Workplace Gamification of Social Media:
Analysis and Strategies

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Research in Computer Science

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What is Gamification?

Gamification: "The Use of Game Design Elements in Non-Game Contexts" [11]

- Gamification is expected to grow from 1.65 Billion USD 2015 to 11.1 Billion USD by 2020

- Gamification has a long history with public social media, but less so in work-place environments.

- Getting people to communicate and innovate from bottom up is an important goal for businesses today

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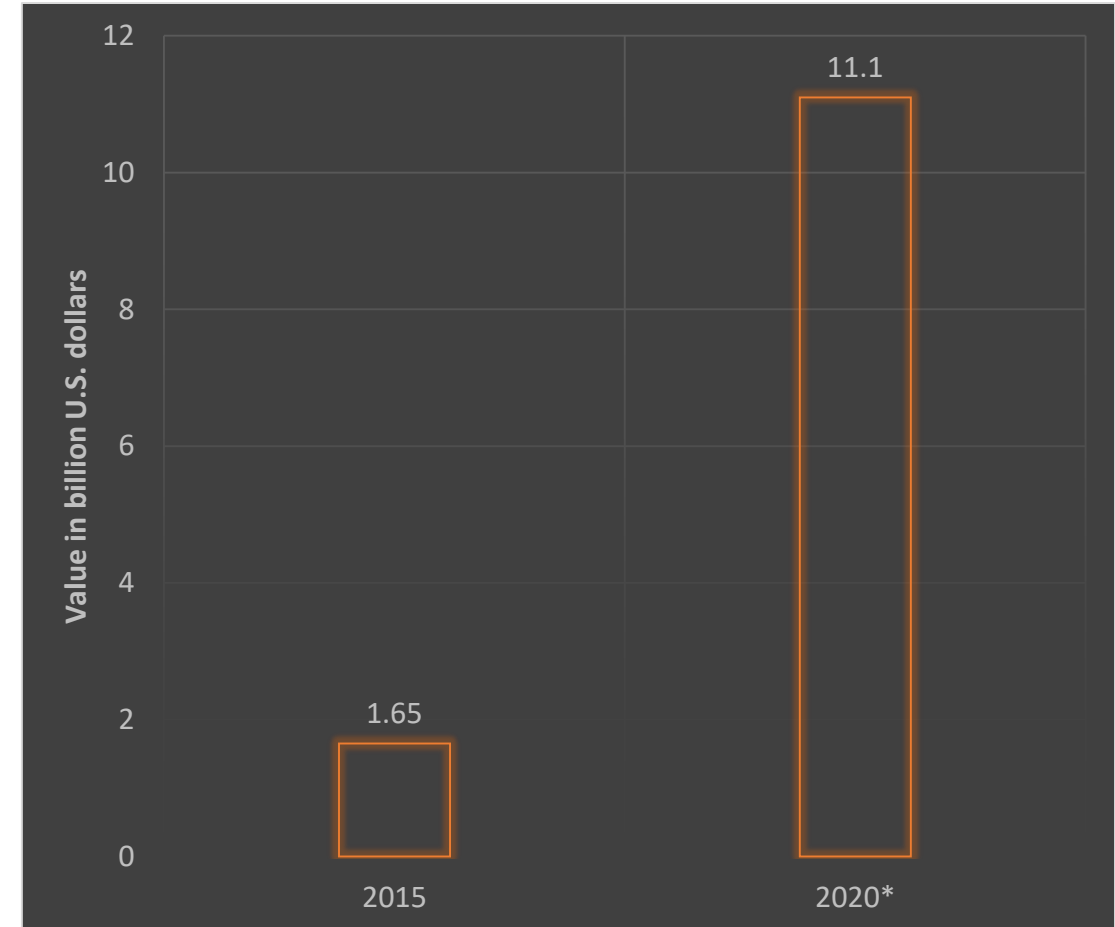
What is Gamification?

Workplace Gamification is growing:

- Unique method to access intrinsic motivation
- New technologies inspired by Social Media, and Data Analytics makes Gamification easier
- Case studies support effectiveness:
  - Significant reduction in training times, with longer retention (50% reduction Deloitte)
  - Reduction of KPI's like call time at CISCO 15%
  - 58% more generated ideas in brainstorming – SAP Streamwork

$25M in venture funding investments to gamification

PREDICTIONS (YOU CAN COUNT ON)

50% of organizations that manage innovation processes will gamify those processes by 2015

70% of Global 2000 organizations will have at least 1 gamified application by 2014

Image Credit: BigDoor.com

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DGC Group & Gamification

- The DGC Group (My company) designs games for AAA Clubs:
  - Auto Club Enterprises
  - MidAtlantic
  - Allied Group
- No Social Media Component
- Games are designed around KPIs like:
  - Overall Sat on Surveys
  - Response Time
  - Keeping Members Informed

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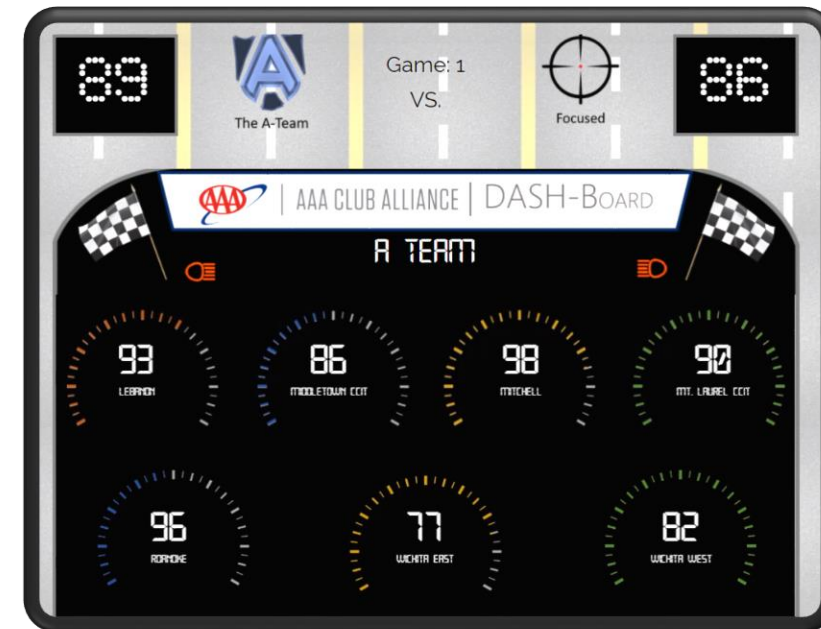
Literature Review

- Vassileva: Different Models for motivating participation in social media outlets:
  - Real-World Benefits – based on classical economics view (less successful)
  - Irrational Users – Behavioral Economics:
    - Recognition – Reviews, Voting
    - Status – action frequency

- Aseriskis et al. Different Game Mechanics have unique effects
  - Finite vs. Infinite Point Systems
  - Thinking about games as "flow of resources"
  - Levels and Game Progress important elements of game mechanics

- Silva: Any Gamification framework needs to *dynamically defined by sustainability indicators*

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Literature Review: Motivation

- Vassileva: The key variable is motivation:
  - Extrinsic. Vs. Intrinsic theories about motivation:
  - Maslow's Heiarchy - Intrinsic
  - Social Comparison – both
  - Reinforcement - Extrinsic

- Yu Kai Chou: PBL Fallacy – Points, Badges, Leaderboard are not enough to really motivate users.
  - Gamification craze is generating energy, but not enough innovation
  - Must design game to effect key aspects of human psychology

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Literature Review: Octalysis

1. Epic Meaning & Calling
2. Development & Accomplishment
3. Empowerment of Creativity & Feedback
4. Ownership & Possession
5. Social Influence & Relatedness
6. Scarcity & Impatience
7. Unpredictability & Curiosity
8. Loss & Avoidance

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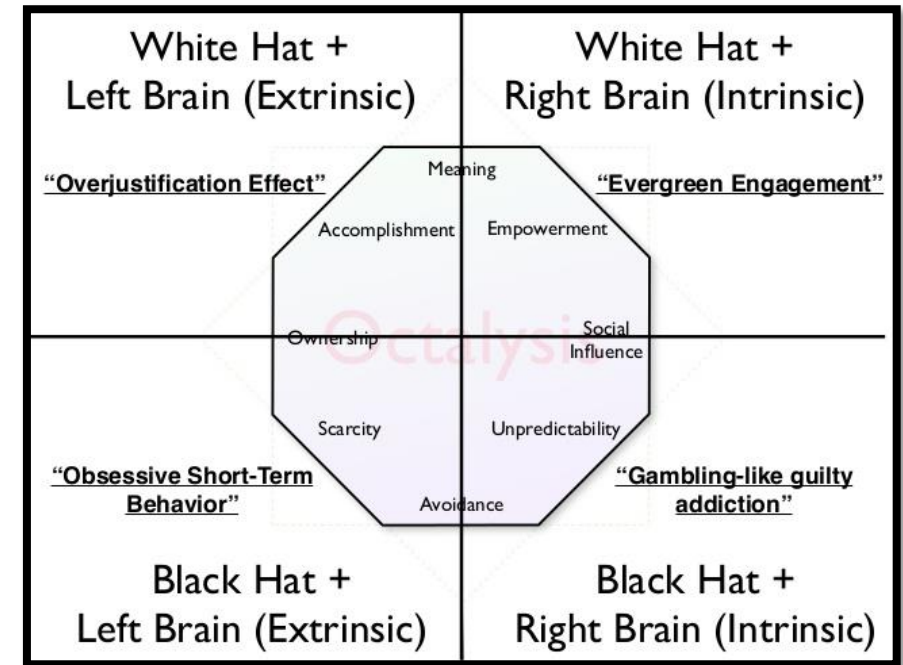
Product Review

- Badgeville:
  - ✓ Basic KPI Rules Engine with Integration
  - ✓ Social Media Participation & Sharing rewards
  - ✓ Badges for Achievment and Progress

- Gameffective:
  - ✓ Race Metaphor for Milestones and Comparison on KPI
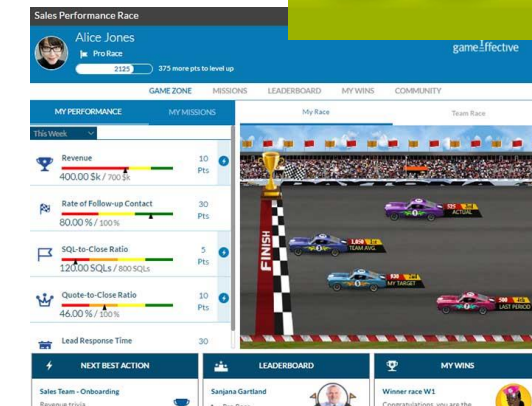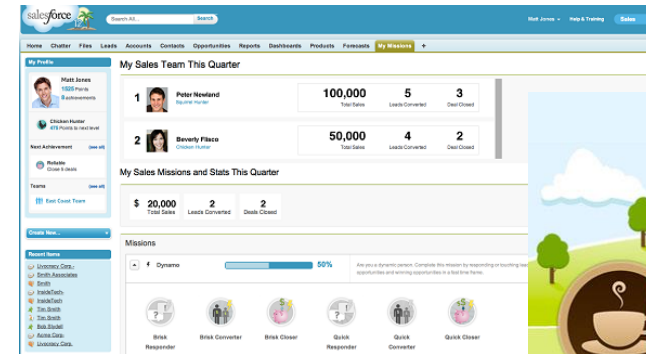
Product Review

- LevelEleven:
  - ✓ Pace Based Progress Updates for Milestones
  - ✓ Real-Time ScoreBoards
  - ✓ Flash-Contest controlled by Manager

- Gigya & Microsoft:
  - ✓ Offer similar features to others with a fewer options, but better integration. Used with large platforms
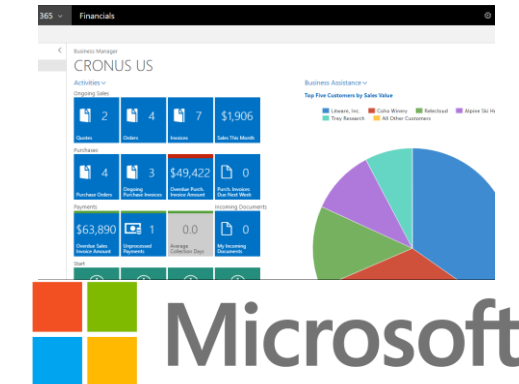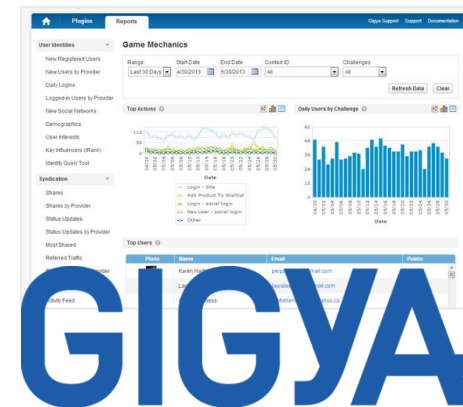
- **Sine-Stream Voting:**
  - Oscillation between Pyramid and reverse-pyramid scheme relationships
  - Ideal for changing dynamics of social media platform
  - Good for incentivizing voting and interconnectivity.

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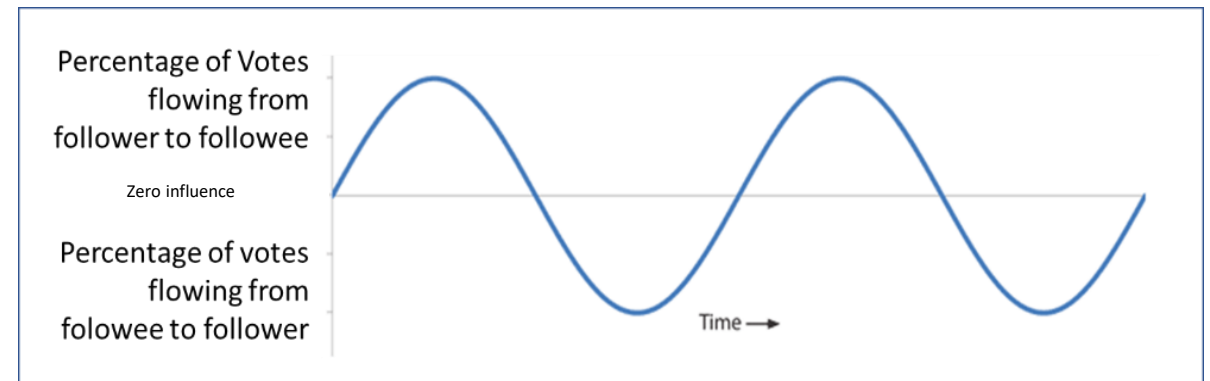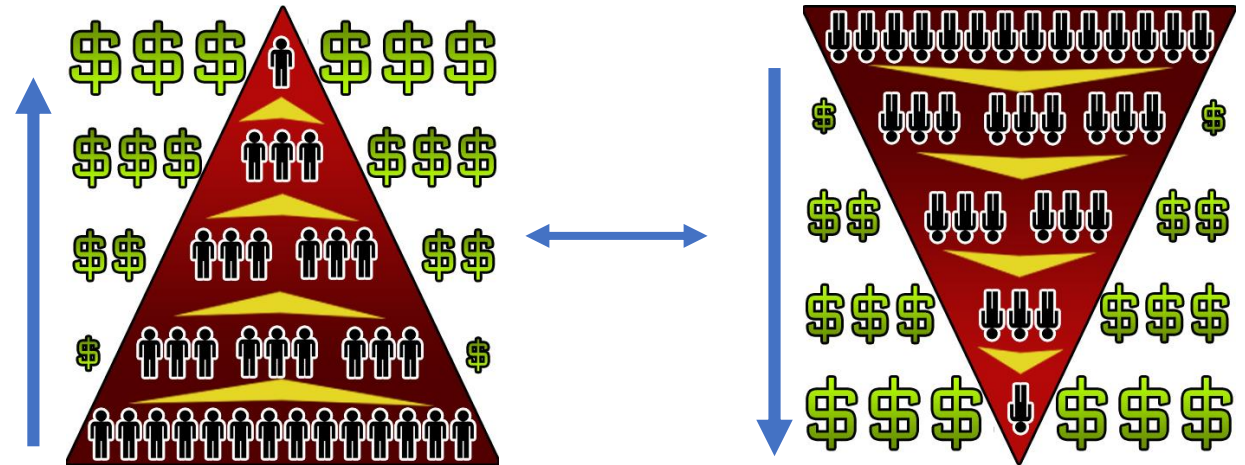
New Strategies:
Voting Types & Sine-Stream

- Infinite vs. Finite Voting
  - Resource flow – make badge assignments finite, but have unlimited general voting
- Categorical vs. General Voting
  - Have certain votes be more meaningful than others (Specific Content)
  - "Best-Practice!"
- Group Voting
  - Under certain scenarios Groups can vote as units for more weight, or vote interdependently swapping voting weights
- Investment Voting
  - With negative voting potential, people can invest finite voting into a post with the possibility of receiving a percentage of other votes assigned to post or negative votes – Like investing in a stock, instead it is an idea – (with this scenario one could vote more than once on a post)

New Strategies: *Dynamic Profiling*

- Similar to Linked in, users start with identifying skills, but do so with finite point assignments
  - Skills can receive additional points by other users by:
    - An unlimited increase from upvotes that express the upvoters skill set as a percentage
    - A limited vote from voluntary finite assignments by other users on a user's profile

50 pts

20	0	5	15	1	9	...
Data Analysis	Admin	Hiring	Marketing	Social Media	C++	

20	0	5	15	1	9	...
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Person A

5	0	25	15	1	9	...
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Person B

5	0	25	15	1	9	...
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Person B

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Person A

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New Strategies: Group Identities

- Sine Stream Voting increases user interdependence overall
- Dynamics of vote sharing can be based on:
  - Follower/Followee
  - Invitation
  - Group associations
    - Group Identities act as middle-man distributers sharing votes between users of the groups. Weighting of this interchange fluctuates according to sine-stream variables
  - Meta-Groups – whole communities or companies can also act essentially as groups, allowing them to quantify the overall participation in the community

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New Strategies:
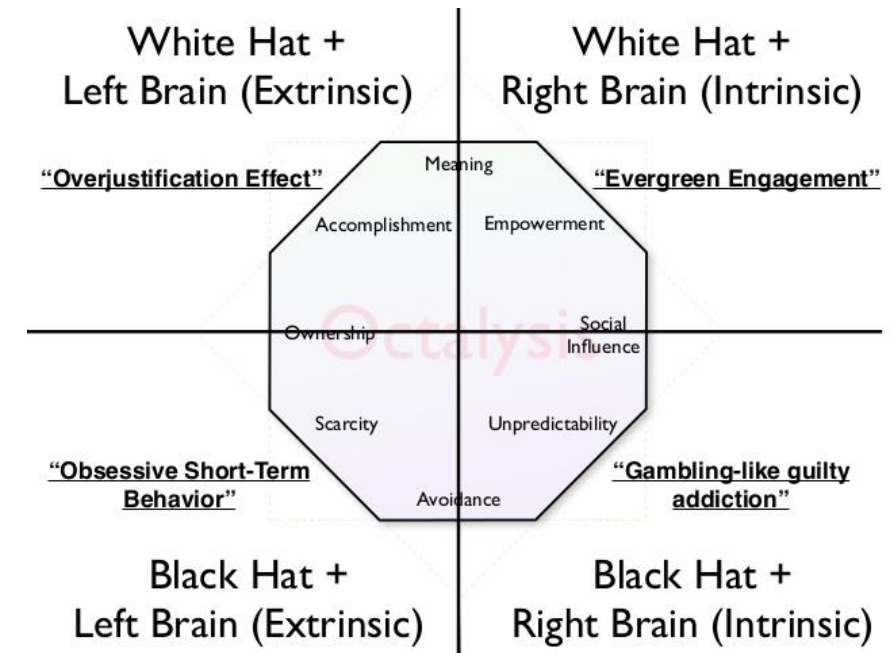## *Leaderboards, Levels, and Challenges*

- Leaderboards are highly classified based on various ways of identifying peer groups and artificial group associations

- Users who struggle could get algorithmic advantages

- Users could *level up-* getting access to special benefits based on voting scores

- Communities can *level up-* receiving features that occur when the entire community reaches a certain level

- Challenges with special vote weighting offered sporadically can lead to surge participation

Ocatalysis
Review of Strategies

Most unique motivators compared to other products:

- *Epic Meaning* via meta-group scoring (make the whole company look good)

- *Development & Accomplishment* + *Ownership and Possession* are heavily influenced by Dynamic Profiling

- *Creativity & Feedback*, *Scarcity& Impatience, Loss & Avoidance* – are influenced by types of voting (finite, investment) and challenges

White Hat +
Left Brain (Extrinsic)

White Hat +
Right Brain (Intrinsic)

"Overjustification Effect"

Meaning

"Evergreen Engagement"

Accomplishment | Empowerment

Ownership | Social Influence

Scarcity | Unpredictability

"Obsessive Short-Term Behavior"

Avoidance

"Gambling-like guilty addiction"

Black Hat +
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Testing of New Strategies

Layer 1: Testing out Different Approaches against Control Groups with different AAA clubs packaged with other campaigns.

- Measure participation levels

- Survey participants

Layer 2: ATP testing of Code used – Use Automatic Theorem Prover to analyze Rules and Specifications against code. Example of Logical Notation used in specifications for a finite vs. infinite point system based on badging

- `All badge points of badge-type x for a post p from user z are unique.`
- `All badge point assignments of badge-type x by user z for any post p may be only given once.`
- `After assignment by user z, the number of badge points (other than upvotes) belonging to user z of badge-type x will be reduced by one.`

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