

I. What is a Game?

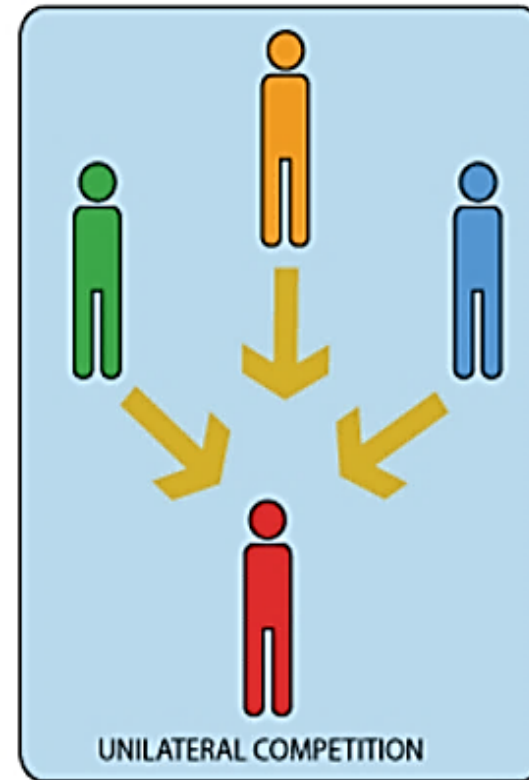
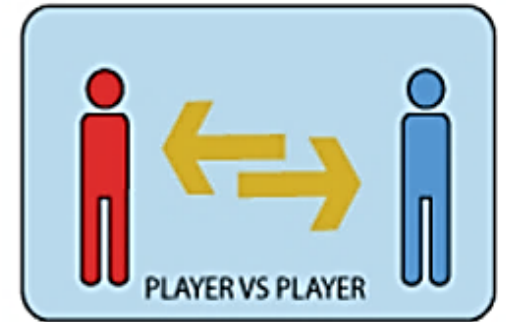
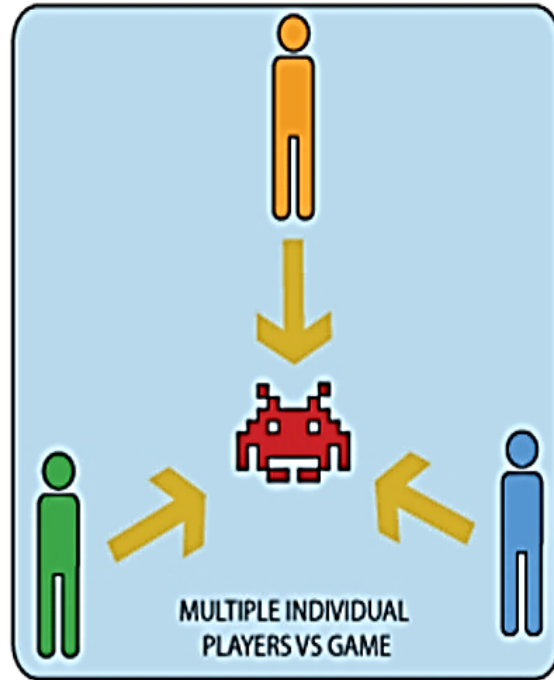
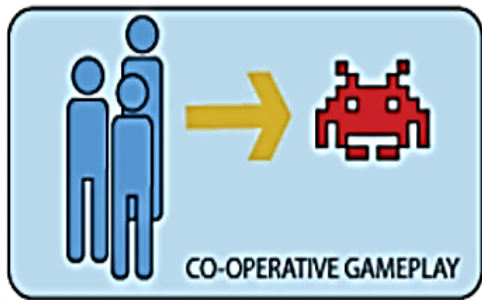
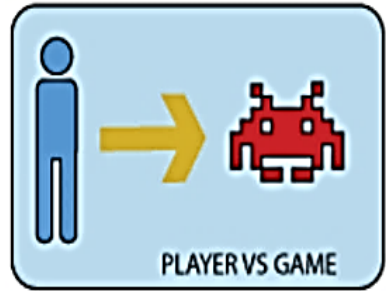
A physical or mental competition activity, conducted according to rules, with the participants in direct opposition to each other.

A game is a closed formal system that subjectively represents a subset of reality (Chris Crawford)





Player interaction patterns



KIND OF RELATIONSHIPS IN A GAME CONTEXT:

- Territorial Acquisition.** These games are often zero-sum games, where the players fight over a limited amount of territory or resources. Example: Think about Risk.
- Prediction:** Party games or gambling games and luck is involved in making a prediction. Example: Roulette.
- Spatial Reasoning.** Often you need to consider how your game pieces work together to create a successful winning strategy. Example: Tetris.
- Survival.** This core banks on our natural instincts to survive and is found in many action games. Example: Dark Souls.
- Destruction.** A game with this core allows players to wreck havoc on most things in the game. Ex.: First-person shooters.
- Building.** The building and use of structures is a core of many games. Examples: Sim City and Minecraft.
- Collection.** The need to collect, own and match things is deeply ingrained in humans. Ex.: Match 3.
- Chasing or Evading.** This appeals to our fight-or-flight response and works as a driving core in games. Ex.: Pac-Man.
- Trading.** This a very cooperative game core. Sometimes, players want to exchange resources and negotiate the values with one another. Example: Settlers of Catan.
- Race-to-the-end:** Children games

II. What is Gamification?

Gamification is the use of **game mechanics** and **game design techniques** in non-game contexts to **design behaviors**, **develop skills** or to **engage people** in innovation.

Gartner defines gamification as: *the use of game mechanics and **experience design** to **digitally engage** and **motivate** people to **achieve their goals**.*

Burke, Brian. 2014. Gamify : how gamification motivates people to do extraordinary things. Gartner, Inc.

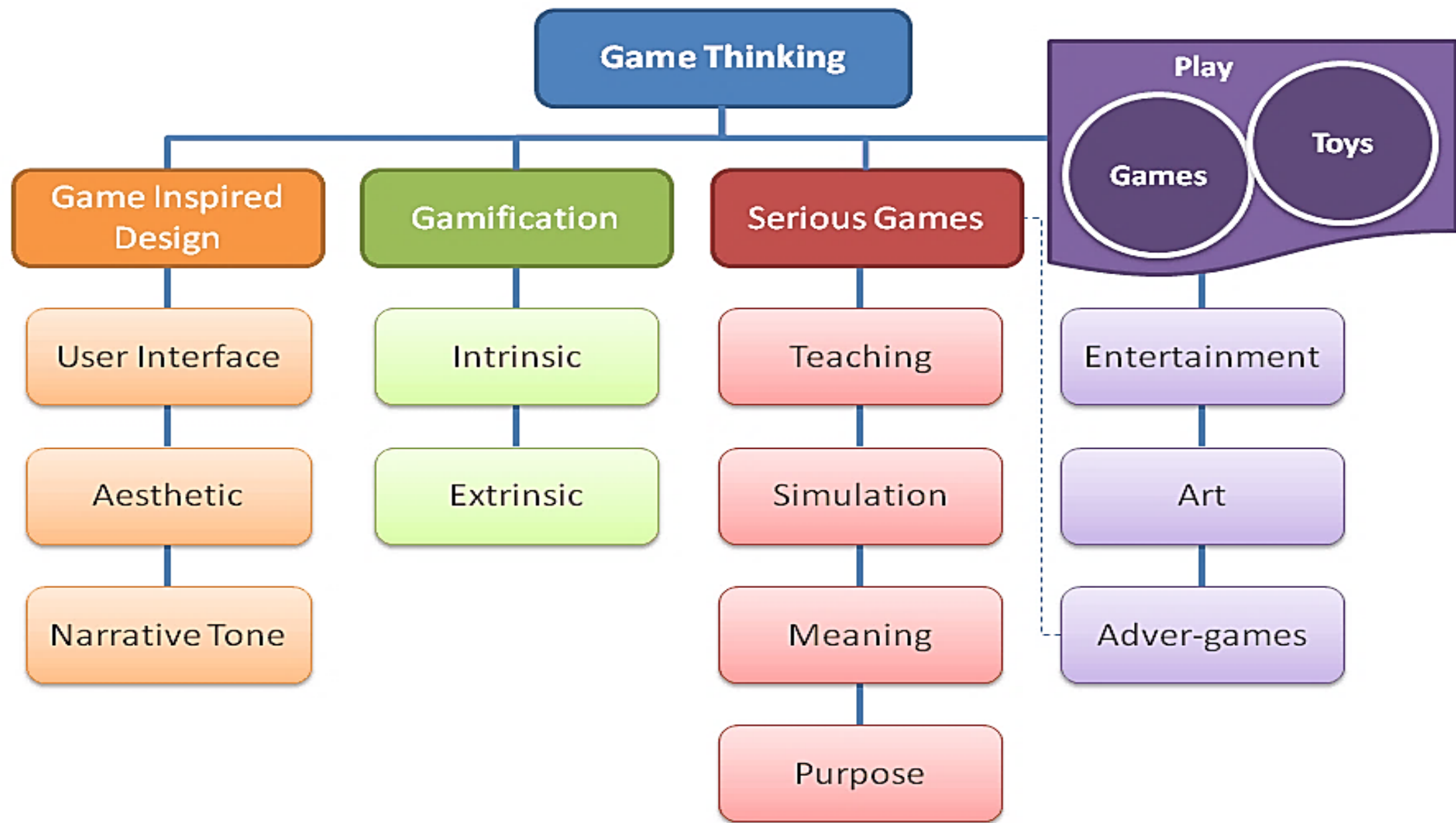
Gamification is a tool to **design behaviors**, **develop skills and enable innovation**. Combined with other **technologies and trends**, gamification can cause major discontinuities in **innovation**, **employee performance management**, **education**, **personal development** and **customer engagement**.

Burke, Brian. 2012. Gamification 2020: What Is the Future of Gamification?

Gamification is the application of *game-design elements* and *game principles* in non-game contexts, in order to improve *user engagement, organizational productivity, flow, learning, crowdsourcing, employee recruitment* and *evaluation*.

Elements of Gamification:

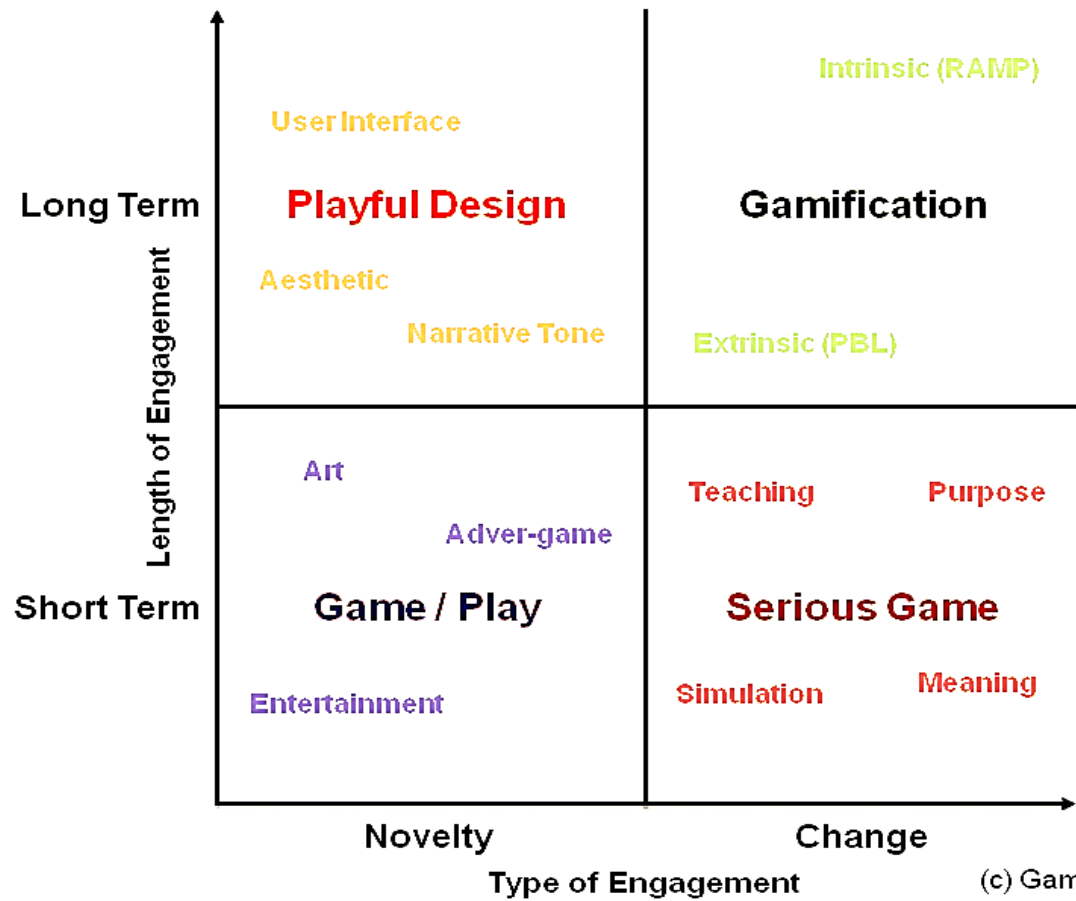
- ***Game mechanics*** describes the key elements that are common to many games, such as **points, badges,** and **leaderboards**.
- ***Experience design*** describes the journey players take with elements such as **game play, play space, and story line**.
- Gamification is a method to ***digitally engage*** rather than personally engage, meaning that players **interact with computers, smartphones,** wearable monitors, or other **digital devices**.
- The goal of gamification is to ***motivate people*** to **change behaviors or develop skills,** or to **drive innovation**.
- Gamification focuses on enabling players to ***achieve their goals***— and as a consequence the organization achieves its goals.



Game Thinking, Broken down by design goal.

	Game Thinking	Game Elements	Game Play	Just for Fun
Game Inspired Design	●			
Gamification	●	●		
Serious Game / Simulation	●	●	●	
Game	●	●	●	●

Game Thinking: When to use what



Disruptor



Socialiser



Free Spirit



Hexad User Types and Game Design Elements

Player



Achiever



III. Background

1973: Charles Coonradt, founded the consultancy The Game of Work

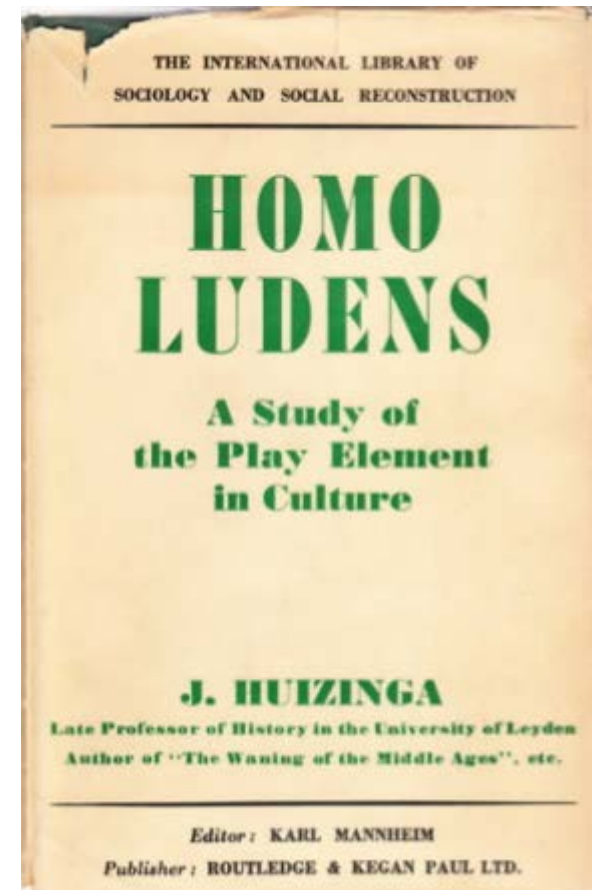
1996: Richard Bartle identify 8 type models of players

2002: Nick Pelling coined the term: Gamification to describe *“applying game-like accelerated user interface design to make electronic transactions both enjoyable and fast.”*

The term "gamification" first gained widespread usage in 2010, in a more specific sense referring to incorporation of social/reward aspects of games into software.

Will Wright, designer of the 1989 video game SimCity, was the keynote speaker at the gamification conference Gsummit 2013.

In October 2007, Bunchball, backed by Adobe Systems Incorporated, was the first company to provide game mechanics as a service



METHODOLOGY: GAMIFICATION DESIGN TOOLS

1 **Gamification Tool Kit:** Dynamic, mechanical and components

2 **Story Cubes:** create a story with pictures

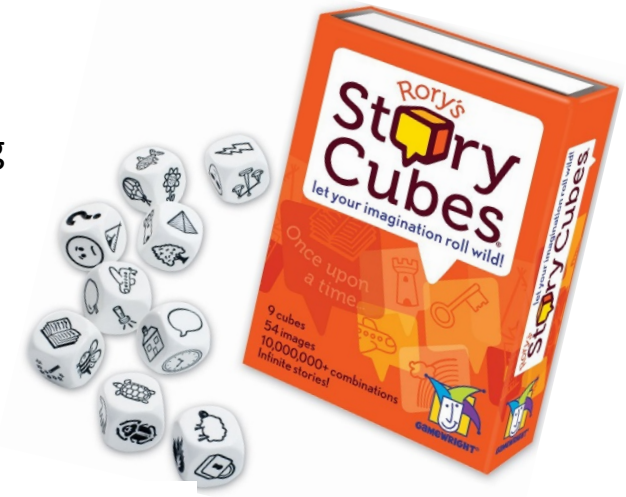
3 **Deck of Lenses :** History, technology, aesthetics, psychology, creativity, teamwork and testing

4 **Octalysis:**

- 4.1 Call epic and Meaning
- 4.2 Development and achievement
- 4.3 Creativity and Feedback
- 4.4 Ownership and possession
- 4.5 Social influence and connection
- 4.6 Scarcity and impatience
- 4.7 Unpredictability and curiosity
- 4.8 Loss and avoidance

5 **Gamification Model Canvas**

- 5.1 Renues
- 5.2 Players
- 5.3 Behaviors
- 5.4 Aesthetics
- 5.5 Dynamics
- 5.6 Components
- 5.7 Mechanics
- 5.8 Platforms
- 5.9 Costs



GAMIFICATION DESIGN TOOLS:

- Gamification Tool Kit
- Story Cubes
- Deck of Lenses
- Octalysis
- Gamification Model Canvas



STORY CUBES

This is a box with nine dice.

On each side is a drawing.

The dice are rolled and must try create a story with all the drawings.

The only limit is the imagination of players.

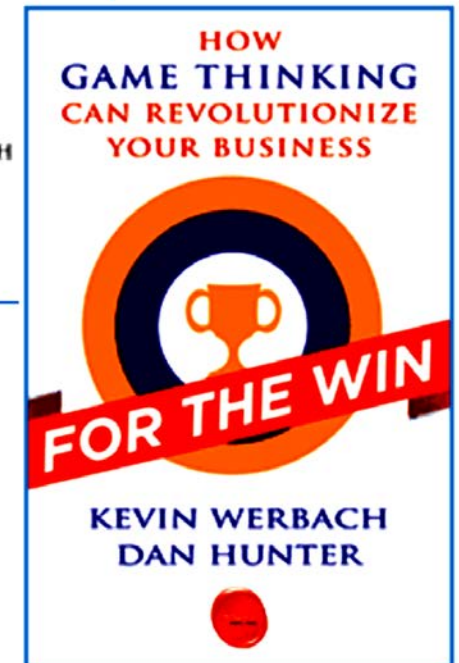
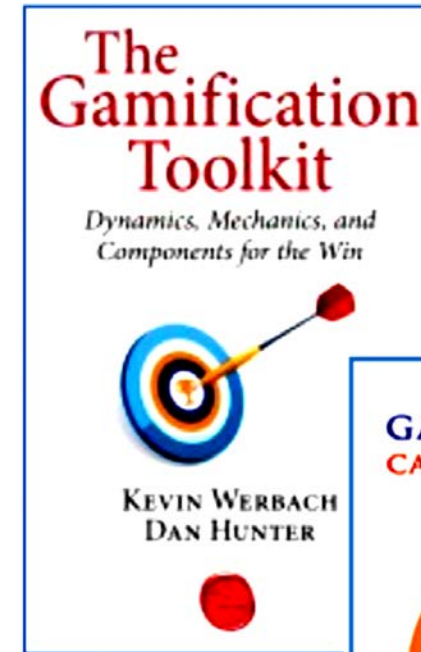


GAMIFICATION TOOL KIT

Describes the three fundamental elements for a restful proposal gamification: Dynamic, Mechanical and Components.

FOR THE WIN

Careful and clever construction of the games is based on decades of research on human motivation and psychology: A well designed game goes straight to the heart of the motivation of the human psyche.



DECK OF LENSES

The Art of Game Design: A Deck of Lenses Cards

Created by Jesse Schell in august 1, 2008

It Contains 100 unique cards type "magnifiers".

Each one, with key questions that will help you to create a great game.

With great color illustrations to help you remember each principle.

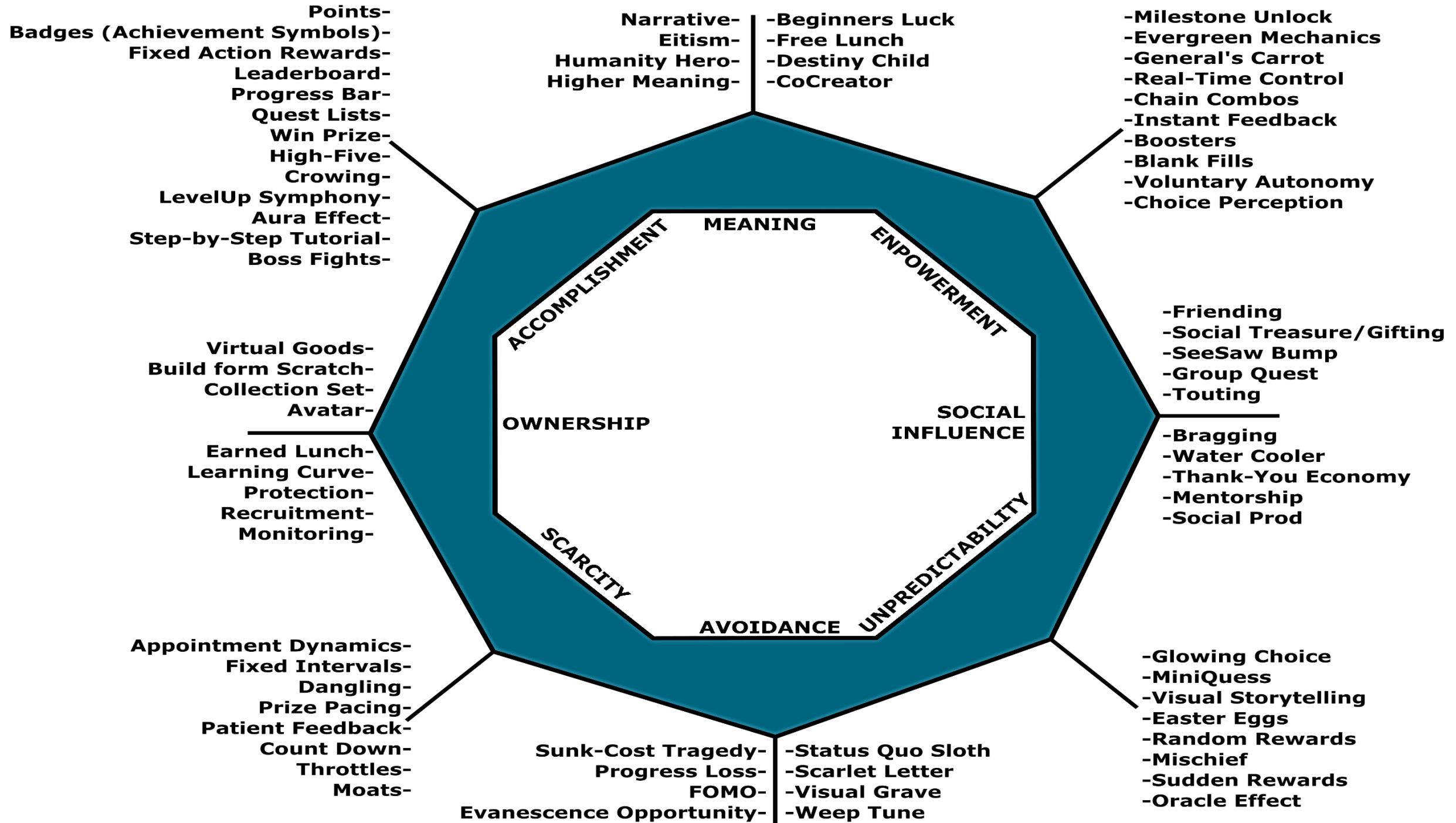
The cards cover all aspects of a game design: history, game mechanic, technology, aesthetics, psychology, creativity, teamwork, testing and even business issues.

It includes instructions explaining how to use the cards, designing board games, card games, and video.



OCTALYSIS

- 1) **Call epic meaning**
- 2) **Development and achievement:** Progress, developing skills and overcoming obstacles. Meeting points, badges and results table.
- 3) **Creativity and Evaluation:** Being immersed in the creative process where the player has to find things and try different combinations.
- 4) **Property and Possession**
- 5) **Influence and social connection:** Group Motivation: Acceptance of others, company, competition.
- 6) **Scarcity and impatience**
- 7) **Unpredictability and curiosity:** All want to know what will happen next.
- 8) **Loss and avoidance**



GAMIFICATION MODEL CANVAS

PLATFORMS



Describe the platforms on which to implement game mechanics

What platforms do we have available for incorporating mechanics?
What platforms can we use to bring mechanics to the player?
What platforms will the game run on?

MECHANICS



Describe the rules of the game with components for creating game dynamics

How will we use the selected components to develop behaviors?
How can we explain the mechanics to our players?
How can we increase the difficulty of mechanics over time?

Examples of mechanics:

Watch this video and get 10 points
Answer this survey and get expert level
Complete this form and unlock this badge
Buy something to complete this mission
Read content before 15 minutes
Recommend something and get this prize

DYNAMICS



Describe the run-time behavior of the mechanics acting on the player over time

What dynamics will we use to create the aesthetics of our game?
What dynamics work best for our players?
How will these dynamics work in our game?

Some dynamics:

Appointment
Status
Progression
Reward
Scarcity
Identity
Productivity
Creativity
Altruism

AESTHETICS



Describe the desirable emotional responses evoked in the player, when they interact with the game

What elements will grab the attention of our players?
Why should they play?
How can our players have fun?

Some aesthetics:

Narrative
Challenge
Fellowship
Discovery
Expression
Fantasy
Sensation
Submission

PLAYERS



Describe who and what the people are like in whom we want to develop behaviors.

Who are our players?
What are your players like?
What do our players want?

COMPONENTS



Describe the elements or characteristics of the game to create mechanics or to give feedback to the players

What components will we use to create our dynamics?
What components will create game mechanics?
What components will be used to provide feedback?

Some components:

Points	Progress Bar
Badges	Missions
Achievements	Avatars
Rewards	Virtual Goods
Leaderboards	Real Prizes
Levels	Inventory
Countdown	Virtual Currency
Random	

BEHAVIORS



Describe the behaviors or actions necessary to develop in our players in order to get returns from the project

What behaviors do we need to improve the challenges of the game?
What behaviors would our players like to improve?
What behaviors can be improved?

Examples of behaviors:

Watch video
Answer survey
Complete form
Buy something
Read content
Recommend something
Go to a website
Read email

COSTS

Describe the main costs or investment for the development of the game

What are the main costs of the game?
What budget is available for achieving the challenges set?
Can we phase costs over time, based on the achievement of objectives?



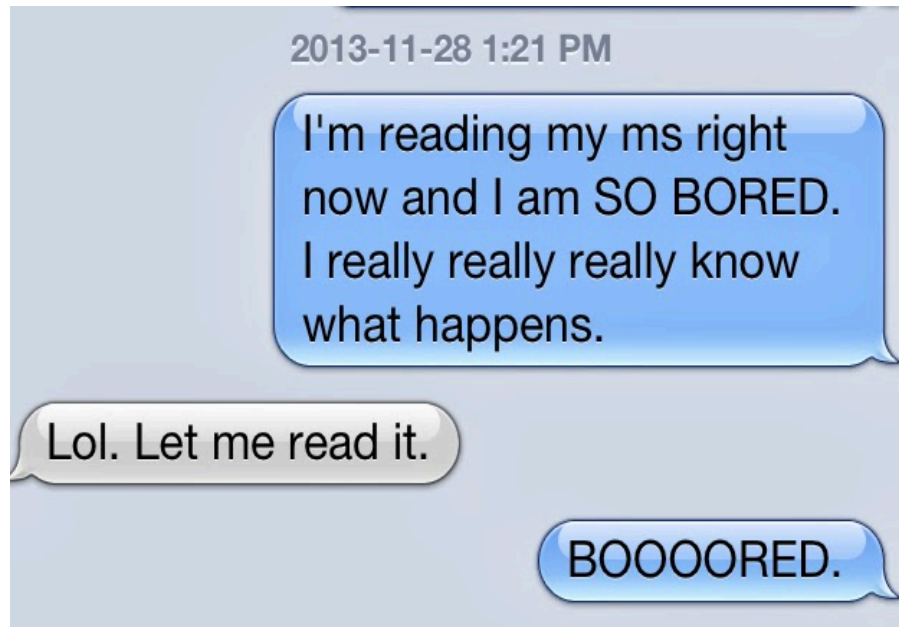
REVENUES

Describe the economic or social return of the solution with the introduction of gamification

What economic or social challenges set out the game?
How will we measure the success of the game?
What results do we hope to achieve from the game?



V. Why Gamification?

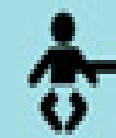


WHO ARE MILLENNIALS?

LARGEST GENERATION YET

MOST ETHNICALLY & RACIALLY DIVERSE

BORN BETWEEN



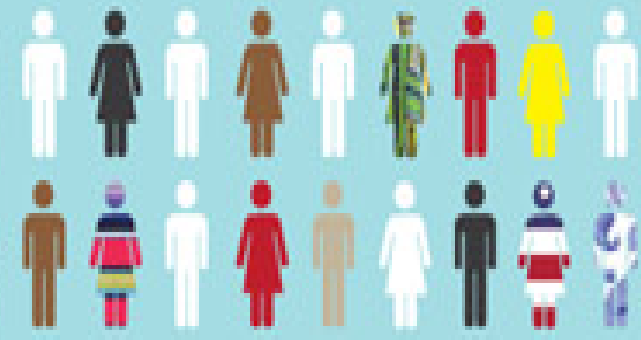
1980

2000

"GEN Y"

80

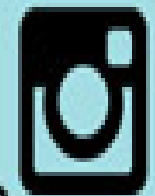
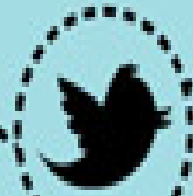
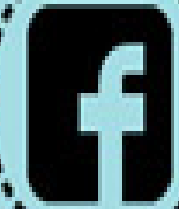
MILLION IN THE U.S



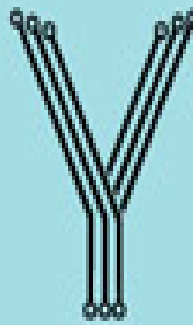
2.5 BILLION WORLDWIDE

GREW UP

ALONGSIDE TECHNOLOGY



DOMINANCE OF SOCIAL NETWORKS



DO THEY MATTER?

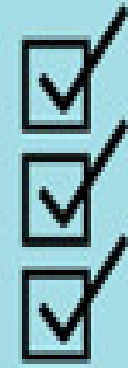
% OF WORKFORCE IN THE COMING YEARS

50% BY 2020
75% BY 2030



ASPIRE TO

MAKE A DIFFERENCE W/ THEIR WORK



CONFIDENT
HAVE HIGH EXPECTATIONS
ACHIEVEMENT ORIENTED

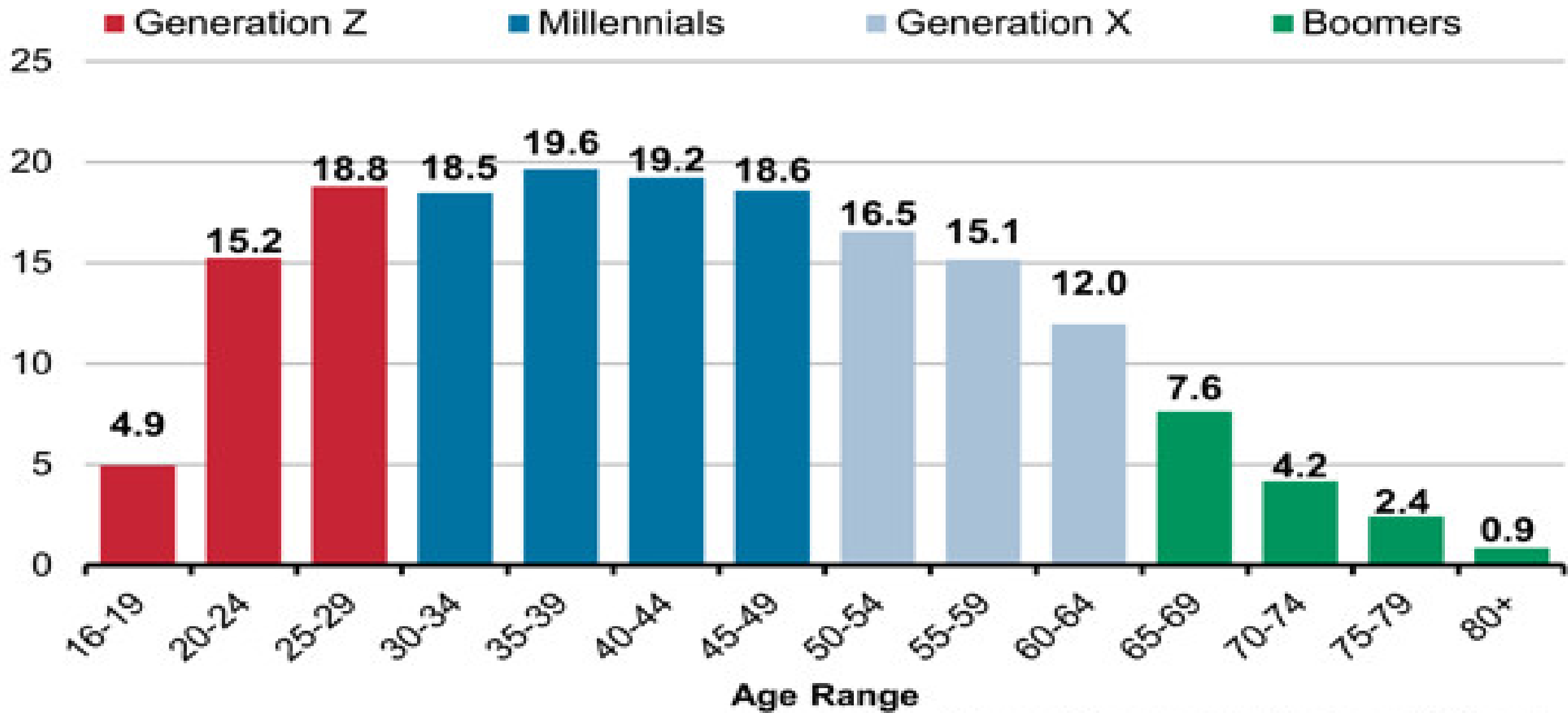


What are
YOU
going to
do about it?
Fight Chronic Absence Florida
www.fightchronicabsence.com

STRONGER TOGETHER STRONGER TOGETHER STRONGER TOGETHER
STRONGER TOGETHER STRONGER TOGETHER STRONGER TOGETHER

The Workforce in 2030

Projected size of U.S. labor force (in millions) by age, for the year 2030



Source: Department of Labor | WSJ.com



Millennials are vulnerable to **BIG** spending



17.9%
more likely to take
PAYDAY LOANS



3.2%
more likely to
CHARGE IT



3.1%
more likely to **BUY BIG**
TICKET ITEMS ONLINE



9.1%
more likely to
LEASE A CAR

21.7%
More likely to be
MAC USERS



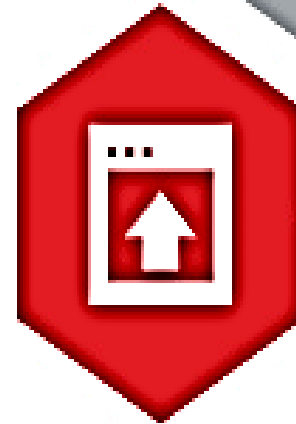
3.1%
More likely to be interested
in **TECHNOLOGY**, in general

21.3%
More interested in
DATA MINING



11.6%
More likely to own
an **iPHONE**

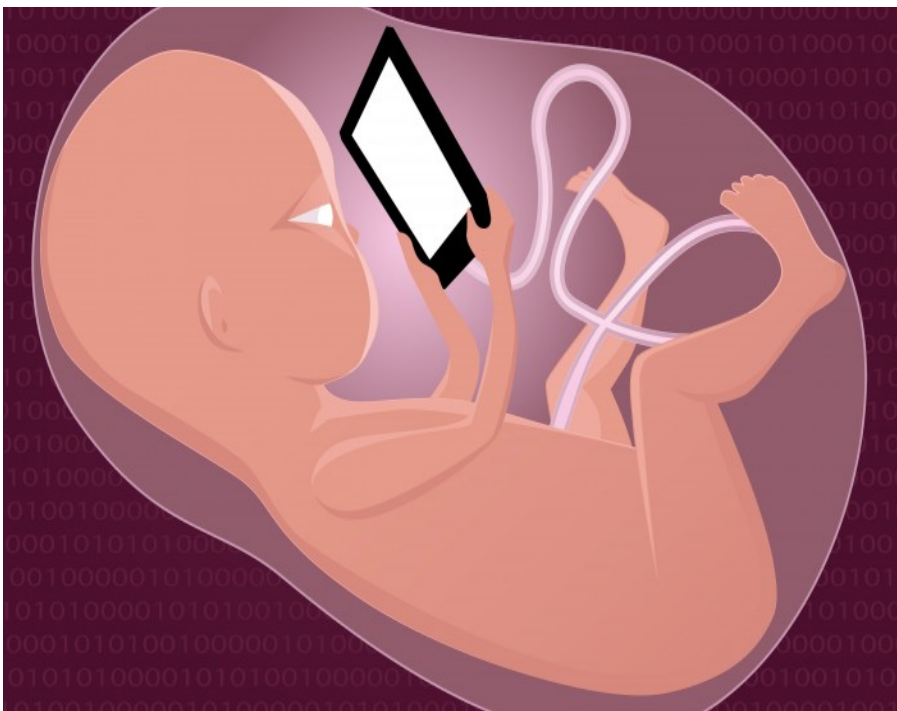
18.8%
More interested in
PHOTOSHOP



12.6%
More interested in
FILE SHARING

**GENERATION Z:
CONNECTED FROM BIRTH.**

Born mid-1990s to 2010.



NEUROTRANSMITTERS 101

nootropicdaily.com



Neurotransmitter Definition

" A chemical substance that is released at the end of a nerve fiber by the arrival of a nerve impulse and, by diffusing across the synapse or junction, causes the transfer of the impulse to another nerve fiber, a muscle fiber, or some other structure."

Acetylcholine (Ach)

Neurotransmitter responsible for learning, memory and muscle movement

Dopamine

Mood, motivation, focus and learning

Serotonin

Neurotransmitter responsible for mood (happiness) and sleep

GABA

Main inhibitory neurotransmitter. Responsible for relaxation



Racetams

cognitive enhancers that are sold over the counter such as: pramiracetam, oxiracetam, coluracetam, and aniracetam

Stimulants

(only effective in small amounts) Caffeine, Rhodiola Rosea



Nutraceuticals

Herbal supplements such as: Bacopa Monnieri, L-Theanine, Ginkgo Biloba, Huperzine A



Cholinergics

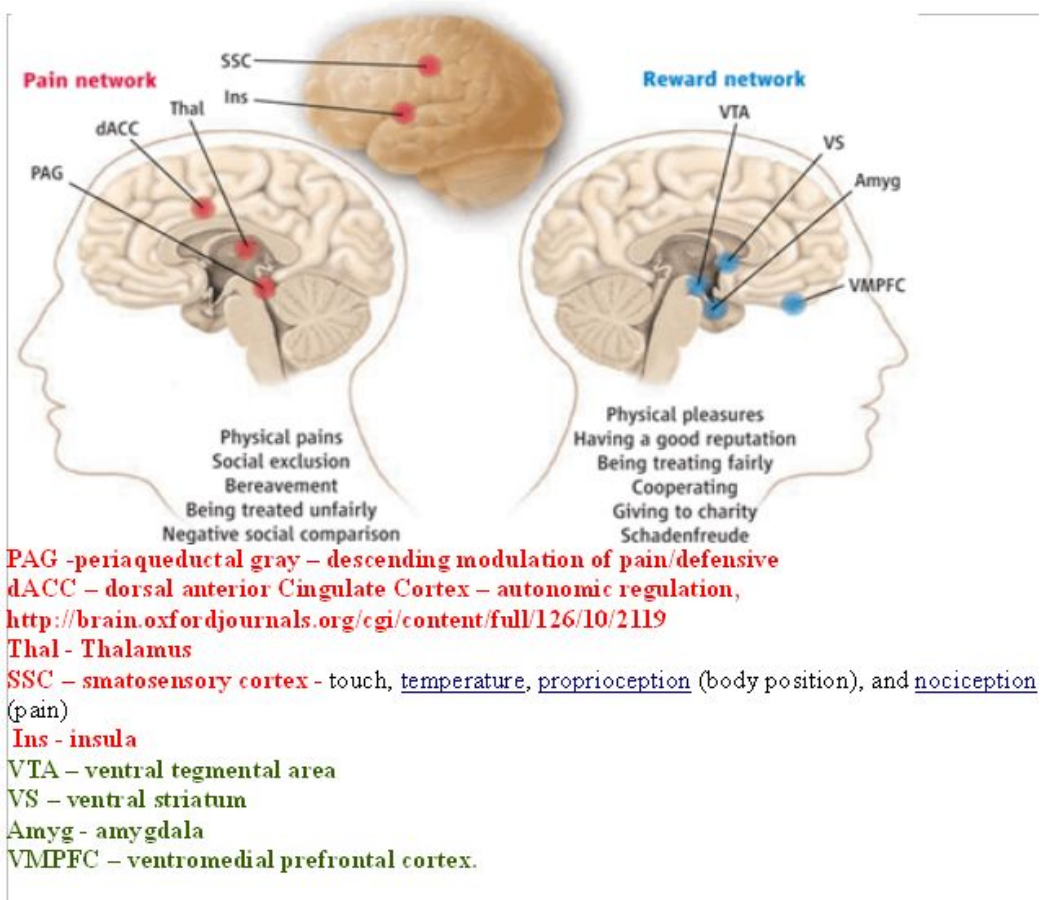
Compounds that increase levels of acetylcholine. Alpha GPC, Choline



INFLUENCE OF GAMIFICATION IN BRAIN ACTIVITY

Several studies shows the impact of intense video gaming had on certain brain sub-regions. Some of them, are:

- Improve **connectivity** in certain regions of the brain
- Improve **attention** skills and **eye-hand coordination**
- Improve **cognitive** brain function and **memory**
- Game experience provide neuro-plasticity in important brain areas for **attentional** and **sensorimotor** functions
- **Neuro-plasticity**: the brain's ability to change and develop stronger connections, memory and cognitive function.
- Improve **social skills** and **emotional abilities**
- Improve **problem-solving** skills



PAG -periaqueductal gray – descending modulation of pain/defensive

dACC – dorsal anterior Cingulate Cortex – autonomic regulation,

<http://brain.oxfordjournals.org/cgi/content/full/126/10/2119>

Thal - Thalamus

SSC – **smatosensory cortex** - touch, temperature, proprioception (body position), and nociception (pain)

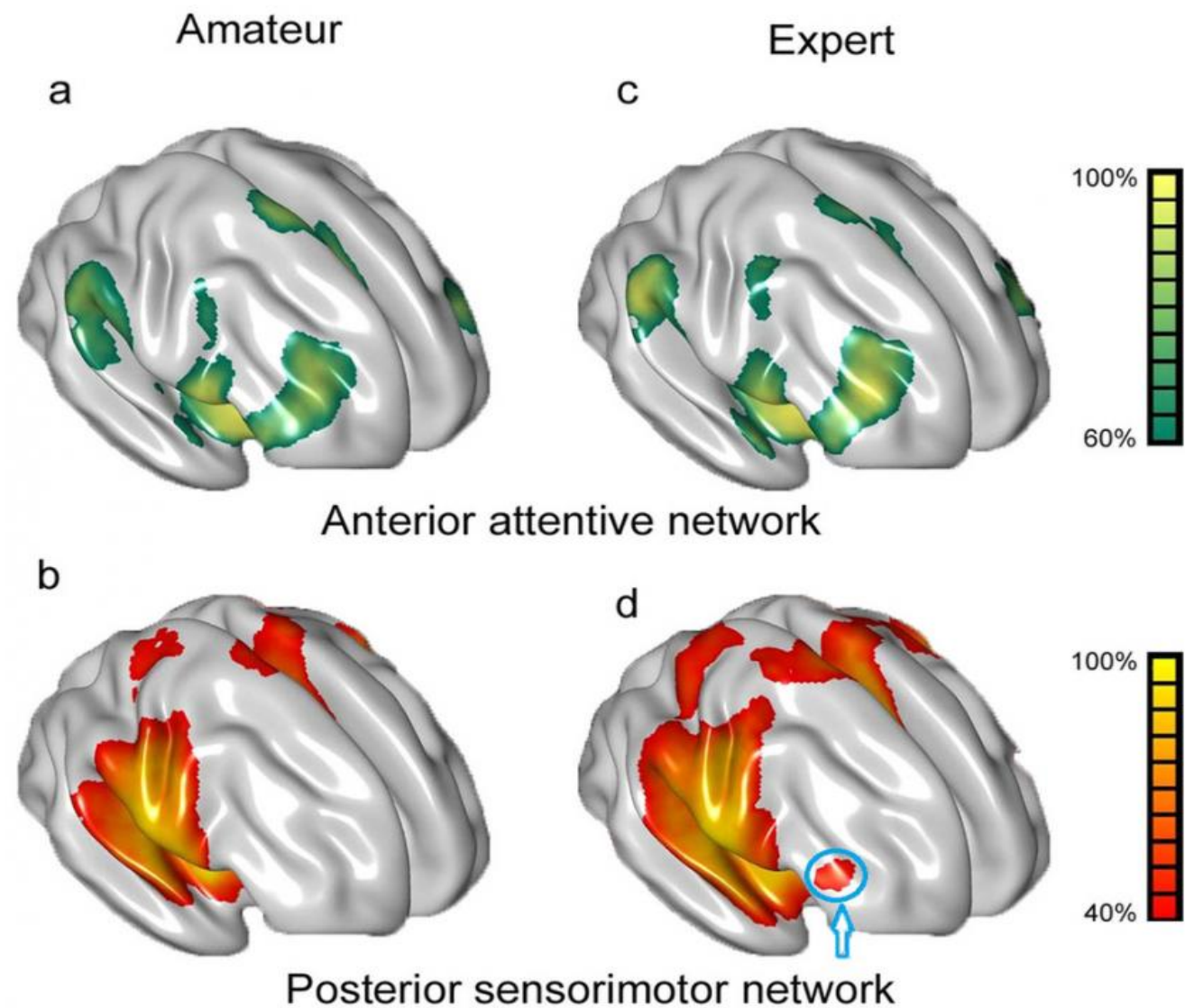
Ins - insula

VTA – ventral tegmental area

VS – ventral striatum

Amyg - amygdala

VMPFC – ventromedial prefrontal cortex.



06



IMPACT ON BOTTOM LINE.

On account of all these aspects that touch and impact learners (better learning experience, higher recall and retention, catalyzing behavioral change, and so on), it can create a significant performance gain for organizations.

01



BETTER LEARNING EXPERIENCE

The learner can experience "fun" during the game and still learn if the level of engagement is high.

05



CAN BE APPLIED FOR MOST LEARNING NEEDS

Gamification can be used to fulfill most learning needs including induction and onboarding, product sales, customer support, soft skills, awareness creation, and compliance.

02



INSTANT FEEDBACK

It provides instant feedback so that learners know what they know or what they should know.

BENEFITS OF GAMIFICATION IN ELEARNING?



PROMPTING BEHAVIORAL CHANGE

Points, badges, and leaderboards would surely make training awesome.

04



BETTER LEARNING ENVIRONMENT

Gamification in eLearning provides an effective, informal learning environment, and helps learners practice real life situations and challenges in a safe environment.

03

GAMIFICATION IN EDUCATION

Pop Learning in eLearning

Chance

Go On

LEVELS
Levels make your game more challenging and fun to play

Supportive Apps
Check out these awesome apps that make learning fun and interactive

3000+ Skills
Check out these awesome apps that make learning fun and interactive

Time 2 U
Check out these awesome apps that make learning fun and interactive

Zenlike
Check out these awesome apps that make learning fun and interactive

Badges
Check out these awesome apps that make learning fun and interactive

Khan Academy
Check out these awesome apps that make learning fun and interactive

TripTico

Fluor
Check out these awesome apps that make learning fun and interactive

Challenges
Check out these awesome apps that make learning fun and interactive

Engage
Check out these awesome apps that make learning fun and interactive

Adaptive
Check out these awesome apps that make learning fun and interactive

Learning
Check out these awesome apps that make learning fun and interactive

EdTech
Check out these awesome apps that make learning fun and interactive

Why?
Using game design mechanics to enhance non-game contexts

What is gamification?

How can games help students to learn?

Kids have always played games

Snakes and Ladders

Monopoly

The Simpsons

Pacman

Sonic

GTA

Candy Crush

TED Talks

Tom Chatfield

Corrado Steiner

DIFFERENTIATION

TEDEX

Design by Anna Lee

Action video games affects several aspects of perception, attention, and cognition.

The skills found to be enhanced by action video game training, include:

- low-level vision (enhanced contrast sensitivity function),
- various aspects of attention (ability to monitor several objects at once, to search through a cluttered scene, to detect an event of interest in fast-forwarding video),
- more cognitive tasks (multi-tasking, task-switching) and,
- a general speeding during decision making.

THE BUSINESS OF **GAMIFICATION**

WHAT IS GAMIFICATION?



Gamification is the use of elements of game play in non-game contexts



It provides rewards and engagement for customers

HOW GAMIFICATION WORKS:

5 COMMON MECHANICS



POINTS

Measure a user's achievements in relation to others
Can double as currency to exchange for rewards



BADGES

Reward achievements visually



LEVELS

Encourage users to progress and unlock new rewards



LEADERBOARDS

Organise players by rank



CHALLENGES

Encourage engagement by offering specific tasks to complete

4 MAIN WAYS TO DRIVE ENGAGEMENT



ACCELERATED FEEDBACK CYCLES



CLEAR GOALS AND RULES OF PLAY



A COMPELLING NARRATIVE



CHALLENGING BUT ACHIEVABLE TASKS

SAMR for Gamification

Iterative

Transformative

Substitution

Using games or gamification as a substitute for traditional methods without enhancement.

Badges

XP / Points

Augmentation

Using games or gamification as a substitute for traditional methods with added enhancements.

Leaderboards

Levels

Easter Eggs

Modification

Using games or gamification to change or redesign previous methods.

Serious / Learning Games

User Journey

Quests

Competition


Redefinition

Using games or gamification to radically alter methods in a way previously not possible.

Simulation

Collaboration / Team play

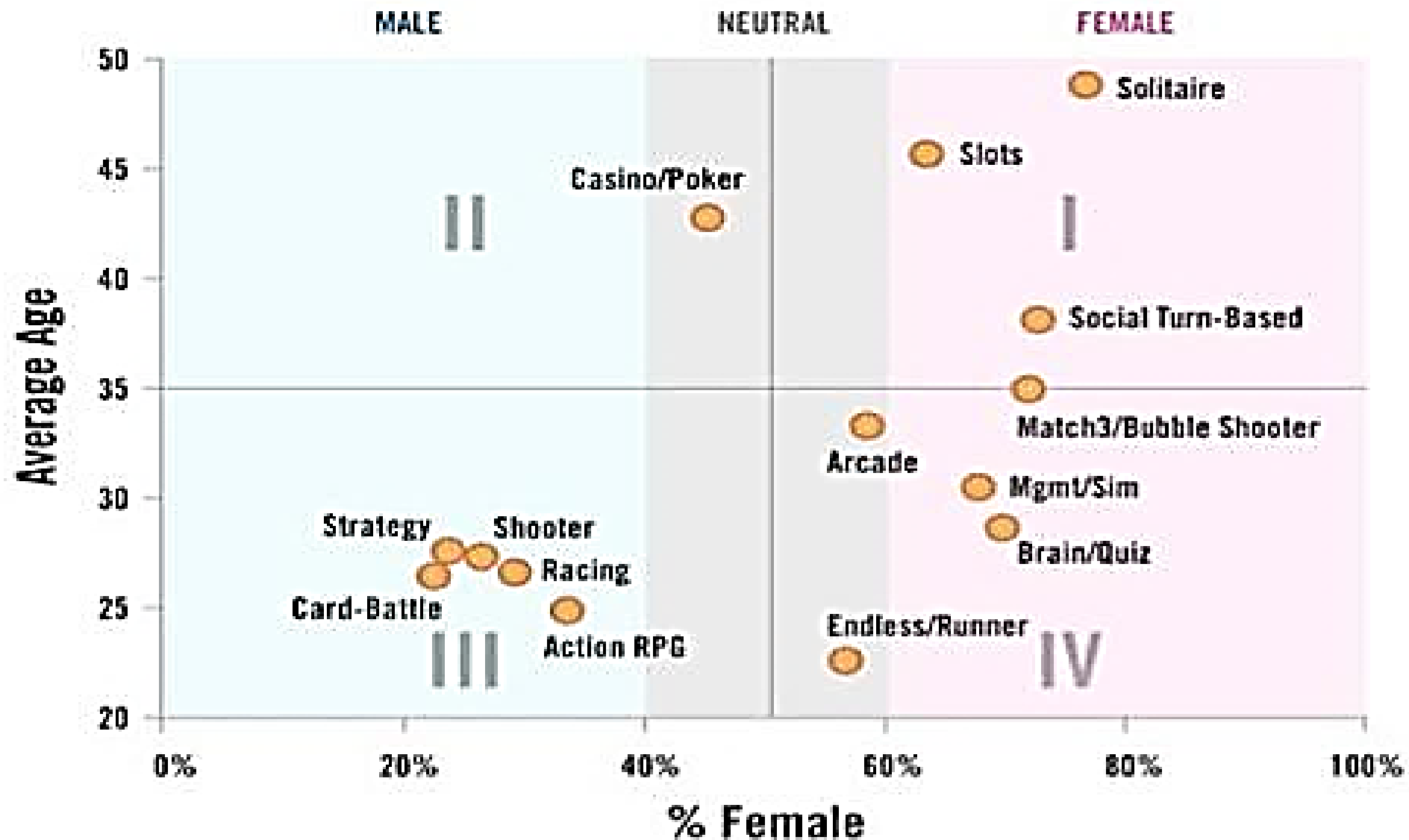
¿What is all this about?



"Cuando se descubrió que la información era un negocio, la verdad dejó de ser importante".

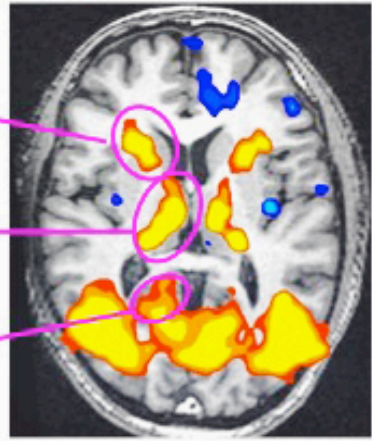
Ryszard Kapuściński

Game Type by Age and Gender



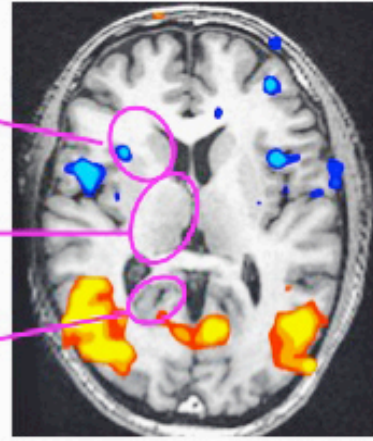


Interactive play



Caudate
Thalamus
Hippocampus

Passive exposure



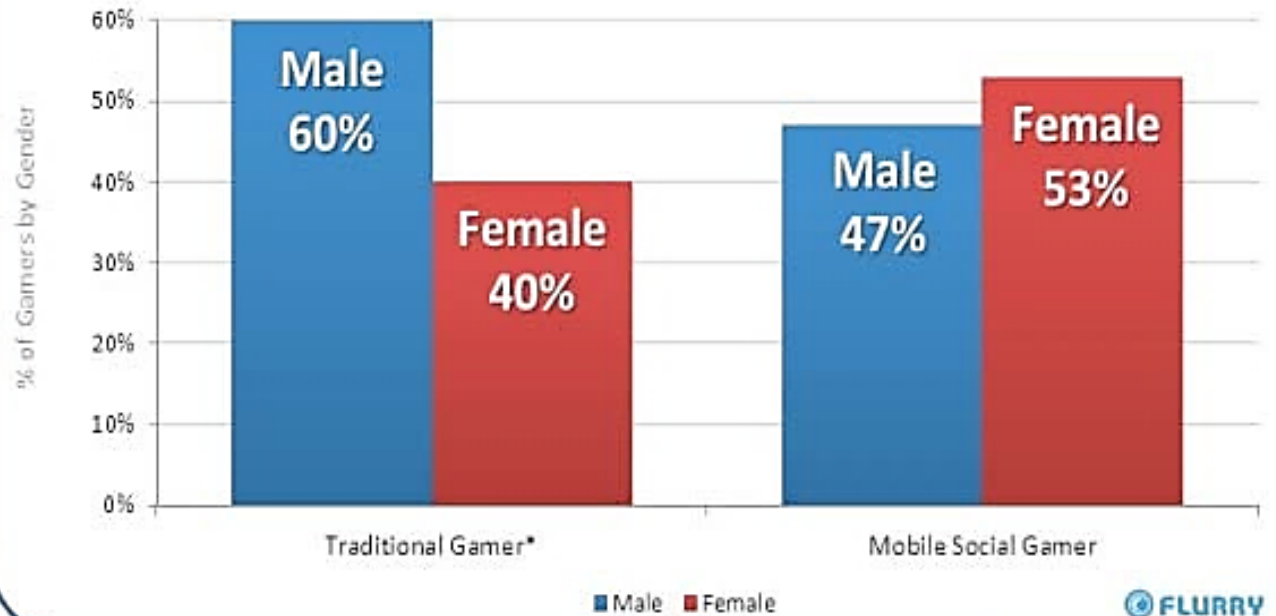
Caudate
Thalamus
Hippocampus



Designed to Addict



Mobile Social Gamers vs. Traditional Gamers by Gender



Sources: Flurry Analytics, *Electronic Software Association



Playing games as addictive as heroin

- 5,000 calls to one clinic for help- Call Of Duty link to three suicides- Dopamine levels increase in brain

BY LEE PRICE, GAMING EDITOR | 8th July 2014, 4:49 am



LINK BETWEEN TEEN KILLERS & VIDEO GAMES? ALL WERE BIG GAMERS



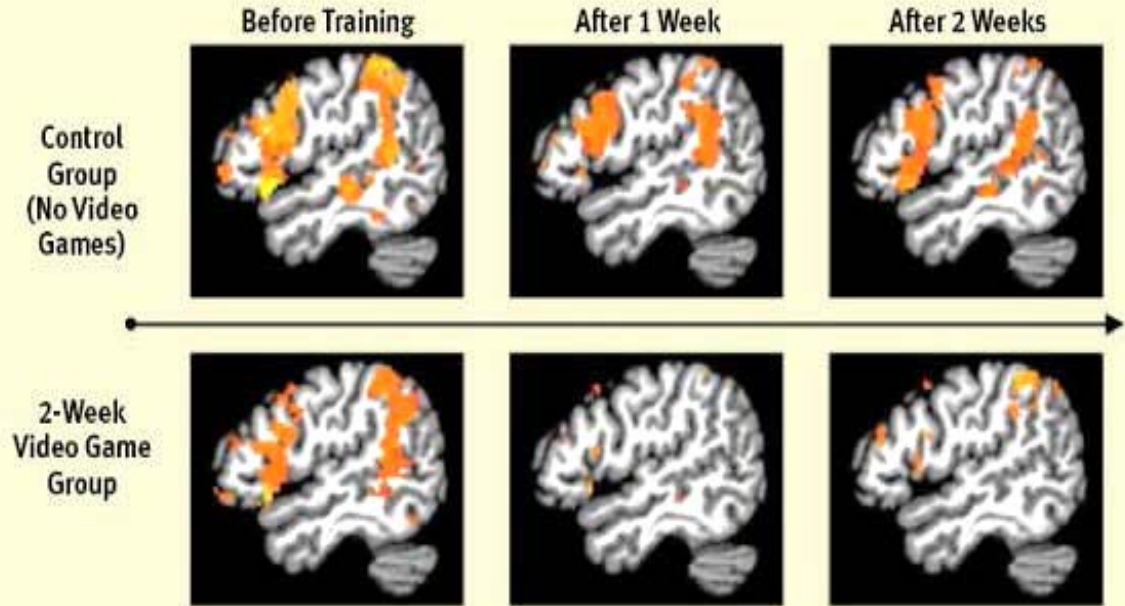
Eric Harris | Dylan Klebold | Seung Hui Cho | Jared Loughner



Anders Breivik | James Holmes | Adam Lanza



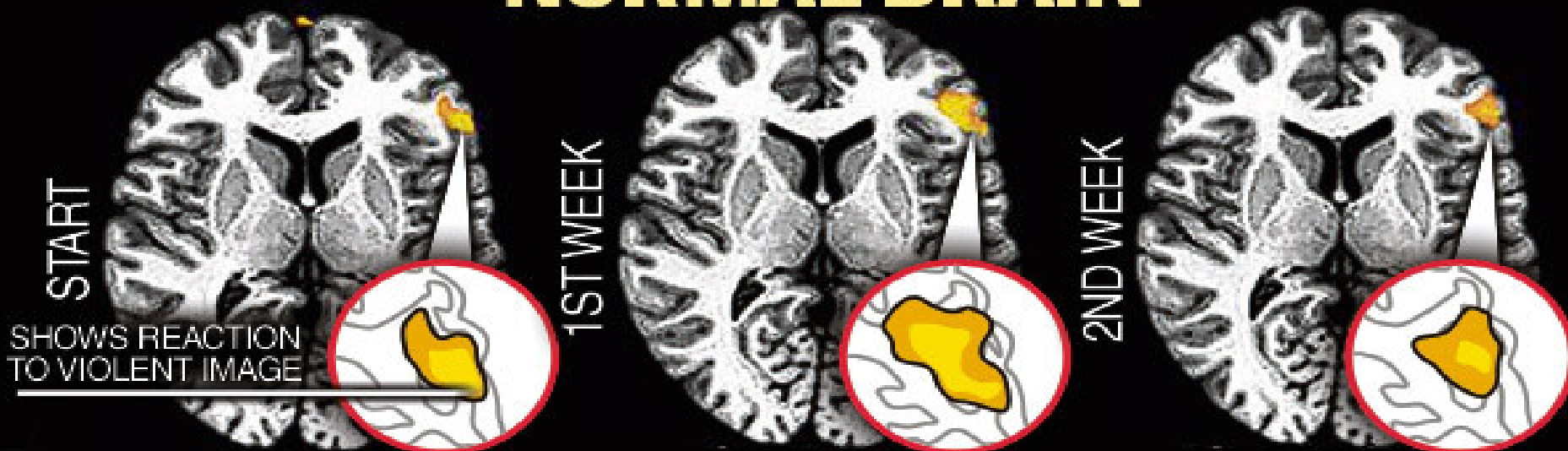
Your Brain on Games: Experimental Evidence



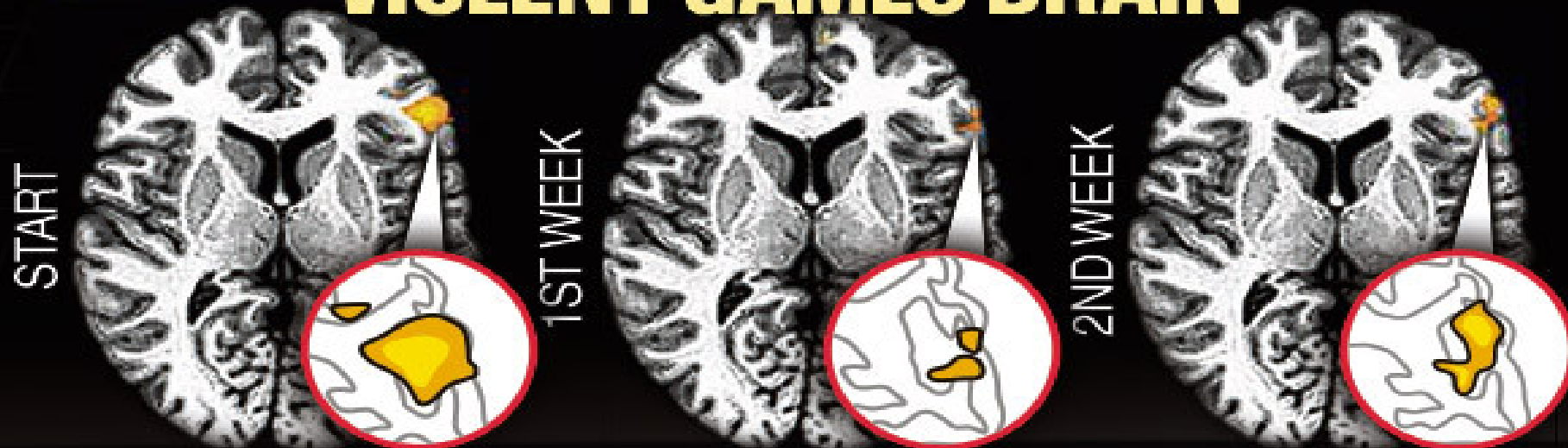
LOSING TOUCH Young adult males who played a violent video game extensively for 2 weeks had lower activity in

important brain areas while attempting to control behavior, compared to those who played no video games.

NORMAL BRAIN



VIOLENT GAMES BRAIN



Marketing to Millennials

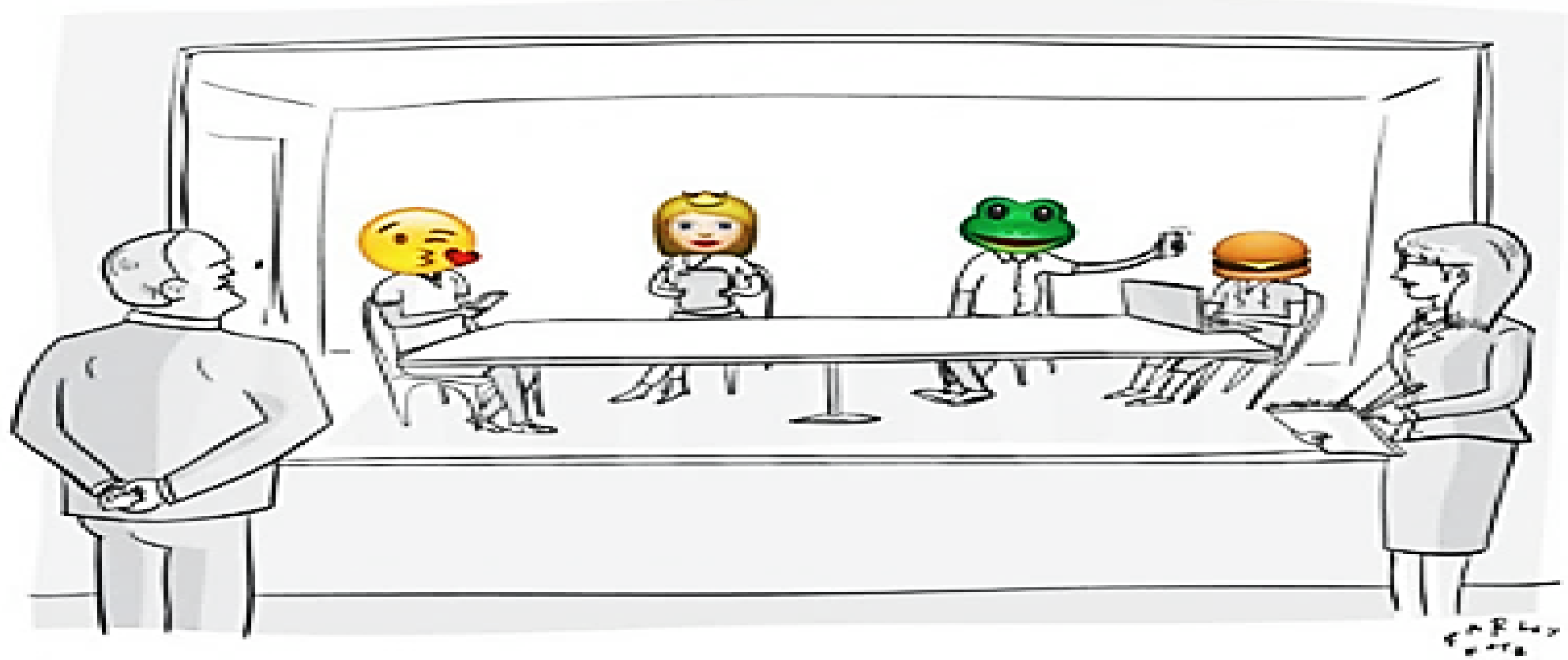
30
SEP

Marketing to self-absorbed selfie takers, hashtag obsessors – the Millennial generation

KRYSTINE DINH RESEARCH 0 COMMENTS

“Technology use isn’t enough. As marketers, we need to dig deeper and know precisely which devices and programs would ensure reach of the Millennial consumer”

e^xponential
Advertising Intelligence



*“We may not understand Millennials,
but, as God is my witness, we’ll take their
money.”*

Other Sources of Information

<http://www.gartner.com/technology/research/gamification/>

<http://blogs.clicksoftware.com/index/top-25-best-examples-of-gamification-in-business/>

<http://www.allencomm.com/blog/2015/07/great-gamification-examples-in-training/>

<http://www.bunchball.com/blog/post/1616/5-gamification-trends-watch-2015>

<http://technologyadvice.com/gamification/smart-advisor/>

Gracias!!!...