

**Script** generated by TTT

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classes with an emphasis on content



- **File Sharing** services.
  - **examples** / example social software: BitTorrent [bit, 2012; in (2)] Peer-to-Peer file sharing protocol and abstract distributed service.
  - **superclass**: Content Sharing.



- **Video Sharing** services
  - **example**: Youtube
  - **superclass**: Content Sharing



- **Photo Sharing** services
  - **example**: Flickr [fli, 2012; in (2)]
  - **superclass**: Content Sharing



- **Presentation Sharing** services:
  - **example**: Slideshare [sli, 2012; in (2)]
  - **superclass**: Content Sharing

classes with an emphasis on content



- **Social Bookmarking** services
  - **example**: CiteULike [cit, 2012; in (2)], Mendeley
  - **superclass**: Content Sharing
  - **overlaps** with: Rating services.



- **Rating** services
  - **subclass**: Product Reviews services
  - heavily **overlaps** with: Recommender services; overlaps with: Events and News services
  - typical **form of communication**: 1:n; indirect; anonymous and non-anonymous; non-threaded; textual, contextual (user-item-relations); mobile, desktop, or laptop; discrete transfer; non-commercial
  - **goals**: inform others about the quality of products or services.

classes with an emphasis on content



- **Recommender** services
  - **example**: Amazon product recommendations; Recommender service on Last.fm internet radio [las, 2012; in (2)] (see also [Thar, 2008; in (2)]).
  - large class of Social Media services with many subclasses (see [Groh et al., 2011a; in (2)])
  - heavily overlaps with: Rating services.
  - typical form of communication: m:n; indirect; anonymous; non-threaded; contextual (user-item-ratings + recommendations); mobile, desktop, or laptop; discrete transfer; non-commercial
  - **goals**: get recommendations for entities on the basis of content, ratings etc.



- **Product Reviews** services.
  - **example**: Epinions [epi, 2012].
  - **superclass**: Rating services.



## Social Media ↔ Social Games

● **Social Digital Game:**

- a **game** (in the sense of the **definitions and characterizations of game** in the discussion and works presented on the previous slides)
- that makes substantial use of **digital computers** (in the sense of the definitions and characterizations of **digital game** in the discussion and works presented on the previous slides)
- that substantially involves **more than one player** (in its (social, interactive) **gameplay**, game **mechanics**, or **rules** etc.)

● **Social Digital Game:** one of our **meta-types**

## Social Media ↔ Social Games



**Games, Social Games**

**play:**

- no material interest
- limits actor's future  
[Frasca, 2007; in (1)]
- actor: tolerance of outcomes  
[Frasca, 2007; in (1)]
- formation of social groupings  
[Huizinga, 1939; in (1)]
- transformative social play: players extend, transform, and manipulate existing social relationships  
[Salen and Zimmerman, 2004; in (1)]
- “manipulation that indulges curiosity”  
[Schell 2010; in (1)]
- involving fate, uncertainty  
[Sutton Smith, 1997; in (1)]
- play as identity  
[Sutton Smith, 1997; in (1)]
- competition  
[Sutton Smith, 1997; in (1)]

**Social Media**

- ✓
- (✓) } other flavors of these aspects
- (✓) }
- ✓
- ✓ (transformative use: many examples)
- (✓)
- (✓)
- ((✓)) (social reactions not exactly foreseeable)
- ✓
- ✓

## Social Media ↔ Social Games



**Games, Social Games**

**play:**

- free, voluntary  
[Huizinga, 1939; in (1)], [Caillouis, 1961; in (1)]
- outside “ordinary” life, “not serious”  
[Huizinga, 1939; in (1)],
- unproductive  
[Caillouis, 1961; in (1)]
- subjective  
[Frasca, 2007; in (1)]
- engaging  
[Frasca, 2007; in (1)]
- absorbing the player intensely and utterly  
[Huizinga, 1939; in (1)],
- make believe  
[Frasca, 2007; in (1)], [Caillouis, 1961; in (1)]  
(↔ blurring: real virtual, true fictional);
- play as the imaginary  
[Sutton Smith, 1997; in (1)];
- rules  
[Huizinga, 1939; in (1)] [Caillouis, 1961; in (1)] [Suits, 1978, in (1)]

**Social Media**

- ✓ } SM is not “outside ordinary life”, but rather outside many aspects of “serious” life (job, health etc.). SM seen as communication support → cross divisional role of SM
- (✓) }
- must be negated for knowledge codification, collaboration classes etc.
- (✓) insofar as communication is subjective
- ✓ } yes but not exactly as much as for games
- (✓) }
- ((✓)) } only insofar as the communicated contents are intended or absorbed in an imaginary / make believe way
- }
- ✓ rules of social interaction, emergent special rules of SM (e.g. “netiquette”)

## Social Media ↔ Social Games

Games, Social Games	Social Media
<b>game:</b>	
• <b>social</b> [Frasca, 2007; in (1)]	✓
• <b>rules</b> [Frasca, 2007; in (1)] [Juul, 2005; in(1)] [Salen and Zimmerman, 2004 in (1)] [Juul, 2005 in (1)]	✓
• <b>utility function for states and outcomes (inspired by social motives):</b> [Frasca, 2007; in (1)] [Juul, 2005; in(1)]	✓
• <b>→ cooperation, competition</b> [Salen and Zimmerman, 2004 in (1)]	✓
• <b>active player participation, effort, skills</b> [Frasca, 2007; in (1)] [Juul, 2005; in(1)]	✓
• <b>emotional attachment</b> [Juul, 2005; in(1)]	✓
• <b>emergent (social) systems</b> [Salen and Zimmerman, 2004; in (1)]	✓
• <b>game: „a problem-solving activity, approached with a playful attitude”</b> [Schell 2010; in (1)]	✓
• <b>chance + uncertainty</b> [Salen and Zimmerman, 2004 in (1)]	✓
• <b>systems of information</b> [Salen and Zimmerman, 2004 in (1)]	✓

## Social Media ↔ Social Games

Games, Social Games	Social Media
• [Novak, 2012; in (1)]:	✓
○ extrinsic / intrinsic motivation	✓
○ seamless technology: deep embedding into all day life / blurring between virtual and real (especially in Pervasive Games)	✓
○ interaction forms: information retrieval, immediate social interaction --> involves communication	✓
• [Klastrup, 2003; in (1)]:	✓ (see later in slides)
spatiotemporal context ↔ social play	
• [Steinkuehler and Williams, 2006; in (1)]:	✓ (see later in lecture)
groups and their social context important in games	
• [Isbister, 2009; in (1)]:	✓ (editorial story / story elements missing / created by interacting users)
key elements of social play: emotional contagion, performance / Hawthorne effect, learning, relationship building	

## Social Media ↔ Social Games

Games, Social Games	Social Media
• [LeBlanc, 1999; in (1)], [Hunicke et al., 2004; in (1)]:	✓
<b>Fellowship fun</b>	
• [Lazzaro, 2009; in (1)]:	✓
<b>People Fun</b>	
• [Wang and Sun, 2011; in (1)]:	✓ <-> "like" in Facebook
social value as characteristic of reward, sociality as utilization of reward	
• [Maslow, 1943 in (1)] → [Schell, 2010 in (1)]:	✓
most achievements of games:	
○ Self Esteem level	
○ Belonging Love level (social games)	
• [Radoff, 2011; in (1)]:	✓
most players develop into socializers over time	
• [Juul, 2005; in (1)]:	(✓) decentralized narrative structure; stories that emerge from social communication forms (blogs, facebook-chronic)
narrative structure: games of emergence, games of progression <-> social media	

## Social Media ↔ Social Games

Games, Social Games	Social Media
• <b>game meta-types online + social (and to an extent mobile): (increasingly) important for all types of games</b>	✓
• [Schell, 2010; in (1)]:	✓
<b>Transmedia worlds</b>	
• Schell [Schell, 2010; in (1)]:	✓ analogous term as for games
<b>“elemental tetrad”</b>	
○ Mechanics (rules, skill, space)	(-)
○ Story	(✓)
○ Aesthetics	✓
○ Technology	✓
• <b>game mechanics : emergent consequence of rules</b>	✓ (dynamics and mechanics: emergent consequences)

## Social Media ↔ Social Games

### Games, Social Games

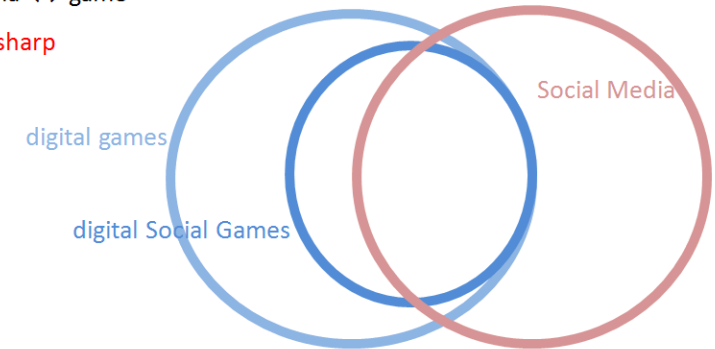
- [Hunicke et al, 2004 in (1)]:  
games: "systems that build behavior via interaction"
- [Hunicke et al, 2004 in (1)]:  
MDA framework (Mechanics, Dynamics, Aesthetics)
- player types

### Social Media

- ✓
- ✓ (✓)
- ✓ (↔ types of social media users (example: "hardcore"))

## Social Media ↔ Social Games

- Social Media and (Social) Games share a lot of characteristics
- The distinctions
  - game ↔ not game
  - Social Media ↔ not Social Media
  - Social Media ↔ gameare **not fully sharp**



## Social Media ↔ Social Games

### important common aspects Social Media ↔ (Social) Games:

- mostly "outside" serious life, **leisure time oriented**;  
**but:** both: increasingly many "**serious forms**" (Serious Games, Company SN etc.)
- **communication** as important element
- defined set of **rules**
- **emergent** mechanics & dynamics; transformative use
- **transmedial** access patterns, blurring: real world ↔ virtual world
- complex game worlds ↔ social information spaces
- parallels in aspects of **motivation**, flow
- one often the "**host**" of the other (e.g. in Social Networking games)
- ...

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## Social Media ↔ Social Games

important **distinctive aspects** Social Media ↔ (Social) Games:

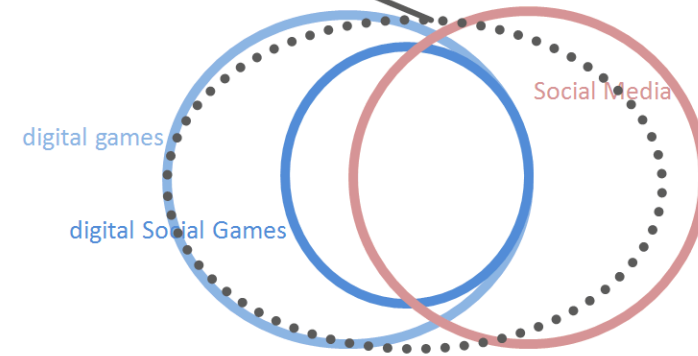
Games, Social Games	Social Media
<ul style="list-style-type: none"><li>● main purpose: entertainment</li><li>● stories and the imaginary</li><li>● rules more explicit</li><li>● items mostly manipulated: graphical characters, objects</li></ul>	<ul style="list-style-type: none"><li>● main purpose: communication &amp; collaboration</li><li>● not as imaginary in this sense</li><li>● rules often more implicit</li><li>● items mostly manipulated: text, photos, videos</li></ul>

## Social Media ↔ Social Games

Social Media ↔ (Social) Games:

“unifying” class:

leisure time oriented applications, services and platforms



## Social Media ↔ Social Games

Social Media ↔ (Social) Games:

“unifying” class:

leisure time oriented applications, services and platforms

↓

for this class: **social contexts** on various temporal scales play important role

↓

we will **define** social context and investigate the **role, applications and detection** of **social context** using the **example** of **Social Networking**



Contextual Social Networking

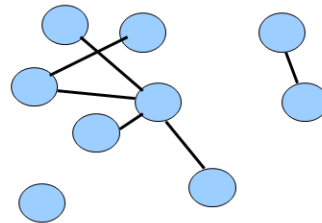
**Communities:** (older term (since end of 1990s)):

- groups of users associated with web-platforms that support their **communication** (direct  $\leftrightarrow$  indirect, 1:1  $\leftrightarrow$  n:m, synchronous  $\leftrightarrow$  asynchronous) through **services** (discussion boards, chats, blackboards, messaging etc.) [Groh and Schlichter, 2005; in (2)]
- **Community types:**
  - Communities of Interest [Koch, 2003a], [Carotenuto et al., 1999 in (2)],
  - Communities of Practice [Lesser and Storck, 2001; in (2)],
  - professional communities [Koch and Richter, 2009; in (2)],
  - Open Innovation communities (see (2) chapter 11)), etc.
- earlier forms of **networks**: “Buddylists” etc.
- often **emphasis** on distinct common **pursuit**, and / or **collaboration**
- **variant** of Social Networking platforms which may be viewed as a **development** from community computing / community platforms

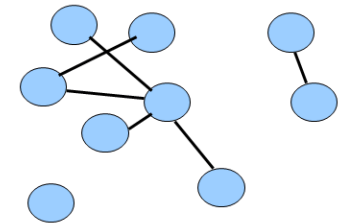
**Social Networking:** class / **paradigm** in Social Computing:

- users’ **main goal**: maintaining and expanding their social network via communication
- users **explicate** and maintain **explicit model of social relations** ( $\rightarrow$  social network) and **user-item-relations** (Facebook “like”, comments etc.)
- users socially interact using **bundle of Social Media services** (direct communication, information, awareness)
- users have **personal information spaces**: sets of items associated with users that they exert control over or whose relations (user-item) they exert control over
- a user has **personal profile**: publicly accessible sub-space of p.i.s.: used as personal reference: for introducing a person or used as reference point for SN services (e.g. awareness services)
- **communication**: non-anonymous; content: mostly textual + photos + contextual ; non-commercial; discrete transfer

- definition (informal): **Real World Social Network**: set of humans together with all aspects of their social relations
- initial definition: **Social Network Model Framework**: mathematical representation (modeling) language for modeling real world social networks (often a graph formalism)
- initial definition: **Social Network Model**: **graph**  $G=(V,E)$ :
  - **nodes**  $V$ : represent humans (actors);
  - (undirected) **edges**  $E$ : represent binary social relations (ties)  $E \subseteq \binom{V}{2}$
- definition: **Social Network**: **instance** of a Social Network Model
- **!! distinguish** between:
  - Social Networking  $\leftrightarrow$  Social Networking platform
  - $\leftrightarrow$  Social networking platform instance  $\leftrightarrow$  Social Network



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# Social Networking Services

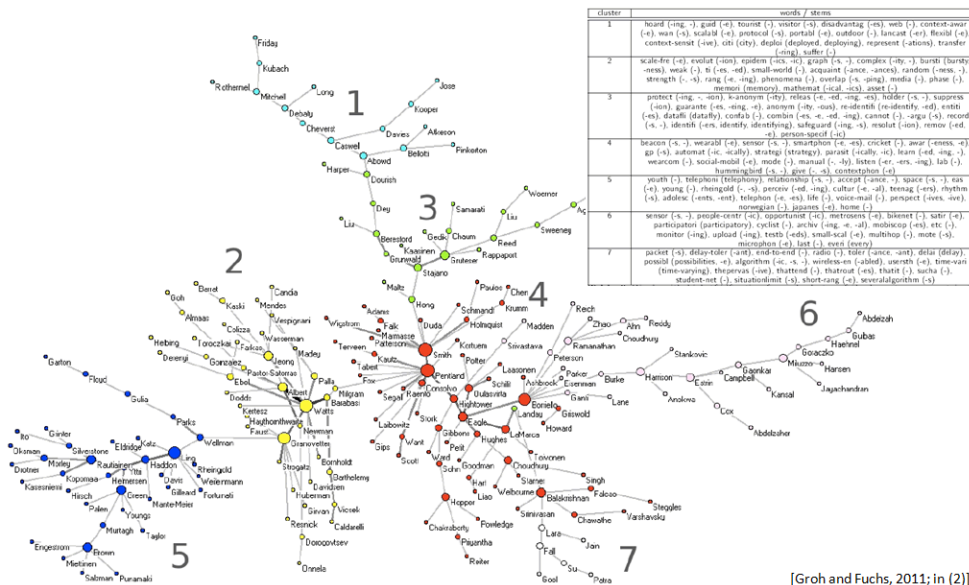
- **awareness / contextual:**
  - services for personal **social network management** (adding „friends“ etc.),
  - **awareness** services on **social network** (network analysis, alerts etc.)
  - services for **privacy** management
  - services for **group** management
  - services for **ratings**, comments
- **direct communication:**
  - synchronous + asynchronous, threaded + non-threaded, 1:1, 1:n, n:m, ...
  - **examples:** chat, messaging, comments with substantial communicative content etc.
- **information:**
  - personal **blogs** + microblogs
  - bulletin **boards** (e.g. Facebook Chronic)

# Social Networking Services

- **awareness / contextual:**
  - services for personal **social network management** (adding „friends“ etc.),
  - **awareness** services on **social network** (network analysis, alerts etc.)
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- **information:**
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# Mobile Social Networking

**Mobile Social Networking: scientific view:** see [Groh and Fuchs, 2011; in (2)]



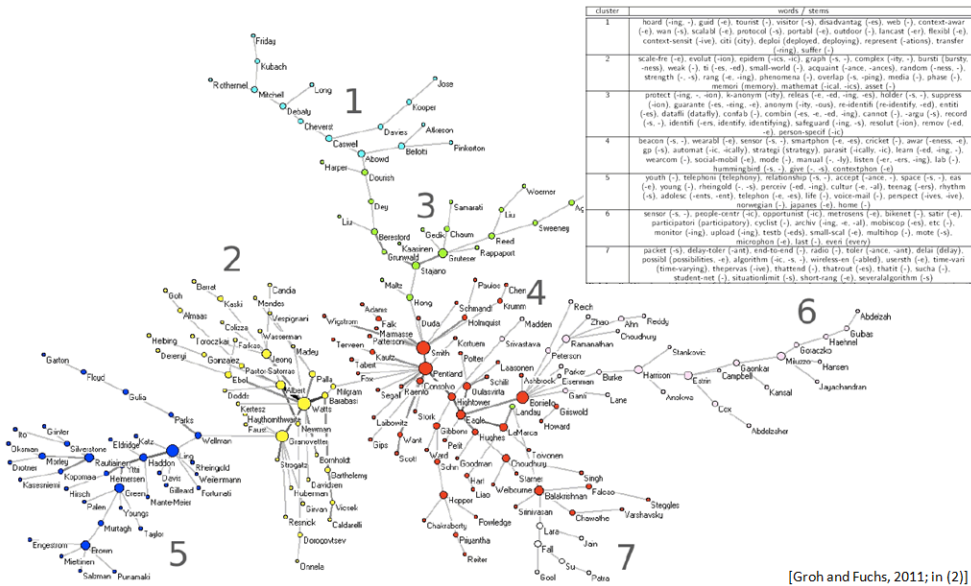
# Mobile Social Networking + Context

- defining **distinction:** SN ↔ MSN:

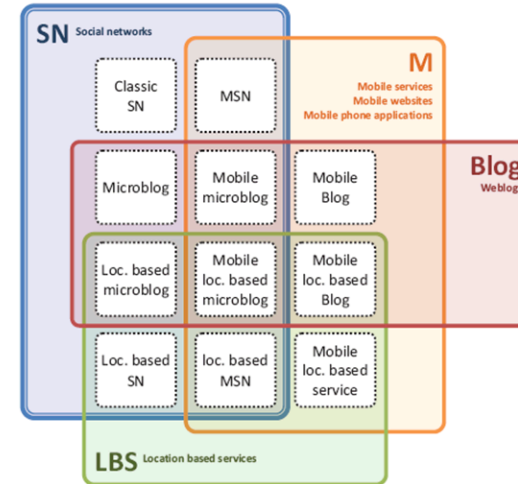
**MSN is a form of SN with mobile UI AND acquisition and use of contexts induced by the mobile interaction scenario (deep embedding into all day life) via sensors conceptually connected to the mobile usage scenario (e.g. part of the mobile device)**

- → **Honest Signals** (see [Pentland, 2008; in (2)]) → observing the homo sapiens in its natural societal habitat → **privacy, Big Data: severe problems!** → Personal Social Agents ?, Decentralized Social Networking ?(see (2), chapter (3))

Mobile Social Networking: **scientific view**: see [Groh and Fuchs, 2011; in (2)]

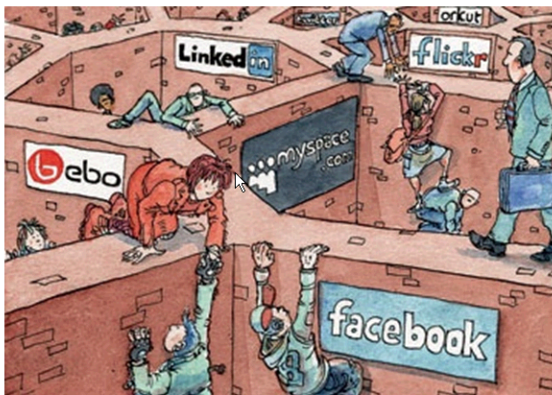


Mobile Social Networking: actual **realizations on the Web** (as of 2009): see [Groh and Daubmeier, 2009; in (2)]



[Groh and Daubmeier, 2009; in (2)][Daubmeier, 2009; in (2)]

**Data-Silo-Problem:**



[Yeung 2009; in (2)]

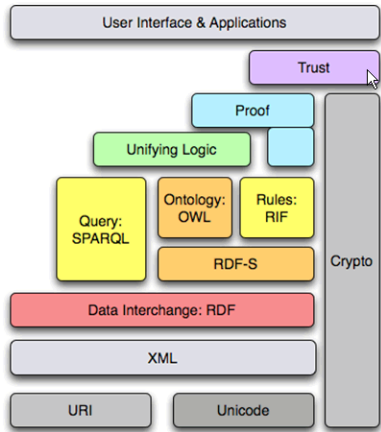
**solutions to Data-Silo-Problem:**

- **API-based solutions:** example: **Google Open Social** [Open Social 2013]: *"The ultimate goal is for any social website to be able to implement the API and host 3rd party social applications. There are many websites implementing OpenSocial, including Engage.com, Friendster, hi5, Hyves, imeem, LinkedIn, MySpace, Ning, Oracle, orkut, Plaxo, Salesforce.com, Six Apart, Tianji, Viadeo, and XING."* (citation from older Google Open Social website <http://code.google.com/apis/opensocial/> 2011)
- **Decentralized Social Networking:**
  - **P2P SN** (e.g. LifeSocial [Graffi et al., 2010; in (2)], Peerson [Peerson, 2013])
  - **Social Semantic Web** (see [Breslin et al., 2009b; in (2)])



Social Semantic Web

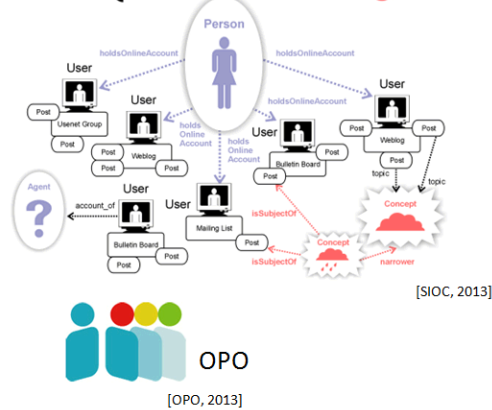
Semantic Web:



[NN, 2013]



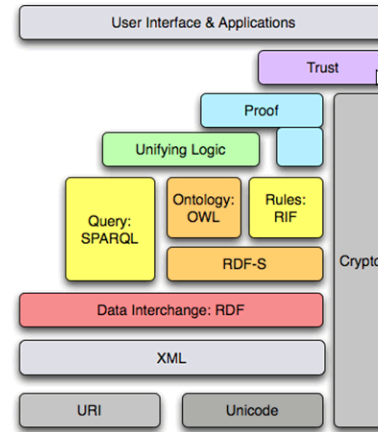
SIOC + FOAF + SKOS



SIOC: Semantically-Interlinked Online Communities  
FOAF: Friend Of A Friend  
SKOS: Simple Knowledge Organization System  
OPO: Online Presence Ontology

Social Semantic Web

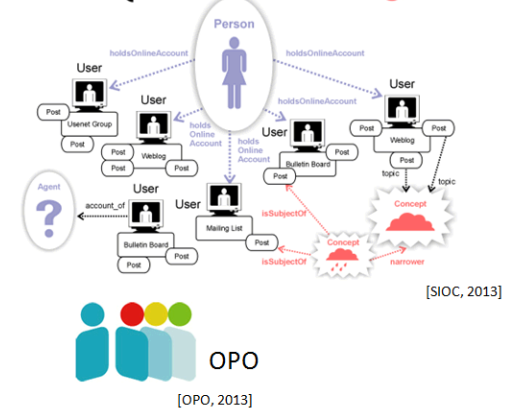
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