

Decentralized Learning

The model, pioneered in such events as the Connectivism and Connective Knowledge course, revolves around the idea that there is no 'core' content which much be learned, but rather, a body of loosely related materials that different people explore in different ways in order to satisfy their own personal learning needs.

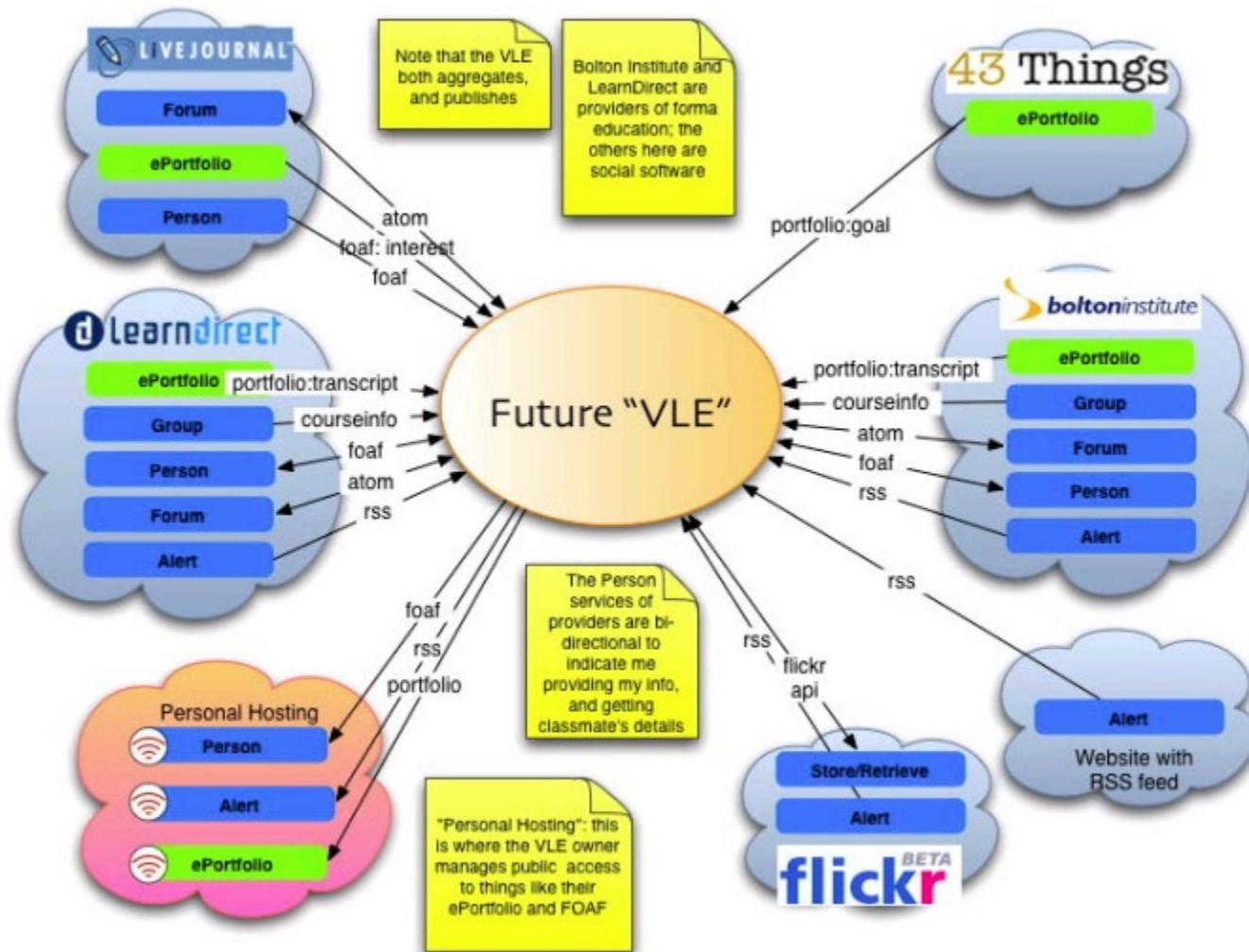
Decentralized Learning

- Physical Organization
- Epistemology
- Pedagogy
- Success Factors

Physical Organization

- The idea that a learning environment is distributed across a number of different sources
- The role of the student is to connect these sources and draw from them learning resources as needed

Physical Model



Personal Learning Environment

- Best thought of as an ecology in which learning takes place
- Is represented with the student thought of as being at the centre
- But is in fact a mesh or a web of interconnected students

PLEX – Example of an Early PLE

The screenshot displays the Plex application window, which is divided into several panes. The top pane, 'Opportunities Explorer', shows a tree structure with 'Free' and 'Match' categories, and a specific item 'learn three chord rock guitar' selected. The bottom-left pane, 'Opportunity Viewer', provides details for the selected item, including its title, the number of registered people (1), and the provider (43 Things). The right pane, 'Search Results', lists several search results for the query 'learn three chord rock guitar', all from the provider '43 Things'. The bottom-right pane shows the details of the selected item, including the address 'http://www.43things.com/things/view/161919' and a search bar. The status bar at the bottom indicates the current item is 'learn three chord rock guitar'.

Opportunities Explorer

- Free
- Match
- learn three chord rock guitar

Opportunity Viewer

Title: learn three chord rock guitar

Number of registered people: 1

Details:

Provider: 43 Things

Location: <http://www.43things.com/thing/>

Search Results

Find It!

Filter results by:

Title	Provider	Location
Leran to play the guitar like no one has ev...	43 Things	http://www.43things.com/things/view/161919
learn to play acoustic guitar, also get a gu...	43 Things	http://www.43things.com/things/view/161919
Learn to play the guitar guitar properly an...	43 Things	http://www.43things.com/things/view/161919
meet Mcfly and just chill out with them an...	43 Things	http://www.43things.com/things/view/161919
Create a music room downstairs, with a dr...	43 Things	http://www.43things.com/things/view/161919
i want to keep playing guitar and play infr...	43 Things	http://www.43things.com/things/view/161919
i want to learn to play the guitar and then...	43 Things	http://www.43things.com/things/view/161919
Sing and play bass guitar at the same tim...	43 Things	http://www.43things.com/things/view/161919

learn three chord rock guitar on 43 Things

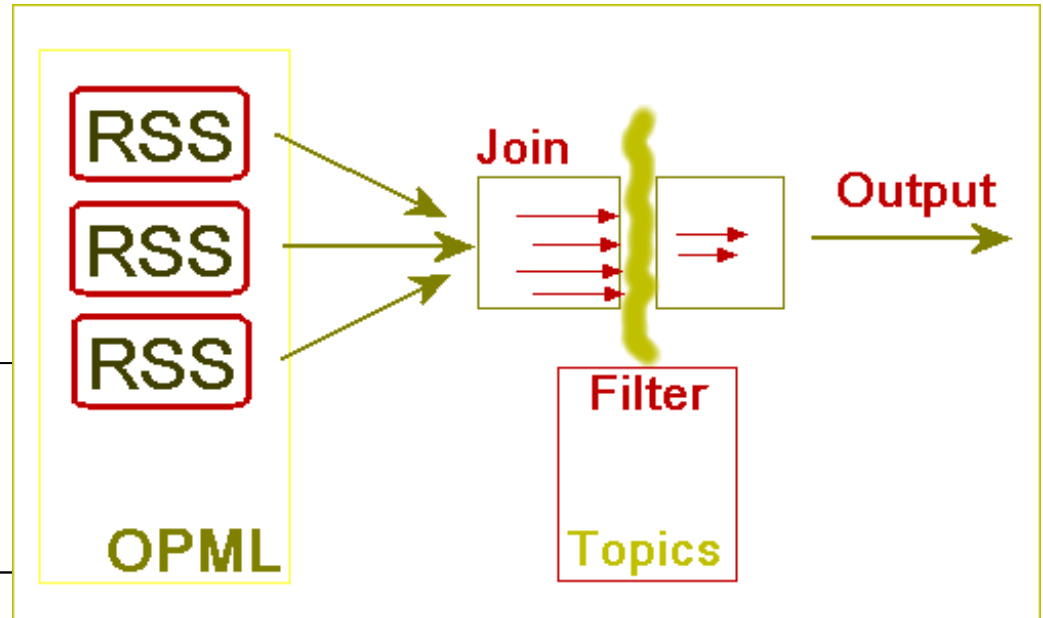
Address: <http://www.43things.com/things/view/161919>

Home Zeitgeist Log In Search

1 person wants to do this...

[learn three chord rock guitar]

Aggregation and Remixing



MyGlu

By Stephen Downes

[About](#)

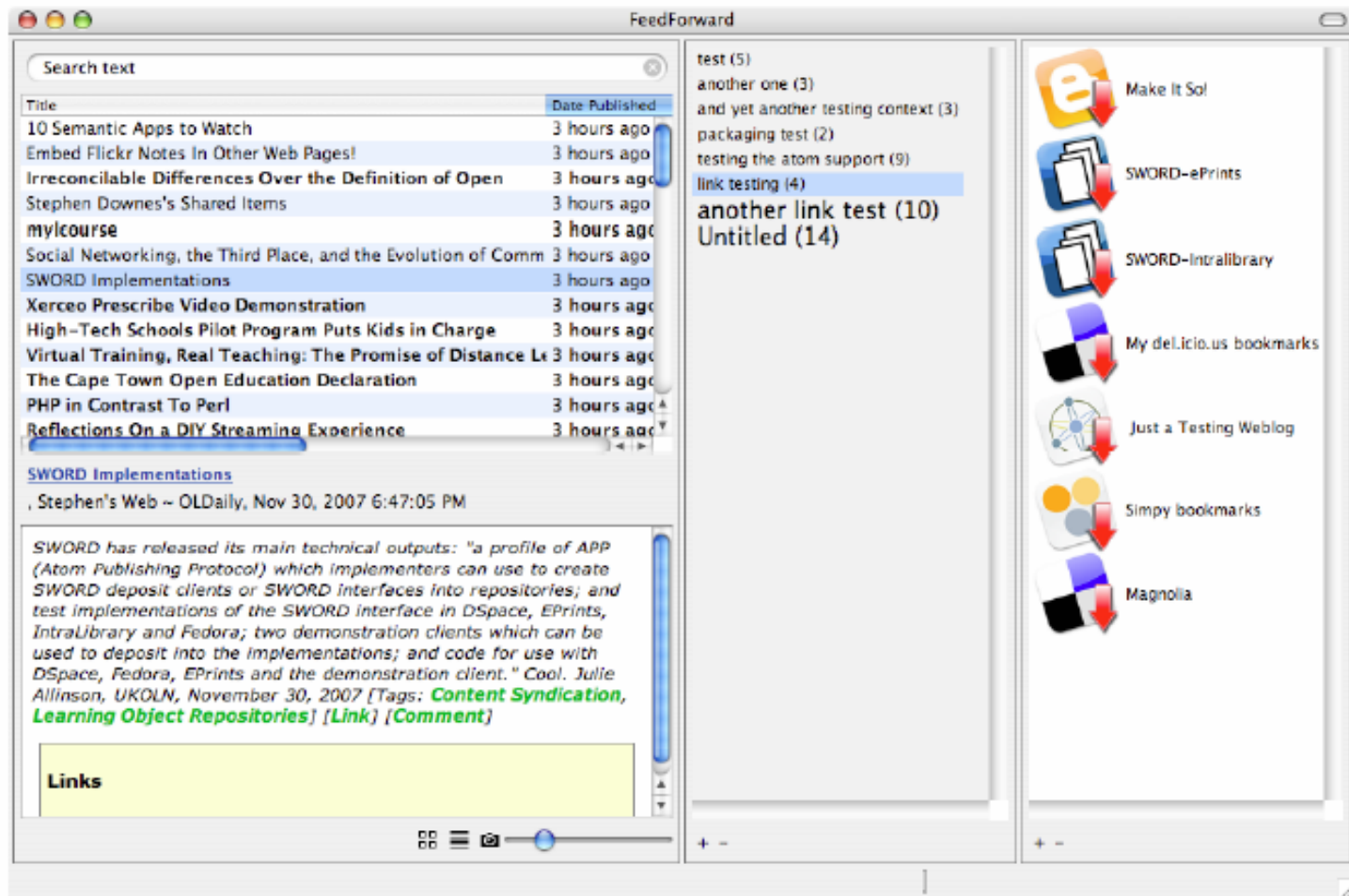
Force: 1

Harvesting <http://del.icio.us/rss/Downes>
Feedfile is: myglu/feedcache/del.icio.us_rss_Downes
No content. Harvesting from source.
URL: <http://del.icio.us/rss/Downes>
Parsing Feed=HASH(0x9f0f10c)

Harvesting <http://www.downes.ca/news/OLDaily.xml>
Feedfile is: myglu/feedcache/www.downes.ca_news_OLDaily.xml
No content. Harvesting from source.
URL: <http://www.downes.ca/news/OLDaily.xml>
Parsing Feed=HASH(0x9f0ef8c)

<http://www.downes.ca/mygluframe.htm>

Feed Forward



Connective Knowledge

- The knowledge created and shared by an interconnecting community of learners
- Knowledge is distributed
- Knowledge is created by conversation and interaction

Role of the Learner

- Participates and engages in a community
- Participation is guided by personal interest and motivation
- (Not staged, akin to Lave & Wenger, no hierarchy of interaction, akin to Salmon, Carr)

The Connectivism Course

- A good example of such a learning network
- There was no 'right' way to interact
 - No set of processes to master or undertake
 - No specific body of knowledge to assimilate
- The connectivist course is an example of open sharing

Connectivism


“At its heart, connectivism is the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks.”

What Connectivism Is

<http://halfanhour.blogspot.com/2007/02/what-connectivism-is.html>

Course Components

- The Wiki...



navigation

- [Main Page](#)
- [Recent changes](#)
- [Random page](#)
- [sandbox](#)
- [Help](#)

ltc links

- [LTC Website](#)
- [Activities](#)
- [Workshops and Resources](#)
- [Teaching with Technology](#)

um projects

- [Educational Psychology](#)

[page](#) [discussion](#) [view source](#) [history](#)

Connectivism

Welcome to the **Connectivism and Connective Knowledge Online Course** support wiki.

Conference tags: CCK08

This page is also available in: [Spanish](#), [Portuguese](#), [Italian](#), [Hungarian](#), and [Chinese](#) (Simplified Character Version). See also [this short post](#) on making surfing in China easier]

This course also has a FaceBook group at [CCK08](#)

Contents [hide]

- 1 Please enter your email address here if you'd like to be involved (either for free participation or to enroll for cre
- 2 Course blog is available here
- 3 Course Details
- 4 Weekly Activities
- 5 Learner Assignments and Evaluation
- 6 Course Links
- 7 Pre-week 1
- 8 Week 1: What is Connectivism? (September 8-14)
- 9 Week 2: Rethinking epistemology: Connective knowledge (September 15-21)
- 10 Week 3: Properties of Networks (September 22-28)
- 11 Week 4: History of networked learning (September 29-October 5)

<http://ltc.umanitoba.ca/wiki/Connectivism>

Course Components

- Course Moodle Forum

Connectivism and Connective KnowledgeYou are currently using guest access ([Login](#))

Courses ▶ CCK08

Bloglines

#cck08 Reading the Moodle forum... It is me, or does ti really looks...
#cck08 Reading the Moodle forum... It is me, or does ti really looks like mrs. Fitzpatrick is trolling?
Trying to determine why I cannot connect to the **CCK08** Moodle Forum
Trying to determine why I cannot connect to the **CCK08** Moodle Forum...
User:Vtaylor/Connectivism and Connective Knowledge
[<http://valerie.posterous.com/cck08-is-...>]
How to filter your **CCK08** email (in Gmail)
How to create a filter for your **CCK08** email.
Bill Kerr's Challenge to Connectivism
I'm struggling to complete my reading assignments for George and Stephen's online course on Connectivism and Connected Knowledge.

Topic outline

Connectivism and Connective Knowledge is a twelve week course that will explore the concepts of connectivism and connective knowledge and explore their application as a framework for theories of teaching and learning. It will outline a connectivist understanding of educational systems of the future.
👤 Introductions
🌐 Google Map of participants
👤 General Forum
🌐 Connectivas Spanish pageflakes site
🌐 Connectivism English Pageflakes site
👤 Week 1: What is connectivism

1

What is Connectivism?

Calendar

September 2008

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Global events

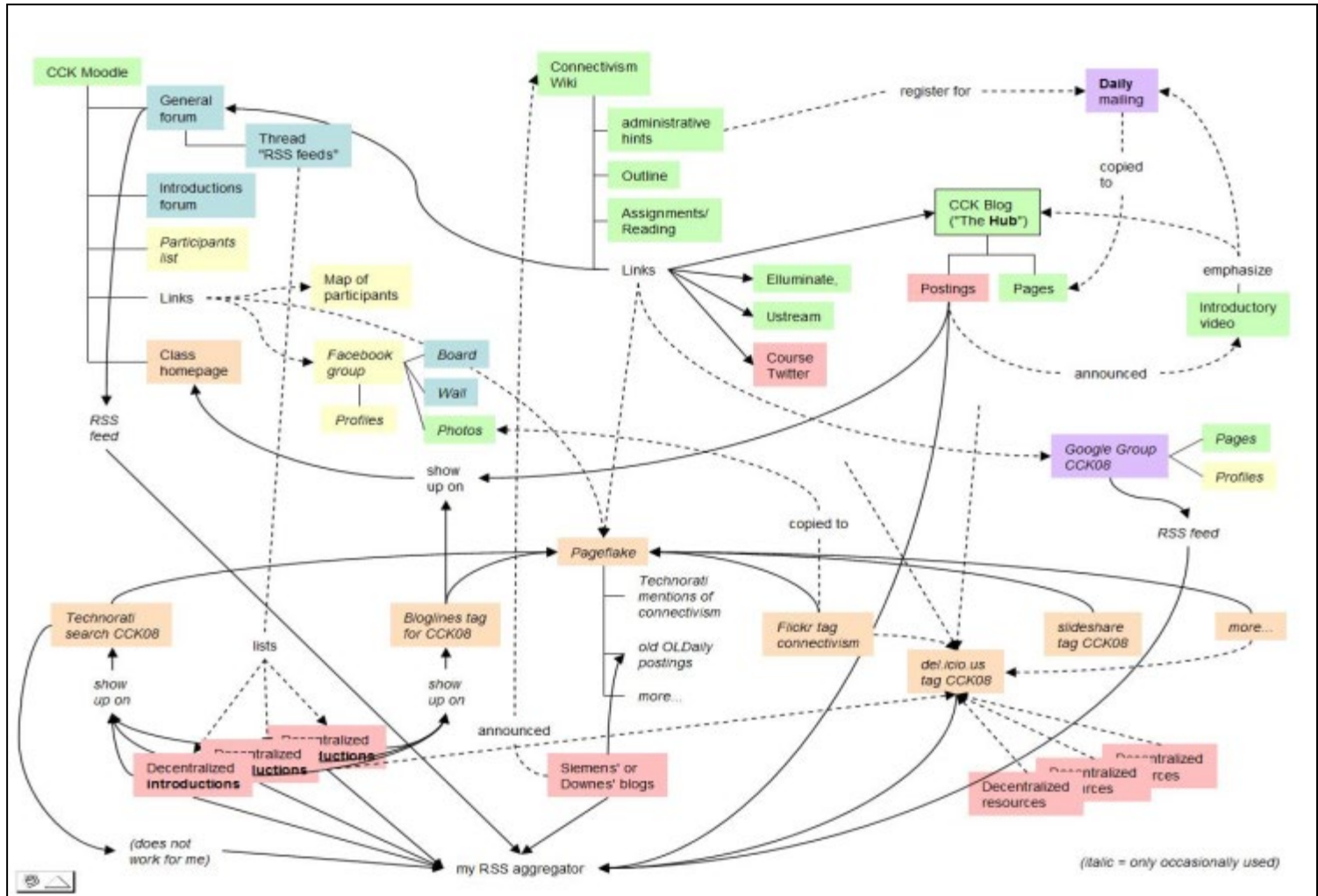
Course events

Connectivism Course Blog

Comparing Connectivism
I've posted a comparison between different theories of learning. It's not a final word summary, but hopefully it can provide a bit of a starting point for discussing the attributes of different concepts. While

<http://ltc.umanitoba.ca/moodle/course/view.php?id=20>

Connectivism as Mesh



Connectivism as Engagement

- There is no curriculum, no theory, no body of knowledge
 - (or, more accurately, the curriculum is the McGuffin)
- The product is not the knowledge, it is the *learner*
- It's not that there's nothing to learn, it's that it's *complex* and needs to be navigated...



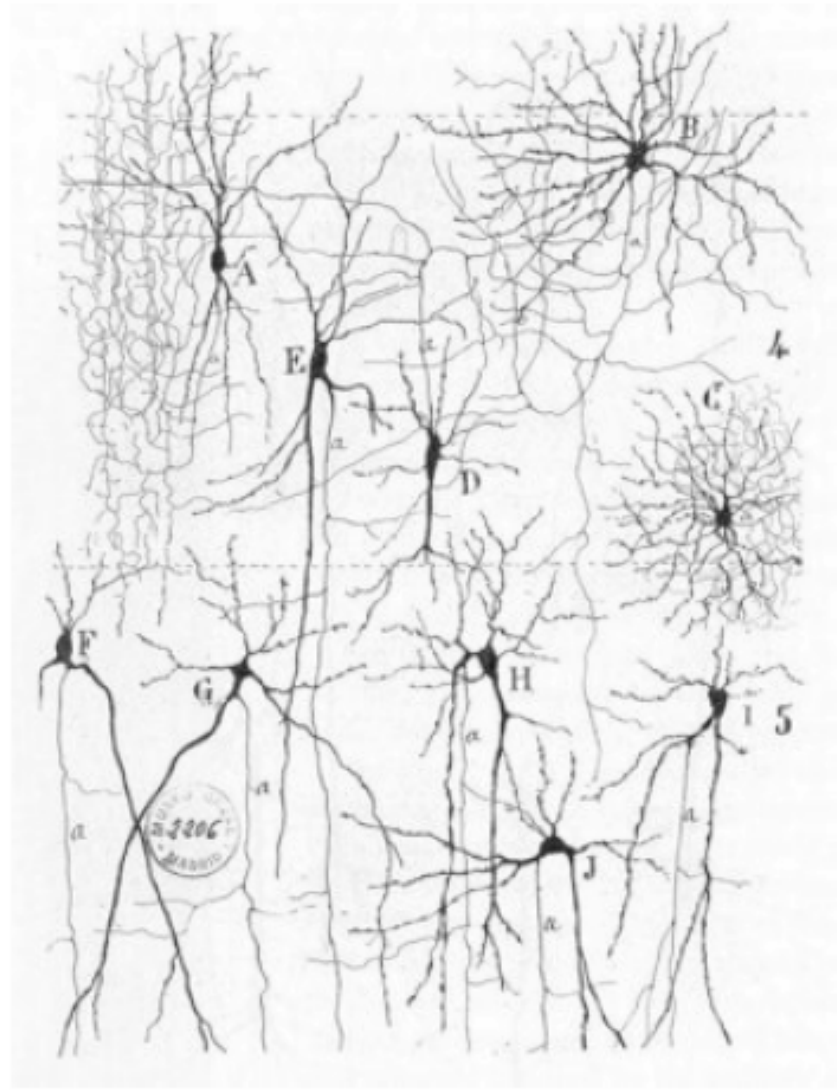
active engagement, not passive observation...

- a bit like ANT, but no presumption of commonality, translation...
- a bit like action research, but no presumption of a community of practice

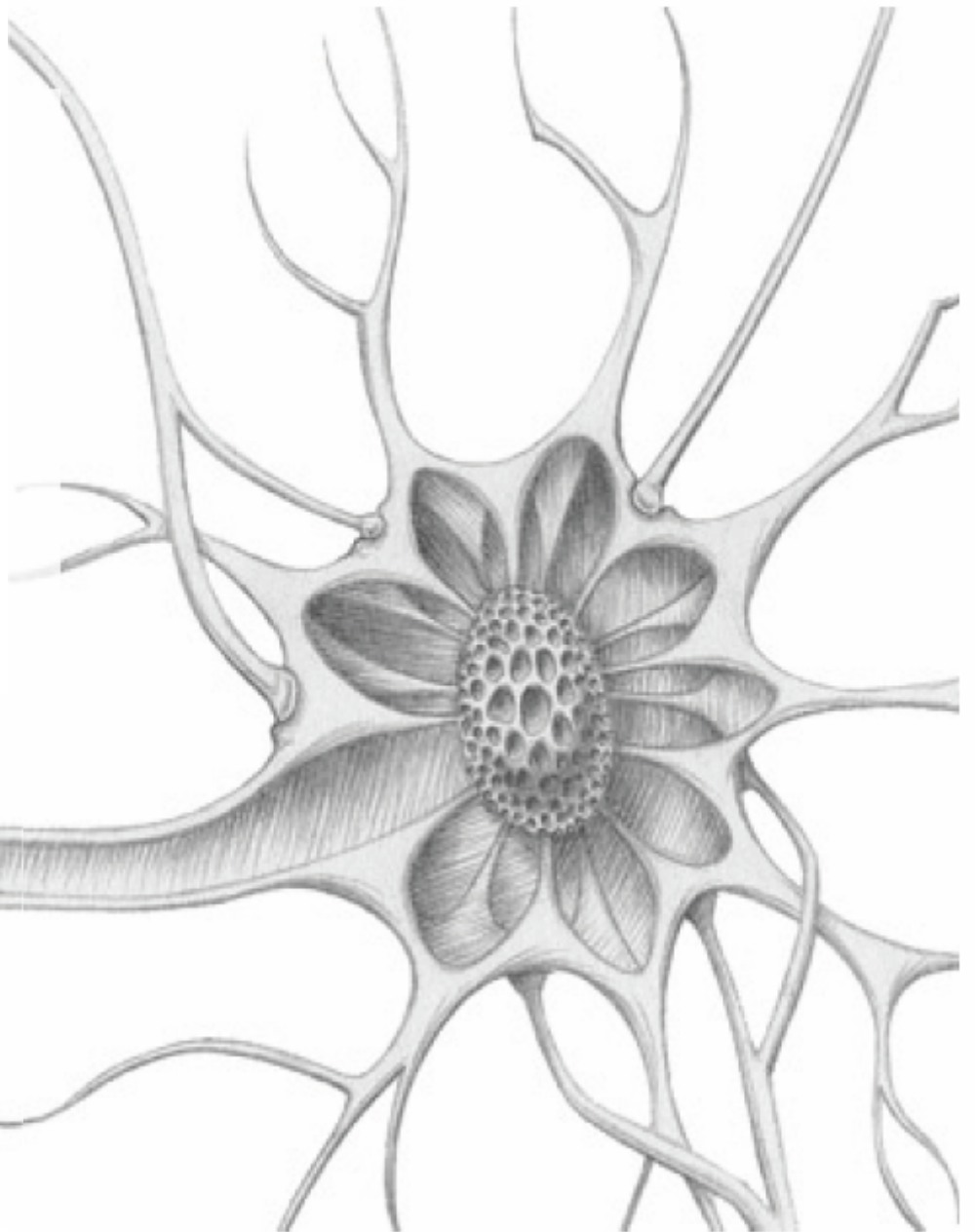
http://carbon.cudenver.edu/~mryder/itc_data/ant_dff.html

<http://www.emtech.net/actionresearch.htm>

- Teachers are nodes, students are nodes
- Both teaching and learning consists of sending and receiving communications to other nodes



Aggregate
Remix
Repurpose
Feed Forward

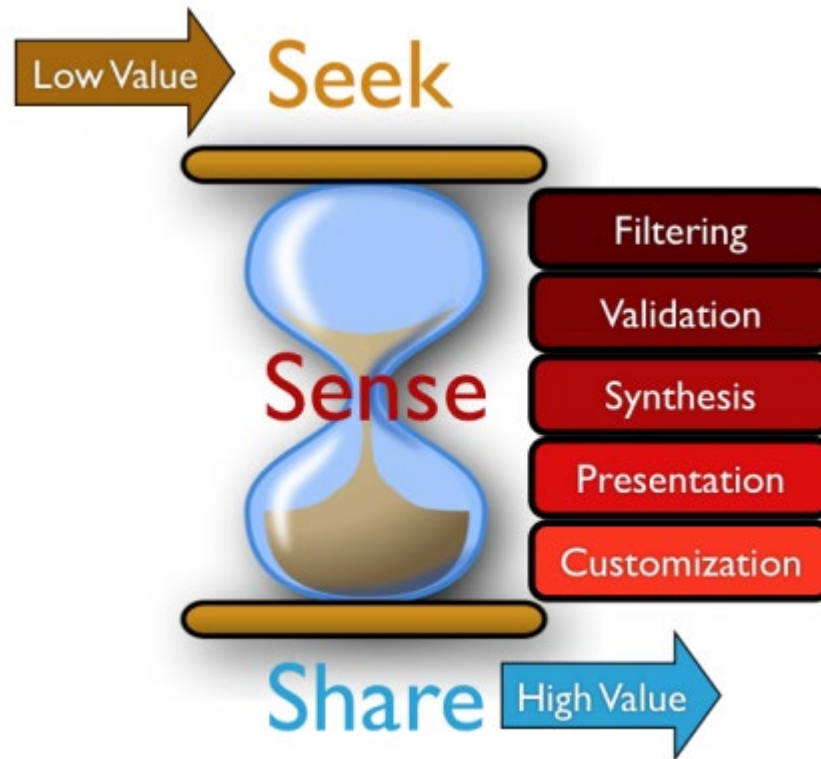


ARRFF

Epistemology

- Contrast between knowledge *transmission* and knowledge *production*
- The distributed model draws on learner-centered and constructivists models

Knowledge Production



<http://www.jarche.com/2010/03/sense-making/>

Knowledge Production As...

Mining

- data is like a raw material that is searched for and retrieved. It can be filtered, assessed and remixed
- You add value by creating more and more refined metals, alloys, compounds and materials out of what was there



Knowledge Production As...

Construction

- data is like a raw material, but you work with it with your hands, and create something new
 - add value to it by giving it form and function.
- Knowledge construction gives you the ability to create abstractions, to treat raw materials as signs and symbols



Knowledge Production As...

Growing

- data is like a raw material that serves as a nutrient or growth medium
- The raw material nourishes and contributes to the growth of the organism, which in turn creates something new and unexpected



Different Emphases

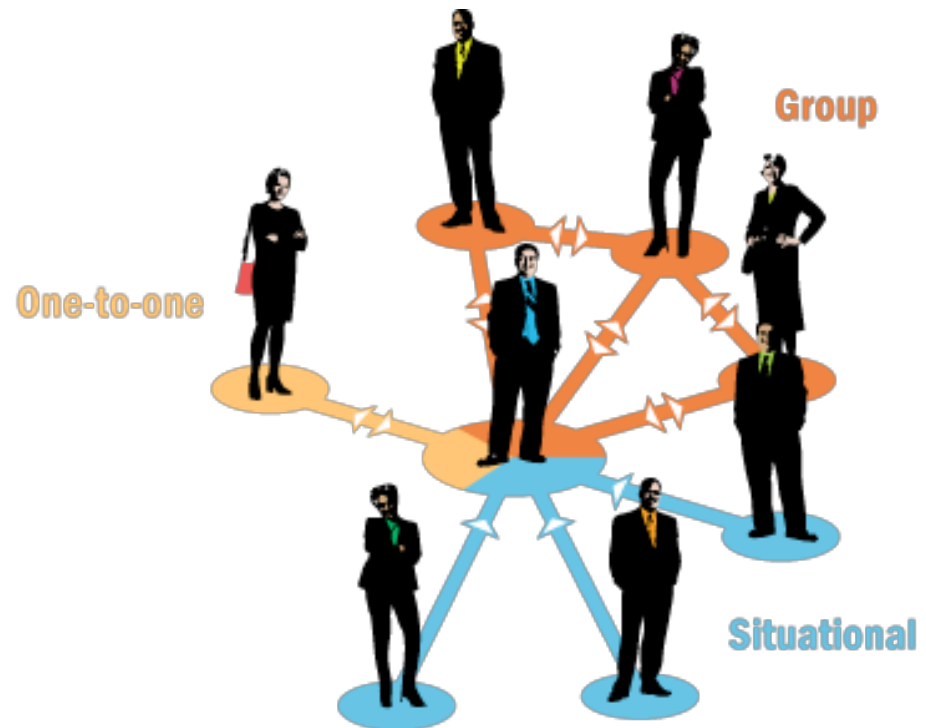
- Mining – accuracy and purity
- Construction – sameness and identity
- Growth – creation and creativity

Each depends in some way on the other

- Filtering requires a sense of purpose
- Constructing depends on being able to create
- Growth requires filtering and selection

Pedagogy

- The next step in such a discussion is usually to describe a theory of social learning, depicting learning as an external process (or set of processes)



Some Forms of Social Learning

- Behaviourism / Instructivism
- Interaction & Interaction Theory (Moore)
- Social Constructivism (Vygotsky)
- Problem-Based Learning (Johnasson)



Aspects of Social Learning

- Externally-Based Definitions
 - Learning objectives, Body of Knowledge
- Externally-Based Processes
 - Learning activities, Processes and conversations
 - Interaction and communication
- External Systems
 - Classes, networks, groups, collaboration
- External Evaluation

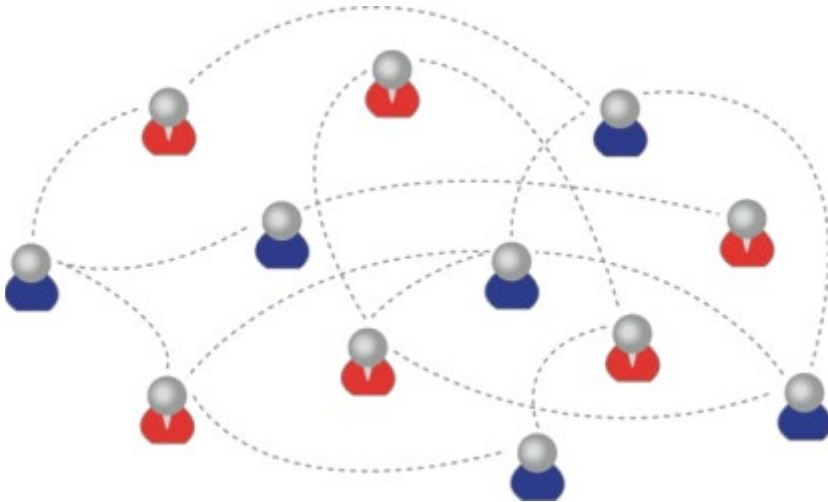
If Knowledge is Growth, Then...

Social knowledge is *not* personal knowledge

- Personal Knowledge management = Learning
- Social Knowledge Management = Research

The product of the educational system is not a *social* outcome (knowledge, skill, problem, community) but a *personal* outcome

Personal Knowledge



We are using one of these

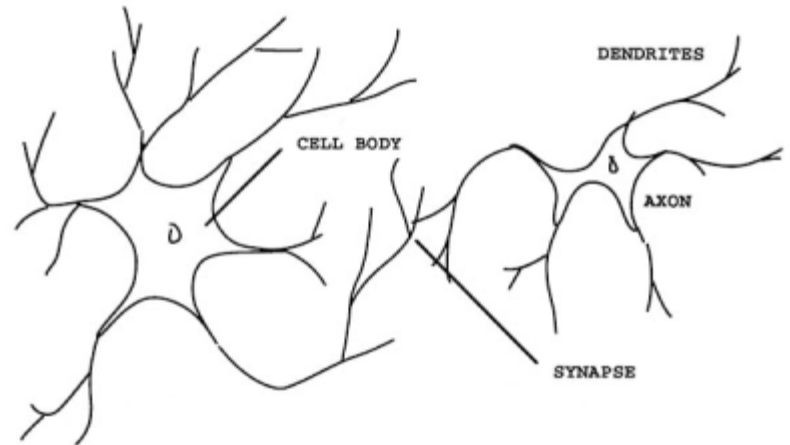


Figure 1. Biological Neuron

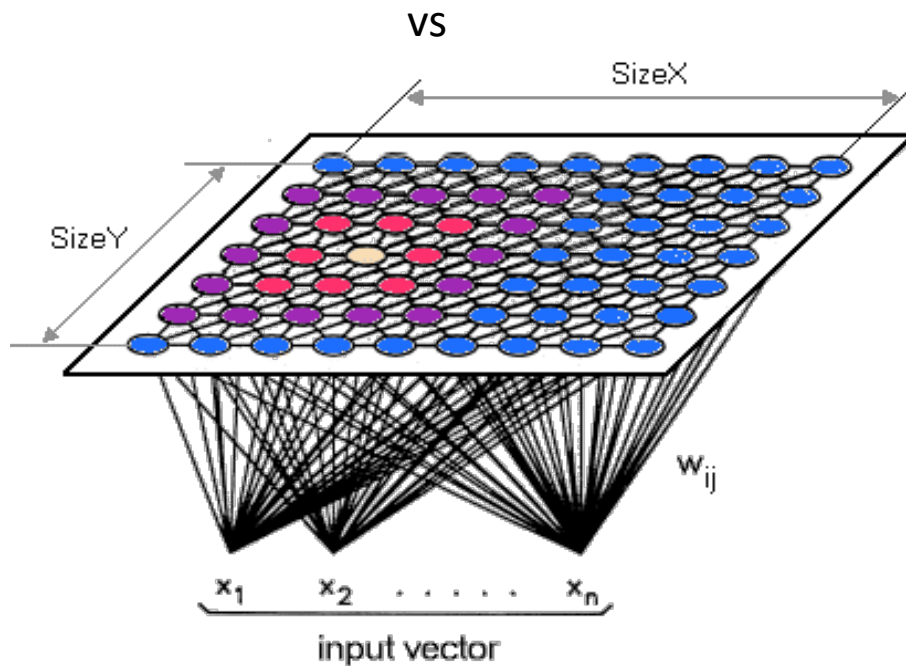
To create one of these

Personal knowledge consists of *neural* connections, not social connections

Learning Outcomes

Simple vs complex – text vs network

“Paris is the capital of France”



Learning Outcomes (2)

It's the difference between:

- 'Knowing' that 'Paris is the capital of France' or even some sort of 'knowing how' (these are *external* definitions of this knowledge) and
- What it *feels like* to have geographical knowledge; what it *feels like* to be a speaker of a language

Learning a discipline is a *total state* and not a collection of specific states

Learning Outcomes (3)

- Learning a discipline is a *total state* and not a collection of specific states
- It is obtained through *immersion* in an environment rather than acquisition of particular entities
- It is expressed functionally (can you perform 'as a geographer'?) rather than cognitively (can you state 'geography facts' or do 'geography tasks'?)

Learning Outcomes (4)

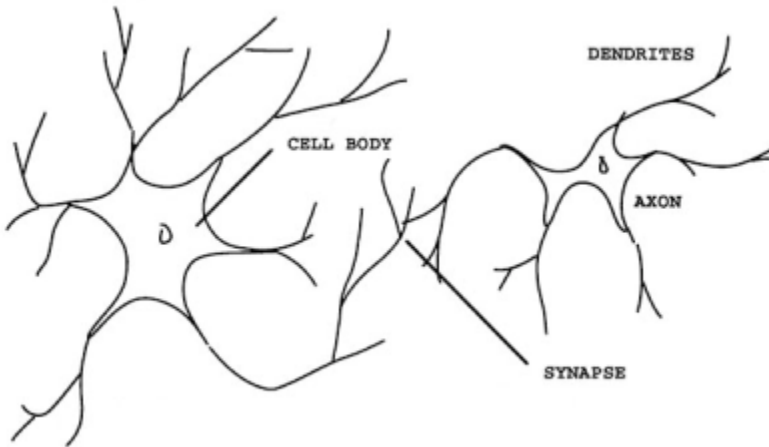
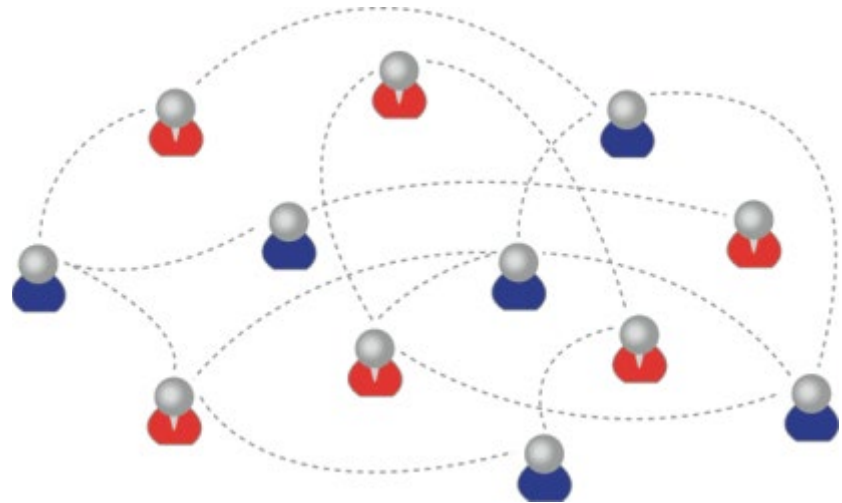


Figure 1. Biological Neuron

We recognize this



By performance in this

There are not specific bits of knowledge or competencies, but rather, personal capacities
(more on this later)

Success Factors

- What sort of decentralized network will best support learning-as-growth?



Diversity

- You need a mixture of materials – you cannot grow organically from carbon alone, or water alone



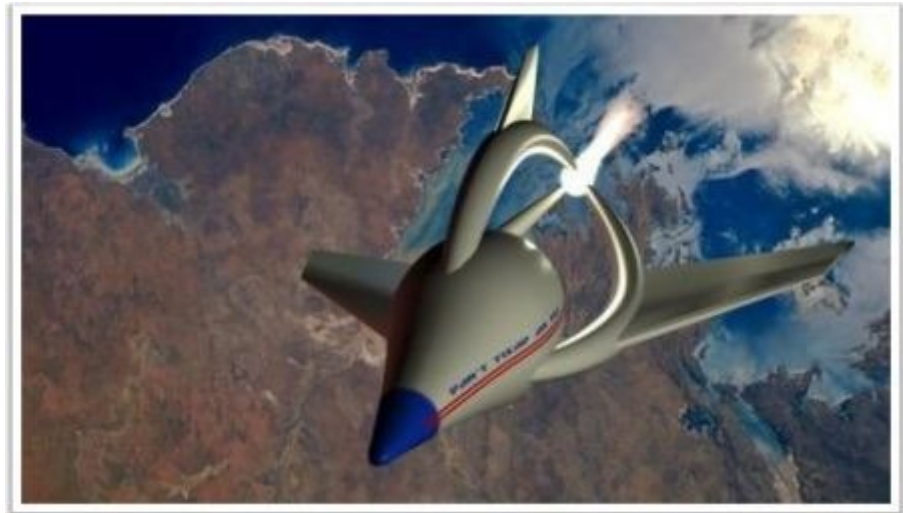
Openness

- Closed systems become stagnant
- Raw materials are depleted
- The system becomes clogged with the 'creative product' of its members



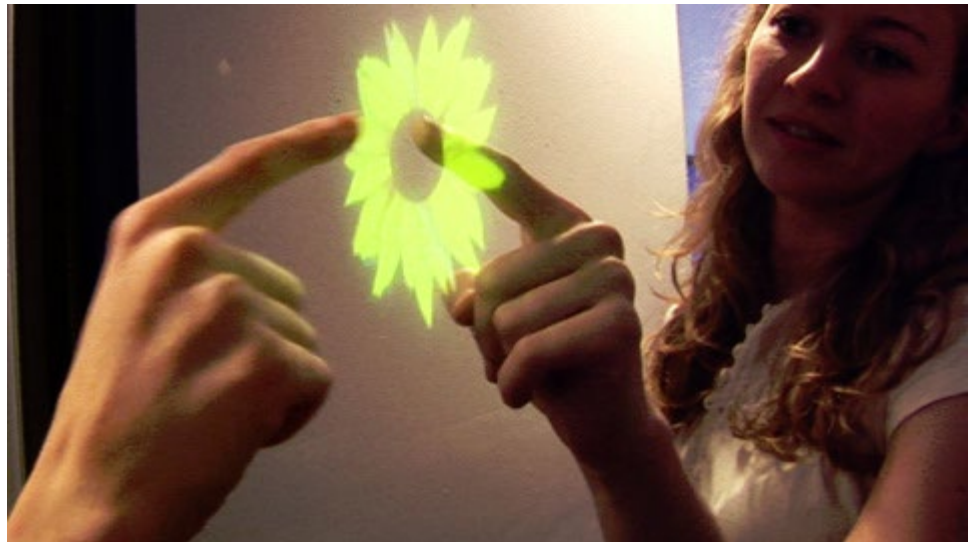
Autonomy

- The simple cloning of entities does not allow for progress or development
- Each individual entity must manage its own growth in its own way



Interactivity

- A system cannot grow unless its parts interact – flowers need bees, cows need grain, beavers need trees
- Growth is created not by accumulation but by *flow*, by constant activation and interaction



Stephen Downes



<http://www.downes.ca>