his own.
        - No progression: Checkins didn't lead to any form of progression, checking in the hundredth time was like checking in the first time.
        - Social: It let you interact with friends, social interaction is powerfully tied to games because people love to compete and collaborate with each other.
        - Habit: Making checking in a natural thing to do, something one has learned to do, one is more likely to do in the future.
- What did Foursquare do:
    - Mayorships: Competition to check in because you are rewarded with a mayorship and can compete with others for this position.
    - Badges: Checking in a certain number of times or to specific locations gives you badges, honoring your engagement.
    - Points: You were given points for different activities.
    - Levels: Users were put on a level depending on their activity on Foursquare.

THINK LIKE A GAME DESIGNER

- "*I am a game designer.*" It reminds us that game design is a state of mind, and that game design comes to us in a natural way.
- "*Different than actually being a game designer.*" One doesn't need the technical skills of an actual games designer, just the mind set and the approach.
- "*Different than thinking like a gamer.*" Playing a game is not thinking about the structure of the game. But structure and framework is what needs to be put together when creating a game.
- Think of your target population as players.
- The player needs to be the center of the game, he needs to feel a sense of control, he must have the chance to really play.
- First, get your plaers playing. Second, make your players keep playing.

DESIGN RULES

1. The player journey: The conceptual path the player follows through the game, with a beginning, middle and end, with a certain progression.
    a. Onboarding: Get the player involved fast.
    b. Scaffolding: Help the user to not get stuck in complexity.
    c. Pathways to mastery: Allow the player to train and get better.
2. Balance: A sense of competition that either player can win, at every stage throughout the game.
3. Create an experience: Make the player feel like he is in a particular kind of world that means something.

TAPPING THE EMOTIONS

- What makes games engaging? They are fun!
- "*In every job that must be done, there is an element of fun. You find the fun and snap - the job's a game.*"
- Categories of fun:
    - Winning
    - Problem-solving and overcoming obstacles
    - Exploring
    - Chilling out
    - Teamwork
    - Recognition
    - Triumphing
    - Collecting
    - Surprise
    - Imagination
    - Sharing
    - Role playing
    - Customization
    - Goofing off

ANATOMY OF FUN

- Nicole Lazzaro's four keys of fun:
    - Easy fun: The bubble wrap of game design
    - Hard fun: Opportunity for challenge
    - People fun: Engaging with others
    - Serious fun: Meaningful in a serious way
- Marc Leblanc's eicght different kinds of fun: Sensation, fantasy, narrative, challenge, fellowship, discovery, expression, submission
- "*Fun doesn't just happen, it has to be designed.*"
- "*Fun isn't always easy, fun isn't always simple, fun isn't always happy - it can be hard, serious and challenging.*"
- "*There is not one kind of fun. Fun is a very nuanced concept.*"

FINDING THE FUN

- http://thefuntheory.com
- The profile completeness bar at Linkedin makes people enter 20% more data.
- Feedback, progression, completion
- "*Gamification is about finding the fun, finding the game-like aspects and using them to create an environment that moves people towards an objective.*"

Gamification - Notes on Section 04 - Game Elements

BREAKING GAMES DOWN

- Every game has a certain set of game elements.
- Game elements of Tic, Tac, Toe: Board, Tokens, Players, Competition, Turns, Win and Draw States, No progression or scoring
- "When you are doing game design, what you control is the game and what you create is an experience."
- "The game is the gestalt, the game elements are the specific pieces."

THE PYRAMID OF ELEMENTS

- A framework for gamification elements: Components, Mechanics, Dynamics
- Dynamics:
    - The grammar of the game
    - The big-picture aspects
    - Constraints, emotions, narrative, progression, relationships
- Mechanics:
    - The verbs of the game
    - The processes that drive the action forward
    - Challenges, chance, competition, cooperation, feedback, resource acquisition, rewards, transactions, turns, wins
- Components:
    - The nouns of the game
    - Specific instantiations of mechanics and dynamics
    - Achievements, avatars, badges, boss fights, collections, combat, content unlocking, gifting, leaderboards, levels, points, quests, social graph, teams, virtual goods
- Around those elements is the experience; the whole that is greater than its parts.
- A critical part of the experience is the aesthetics of the game.
- Lessons from the pyramid: Variety of options, lower levels implement one or more higher level concepts

THE PBL TRIAD

- Points, Badges, Leaderboards
- "*There is a fundamental attraction to using PBL, because they serve a variety of different functions.*"
- The point of points: Keeping score, determining win states, connecting to rewards, providing feedback, diaplaing progress, data, fungible
- The point of badges: Representations of achievement, flexible, style, signaling of importance, credentials, collections, status symbols
- The point of leaderboards: Feedback on competition, personalized leaderboards e.g. friend-relative,
- Leaderboards can be dangerous for the success of a game because they demotivate.
- http://openbadges.org

LIMITATIONS OF ELEMENTS

- "People don't think of frequent flyer miles as a game. Except for a very small subset of hardcore flyers who do everything they can to optimize their mileage status. Those people are players."
- The elements are not the game. The game is the thing inbetween the exprience and the elements.
- Game elements are service level components.
- Not all rewards are fun; not all fun is rewarding.
- Cookie cutter: PBL look very similar everywhere and people can get bored of it.
- "Game elements are important to start the path of gamification, but you can't stop there."

Gamification - Notes on Section 05 - Motivation & Psychology I

MOTIVATIONAL DESIGN

- To be motivated = to be moved to do something
- "*Motivation is complicated. People are complicated. We are all motivated by many different things.*"
- "*We don't need no stinking badges. Well, some guys need stinking badges.*"

- Apple is the highest grossing retail store in the entire United States. Why? Because they motivate their clients to hang around their stores, explore their products, and thus buy them at the end of the day.
- The lesson is: Think about different ways to motivate your users.

BEHAVIORISM

- Behaviorism looks externally at what people do.
- Because we can't know what people feel, we restrict ourselves to look at what we can see from the outside.
- The person is a black box - we can measure what goes in and what comes out, but we don't know what happens inside.
- The basic notion of behaviorism involves two thing, stimulus and response.
- There are two different principles in behaviorism:
    - (1) Classical conditioning: Pavlov, stimulus leads to response
    - (2) Opperant conditioning: Skinner, stimulus leads to response, which is learned so that the stimulus can consciously be activated.
- Behavioral Economics: Kahnemann, Tversky, Arielly, Failor
- In reality, people don't always conform to abstract economic theories. So, let's look at what people actually do.
- People make mistakes consistently: Loss aversion, power of defaults, confirmation bias
- Learnings from Behaviorism: Observation, feedback loops, reinforcement

BEHAVIORISM IN GAMIFICATION

- Watch what people do. People act differently than they are supposed to according to theory.
- Importance of feedback. tell people where they are and where they can go in small, qunatafiable chunks.
- Conditioning through consequences. If consequences for a certain behavior are introduces, people develop an "appointment mechanic" and do something as a matter of habit.
- Reinforcement through rewards.
- The dopamine system. Getting a reward is like a shot of a drug, dopamine is released as an effect to certain game mechanic.

REWARD STRUCTURES

- There are a lot of different rewards and a lot of different things that can be rewarded.
- There are two aspects in rewards:
    - (1) What is the intension of the game designer, what does he want the player to do?
    - (2) What behavior gives the player a set of meaningful choices and makes the game more engaging?
- What different categories of awards are there? Ryan and Dessy have developed a typology of awards:
    - Tangible vs. intangible rewards
    - Expected vs. unexpected rewards - unexpected rewards are cooler to the brain
    - Contingency of rewards: non-cotingent (automatically), contingent upon engagement (starting to do something), contingent upon completion (completing something), contingent upon performance (doing something well)
- Cruise badge on Samsung Nation: Intangible, unexpected, engagement-contingent
- Quest badge on Samsung Nation: Intangible, expected, completion-contingent
- Rewards can be hybrid, asking the user to do various things.
- "*Think about the different possibilities and come up with the rewards that are most effective for the players.*"

REWARD SCHEDULES

- Behavioral studies suggest that rewards schedules have significant implications for the psychological reaction that the rewards produce.
- There are three different reward schedules:
    - (1) Continuous rewards. Of the least interest for gamification, tends to not feel like a reward but just as a reminder that you are playing.
    - (2) Fixed ratio (activity) or fixed interval (time) rewards. Has some psychological value and can make things easier in gamification, but the brain picks up on the pattern and that ultimately dulls the psychological impact of the reward.
    - (3) Variable rewards. The most interesting for gamification because based on the way our brains have been evolved, we tend to respond powerfully to unexpected and to variable schedule.
- "*Our brains are really good at encouraging us to take a closer look at things that are somehow different.*"
- Dimensions of variability in rewards: competitive vs. non-competitive, certain vs. uncertain.
- "*What makes the one-armed bandit work is the variable reward schedule: you never know when a reward is going to come up.*"

Gamification - Notes on Section 06 - Motivation & Psychology II

LIMITS OF BEHAVIORISM

- There are serious limitations and blind spots to the behaviorist approach and we need to understand them in order to have a full picture of gamification.
- To answer the question why people do something, we have to go beyond behaviorism. We need to know what people think and feel to

understand what is actually motivating them to act in a certain way.
- The notion of modifying people's behavior through these constructed systems of reward or punishment based on learning from feedback scared people and got associated with things like socialism and fascism that were trying to manipulate and change people's behavior in ways that people didn't want.
- If you take a purely behaviorist approach you tend to focus on the person involved as a black box, not as a human being.
- "*Remember, game thinking is about empowering the person as a player. They are the center of the action.*"

DANGERS OF BEHAVIORISM

- The behaviorist approach has potential for abuse and manipulation.
- If we can design systems that are optimized to addict people, we should not do it as an ethical matter. "*Don't see everything like a casino owner.*"
- Hedonic Treadmill:
    - Monkey-Grapejuice-Tone Experiment
    - Once you start focusing on giving people rewards in order to give them pleasure, it can create a feedback loop leading to people only responding when the reward is there.
    - The designer then needs to keep putting in more rewards to keep people interested which puts a significant burden on the gamification designer.
    - "*The dopamine system doesn't give pleasure for rewards, it gives pleasure for the anticipation of rewards.*"
- The behaviorist approach in gamification has a tendency to reduce down to a heavy status focus which leads to missing some of the other kinds of benefits that can be delivered from a gamified system.
    - Everyone isn't Tom Stuker!
    - "*There's no way I'm going to put so much energy into flying, even if I think there's status value.*"
    - "*We're not all constantly looking for people to think that we're cool in every walk of life. We do things for lots of other reasons.*"

INTRINSIC AND EXTRINSIVC MOTIVATION

- Cognitivism: Opening up the black box and figuring out what is motivating people to act in a certain way.
- Different kinds of motivation: Intrinsic vs. Extrinsic.
    - Intrinsic: Doing a thing for its own sake because it's engaging, enjoyable, fun. "I'm doing it because I want to do it. I'm focusing on the thing, not the consequences."
    - Extrinsic: Doing something for a reward, a reason other than the thing itself.
- SAPS: Status, Access, Power, Stuff (Zichermann)
    - Status: We do something because we think others find it cool.
    - Access: Getting access to things other people don't have.
    - Power: You're enabled to do certain things as a result of your action.
    - Stuff: Tangible rewards that you actually get.
- The items in SAPS are in a hierarchical order.
    - The farther up, the cheaper.
    - The farther up, the more powerful. (Controversial)
- Where a motivator fits in (intrinsic or extrinsic) depends on the specific context.

HOW REWARDS CAN DEMOTIVATE

- Rewards as extrinsic motivators can crowd out the intrinsic motivation that is already there.
- Substitution Effect: The reward substitutes for the intrinsic motivation.
- Studies confirm the substitution effect over and over again: drawing, day care pickup, blood donation, teacher salaries.
- Substitution effects are generally focused on interesting tasks.
- Reward types do matter in the substitution effect:
    - Tangible rewards lead to a significant effect.
    - Unexpected rewards lead to almost no effect.
    - Performance-contingent rewards can go both ways.
- *"We need to focus on the underlying theory that explains why certain kinds of extrinsic motivators work and what kinds of things lead to intrinsic motivation."*

SELF DETERMINATION THEORY

- Ed Deci and Richard Ryan developed the basis for the self determination theory in the 1970's.
- Spectrum of motivational types in the self determination theory: "Amotivation" > Extrinsic Motivation > Intrinsic Motivation
- Different kinds of extrinsic motivation:
    - External Regulation: you do it because somebody tells you to do it.
    - Introjection: you take an external motivator and make it your own.
    - Identification: Seeing value in the external motivator and accepting it as your own.
    - Integration: Complete alignment between my goals and the thing.
- The question for gamification is: How to utilize the different kinds of motivation for the specific situation?
- Three characteristics of intrinsic motivation: Competence (skill), autonomy (choice), relatedness (meaning and purpose).
- Every gamification implementation should be based on some attempt to engage these aspects of intrinsic motivation.

Gamification - Notes on Section 07 - Gamification Design Framework

THE DESIGN PROCESS

- Design is a process of attacking a problem, a general approach to addressing challenges.
- The term was first used by Roger Martin from the Business School at the University of Toronto.
- What does design actually mean?
    - It is purposive, it has a goal.
    - It is human centered, designed around real people with real lives, who want to reach objectives and who are going to encounter this designed artifact.
    - It has a balance of analytics and creativity, so called "abductive reasoning" (inference from insufficient information, starting with the best explanation we've got and making an inference from there).
    - It is iterative, doing the same thing multiple times but improving over time ("*we're not going to get it right the first time*")
- 6-step process for implementing gamified systems (Design Thinking Framework - D6)
    - (1) Define your business objectives
    - (2) Delineate target behaviors
    - (3) Describe your players
    - (4) Devise activity loops
    - (5) Don't forget the fun
    - (6) Deploy the appropriate tools

DEFINE YOUR BUSINESS OBJECTIVES

- Business objectives can be just about anything; it's the goals that you want your gamified system to accomplish.
- The steps in the gamified system are just stepping stones to something else.
- *"Badges are only valuable if they are part of a process that gets more people to buy your product."*
- How to you catalogue business goals for a gamified system:
    - Make a list of all business goals.
    - Rank the list and think about tradeoffs for conflicting goals.
    - Cut out the ones that are not really your business objectives.
    - Justify each of the remaining objectives and come up with a short explanation about why it's your objective.
- By doing this process, you'll start to see some of the dependencies and interrelationships.

DELINEATE TARGET BEHAVIORS

- Target behaviors are the things you want your users to do.
- Be as specific as possible about why you are trying to gamify something.
- Figure out what the success metrics are. (What will tell you whether the project was a success?)
- Define the analytics you need to measure:
    - Daily Active User / Monthly Active User (DAU/MAU)
    - Virality (ratio of to referals)
    - Virtual Economy (level of usage, interaction, and engagement)

DESCRIBE YOUR PLAYERS

- Who are these people who are playing your game, what do you know about them?
- Demographics and psychographics (behavior and mental models) are a good starting point.
- The real important aspect to learn in describing your players understanding what motivates them.
- Richard Bartle has developed a typology of players, "Bartle MMOG Player Type Model"
- You can find these four categories in pretty much any kind of situation that gamification would apply to.
- It is set up as a two-times-two matrix (player vs. world and acting vs. interacting).
    - Achiever (acting in the world)
    - Explorer (interacting with the world)
    - Socializer (inteacting with other players)
    - Killer (acting on other people)
- *"We are not born into one of these quadrants, we even go back and forth during a game."*

DEVISE ACTIVITY LOOPS

- Every game will have loops, structures that are repetitive but also branching off in different directions.
- There are two kinds of activity loops in games: Engagement Loops and Progression Loops.
- (1) Engagement Loop:
    - Operate at the micro level of individual user actions.
    - The constant process of first motivators appearing.

    - Motivation to do something > Taking action and doing it > Getting feedback from the system
- (2) Progression Loop:
    - Operate at the macro level, broader structures of activity throughout the course of the game.
    - Typically a series of smaller challenges that are part of a larger challenge.
    - The user experiences the ease of the individual steps and has a sense of the ultimate goal.
    - This is a representation of the player journey, the development from novice to master.

DON'T FORGET THE FUN

- It turns out that when people start building a gamified system, they often lose sight of fun.
- Keep in mind that fun is important.
- Good example: fitocracy.com

DEPLOY THE APPROPRIATE TOOLS

- The final step in the design process is to deploy.
- The key in deploying is to use the right tools.
- There is a richness in the palette that a gamification designer has to work with.
- PBL style gamification examples are real and can be successful, but there's a lot more possible beyond that.

Gamification - Notes on Section 08 - Design Choices

TAKING STOCK

- There are two different kinds of gamification, two different things people mean when they use the word gamification.
- The best way to divide the two is to ask: Is a slot machine a game?
- Two different approaches about what is a game: Doing vs. feeling.
- (1) Doing:
    - Marketing and Economics
    - Incentives
    - Satisfying needs
    - Game elements
    - Status
    - PBL
    - Rewards
    - Making users do things
- (2) Feeling:
    - Game design and cognitive psychology
    - Experiences
    - Fun
    - Game thinking (deductive)
    - Meaning
    - Puzzles
    - Progression
    - Making players awesome
- Werbach: *"I am much more comfortable with the Feeling camp."*
- But: There are lots of great examples of the Doing based approach getting valuable results in gamified systems.
- *"It is important to be aware of the two approaches and be aware of where they come together and where they diverge."*

IS GAMIFICATION RIGHT FOR ME?

- You should answer four questions to figure out whether gamification is right in a specific situation:
    - (1) Motivation: Where would you derive value from encouraging behavior?
    - (2) Meaningful choices: Are your target activities sufficiently interesting?
    - (3) Structure: Can the desired behaviors be modeled through algorithms?
    - (4) Potential conflicts: Can the game avoid tension with other motivational structures?
- If you think about all four of these questions and come up with good answers, you can be confident that gamification is a worthwhile approach to tackle a particular business business perspective.

DESIGN FOR COLLECTIVE GOODS

- Stack Overflow - Part of a larger group of sites called Stack Exchange.
    - Question and answer site for programmers where you can go to ask questions about how to write software or problems you're having with your code.
    - Over 2M registered users, over 5,000 new questions per day, over 10,000 new answers per day.

    - *"Obviously, they've been able to motivate people to engage."*
- Approach:
    - How do we think about the problem in a way that makes the people feel like they want to do it themselves?
    - Implement a system that is reflective of their community. Know your players. Meaning is socially constructed in communities.
- "Stack Overflow is my personal Counterstrike."
    - Structured around groups coming together and having to fight as a team.
    - The idea is, helping fellow programmers is the way you win the game.
    - The gamified system in Stack Overflow is structured relentlessly to incentivize pro-social behavior.
- Some of the ways that Stack Overflow structures its game elements to produce a Counterstrike like result:
    - Points in the system are actually called reputation and the primary way you get points is when fellow users vote up your questions and answers.
    - Not for your actions but for other people saying you did a good job.
    - Not individual achievement are rewarded but things that serve the collective good.
- Badges are about doing things: Edit 100 posts, Vote 300 times, Leave 10 comments, etc. - all social behavior.
- *"Editing a post is the thing that's most beneficial in terms of improving the quality of the site collectively, but the thing that people are least likely to do on their own. So, use a badge to encourage people to do it."*
- All of these are different ways of incentivizing the very things that are in the interests of the site, in the interests of the group as opposed to just incentivizing the things that make people feel individually cool.
- *"Try to find things that are meaningful and fun for people. But also try to find ways to have the gamification elements push towards cooperation, collaboration and larger good, larger purpose."*

DESIGNING FOR HAPPINESS

- How can gamification be applied in a way that makes people happy?
- Positive psychology: Look at what makes people happy and fulfilled.
- Much of the research on positive psychology is very relevant to understanding the implication of games and gamification.
- Framework for human flourishing which he calls PERMA:
    - Positive emotions
    - Engagement
    - Relationships
    - Meaning
    - Achievement
- According to Seligman these are the the five core aspects of being a fulfilled, flourishing individual. Not just happy in a kind of light short term sense, but truly successful as an individual.
- All five elements are tied into the core elements of games - that's the high level way that gamification and games can actually promote human flourishing.
- Flow:
    - The idea of flow is that there's a state that we sometimes get into where we are so engaged in what we are doing.
    - It's something that happens organically when an activity has certain characteristics that are at a sufficient level for that individual.
    - If the activity is too difficult, it creates anxiety. If it's too easy, we get bored. In the middle is the flow channel.
- Conditions for Flow:
    - Clear goals
    - Balance between perceived challenges and perceived skills
    - Clear and immediate feedback

AMY JO KIM INTERVIEW

- Alternative to Richard Bartle's player typology should, two-times-two matrix (content vs. players and acting vs. interacting):
    - To express (acting with content)
    - To compete (acting with players)
    - To collaborate (interacting with players)
    - To explore (interacting with content)
- Traditional definition of game: A system in which players engage in an artificial conflict, defined by rules, that results in a quantafiable outcome.
    - Zero-sum games: We are opponents - I win, you lose.
    - Head to head battles, war simulations, rank-ordered competitions, gambling
- Alternative definition of game: A structured experience with rules and goals that's fun to play.
    - Non zero-sum games: We are partners - win-win, lose-lose
    - Playground games, party games, martials arts, charity walk
- Mistakes of people from the web world in designing gamification systems:
    - The gaming experiences changes over time.
    - Skill and commitment are increasing, so the game has to change.
    - Three stages of newbie, regular and expert need to be addressed.

Gamification - Notes on Section 09 - Enterprise Gamification

ENTERPRISE APPLICATIONS

- Many major enterprises are starting to experiment with gamification and to apply it in

specific situations.
- Constellation Research put out a report in 2011 where they talked to 55 different early adopters of enterprise gamification and found a wide range of different kinds of uses within the enterprise.
- Here are some of the highlights:
    - Online collaboration systems that companies operate for their employees, game elements are used to encourage people to contribute (SAP).
    - Productivity enhancement, game elements to produce motivation and provide information and feedback to improve job performance (Arcarus).
    - Efficiency enhancement via Email Game to allow people to do their work efficiently (Baden). Also, virtual currency around emails with tokens having to be attached to emails (Seriosity).
    - Profiles to let people know who can do what in the company (Deloitte).
- Other uses of internal gamification:
    - Onboarding, gamification to get people up and running at a company.
    - Acculturation, getting people engaged in the culture of the enterprise.
    - Performance review and employee recognition, telling people you did a great job in the enterprise.
    - T&E (travel and entertainment), fixed amount of money for travel that can be traded.
    - Innovation, encourage employees to come up with great new ideas.

Workplace Motivation

- Usually there is extrinsic motivation in a job (compensation like paycheck, bonuses, rewards, praise, etc.).
- Gamification can activate intrinsic motivators to make you want to be good in your job.
    - Skill development to broaden your horizon
    - Information to know how you are doing
    - Corporate citizenship to feel like you're doing something good for your company
    - Fun to learn about your company
- On the other hand, gamification can crowd out intrinsic motivators.

The Game vs. The Job

- There is a dividing line in enterprise gamification between the game on one side and the job on the other.
- If you're designing a gamified system in the enterprise, what you care about is the job.
    - The goal is to motivate employees to do something that's a business benefit.
    - But for the employees, they may well be focused on the game.
    - Call center example: if employees get points for finishing off clients fast, customer service quality will suffer.
- The structures of the gamified system have to be designed to motivate towards business goals.
- *"It's important to focus on the job otherwise people will optimize themselves on the game."*
- Sometimes people are motivated at work for things outside the job in a good way, and that refers to corporate citizenship.
- Situations where people will do things at work just to be nice to colleagues or to be good for the company.
- There are three ways of corporate citizenship:
    - Consciousness: People will work hard, because they take pride in what they do
    - Civic Virtue: People care about doing their part for the community even though it's a business community
    - Common Courtesy: People like being fair to others

- Ross Smith from Microsoft has developed a framework to understand which applications lend themselves well to this approach.
    - Two different kinds of tasks, three different kinds of skills.
    - Tasks: In-Role (job description) and Citizenship (good employee)
    - Skills: Core (everyone), Unique (some), Future (not yet)

- Productivity games in the workplace are best used in just two of the sections in the matrix:
    - Citizenship / Core: Anyone can participate and it does something good.
    - In Role / Future: You can develop yourself in your specific job
    - Two big categories of gamification application to the workplace: One involves groups, the other involves individuals.

	Core	Unique	Future

In-Role			✓
Citizenship	✓		

PLAYBOR

- Playbor (play and labor): If it's play and work at the same time, what is it? What about someone who is forced to play a game at work?
    - Checkout cashiers at Target
    - Electronic whip at Disneyland Hotels
- Part of what makes something intrinsically motivating is when the person feels autonomy. If the feedback they get doesn't promote autonomy, it's perceived as controlling. And then it actually can demotivate.
- *"It's important to think about how can gamified systems in the enterprise be designed to promote the beneficial aspects of gamification but not lead to this kind of lord of the flies, all against all competition."*
- How do companies avoid that and still get the benefits that we've talked about from gamification in the enterprise?
    - The answer lies in the extent to which the system is voluntary and transparent.
    - *"Beyond that, I leave it you to think about this question but it's an important one for any company to take into account when going down the path of gamification."*

Gamification - Notes on Section 10 - Social Impact and Behavior Change

GAMIFICATION FOR GOOD

- What's the difference between gamification for social good and gamification in other contexts?
    - There is an inherent relatedness in the payers
    - You must not give out rewards to not crowd out intrinsic motivation
    - The goal is behavior change, it is about the long term effects of the system

BEHAVIOR CHANGE

- There are lot of situations where we want to change the way we act, but it's hard to do so.
- Behavior change comes through the formation of habits.
- *"A habit is something that you do automatically. It's the default. It's the normal way of doing something."*
- B.J. Fogg, Director of the Persuasive Technology Lab at Stanford, http://behaviormodel.org
- Framework for describing how behavior change works: B (behavior) = M (motivation) + A (ability) + T (trigger)
    - We can plot everything on the two axes of Motivation (Y) and Ability (X), and then we look at the triggers.
    - Triggers are things that push us at a particular moment to engage in the activity.
    - The more you are in the domain too little ability and too little motivation, the more you need triggers.
- When designing a gamified system, it's important to think about three things:
    - What is the level of motivation?
    - What is the (perceived) ability?
    - What could trigger the activity given the conditions?
- Learnings:
    - Motivation and ability can trade off against each other.
    - Timing matters a lot when it comes to triggers.
- Three kinds of triggers:
    - Sparks (increase your motivation)
    - Facilitators (increase your perceived ability)
    - Signals (remind that something has to be done)
- Michael Wu: The Magic Potion of Game Dynamics. http://bit.ly/T4ZpJ5

SUSAN HUNT STEVENS INTERVIEW

- The game elements in Practically Green are really the foundation for creating a scale - if you think about sustainability, there is no scale to step on and say how green am I.
- Most games have a shelf life of 12 to 18 months, there's a start and a finish. Behavior change for social good is more of a lifetime thing.
    - You have to design something very differently when your thinking about long term play.
    - How do we drive long term engagement? How do we keep people motivated and inspired?
    - In particular, it's the community. 80% of people are participating for the social benefits of being part of a community that's doing something together.
- It's the people you're playing with, they keep you there and keep you coming back.
    - The rate at which people participate in a system is very different between trusted communities versus communities of people

who don't know each other as well.
    - When testing which groups work best, we found it is the work place that is the top of the pyramid. The next layer is friends and family. The next layer is neighborhood and club. The last layer is people who are virtual friends.
- Gamification in Practically Green does two things:
    - It levels up, because that helps make the content that we're then feeding to them more contextual to who they are and what they've already done.
    - It rewards status, access, power, more information, more capabilities, etc., because it gives the users feedback that they are doing the right thing.
- Being able to compete, compare, and collaborate makes a huge difference in behavioral change.
- *"I'm a big believer, however, that offline is as important as online. And it's when those two things come together that it can be really important."*

Gamification - Notes on Section 11 - Criticism and Risks

POINTSIFICATION

- Margaret Robertson, 2010, Hide and Seek.
- *"What we're currently terming gamification is in fact the process of taking the thing that is least essential to games and representing it as the core of the experience."*
- Pointsification: Gamification relies on the surface aspects of games only and doesn't accomplish anything in non-game contexts.
    - Gamification is an inadvertent con. It's trying to take something valuable from games but it's taking the wrong thing.
    - It doesn't produce the sense of true engagement and intrinsic motivation, that's so important to change behavior and produce sustainable results in beneficial ways.
- Pointsification is focusing on a limited set of gamification examples and practices - we can take it to heart without writing off the entire practice of gamification.
- But one important question remains: Is gamification really is effective?
    - Real research on effectiveness is limited. (Ethan Mollick is doing research at the moment)
    - Potential for engagement decay. (Engagement may spike initially but will then decay)
    - Intrinsic motivators are crowded out. (Substitution effect through false extrinsic motivation)
- *"Gamification is the high fructose corn syrup of engagement."*
- The Foursquare example:
    - Redesign in 2012 that de-emphasized game elements.
    - Game elements are still there and important to the service, but they are just a means to the end of engaging with people.
    - It has reached the critical mass where it can build out off of the large number of users to create real rich informational and social value.
    - Gamification can help to go from lightweight systems to more sophisticated deployments.
- Implications:
    - Names are powerful
    - Bad gamification is bad
    - There is more to games than gamification, and vice versa
    - Caveat ludor

EXPLOITATIONWARE

- Exploitationware: Gamification is too effective, it can be used to get people to do things that are not in their interest.
- Term was coined by Ian Bogost, Georgia Tech University, http://bogost.com/writing/exploitationware.shtml
- Two arguments:
    - Gamification is an intentional con, confusing people about the real intention of a system.
    - Gamification undermines the nature of economic and social exchange, replacing real incentives with fictional ones.
- The criticism is not so much about gamification, but about how it is being used.
- The same context can be used in exploitative ways or in ways that are healthy.
- Bogost designed a wonderful proof of exploitationware (Cow Clicker) to make fun of social games that are driven by virtual goods and virtual currency.
- What happened was 50,000 plus people started playing the game.
- All in all, legitimate criticism that gamification designers need to take into account.

GAMING THE GAME

- One of the most common and most dangerous mistakes is to forget about who the system is for, namely the players.
- Players might game the system, they might turn the tables and do something that you never expected and intended.
- Gamification Can Kill: Ramp to the San Francisco Bay bridge where the price goes up during rush hour.
- Players have to voluntarily accept the rules of the game, otherwise they will cheat and figure out a way to achieve their own aims.
- The lesson is: People will act in unpredictable ways in response to the signals that the system produces.
- Part of game design is building in structures that ensure that those activities don't destroy the game.
- Don't create imbalances and make the game unplayable or undesirable.

LEGAL ISSUES

- Five issues in which the legal system could become a problem:
    - Privacy: You get lots of information about players, who they are, what they are doing.
    - Labor Law: There are rules what you can do as an employer vis-a-vis your employees.
    - Deceptive Marketing: Advertising is regulated, a gamified system might qualify as misleading.
    - Intellectual Property: Digital assets might be protected by intellectual property law.
    - Virtual Property Rights: What happens if a user spends time and effort and pays real money to get something virtual in a game - and game designer wants to take it away.

REGULATORY ISSUSES

- There are three more regulatory issues to think about when creating a gamified system:
    - Paid Endorsements: Someone is surreptitiously becoming a marketer for a product (liking, tweeting, etc.).
    - Banking Regulation: What's involved in a gamified system can be a currency and thus potentially all of the requirements that apply to banks will apply to you.
    - Sweepstakes and Gambling: Tangible rewards might qualify as sweepstakes or gambling and fall under special laws.
- If you touch tangible rewards, it might a good idea to call in someone with more specific legal knowledge.

Gamification - Notes on Section 12 - Beyond the Basics

INDUCEMENT PRIZES

- What are inducement prizes?
    - A way to induce a certain behavior by giving out a price if someone achieves a specific goal.
    - A contest to motivate a certain result.
    - An alternative to direct funding like in R&D or outsourcing and grants.
- The benefits of inducement prices:
    - Only one person gets the price, but the investment made by all competitors is much higher than the price's worth.
    - Specifying the end rather than the means supports creative thinking, and people participating are often from different domains.
- Inducement prizes vs. substitution effect:
    - Does an inducement prize fit in gamification techniques although it is an extrinsic motivation?
    - Yes, self determination theory asks for competence, autonomy and relatedness, all those factors are immanent in inducement prizes.
- Inducement Prize Initiatives:
    - Private: X Prize Foundation, Innocentive, Kaggle, TopCoder
    - Governmental: DARPA Grand Challenges, America Competes Act, OSTP initiative
- Attributes:
    - Multiple individuals and teams need to be capable of competing
    - Costs need to be sufficiently small for the competitors because they are not paid
    - Balance scale vs. incentives (competition must not be too fierce, there needs to be a real chance to win)
    - Opportunities to leverage results (so that competitors don't work for the price, only)

VIRTUAL ECONOMIES

- Three key terms:
    - Virtual Goods: Persistent virtual rewards, virtual goods that appel to have value just like real world goods.
    - Virtual Currency: Tradable or redeemable points, which you can use as a medium of exchange to buy real world goods.
    - Virtual Economy: In-game transactions in virtual markets, offered in a game to induce economic action.
- Worldwide virtual asset market: US$ 7B in 2010, US$ 13B in 2016
- Loyalty programs as virtual currency (although gamification aspects are not prominent in such programs today).
- The key attribute for virtual economies to function is balance.
    - Economic dynamics are driven by scarcity, not money.
    - Faucets & Drains (Sources & Sinks) to keep system in balance.
- Virtual economies can be dangerous:
    - Real money costs real money
    - Hedonic treadmill and crowding out effect
    - Intrinsic value from rarity and surprise

COLLECTIVE ACTION

- Gamification can be very powerful in activating large numbers of people.
- Kinds of collective action in gamification in a two-times-two matrix (top-down vs. bottom-up and competitive vs. collaborative):
    - top-down / competitive: grant
    - bottom-up / competitive: inducement prizes
    - top-down / collaborative: employees

        - bottom-up / collaborative: crowdsourcing
- What makes people participate in crowdsourcing activities?
    - Money: Microwork exchanges like the Amazon Mechanical Turk
    - Fun: Gamified puzzles dites like Fold.it
    - Love: Caring about the topic or the results
- Nature of crowdsourced tasks:
    - Can it be be split up easily?
    - Are humans better than computers?

THE FUTURE OF GAMIFICATION

- Empowering or manipulative?
- Shallow or thoughtful?
- It's up to you. ;-)