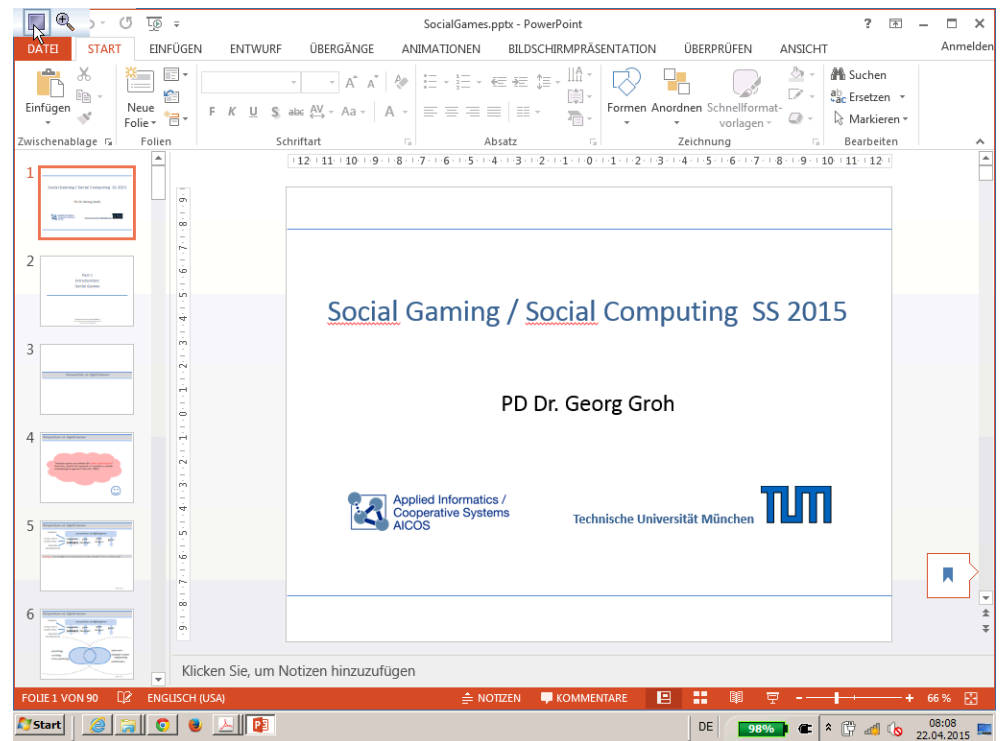# Script generated by TTT

Title: groh: profile1 (22.04.2015)

Date: Wed Apr 22 08:08:30 CEST 2015

Duration: 85:02 min

Pages: 47

Types of Digital Games: Casual Games

Casual Games

○ Juul [Juul, 2010; in (1)]: **five design principles**:

  − **Fiction**: almost all: "*fictions with positive valence*".

  − **Usability**: are easy to use, friendly interfaces, "*presuppose little knowledge of game conventions*"

  − **Interruptibility**: allow players to "*play in short bursts*"

  − **Difficulty and punishment**: "*often become very difficult during the playing of a game*" but typically only have "*lenient punishments for failing*".

  − **Juiciness**: "*excessive positive feedback for every successful action*"

Types of Digital Games: Pervasive Games

Pervasive Games

○ [Montola et al, 2009; in (1)]: „*game that has one or more salient features that expand the contractual magic circle of play spatially, temporally, or socially*"   ←→ cyberpyhsical systems

○ [Montola *et al.*, 2009, in (1)]. other terms:

  "*adaptronic games, alternate reality games, ambient games, appropriative games, augmented reality games, big games, brink games, context aware games, crossmedia games, geogames, hybrid games, immersive games, invasive games, location-based games, locative games, massive games, mixed reality games, mobile games, pervasive games, reality games, supergames, total games, transreality games etc.*"

Types of Digital Games: Pervasive Games

Pervasive Games: sub-types: [Magerkurth et al, 2005; in (1)]:

- **Smart toys**:
  e.g. Tamagotchi-like toys, Ravensburger tiptoi

- **Affective gaming**:
  integrate a player's emotional state, measured via sensors

- **Augmented tabletop games**:
  e.g. via tangible pawns

- **Location-aware games**:
  e.g. Geocaching

- **Augmented reality games**:
  e.g. via head-mounted displays, projected images
  on real-world surfaces, or hand-held devices.

- general (pervasive) trend: Gamification

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Types of Digital Games: Serious Games & GWAPs

Serious Games

- **games with ‚useful' side effects** for users: [Susi et al., 2007; in (1)]:
  - education: e-learning, edutainment, game-based learning, digital game-based learning (related, overlapping)
  - training: : e.g. military or financial simulations
  - information: political games, corporate games, and healthcare games (inform, create awareness)

- **„Games with a Purpose"** (GWAP):
  - side-effects not immediately useful for users
  - closely related but not necessarily with game orientation: „human-based computation", „crowdsourcing"
  - examples: Artigo (soft ontology / folksonomy generation), Captcha-solving

- meta types: social, simulation

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○ meta types: social, simulation

Types of Digital Games

	Hardcore	Casual	Pervasive	Serious
Simulation	◕	○	○	◔
On-line	◔	◐	◔	◔
Social	◔	◐	◔	◕
Mobile	○	◔	◕	○
Location-based	○	○	◐	○

adaptated from (1)

Genres of Digital Games

- extensive review of genres: [Järvinen, 2008; in (1)]: „*ludological genre frameworks*"

- example: [Rollings and Adams, 2003; in(1)], [Bates, 2004 ; in(1)] and [Novak, 2012 ; in(1)]:
  - {*action games,*
  - *adventure games,*
  - *strategy games,*
  - *simulations,*
  - *role-playing games,*
  - *puzzles*}

Genres of Digital Games

critique:

- not "timeless", formal criteria missing

- tree-based classifications (taxonomies): too rigid (e.g. in terms of mixed genres), graph based (with more relations than sub-sumption (is-a) or meronymy (part-of)) required

- mostly driven from existing games (extensional), not intensional

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- ● **better:** genre classifications based on **game mechanics**: *"genre is defined by a shared collection of core mechanisms"* [Costikyan, 2005; in (1)];

  - ○ genres by game mechanics: similar to ludological genre frameworks;
  - ○ genres == sets of game mechanics
  - ○ additive: new mechanics can be added w.o. changing older parts
  - ○ new genres easy: new combinations / sets

- ● genre: derived from single **pioneer** game and its mechanics and following similar games [Costikyan, 2005; in (1)]

[Järvinen, 2008; in (1)]: **Rapid analysis method (RAM):** 40 types of **game mechanics**:

"accelerating / decelerating, aiming & shooting, allocating, arranging, attacking / defending, bidding, browsing, building, buying / selling, catching, choosing, composing, conquering, contracting, controlling, conversing, discarding, enclosing, expressing, herding, information-seeking, jumping, maneuvering, motion, moving, operating, performing, placing, point-to-point movement, powering, sequencing, sprinting / slowing, story-telling, submitting, substituting, taking, trading, transforming, up-grading / down-grading, voting"

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examples:

"Command and Conquer" (1995) , „StarCraft II" 2010:
classic real-time strategy games:

attacking / defending, building (a combination of placing and arranging), conquering, information-seeking, operating, point-to-point movement

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- *"A **game** is to somebody an engaging activity in which players believe to have active participation and where they agree on a system of rules that assigns social status to their quantified performance. The activity constrains players' immediate future to a set of probable scenarios, all of which they are willing to tolerate"* [Frasca, 2007; in (1)]

- four **types** of games: {**hardcore, casual, pervasive, serious**},
  - described as vectors $\in [0,1]^4$ of **meta-types** {**simulation, on-line, social, mobile, location-based**}

- **genres** of games: either described via
  - ludological genre frameworks or
  - as subsets of a large number of / a taxonomy of game-mechanics

Socio-Psychological Domain

- *"You can learn more about a person in an hour of play than in a year of conversation"* [Plato].

- *"In our play we reveal what kind of people we are"* [Ovid].

- *"The opposite of play isn't work - it's depression"* [Sutton-Smith, 1997; in (1)]

- *"positive emotions we get from games are already spilling over into real."* [McGonigal, 2011a; in (1)] → societal challenges of the 21st century

- numerous researchers (see (1)): playing addresses emotions (mostly positive ones) directly: fun, eustress, frustration.

- also: games support motivation & flow experiences

Socio-Psychological Domain: Players

- most players develop into socializers over time [Radoff, 2011; in (1)]

- [Yee, 2006 (various); in (1)]: statistics based: **three motivational components** for MMOG player type definition:

  - **Achievement**: desire for advancement, mastery of game mechanics, love of competition

  - **Social**: socializing, building relationship, teamwork.

  - **Immersion**: urge for discovery, love of role-playing, need for customization, motive of escapism.
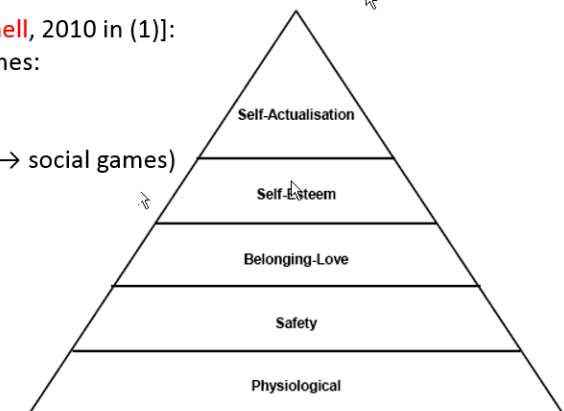

Socio-Psychological Domain: Motivation

Motivation

- **intrinsic** (pleasure in means/ activity itself) vs. **extrinsic** (goal ↔ utility)

- [Maslov, 1943 in (1)]→[Schell, 2010 in (1)]: most achievements of games:
  - Self Esteem level
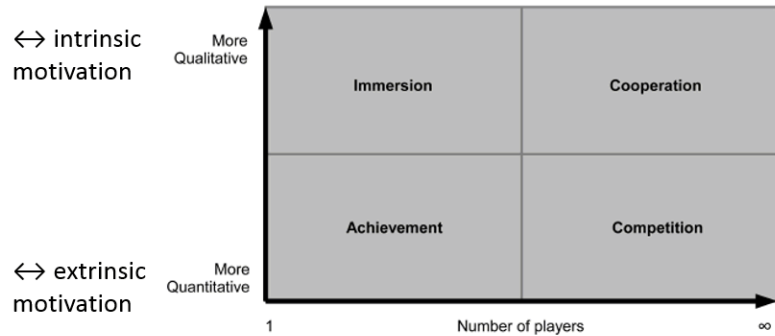 - Belonging Love level (↔ social games)

Maslov's basic need hierarchy [Maslov, 1943; in (1)]

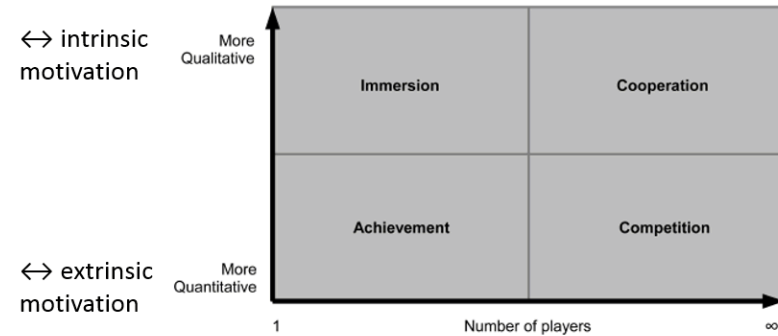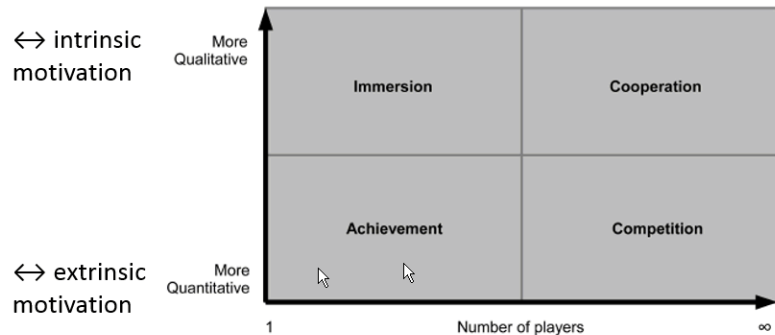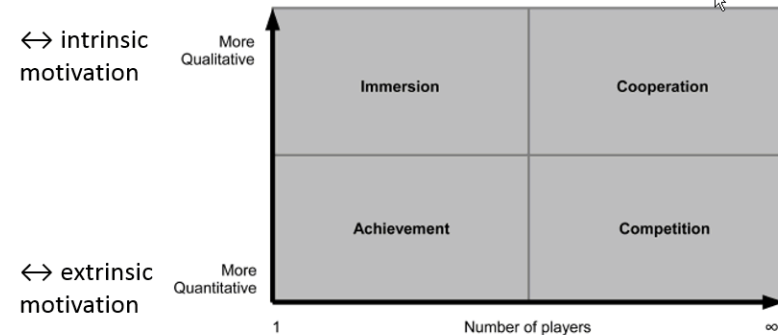# Socio-Psychological Domain: Motivation

Motivation: types

○ [Reiss, 2004; in (1)]: 16 motives:
power, curiosity, independence, status, social contact, vengeance, honor, idealism, physical exercise, romance, family, order, eating, acceptance, tranquility, saving

○ [Radoff, 2011; in (1)]: social → more powerful motivators: acceptance or status

↔ intrinsic motivation — More Qualitative

| Immersion | Cooperation |
| Achievement | Competition |

↔ extrinsic motivation — More Quantitative

1 — Number of players — ∞

Radoff's Player Motivations. [Radoff, 2011; in (1)]

Socio-Psychological Domain: Motivation

Motivation: rewards

- four **characteristics** of reward: [Wang and Sun, 2011; in (1)]]
  - **social value**,
  - **effect** on game-play,
  - **suitability** for **collection** and **review**,
  - **time required** to earn and/or receive the reward

- **utilization** of rewards: [Wang and Sun, 2011; in (1)]]
  - **Advancement**, (game progress)
  - **Review**, (sense of accomplishment)
  - **Sociality**, (interaction)
  - **Cooperate / Compete**, (share, hoard)

Socio-Psychological Domain: Emotions

Emotions

- ↔ Affective Computing [Picard, 1995; in (1)], Social Signal Processing [Vinciarelli 2011], Emotion Synthesis (Robotics)

- **Ekman's six key emotions** [Ekman, 1972; in(1)]:
  - *frustration (anger), fear, surprise, sadness, amusement (happiness)*

- **Pluchik's wheel of emotions** [Plutchik, 2011; in (1)]: eight basic emotions:
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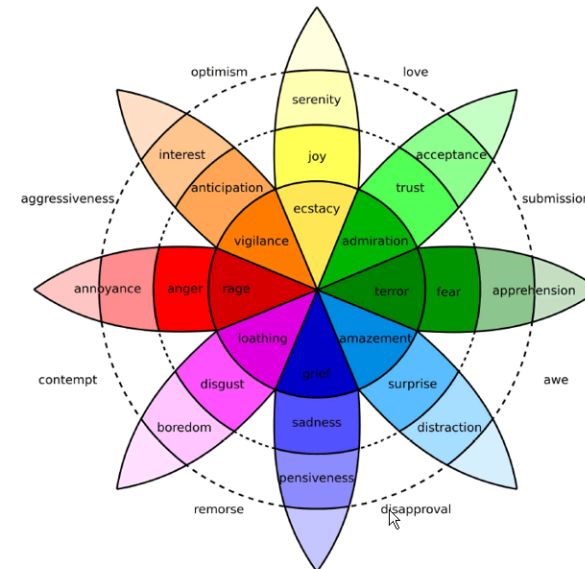
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Socio-Psychological Domain : Emotions

Plutchik's Wheel of Emotion. Source: [Plutchik, 2012; in (1)]

Socio-Psychological Domain : Emotions

Emotions

○ **detection** via Social Signal Processing [Vinciarelli 2011]: galvanic skin response (GSK), cardiovascular measures, and electromyography (EMG) [Mandryk et al., 2006; in (1)], computer vision, audio based methods (Schuller, TUM)

○ [**Lazzaro**, 2007; in (1)]: five **functions** of player emotion In digital games:
  - **support enjoyment**
  - **focus attention**
  - **help in decision making**
  - **affect player's performance**
  - **support learning**

Socio-Psychological Domain : Involvement

Forms of Engagement: Flow

○ **characteristics of Flow** [Nakamura and Csikszentmihalyi, 2002; in (1)]:
  - Intense and focused concentration
  - merging of action and awareness.
  - loss of reflective self-consciousness
  - sense of total control of one's actions
  - distortion of temporal experiencee
  - experience of the activity as intrinsically rewarding

○ **conditions for Flow** [Nakamura and Csikszentmihalyi, 2002; in (1)]:
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  - immediate feedback

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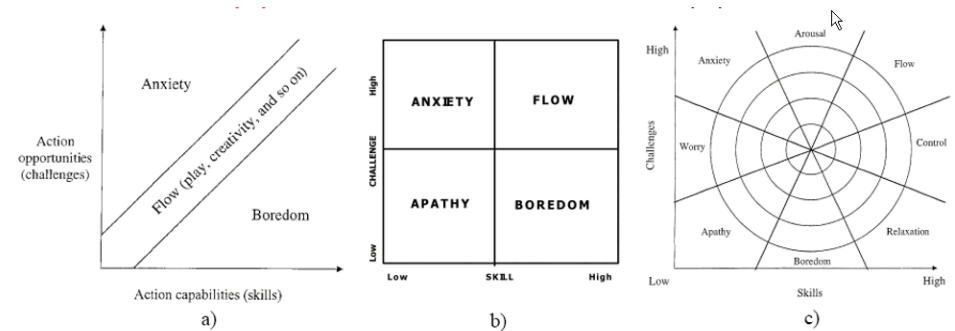- **characteristics of Flow** [Nakamura and Csikszentmihalyi, 2002; in (1)]:
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Forms of Engagement: Flow

Different Models of Flow: (a) Original Three Channel Flow Model, (b) Four Channel Flow Model and (c) Eight Channel Flow Model. Sources: a) and c) [Nakamura and Csikszentmihalyi, 2002], b) [Novak *et al.*, 1997]. (all in (1))
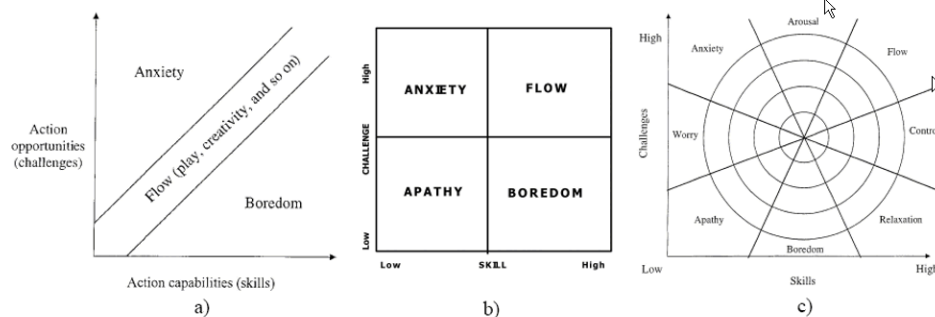

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Fun

[LeBlanc, 1999; in (1)]: **eight kinds of fun** (→ part of MDA framework ('Aesthetics') [Hunicke *et al.*, 2004; in (1)]:

- **Sensation:** *game as sense-pleasure*
- **Fantasy:** *game as make-believe*
- **Narrative:** *game as drama*
- **Challenge:** *game as obstacle course*
- **Fellowship:** *game as social framework*
- **Discovery:** *game as uncharted territory*
- **Expression:** *game as self-discovery*
- **Submission:** *game as pastime*