

# How the crowd can teach/how to teach the crowd



*Jon Dron*

*TEKRI*

*Athabasca  
University*

# Athabasca University

CANADA'S OPEN UNIVERSITY

Formed 1970

Distance-only

In the middle  
of nowhere



**-40°C = -40°F**

Highly distributed faculty

# general plan

- sharing what we know
- context: online, open, massive, informal, formal,
- a bit of theory
- share concerns
- plan futures

# getting started

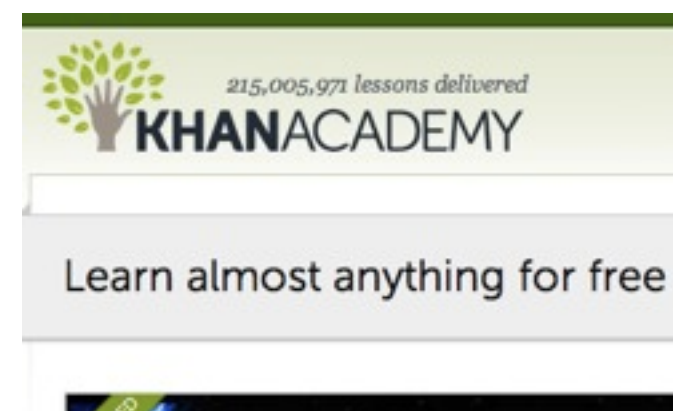
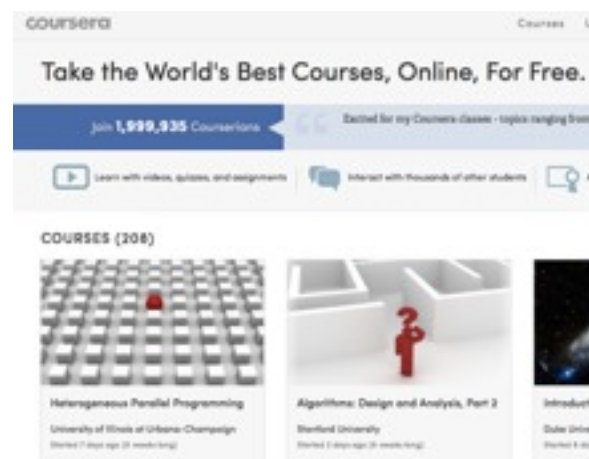
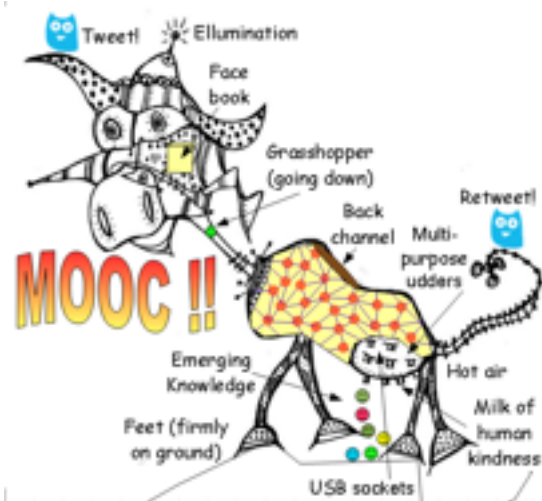
- why are you here?
- share experiences
- share concerns



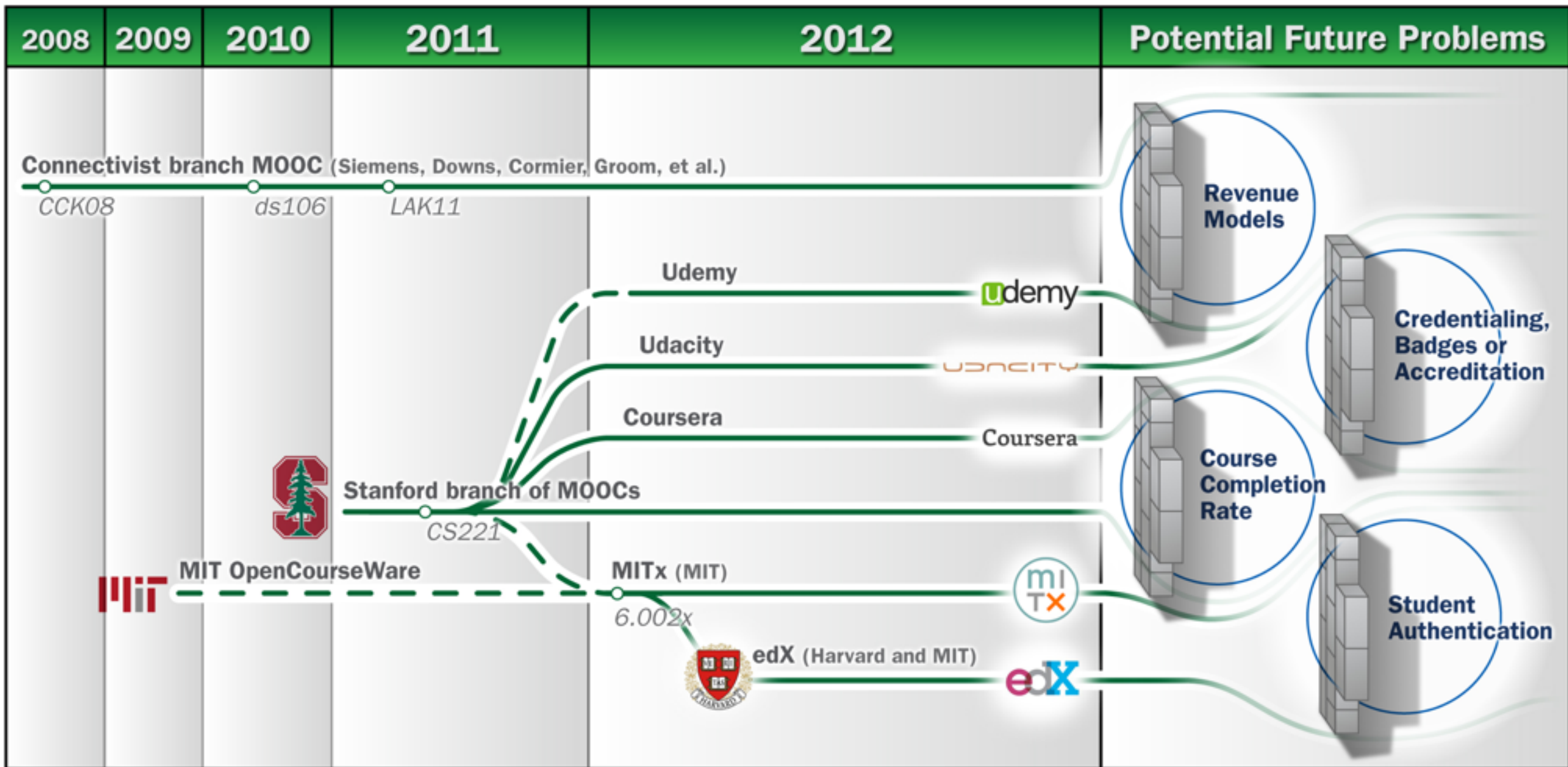
**teaching crowds**

# MOOCs

- cMOOCs - Wiley, CCK08, PLENK and beyond
- xMOOCs - Coursera, Udacity, edX etc
- kMOOCs - Khan Academy, How Stuff Works, Learni.st, etc

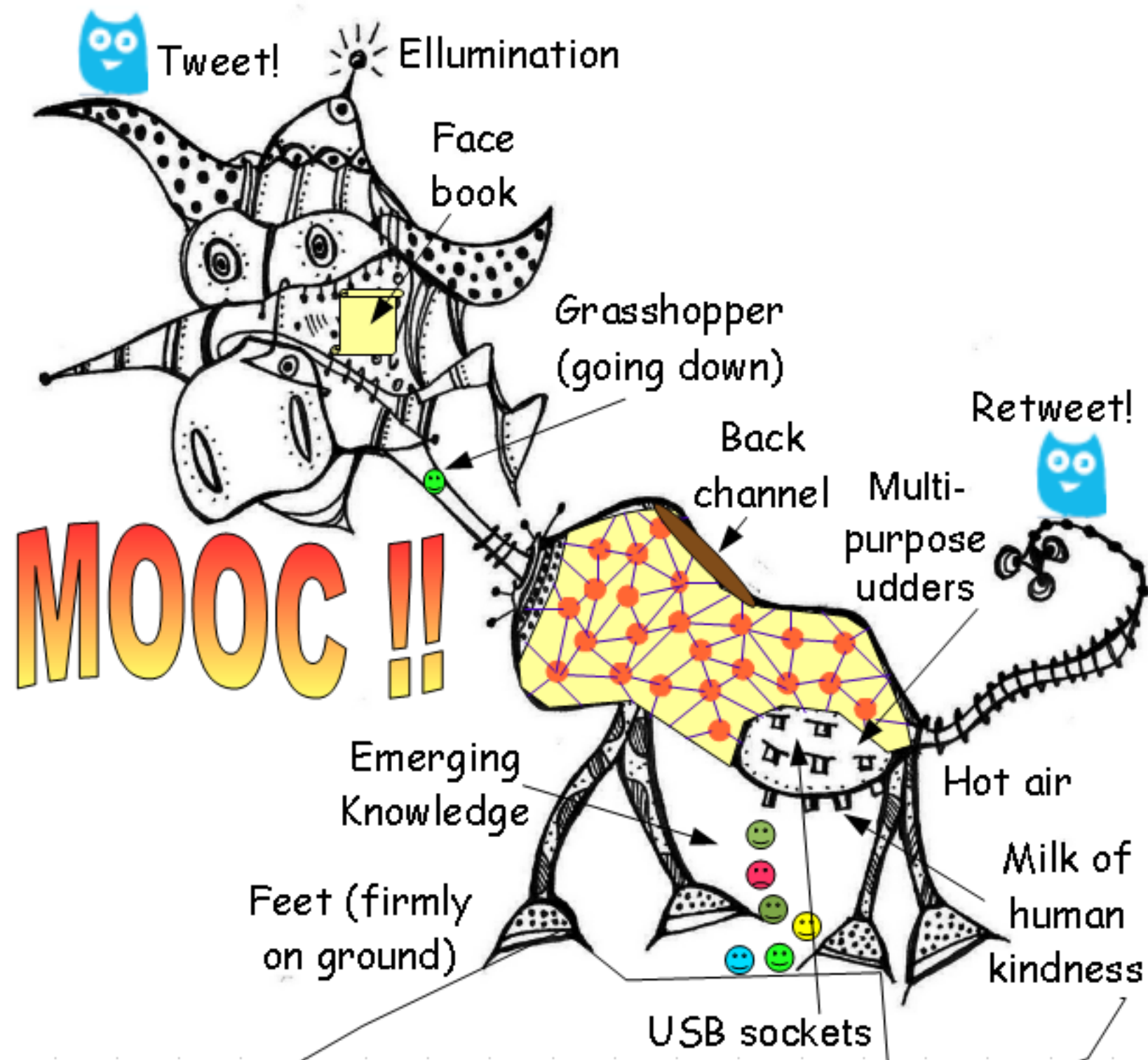


# MOOCs



# cMOOCs

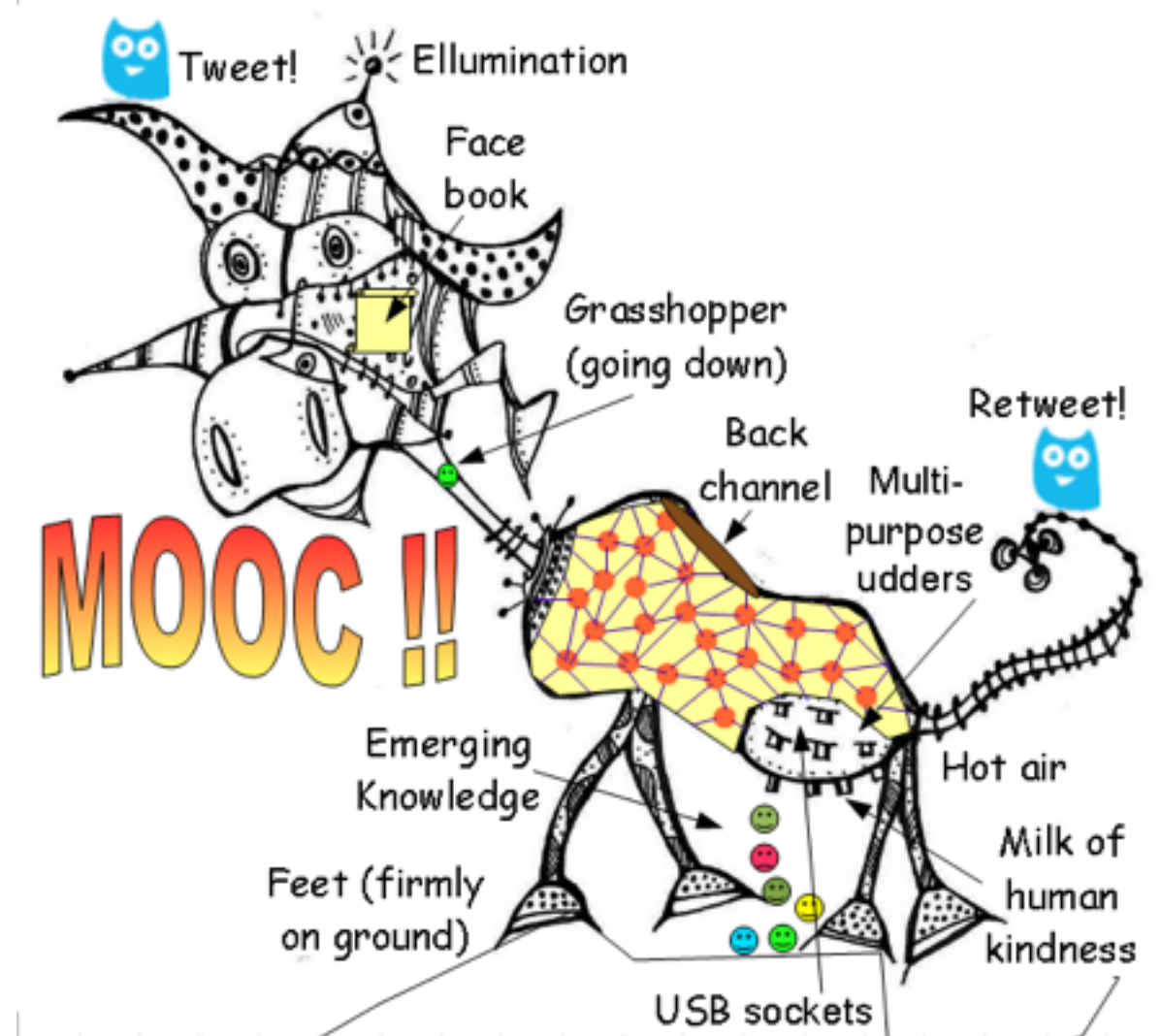
- CCK08 - about 6000 'students'





# cMOOC methods

- participation
- aggregation
- relation
- creation
- sharing



# xMOOCs

- > 100,000 'students'

## Beginning Courses

These courses require little or no previous experience in the subject  
Udacity and are curious about what we do, or want to get started lea

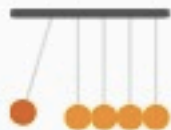


### Introduction to Computer Science

Taught by David Evans

In this course you will learn key concepts  
programs in the context of building a web

Tags: Beginner , Computer Science



### Introduction to Physics: L

Taught by Andy Brown and Jonathan

Study physics abroad in Europe -- virtual  
and the UK, by answering some of the dis

Tags: Beginner , Physics



### Introduction to Statistics:

Taught by Sebastian Thrun and Adam

Statistics is about extracting meaning from  
relationships in data and systematic techni

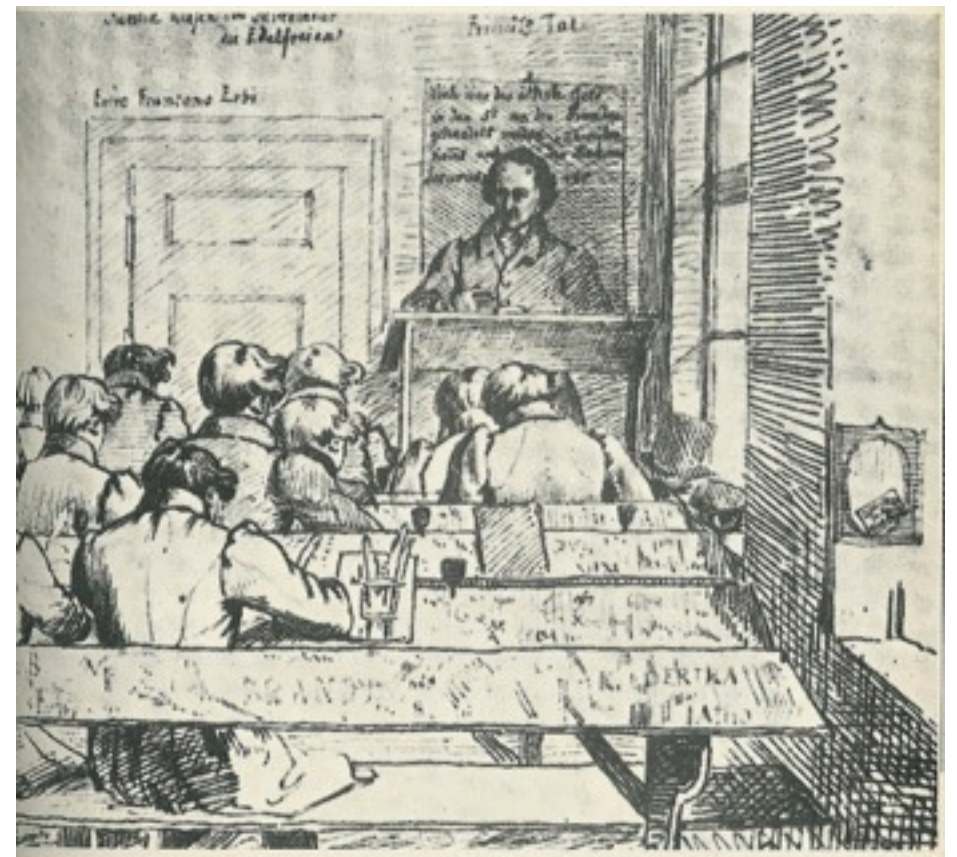
Tags: Beginner , Statistics

The screenshot shows the Coursera website homepage. At the top, it says "Take the World's Best Courses, Online, For Free." Below this, there is a blue banner that says "Join 1,999,935 Courserians". To the right of the banner, there is a quote: "Excited for my Coursera classes - topics ranging from s". Below the banner, there are three icons with text: a play button icon with "Learn with videos, quizzes, and assignments", a speech bubble icon with "Interact with thousands of other students", and a person icon with "Ac". Below these icons, there is a section titled "COURSES (208)". There are three course cards visible: 1. "Heterogeneous Parallel Programming" by the University of Illinois at Urbana-Champaign, started 7 days ago (6 weeks long). 2. "Algorithms: Design and Analysis, Part 2" by Stanford University, started 2 days ago (6 weeks long). 3. "Introductic" by Duke Univer, started 8 days ago.

self-paced -> paced

# xMOOC methods

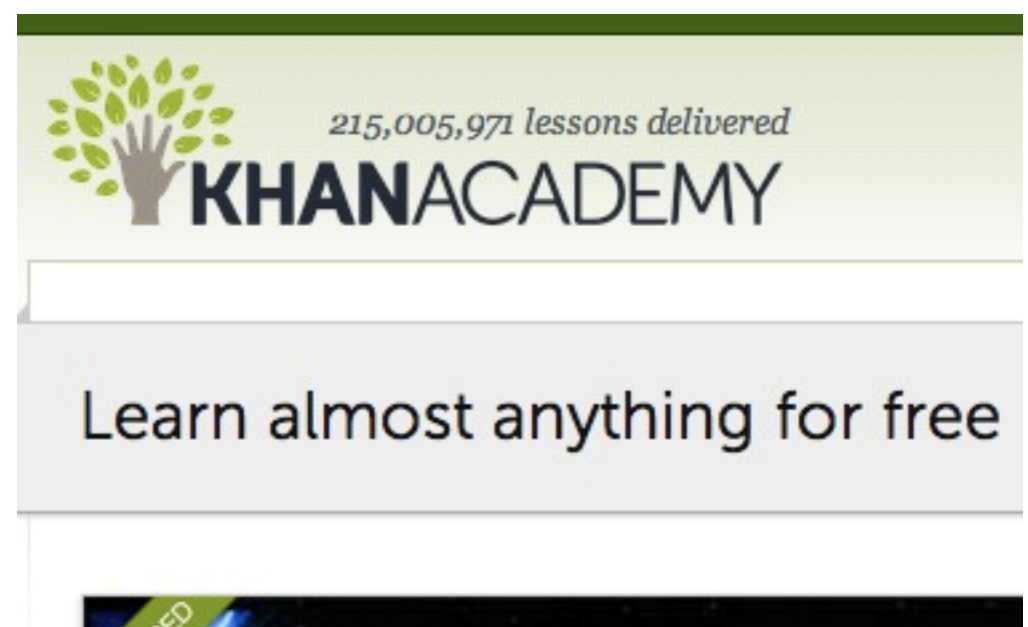
- acquisition and replication
- structure
- self-paced (e.g. Udacity) or paced (e.g. Coursera, edX)
- teacher control
- assessment (for a price)





# kMOOC methods

- digestible chunks
- ad hoc help
- cognitivist methods
- just in time





# not so different...

**We built in the opportunity for students to interact with each other** in meaningful ways and have one student help another through the hard bits so they could work together to achieve a better outcome for everyone. There was a real community built up where **students felt incredibly motivated to help each other** and answer each other's questions to the point that in the Fall quarter of 2011, **the median response time for a question posted on the forum was 22 minutes**. Because there was such a broad worldwide community of students all working together, **even if someone was working at 3:00 a.m.**, chances are that somewhere around the world, there would be somebody else who was awake and thinking about the same problem.

# drop-out rates?

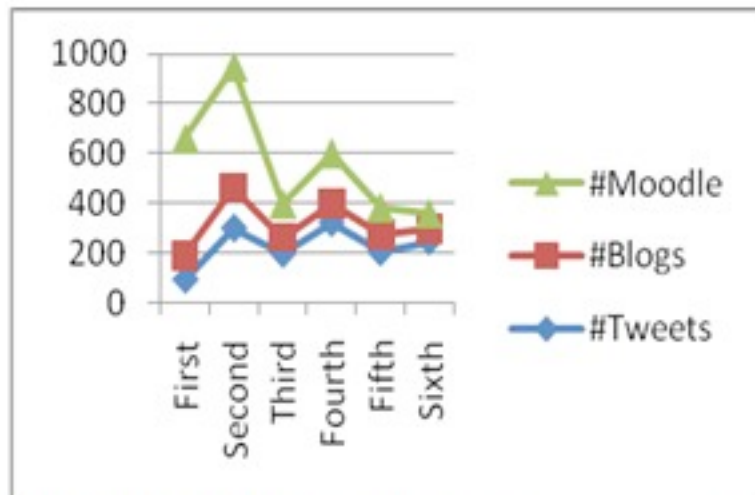


Chart 3. Posting by participants.

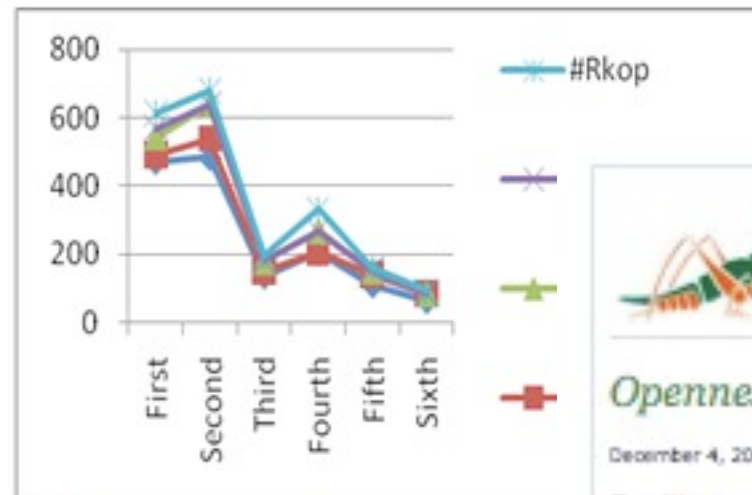


Chart 4. Posting by facilitators.

PLENK MOOC (from Kop, 2011 - <http://www.irrodl.org/index.php/irrodl/article/view/882/1689>)

December 4, 2012

### Facilitator Posts

To view the entire blog post, click on the title of the post, and you'll be taken to the blog post itself.

### Participants' Blog Posts

This is a list of the blog posts mentioning the 'oped12' keyword or tag harvested from the list of blogs submitted by participants. [\[Browse all Blog Posts\]](#)

### New Discussion Threads

Consider commenting on participant's blog post to create a new discussion here. To view the entire discussion thread, click on the title of the post, and you'll be taken to the blog post itself. Or view the list of [all discussion threads](#).

### Comments

These are individual comments posted today to the discussion threads (for new discussion threads, see the list above).

### Digo Posts

This section contains items posted in the last 24 hours to the [oped12 Digo group](#).

### Twitter Posts

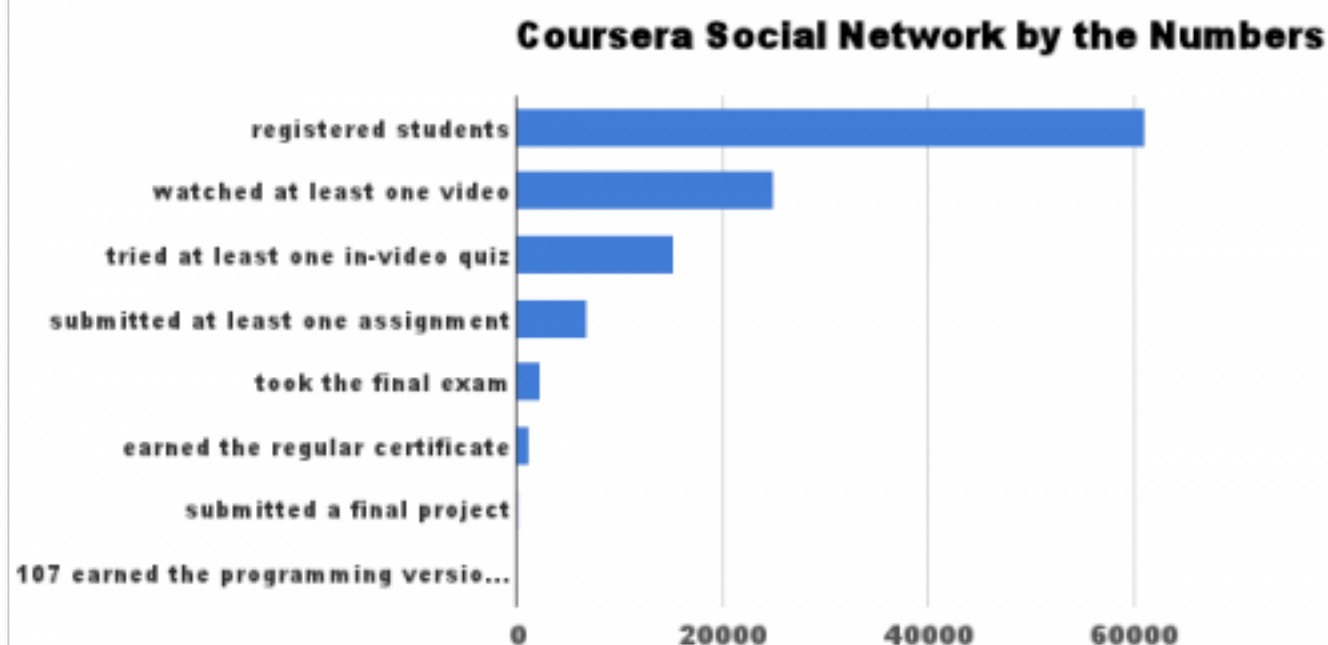
If you use the 'oped12' tag on Twitter, your Twitter posts will be collected and listed here.

[@NoCasper](#) tweeted: #CEHE12 #Oped12 MOOCs emerging as Landscape of Change - Part 1 | @scoopit <http://t.co/2h3cPZ5j> Tue, 04 Dec 2012 10:29:11 +0000

[@moocead](#) tweeted: #moocead # #CEHE12 Emergencia Oped12 de MOOCs Parte Final 5 xMOOCs satisfazem o cMOOCs | Learner Weblog <http://t.co/N5wQcW0B> Mon, 03 Dec 2012 19:02:32 +0000

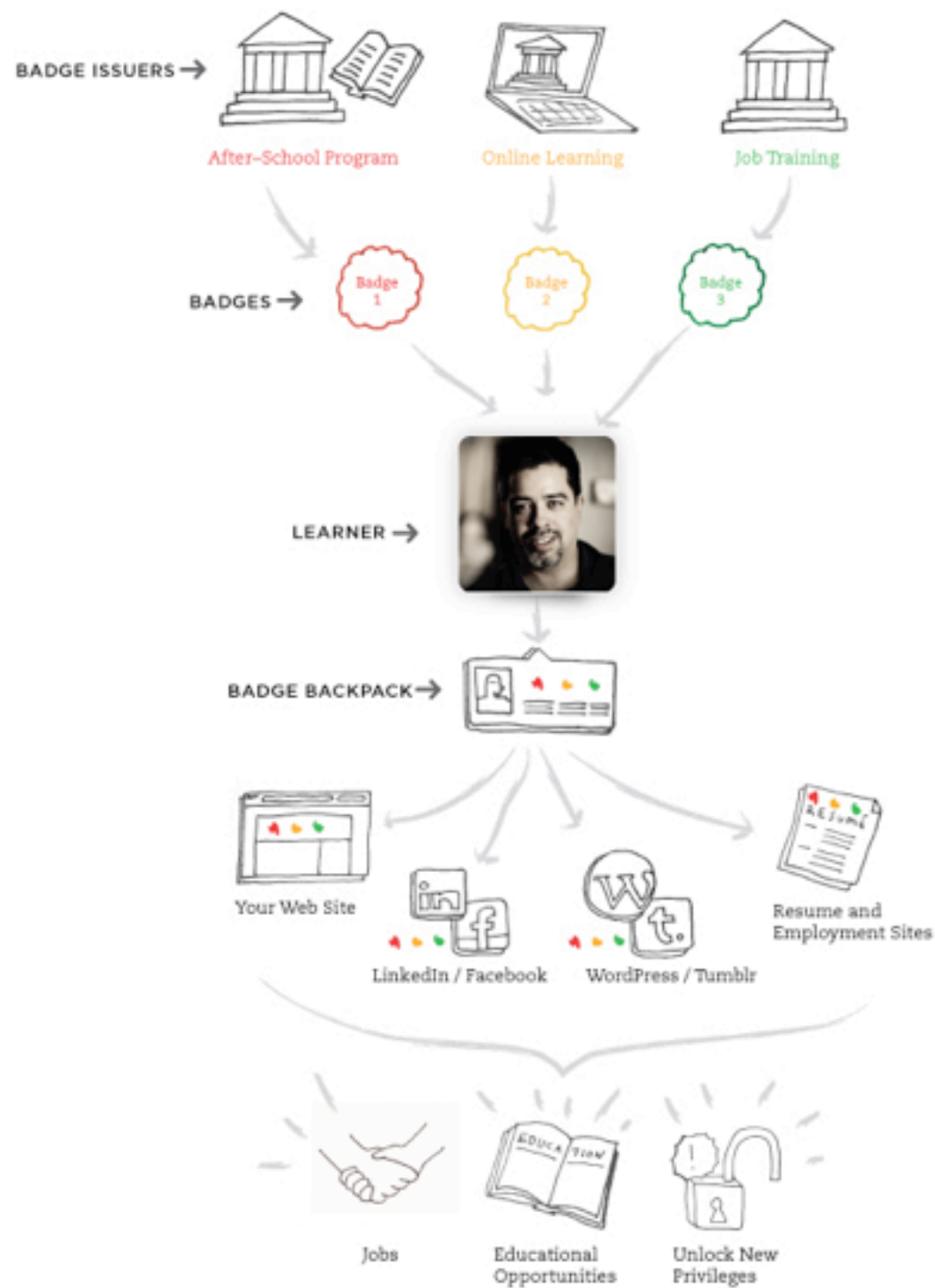
[@paula\\_ugside](#) tweeted: #CEHE12 #Oped12 Emergencia de MOOCs Final Part 5 xMOOCs meeting the cMOOCs via @scoopit <http://t.co/3ClaxkX2> Mon, 03 Dec 2012 16:07:36 +0000

[@qued\\_](#) tweeted: RT @igandic: #CEHE12 #Oped12 Emergencia de MOOCs Final Part 5 xMOOCs meeting the cMOOCs | @scoopit <http://t.co/3yyTXp6e> Mon, 03 Dec 2012 15:06:05 +0000



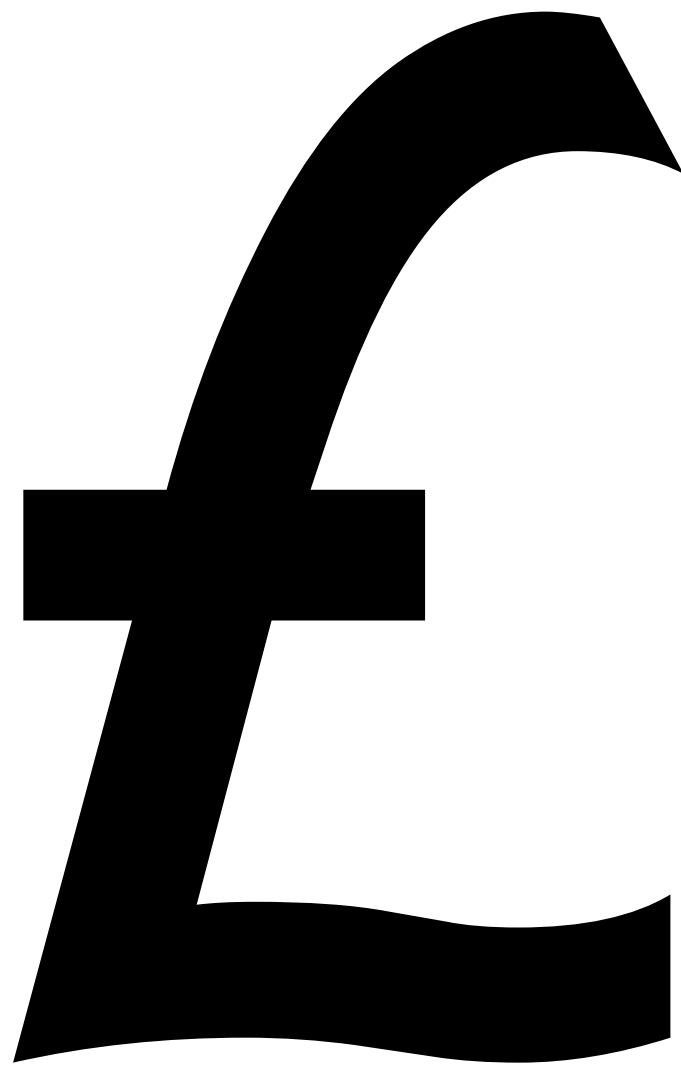
<http://cogdogblog.com/2012/11/27/owning-massive/>

# accreditation?



<http://openbadges.org/en-US/>

revenue?





**crowds that  
teach**

**My network has drastically changed the way I learn.** I used to learn by reading as many scholarly sources as I could find about a particular topic. Then I would form an opinion and move to the next topic. Sometimes I would connect topics and sometimes I would not. Since becoming a part of the digital world, I learn much differently. I actually read posts from experts and other educators and ask them directly for assistance. This has changed the way I work tremendously. Now I utilize livebinder and blogs more frequently than scholarly journals and books. When I read about a new topic, I ask questions directly of the experts in the field and solicit scholarly recommendations. Often I purchase materials recommended by experts rather than navigate the bookstore or library individually. I have not visited the scholarly libraries in many years. The works housed in the Law Library and Library of Congress can be found digitally. However, my scholarly interest is often superseded by the availability and diversity of twitter. This is perhaps my favorite learning tool. I follow experts and educational leaders to stay abreast of current research and trends. I have found that following experts and conferences on twitter combined with weekly Diigo and DEN updates provides access more technology than I can utilize in one school year. **This connectivist approach to learning has opened possibilities that were previously unknown.**

Marla Robles – Middle school science teacher

<http://echoconcerns.wordpress.com/2012/12/01/reflection-on-connectivism-my-mind-map-reflection/>

# typology of social forms

- Dron & Anderson

# Groups





# Nets

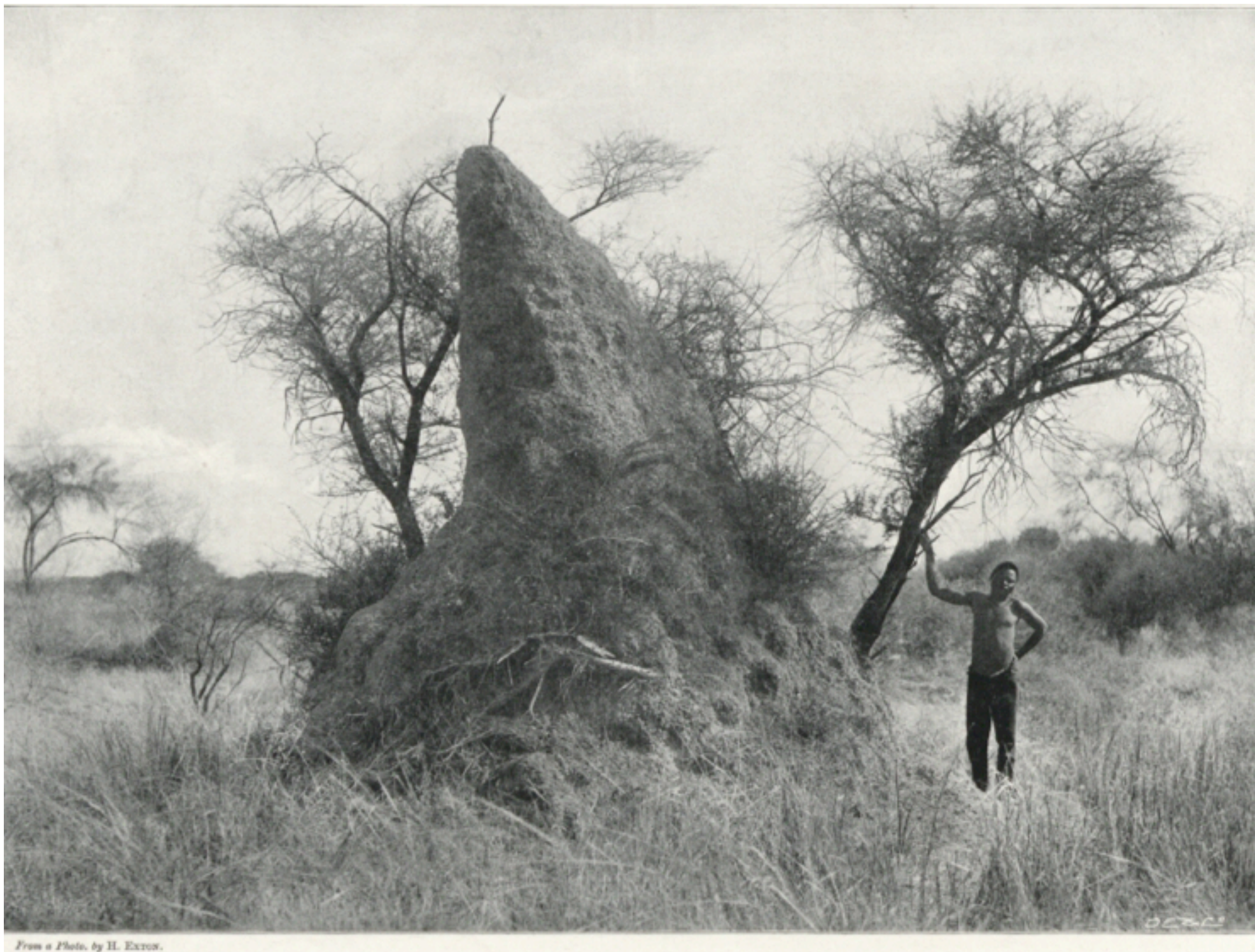


# Sets





# collectives

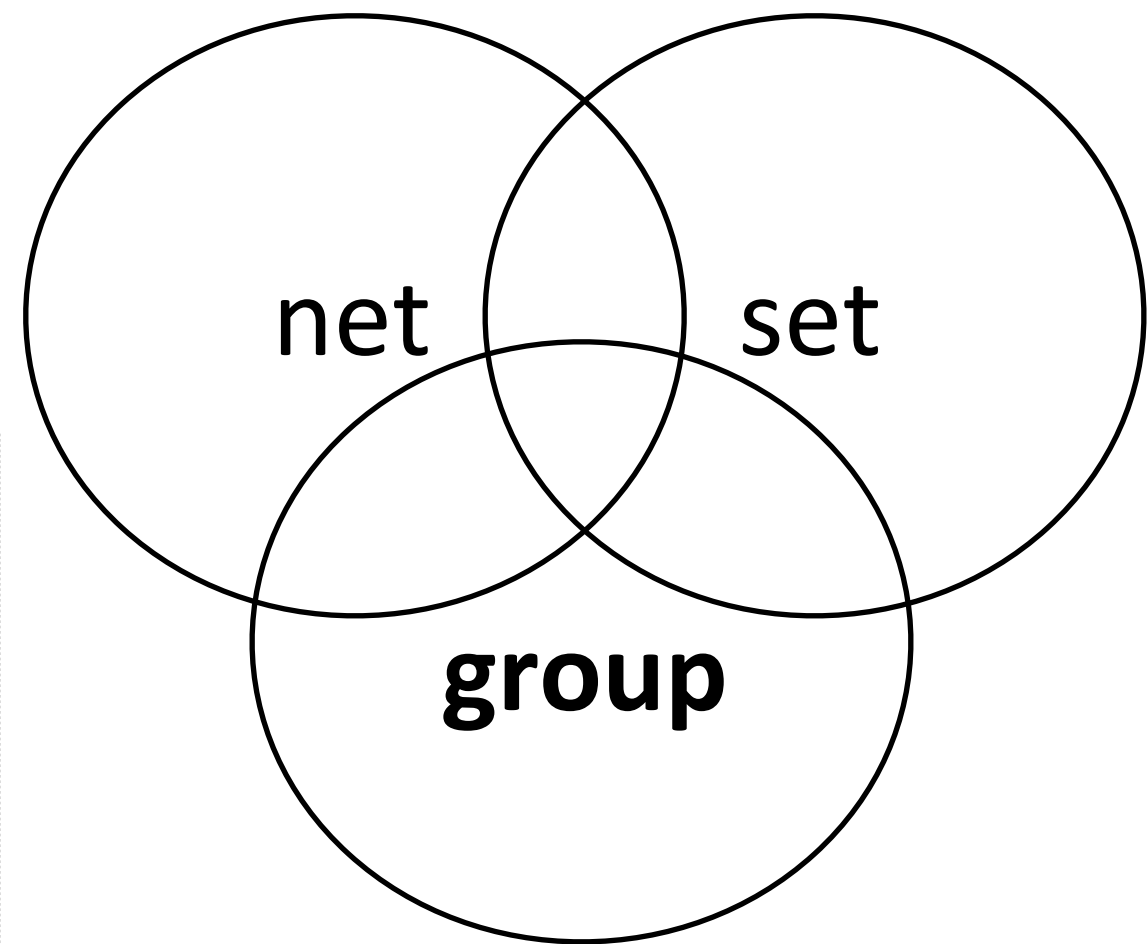


*From a Photo. by H. EXTON.*

Sustaining ties  
Making ties  
Ad hoc networks  
Knowledge diffusion  
Social capital  
Social presence  
Emergence  
Shifting  
Contextual

*cMOOCs,  
blogs,  
LinkedIn,  
social  
networks,  
etc*

*kMOOCs, Social interest  
sites, Wikipedia,  
Google Search, Twitter,  
Pinterest, etc*



Cooperation  
Sharing  
Serendipity  
Interest -  
orientation  
Sense-making  
Collective  
intelligence  
Intentional  
discovery

Collaboration  
Structure  
Roles  
Membership  
Intention and purpose  
Hierarchies  
The classical 'class' model

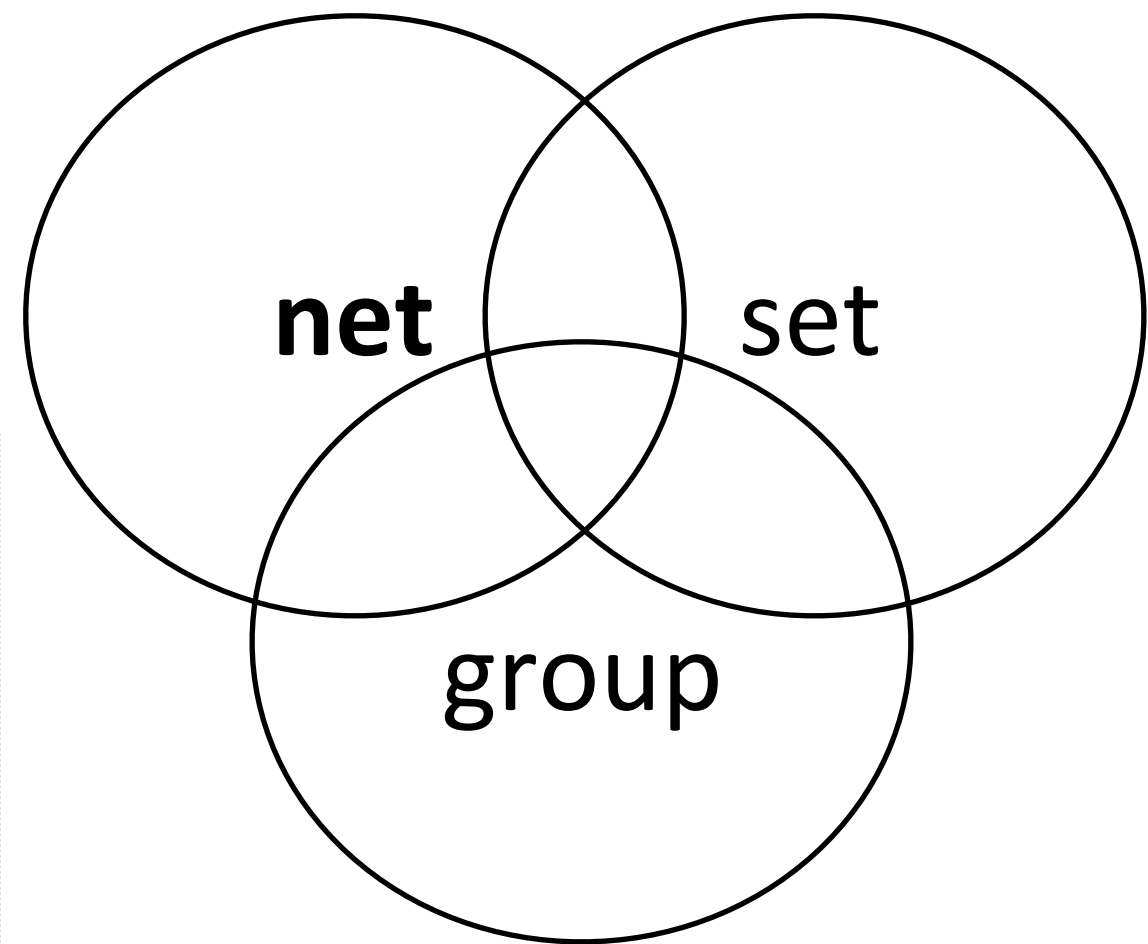
*xMOOCs, classes,  
tutorial groups,  
learning  
management  
systems, etc*



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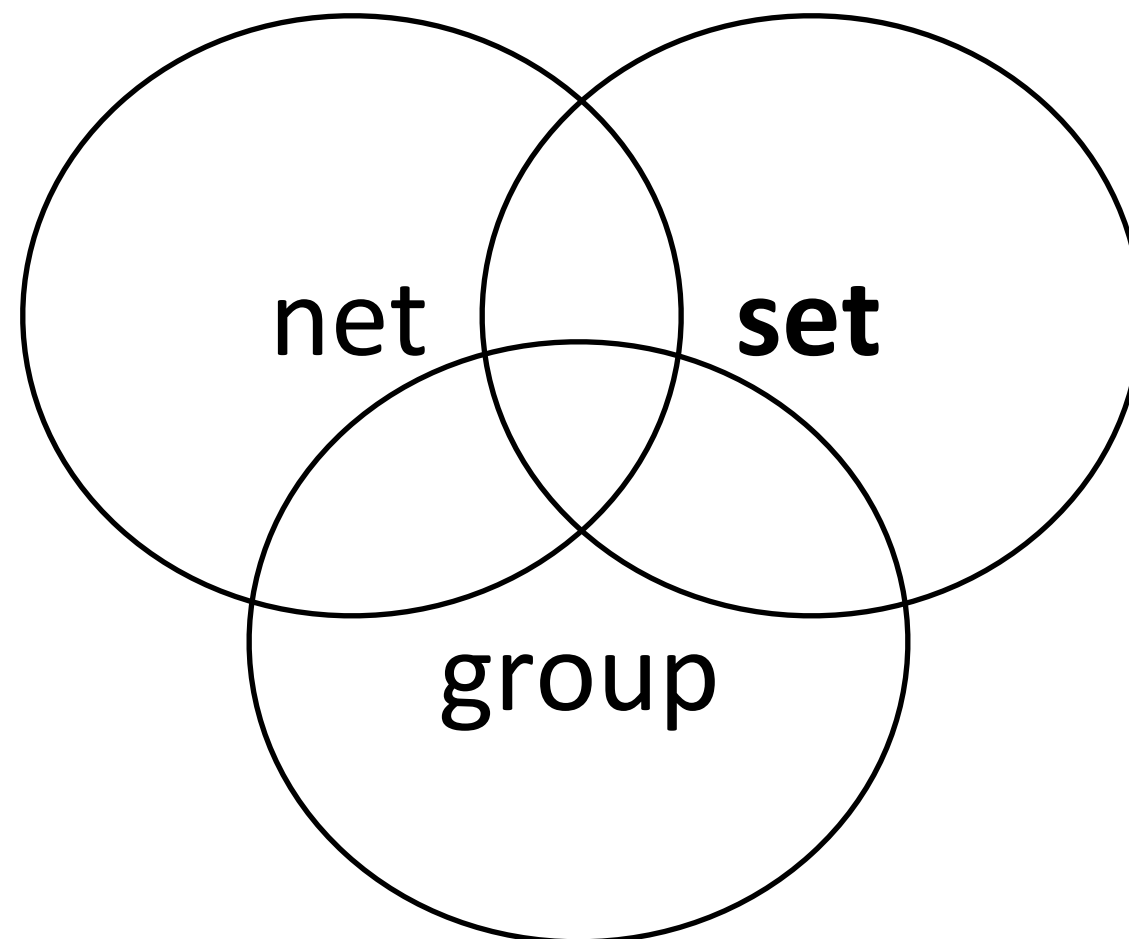
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*xMOOCs, classes,  
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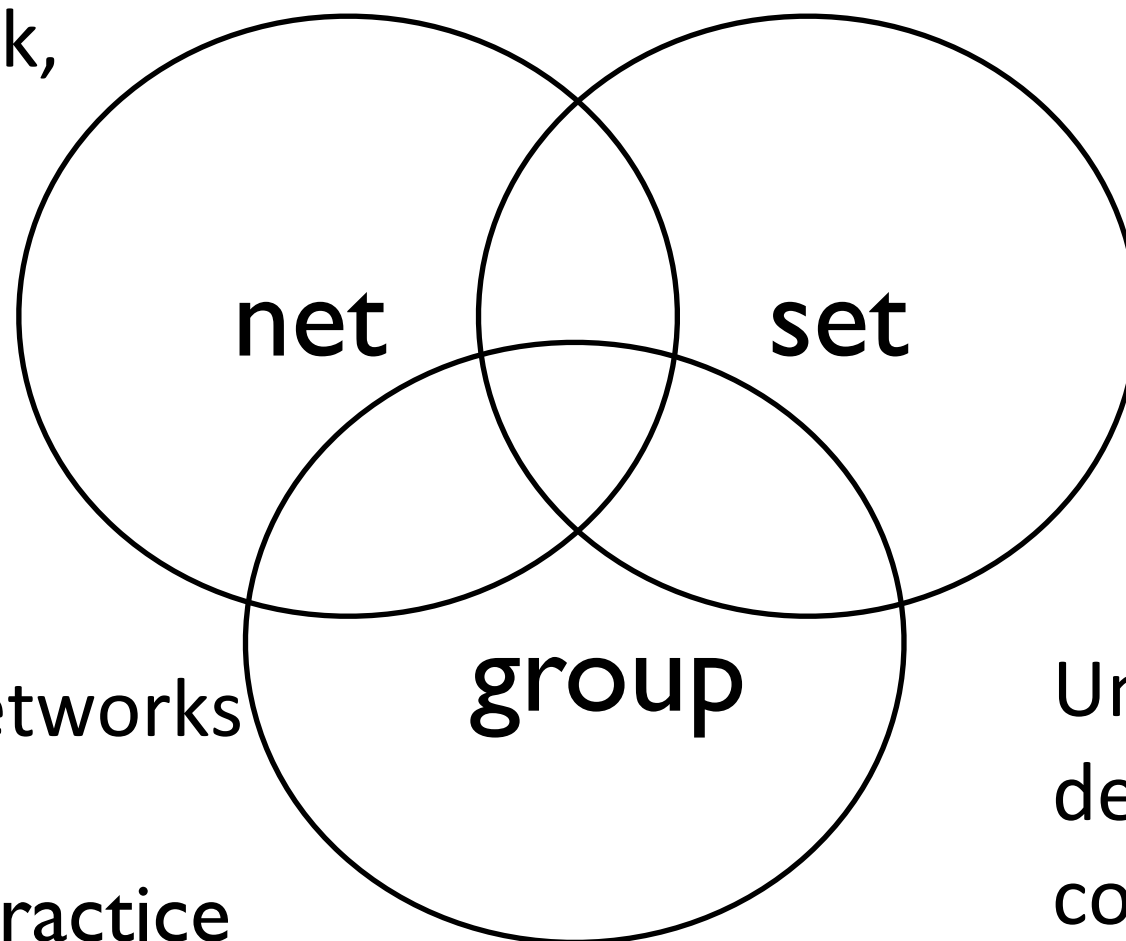


# examples

Wikipedia editors  
Subject area mailing lists  
alumni networks

Social networks -  
friends, work,  
community

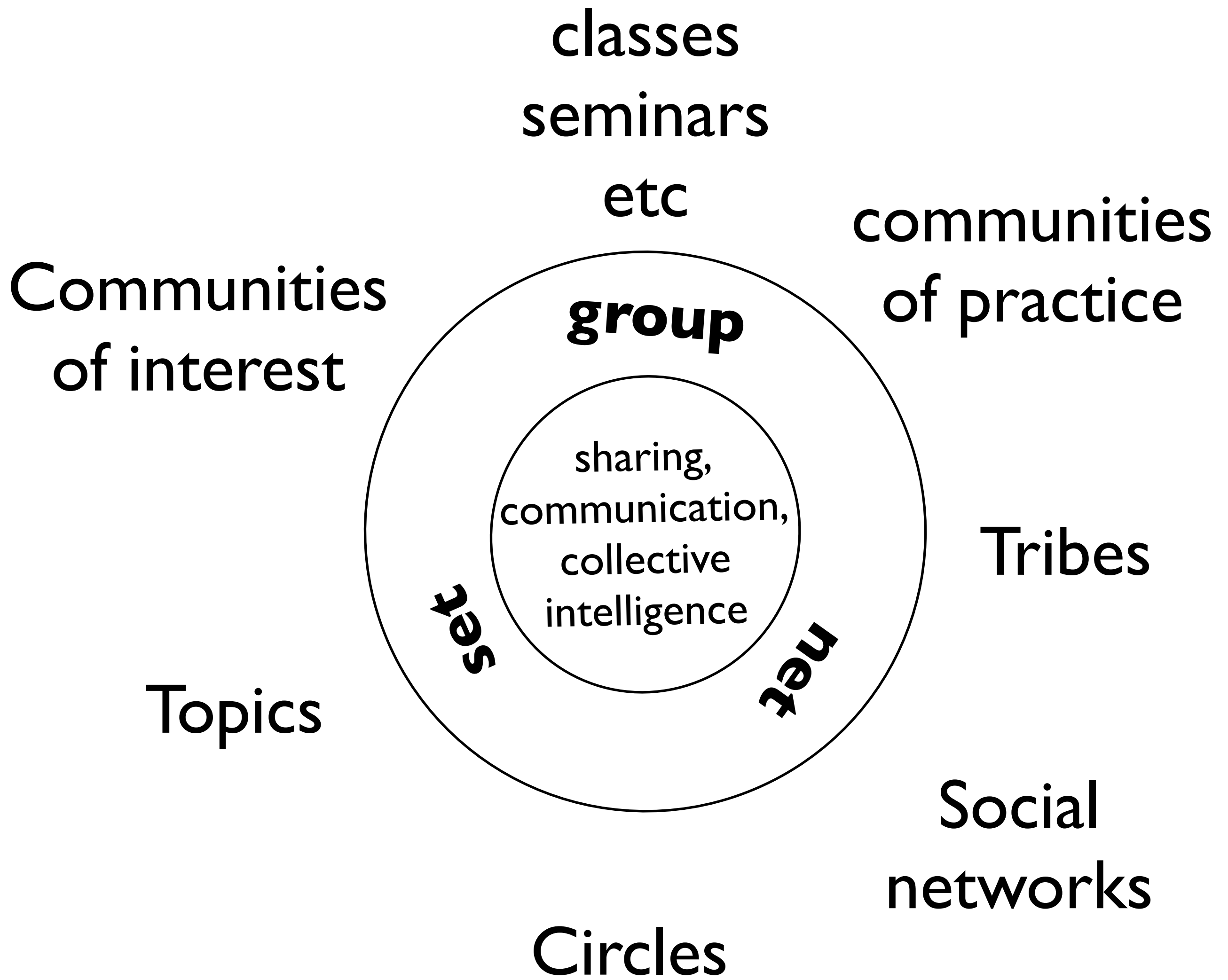
Subject areas  
Geographically  
collocated people



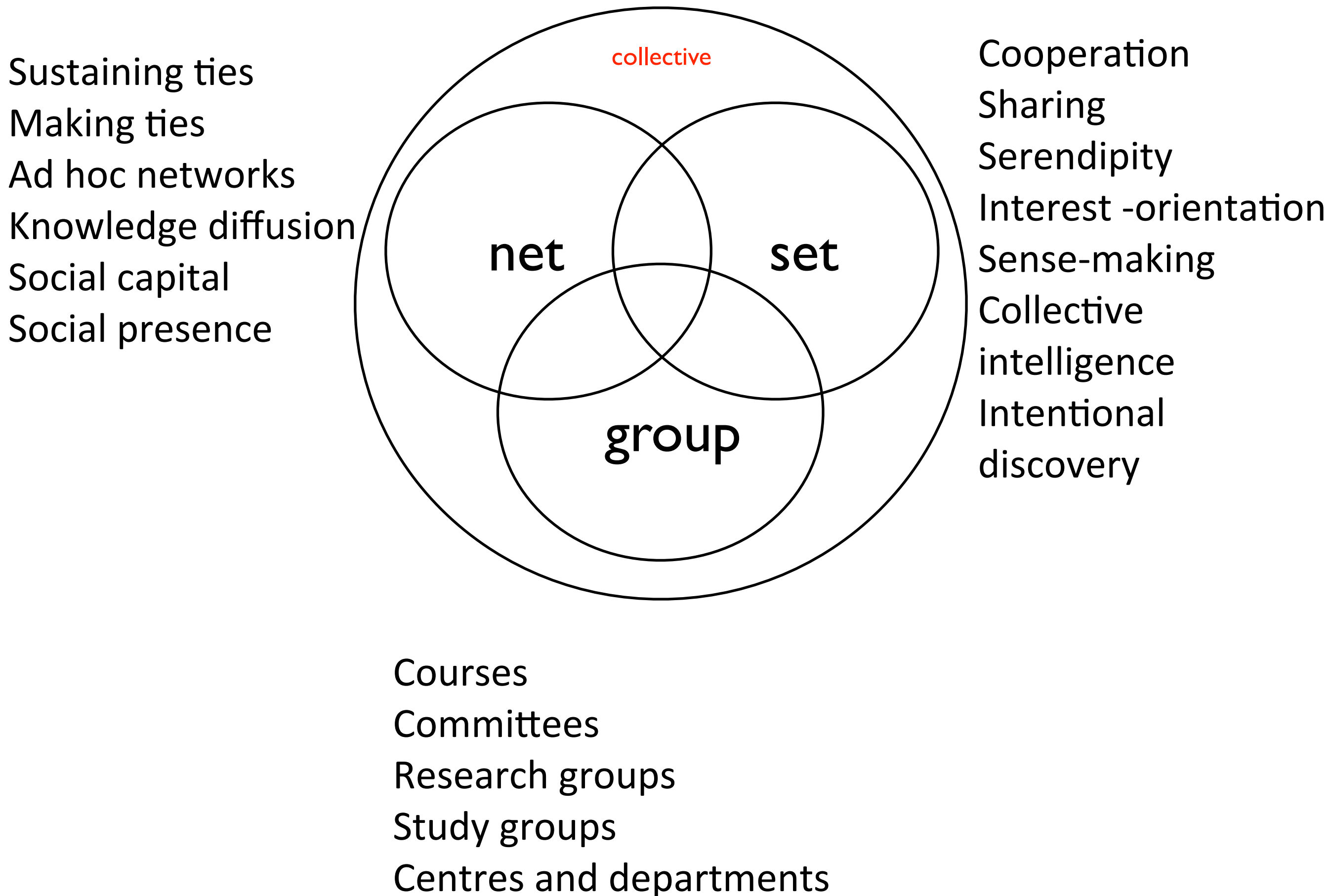
ad-hoc learning networks  
clubs & societies  
Communities of practice

Universities  
departments  
companies  
nations  
Tribes

Classes  
Tutorial groups  
Seminars  
Project teams



# uses



# Generations of distance learning pedagogies

Private

**1. Behaviourist/  
Cognitive – *Self Paced,  
Individual Study,***

individual

hard

**2. Social constructivist –  
*Groups, classes***

group

Public

**3. Connectivist –  
*Networks***

net

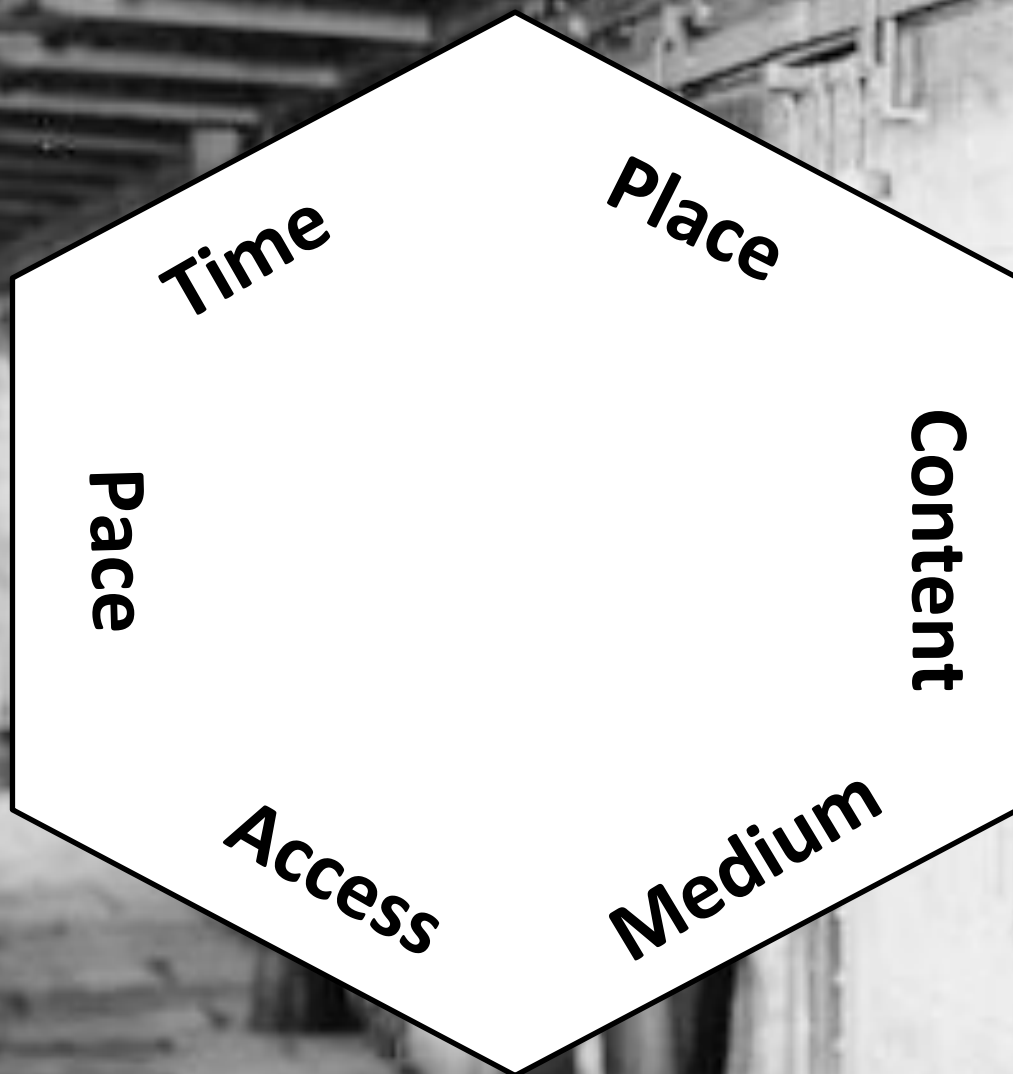
soft

**4. Holist - *Sets and  
Collectives***

set

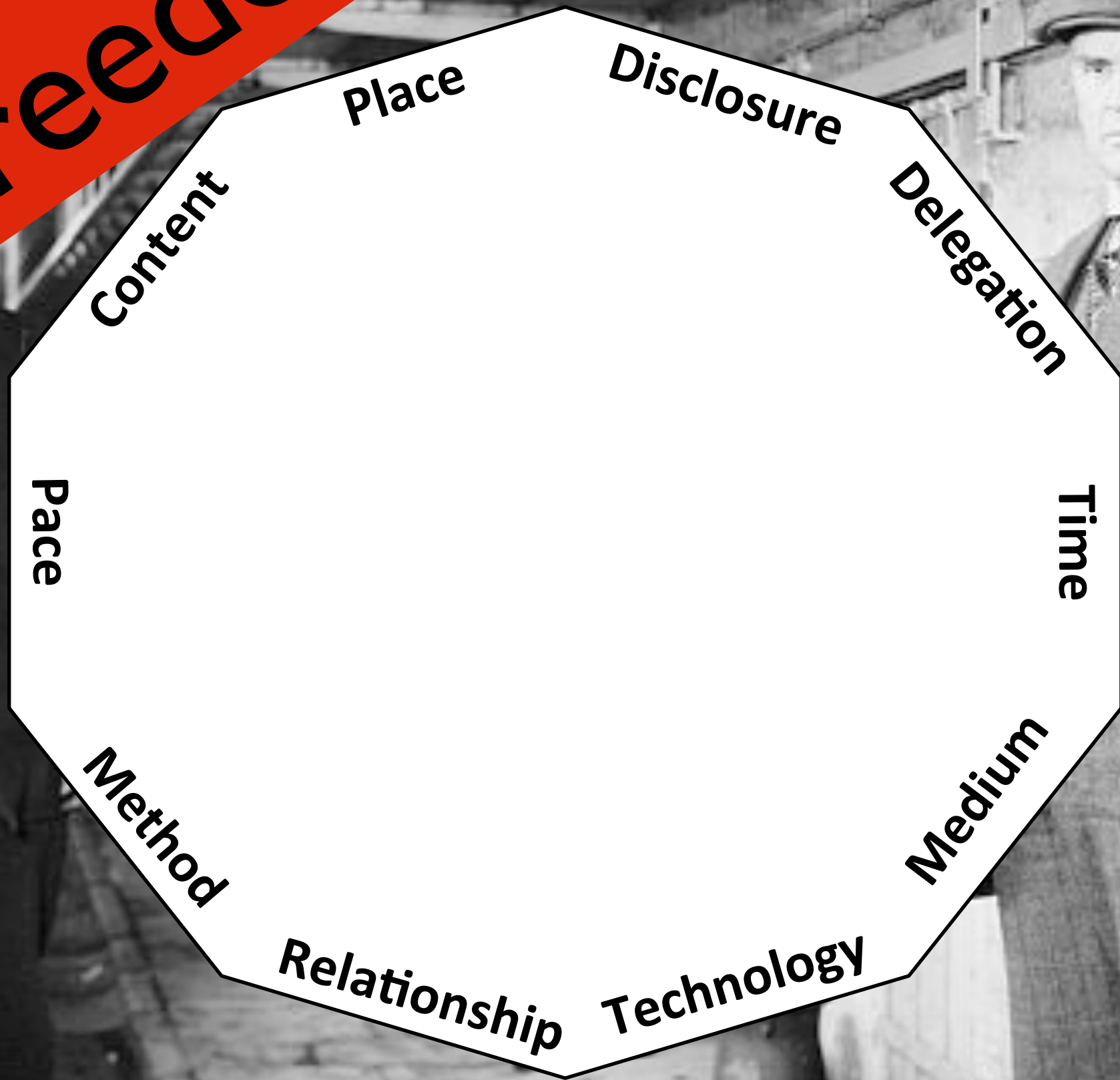
**choice <> control**

# Cooperative freedoms





# Cooperative freedoms ++



# Control in social systems

Collective control

**Individual control**

**Negotiated control**

**Teacher control**

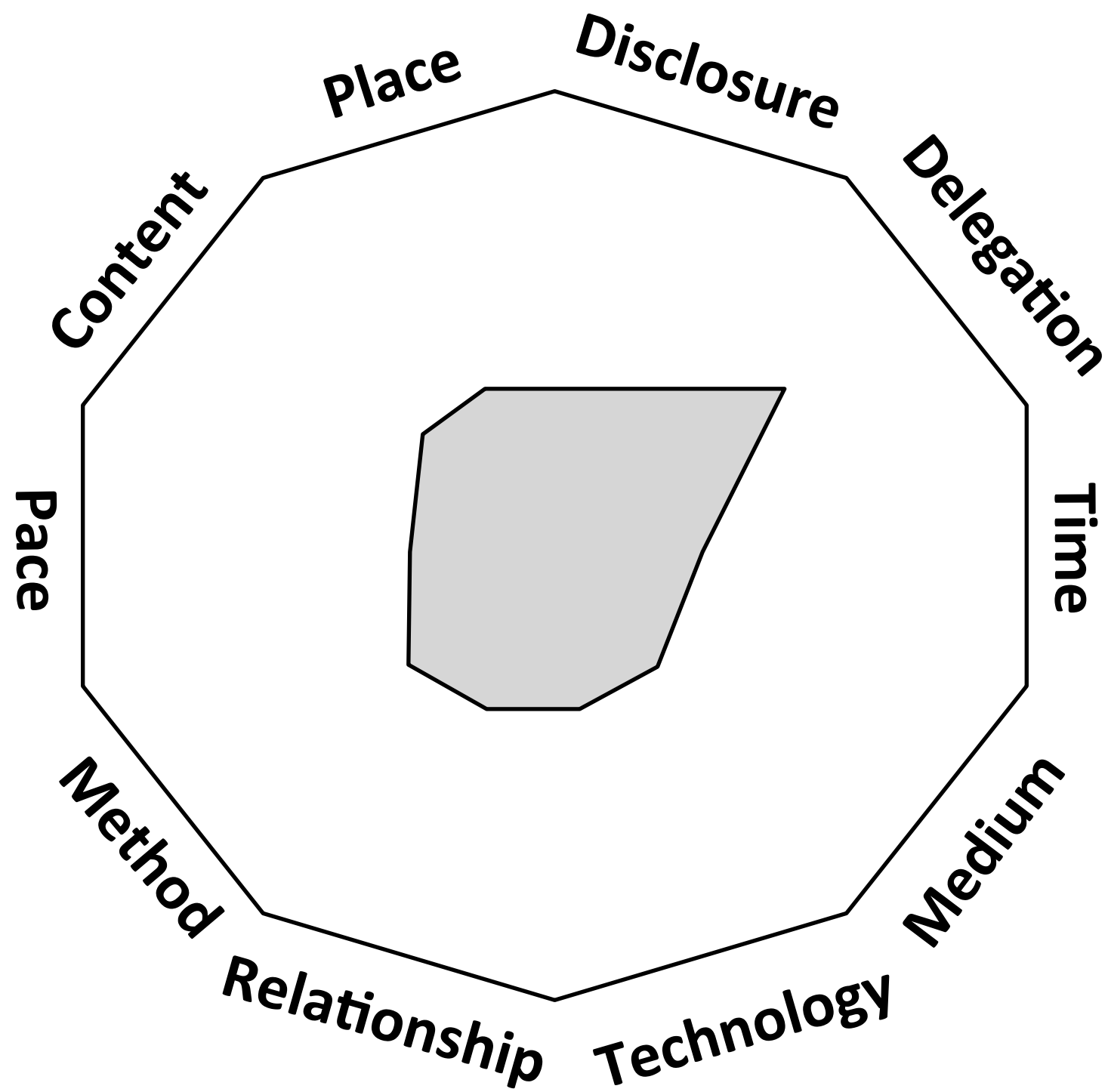
Ownership, autonomy

collaboration, dialogue

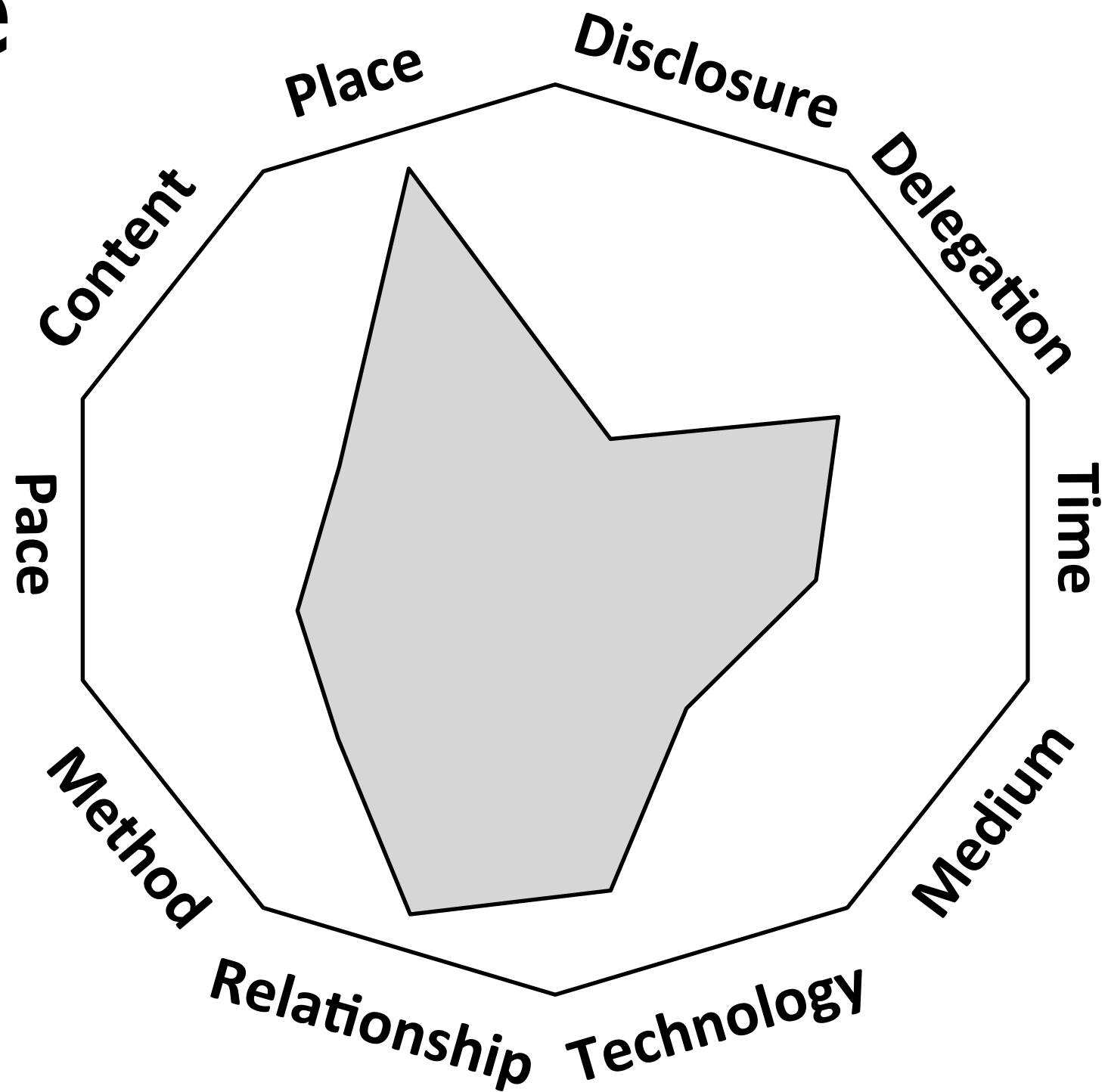
hierarchies, structure

Cooperation, sharing

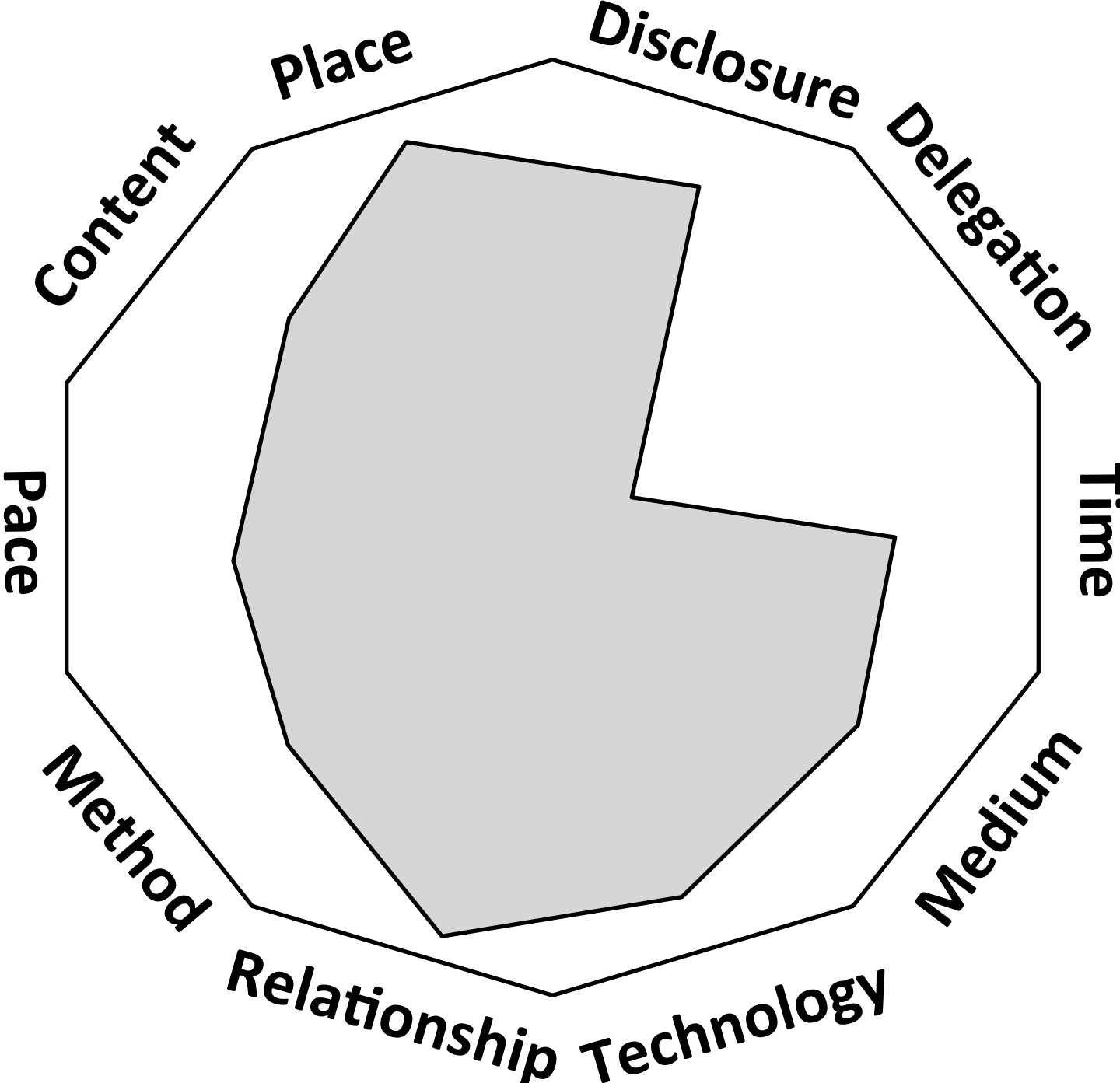
paced  
group  
f2f



paced  
group  
online

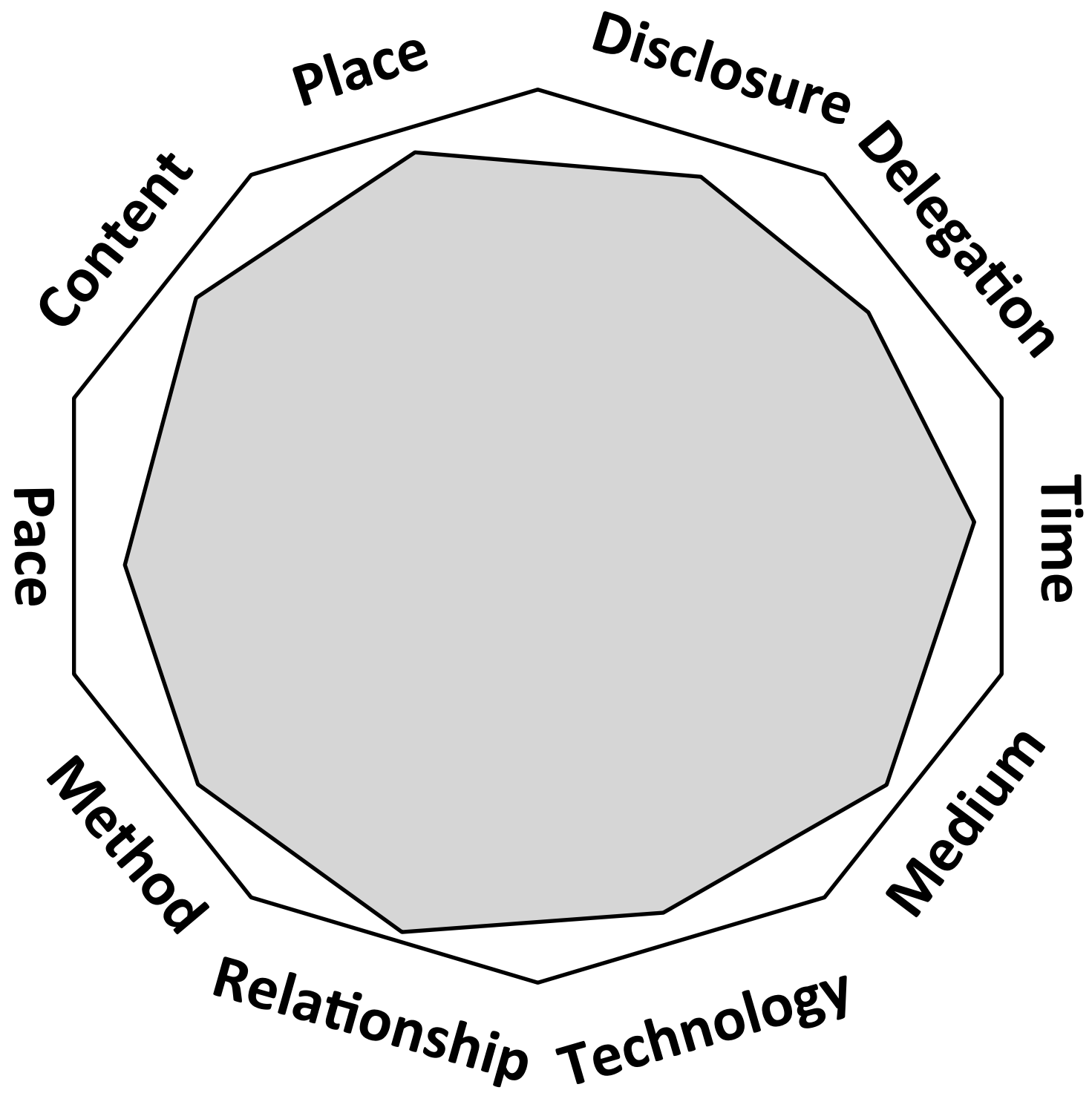


# network



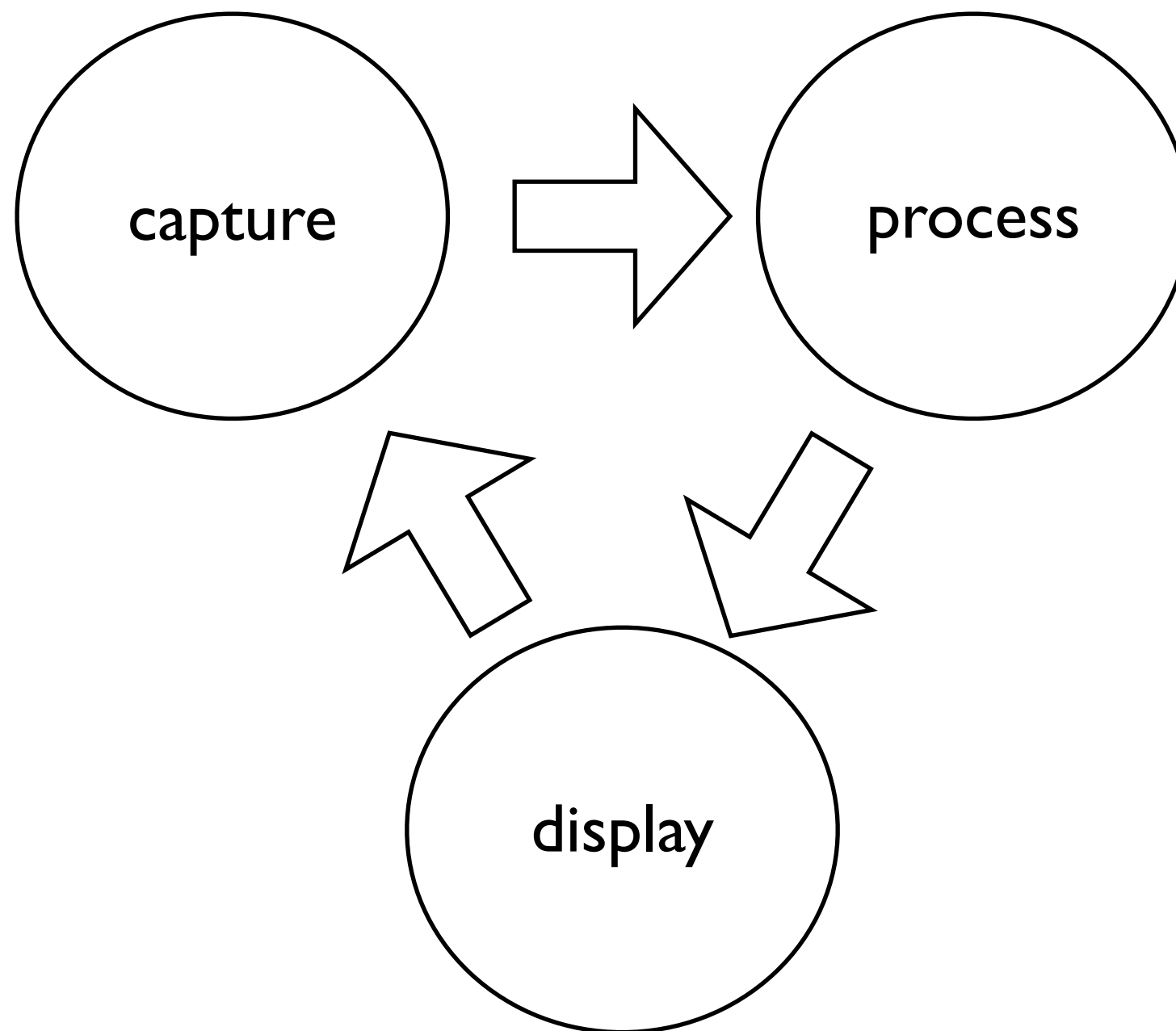


**set**

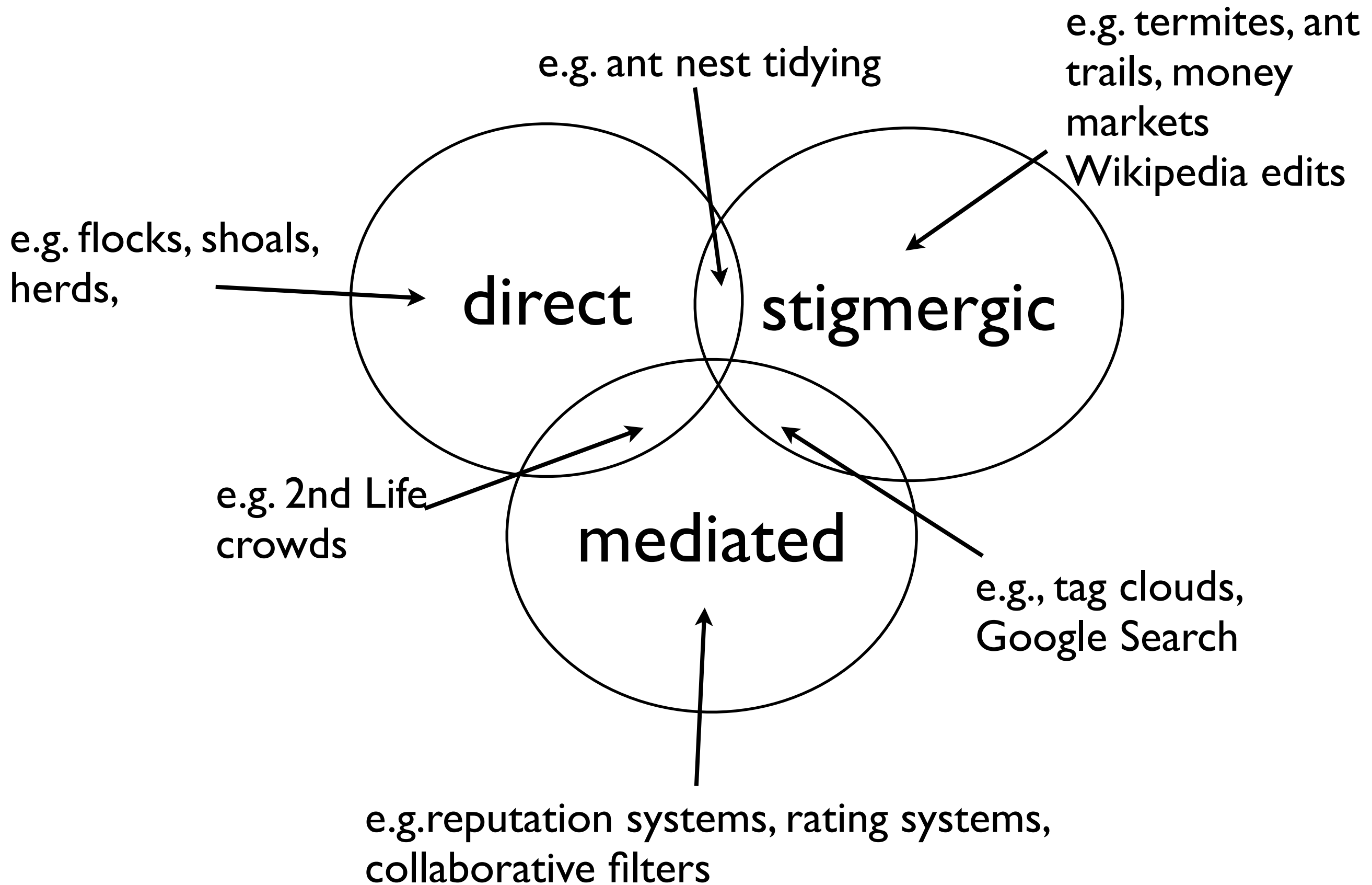


**choice <> control**

# Collective overview



# Collective types



**example**



# Self-paced

- Any time, any place
- No cohorts
- No schedules
- 6 months to finish from the start date




# Production lines



# Once upon a time...

text-book wraparound  
formal assignments,  
based on a book  
formative quizzes  
problem-solving forum  
in-person proctored  
examinations

-  Tutor Marked Assignment (TMA) 2
-  Tutor Marked Assignment (TMA) 3
-  Tutor Marked Assignment (TMA) 4
-  [COMP 266 Course Coordinator](#)
-  Coordinator and tutors forum (Faculty

## Week 1

-  Familiarize yourself with the Study Guide
-  Complete Unit 1
-  Quiz 1

## Week 2

-  Begin Unit 2

## Week 3

-  Complete Unit 2
-  Quiz 2
-  Complete and Submit TMA 1

## Week 4

-  Begin Unit 3

## Week 5

-  Quiz 3
-  Complete Unit 3





# Problems

- sociability vs control
- inflexibility
- cheating
- teaching programming
- motivation
- authenticity





not well-loved





# loneliness





# inflexibility

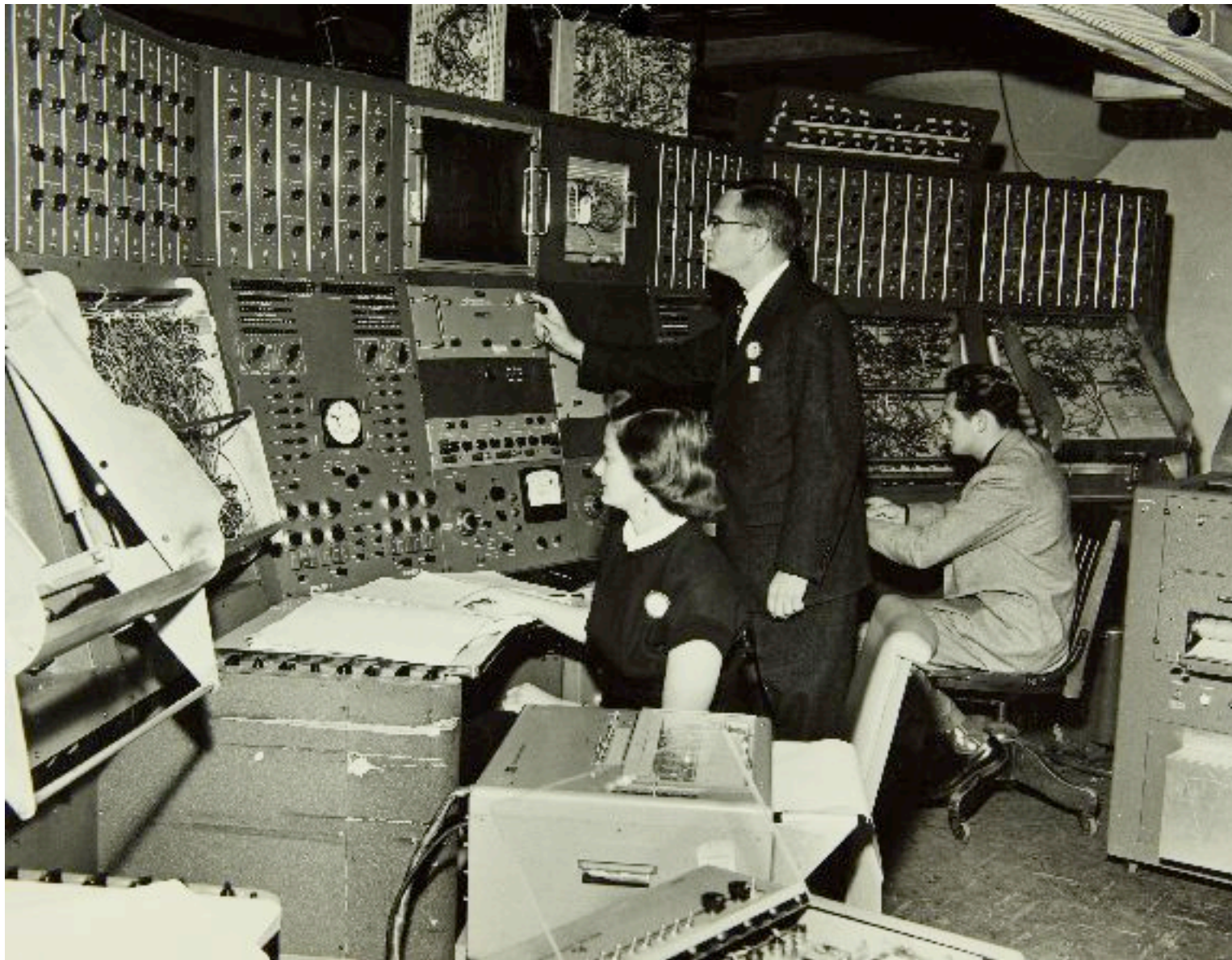


# cheats





# programming



# motivation



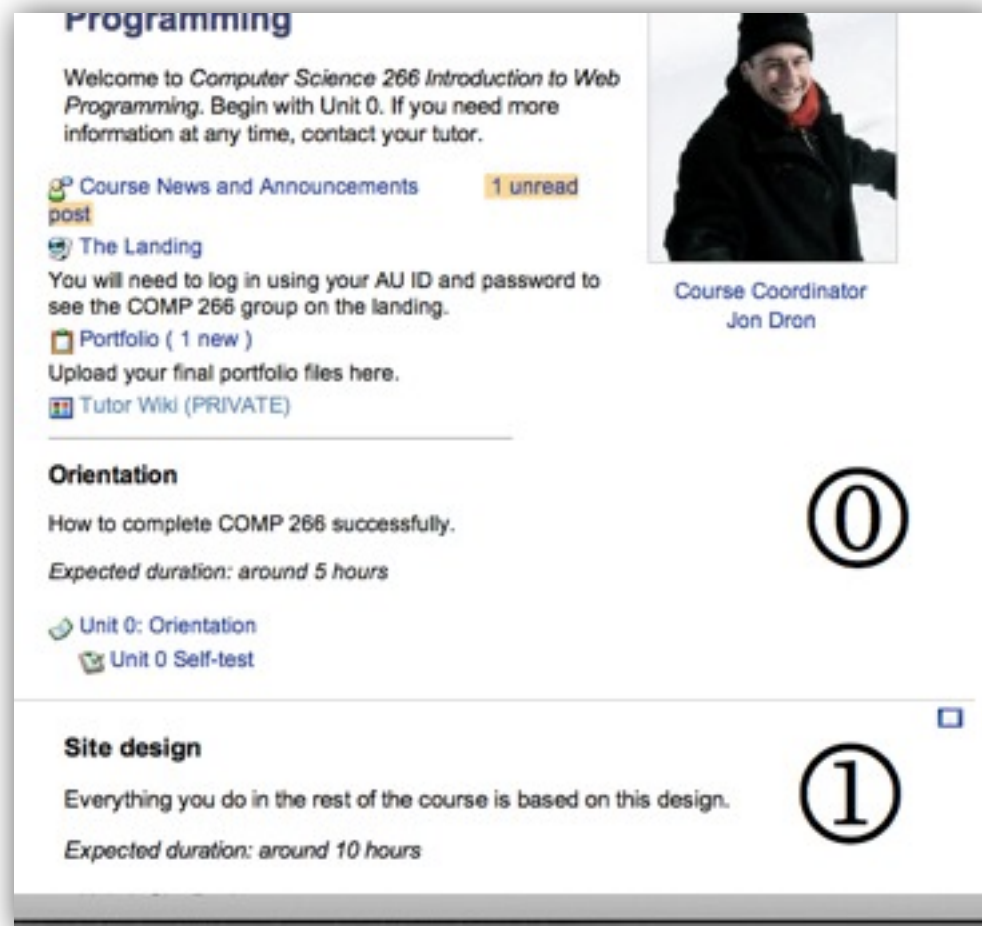
(Ryan & Deci Self-determination Theory)

**this had to change**







# Moodle + Elgg





**Programming**


Welcome to *Computer Science 266 Introduction to Web Programming*. Begin with Unit 0. If you need more information at any time, contact your tutor.

 Course Coordinator  
Jon Dron

 Course News and Announcements **1 unread post**

 The Landing  
You will need to log in using your AU ID and password to see the COMP 266 group on the landing.

 Portfolio ( 1 new )  
Upload your final portfolio files here.



 Tutor Wiki (PRIVATE)

---

**Orientation**

How to complete COMP 266 successfully. 0

*Expected duration: around 5 hours*

 Unit 0: Orientation  
 Unit 0 Self-test

---

**Site design**

Everything you do in the rest of the course is based on this design. 1

*Expected duration: around 10 hours*



My Dashboard My Profile Tools  Account

Groups > COMP 266  
**COMP 266** Invite users Edit group

3712 Views

```
<title>
COMP 266:
Introduction to
</title>
</head>
<body>
<h1>Welcome to t
<script type="tr
<!--
//this is to wel
..
```

**Description:**  
A closed group to support the SCIS course, COMP 266, Introduction to Web Programming. If you are a student of COMP 266 (revision 3) please request membership to join this group.

**Brief description:** COMP 266: Introduction to Web Programming

**Tags:**  
comp 266, comp266, web programming, html, css, jquery, javascript, ajax, programming, web

**Owner:** Jon Dron  
**Group members:** 66  
**Closed group**

**Website:**  
<http://scis.lms.athabascau.ca/course/view.php?id=310> Add widgets

**Welcome to the COMP 266 group**

**Where to now?**

Check out the [group bookmarks](#) for resources to help with HTML, CSS, JavaScript, JQuery, AJAX, and site design

Check out the [FAQs](#) for answers to common problems

Use the [discussion forum](#) to ask for and to give help

Write your reflections in the [group blog](#)

Don't forget to fill in the details for your profile, at least including an image to represent yourself.

Use the [COMP 266 Moodle site](#) as the definitive guide to the course process and a source of lots more information

**Forum Topics** 69 Views

**Group wikis**

[Add wiki](#)

[Javascript Code in HTML giving](#)

[Accessing your web space at AU](#)

**COMP 266**  
COMP 266: Introduction to Web Programming  
**Closed group**

Group activity  
Group blog  
Group bookmarks  
Group discussion  
Group files  
Group polls  
Group wikis

Mail Members  
Manage join requests (2)

Edit Group Appearance

Search in this group

Go

Group admins 

Group members 

[View all members](#)

# assessment

- portfolio assembly
- reflective diaries
- formative stop-points
- self-test exercises
- mapped outcomes





# grades for outcomes

- No assessed assignments
- Grades for evidence each intended competence
- any evidence will do - problem solving, bookmark sharing, hints shared, whatever





# stopping cheating

- Reactive

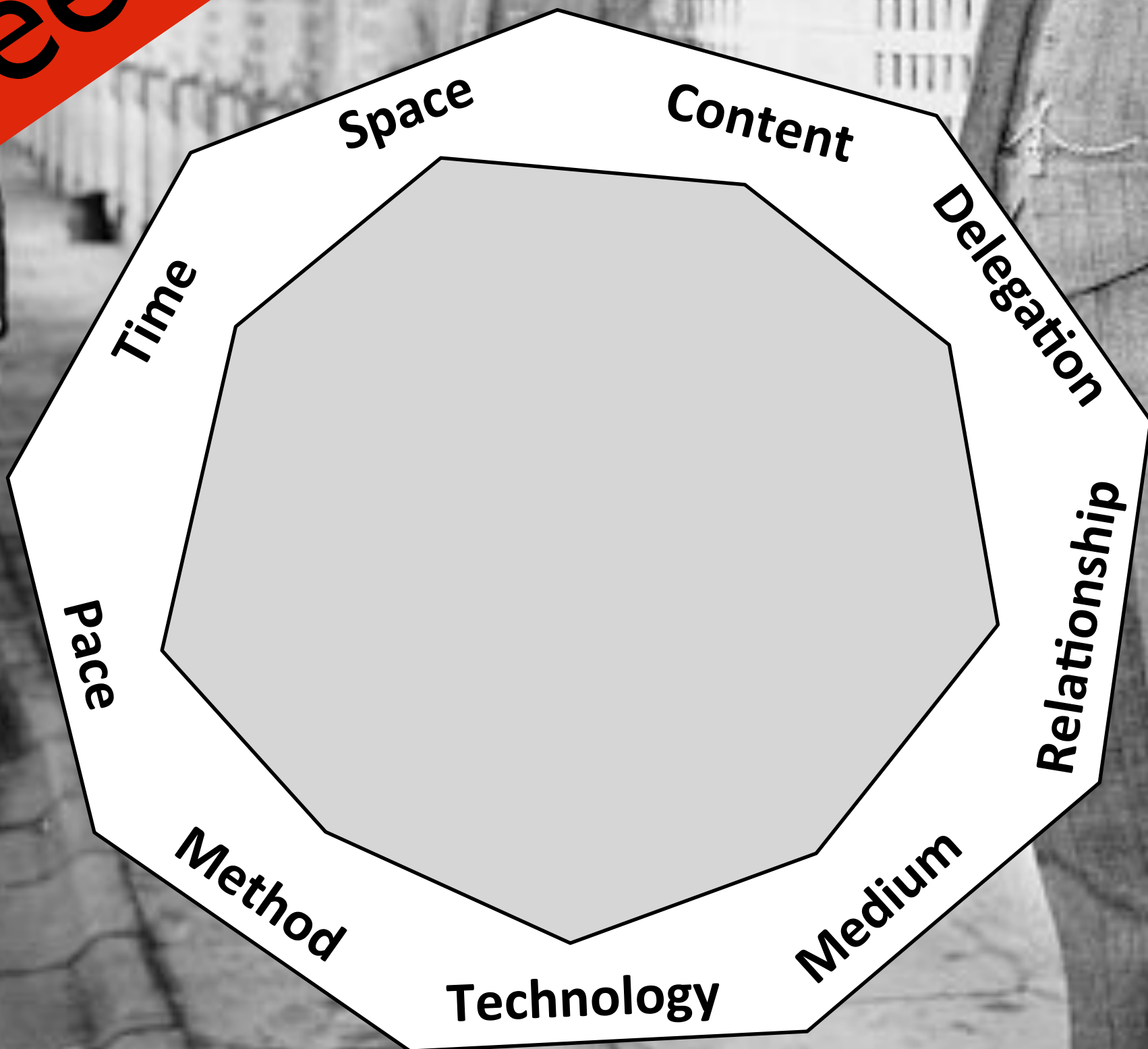
cartoon eyes  
incremental artefact building  
valorize copying  
stop-points  
many eyes  
making cheating expensive

- Preventative

tracking  
many eyes  
automated tools  
server logs



# Cooperative freedoms



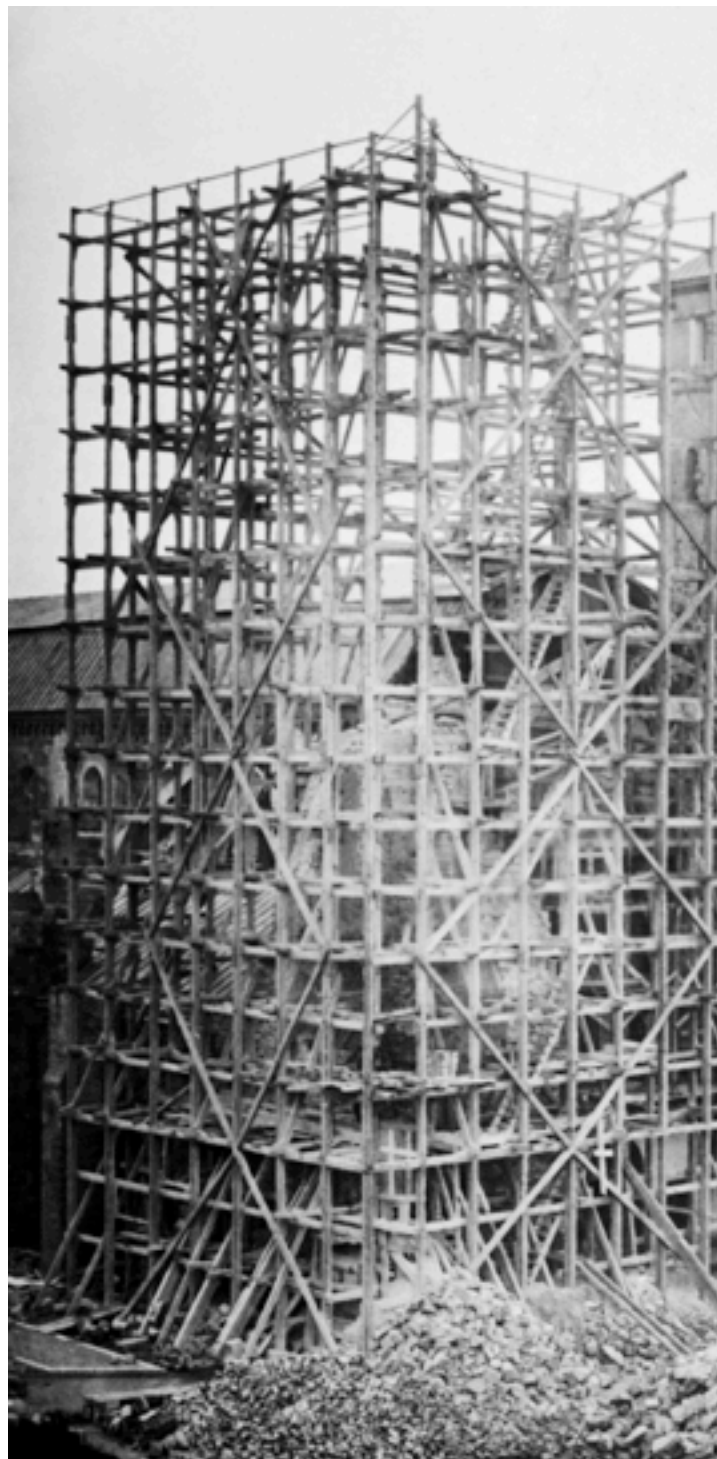


**it works...**

**“I find that this is a perfect way to teach a course on web programming. It makes the course more interesting and engaging for students.”**

**but...**

# some problems



usability  
scaffolding  
novelty  
tutor  
engagement  
scalability



**concerns**

**futures**

thank you

<http://jondron.org>

[jond@athabascau.ca](mailto:jond@athabascau.ca)