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Socio-Psychological Domain: Social Play

**key elements** of social play [Isbister, 2009; in (1)]:

- **Emotional contagion**: [Hatfield et al., 1994; in (1)]: tendency to automatically mimic and synchronize expressions, vocalizations, postures, and movements with those of another person’s and, consequently, to converge emotionally. Also applicable to HCI and NPCs [Reeves and Nass, 1996 in (1)], [Nass et al, 1996 in (1)].

- **Performance**: humans perform differently when they are watched by other humans [Cottrell, 1972; in (1)]. Also applicable in HCI [Rickenberg and Reeves, 2000; in (1)].
  ↔ **Hawthorne effect** [Landsberger, 1958; in (1)]: change in human behavior just by the fact that the people know that they are being observed.

Communities and Social Networks in Digital Games

**Studies of Communities and Social Networks in Digital Games**

- long history of Virtual Community research (see e.g. [Klastrup, 2003; in (1)]
- example in games: MMO(RP)G (WoW etc.): cooperation in game may be necessary; models of emotion expression etc.
- Social Media, Social Games: → large datasets to study human social behavior
- in-game vs out-game social relations → related [Jakobsson and Taylor, 2003; in (1)]

- **self-organisation** of players: short-term or long-time groups such as guilds [Nardi and Harris, 2006; in (1)], [Williamsæt al., 2006; in (1)].
  their context [Steinkuehler and Williams, 2006; in (1)].
  sub-topics:
  - social structuring: e.g. management, leadership, typology
  - rationales of social structures
  - culture and social norms
  - use of information and communication technology.

- **demographics and psychographics**
- relationships between players and their avatars or characters [Bainbridge, 2010; in (1)].
- **learning**: e.g. in serious games
Studies of Communities and Social Networks in Digital Games

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Studies of Communities and Social Networks in Digital Games

**study topics** (contd.):

- **anti-social and misbehaving** conduct [Kirman et al., 2010; in (1)] [Achterbosch et al., 2008; in (1)].

- **prediction of social interaction** [Putzke et al., 2010; in (1)]

- **communities that form around games** [Kirman, 2010; in (1)] [Wei et al., 2010; in (1)].

- **technological aspects** [Achterbosch et al., 2008; in (1)] (e.g. effects of latency)

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**social play: three characterizing properties**

**spatio-temporal context**

**interaction**

**game play**

[Figure from (1)]
Social Play as Descriptive Aspect of Digital Games

social play: three characterizing properties

spatio-temporal context

interaction

game play

figure from [1]
T. O’Reilly (2007) (more technical): Web 1.0 → Web 2.0: paradigm switch of replacing certain types of conventional monolithic software by a collection or network of web based services that

- utilize and implement ‘the Web as a platform’,
- ‘harnesses collective intelligence’ of a broad user base (→ Social Media),
- emphasize importance of content / data (made accessible, relatable and extensible via web-based services),
- that are continuously updated (replacing the traditional software life cycle) and integrate users as co-developers,
- use lightweight programming models,
- collectively implement ‘software above the level of a single device’,
- and provide a ‘rich user experience’. [O’Reilly 2007; in (2)]
**Definitions**

- **Web 2.0**: “denoting the extension of Web 1.0 in terms of instances of Social Media services and platforms [...]” [2]

- **Social Media service**: Web-based service (in the sense of SOA [MacKenzie et al., 2006; in (2)], “[...] supporting [direct and indirect] social interaction” [especially communication]) “via the generation and exchange of large amounts of content by a broad (compared to the number and nature of Internet users), non-IT-specialist set of users.” [2]

- **Social Media platform**: “functionally coherent bundle of Social Media services” [2] (distinction service ↔ platform often not totally sharp) PLUS commonly accessible, sufficiently widespread, distributed, functionally coherent bundle of network technologies (e.g., P2P or client-server Web-Protocols) on which it operates

**Definitions (cont.)**

- **Social Media service or platform instance**: instance of service or platform with an associated user base and information space

- **Social Media service class**: examples: Wiki, Blog, discussion board etc.

- **Social Media service software**: implementing Social Media services; example: mediaWiki [med, 2012; in (2)] implementing Wikipedia

- **Social Media platform software**: implementing Social Media platforms; example: Elgg [elg 2012; in (2)] implementing Social Networking platforms

- **Social Software**: Social Media service software U Social Media platform software

**Other Issues**

- **Criticism**: Web 1.0 already providing all basic prerequisites and characteristics of collaboration, social interaction and distributed content generation and exchange (see [Berners-Lee and Lanningham, 2006; in (2)])

- **Necessary**: qualitative or quantitative studies in (technology) sociology or (technology) history (using historical criticism methodology)

- **Utility of Web 2.0**: example: ongoing debate about quality of user generated content: [Giles, 2005; in (2)]; [Flintoff, 2007; in (2)]; [Lorenz et al., 2011; in (2)]; [Wöhner and Peters, 2009; in (2)]
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**Social Media characteristics**

- **openness**: admissibility, low technical barriers

- **content**: subject to constant change

- **more interactive**: e.g. enabling back-channeling [Sutton et al., 2008]

- **dynamics**: fast media → **emergent social effects**: e.g. triggering initiatives in cases of disasters, e.g. in
  - 2007 Southern California wildfire [Sutton et al., 2008; in (2)];
  - Fukushima 2011 radiation levels measurements [par, 2012; in (2)] 2011
  - Arab Spring phenomenon [DeLong-Bas, 2012; in (2)].
Social Media - Characteristics (contd.)

**Social Media characteristics:** collectively solve problems beyond individual capabilities [Lermann 2007 in (2)]:

- (Authoring tools → Blogs), Micro-Blogs, ...
- Collaboration tools → Wikis, Wikipedia, ...
- Tagging systems → del.icio.us, Flickr, CiteULike, ...
- Social Networking → Facebook, Xing, ...
- Collaborative Filtering → Digg, Amazon, ...
- Social Games → MMOGs (World of Warcraft etc.), ...

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Social Media – Technologies

**Social Media: Technologies**

general enabler technologies for Social Media: technologies for building general Rich Internet Applications (RIAs) or Web-applications (see e.g. [Shklar and Rosen, 2009; in (2)]):

- basic Web protocols (e.g. HTTP(S))
- languages for declarative representation of structure, actual content, and format of content (e.g. HTML5, XML + related (e.g. XSLT), specialized XML languages (e.g. GML))
- Semantic Web languages (e.g. RDF(S), OWL, SPARQL), Social Semantic Web Ontologies (e.g. SIOC, FOAF)
- client-side technologies (e.g. Flash, JavaScript, JSON, AJAX, Silverlight)
- server-side technologies (e.g. PHP, JSP, ASP, Ruby on Rails, Spring, Databases)
- syndication and mash-up of content (e.g. RSS, Atom)
- Social Software (e.g. Elgg, MediaWiki)
### Social Media Classes: Characterization

by [Kaplan and Haenlein, 2010; in (2)]

<table>
<thead>
<tr>
<th>Self-presentation/ Self-disclosure</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blogs</td>
<td>Blogs (e.g., Facebook)</td>
<td>Virtual social worlds (e.g., Second Life)</td>
<td></td>
</tr>
<tr>
<td>Collaborative projects (e.g., Wikipedia)</td>
<td>Content communities (e.g., YouTube)</td>
<td>Virtual game worlds (e.g., World of Warcraft)</td>
<td></td>
</tr>
</tbody>
</table>

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### Diagram

- **Presence**: The extent to which users know if others are available.
- **Sharing**: The extent to which users exchange, distribute, and receive content.
- **Identity**: The extent to which users reveal themselves.
- **Conversations**: The extent to which users communicate with each other.
- **Reputation**: The extent to which users know the social standing of others and content.
- **Groups**: The extent to which users are ordered or form communities.
All social interaction in Social Media may be viewed as forms of communication → characterize Social Media classes via classification system for communication.

Social Media services and platforms will typically support communication that is \(m:n\) or \(1:n\), indirect and non-commercial.

communication axes:

- **Cardinality** of persons involved in a typical communication act \((1:1, 1:n, m:n)\)

- **Directedness**: \((\text{direct}, \text{indirect})\): specific dedicated receiver / list of receivers vs. open set of receivers, possibly formally or informally constrained e.g. via certain properties.

- **Anonymity**: \((\text{non-anonymous}, \text{anonymous})\): the identity of the sender(s) is or is not known to the receiver(s).

- **Threadedness**: \((\text{threaded}, \text{non-threaded})\): do `reply-type` relations exist between representations of communication acts?

**Axes Characterizing Communication (contd.):**

- **Content**: \{(textual, graphical, video, contextual \{locations, social relations, user-item-relations etc.\}\}

- **Transmission**: \{stream, discrete\}

- **User Interface / Device / Usage Pattern**: \{mobile, laptop, desktop\}

- **Goals (may overlap):**
  - higher level of abstraction: \{(informing or being informed, create or gain awareness, collaborate, chat, etc.)\}
  - lower level of abstraction: \{(find a partner, maintain + expand social network, generate + manage ideas, exchange movies or music, entertain or be entertained, explicate and organize knowledge, etc.)\}

- **Commercialization**: \{commercial, non-commercial\}

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Social Media Classes

crass classes of Social Media

- **Awareness services** (/ contextual services):
  - inform users about events or states directly linked with other users that fulfill certain (contextual) criteria, proactively or on request
  - manage contextual data (social network, privacy settings etc.)
  - primary form of content: contextual information.
  - typical form of communication: 1:n and m:n; indirect; non-anonymous; non-threaded; contextual (e.g. locations, social relations, online-status etc.); discrete transfer; non-commercial.
  - example sub-class: Location-Based Awareness services

- **Direct Communication services**:
  - support direct communication of all forms (emphasis on 1:n, 1:m)
  - examples: group-messaging, certain forms of Micro-Blogging, chat

- **Information services**:
  - support indirect communication (if not already classified as Awareness service)
  - comprise the majority of the finer grained Social Media classes discussed above.
classes with an emphasis on certain forms of communication

- **Blogs:**
  - examples: Blogspot [blo, 2012; in (2)] (Blog hosting platform), official Google blog (an instance) [goo, 2012c in (2)].
  - Social Software example: WordPress [wor, 2012].
  - overlaps with: Microblogs. Superclass: information services.
  - supported typical communication form: 1:n; indirect; non-anonymous; non-threaded; textual (+ photos); desktop or laptop; discrete transfer; noncommercial;
  - typical goals: self-presentation, informing, awareness.
Social Media Classes

classes with an emphasis on certain forms of communication

- **Wikis**
  - example: Wikipedia
  - Social Software example: [wik, 2012b; in (2)].
  - supported typical communication form: m:n; indirect; anonymous; non-threaded; textual; desktop; discrete transfer; non-commercial
  - typical goals: knowledge management (codification, structuring, etc.).

- **Discussion Boards**
  - example: Sherdog [she, 2012; in (2)].
  - superclass: information services.
  - Social Software example: PHPBB [php, 2012b].
  - supported typical communication form: 1:n; indirect; non-anonymous; threaded; textual; desktop + laptop; discrete transfer; non-commercial
  - typical goals: exchange opinions and facts, give advice.

Social Media Classes

collaboration oriented classes:

- **(Revision Control)**
  - example Social Software: SVN [svn, 2012; in (2)].
  - superclass: Information services.
  - overlaps with: content oriented classes, especially document management.
  - supported typical communication form: 1:n; undirected; non-anonymous; threaded; code; desktop or laptop; discrete transfer; commercial and non-commercial
  - typical goals: collaborative code development for Open Source
  - usually not considered to be Social Media but peripherally matching our definition of Social Media