It ain't what you do it's the way that you do it

Jon Dron, October 2011

a learning technology?

Is this a learning technology? (ANSWER: yes, it can be – depends how you use it)

technology

"the orchestration of phenomena for some use"

(W. Brian Arthur)

Arthur, W. B. (2009). *The Nature of Technology: what it is and how it evolves*. New York, USA: Free Press.

in other words, we make use of the way things are, putting them together in order to do something. Note that those things can themselves be technologies – almost all if not all technologies are assemblies of other technologies (ie they are constituted in relation to each other, there is no such thing as a fundamental part)

(from Arthur, W. B. (2009). *The Nature of Technology: what it is and how it evolves*. New York, USA: Free Press.

What is *a* pedagogy?

A way of doing things

A learning design

Methods and procedures

should be clear by now – not just how tools are used, but actually technologies themselves
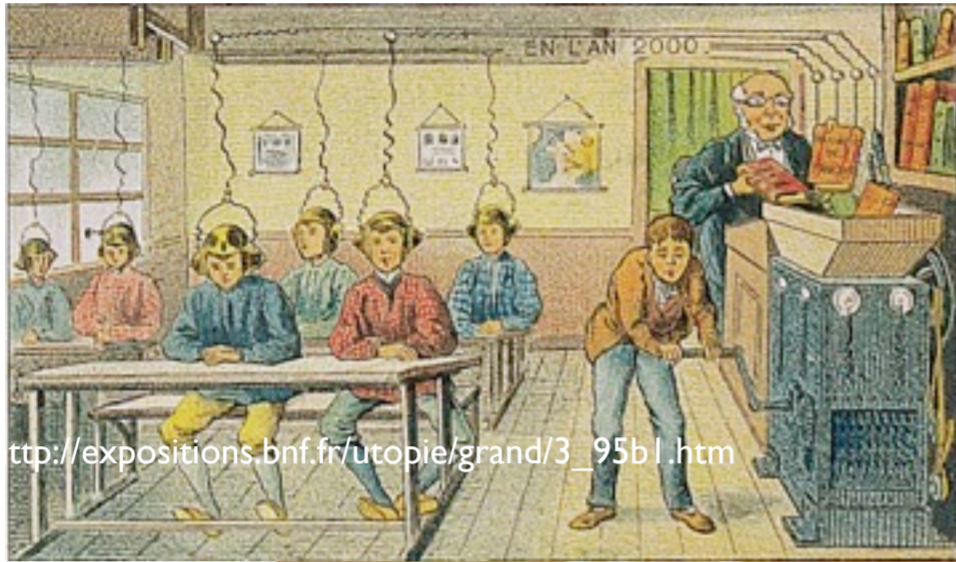
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Technology-enhanced learning...

http://expositions.bnf.fr/utopie/grand/3_95b1.htm

http://commons.wikimedia.org/wiki/
File:Gloeden,_Wilhelm_von,_n._0027,_Socrate_alla_fonte.jpg

http://4.bp.blogspot.com/_sGYULzoQCgA/
SA6HEWNCB5I/AAAAAAAABeA/FTkqbqDd9do/
s1600-h/1964-worlds-fair-schoolmarm.jpg

http://upload.wikimedia.org/wikipedia/commons/1/1e/
Torvisen_kansakoulu_1924-26.jpg

as long as it uses repeatable and intentional method, it is using technology

The problem of mismatched technologies

http://www.flickr.com/photos/nationaalarchief/2948560477/sizes/o/

things go wrong when we don't make things work together well – when we, for instance, try to fit incompatible patterns of pedagogies together. e.g. marking of participation in forums (you are marking a process, not a product, and making people say things even if they have nothing valuable to say, and people get better as they go) – mapping instructivist and constructivist methods.

e.g. of incompatibility – discussion forum with instructivist methods

Pedagogies are flexible

some electronic technologies are not (so much)

so- easier to change pedagogy than tech? depends on the tech. holistic vs prescriptive techs (Ursula Franklin). e.g. email v flexible, LMS not .
Trouble is, LMS is made to make things easier by reducing choices - including of pedagogies

Origins of the LMS

http://commons.wikimedia.org/wiki/File:AHW_Prof_Moritz_Vogel_Matthaeikirche_Leipzig_um_1920.jpg

Structure and behaviour
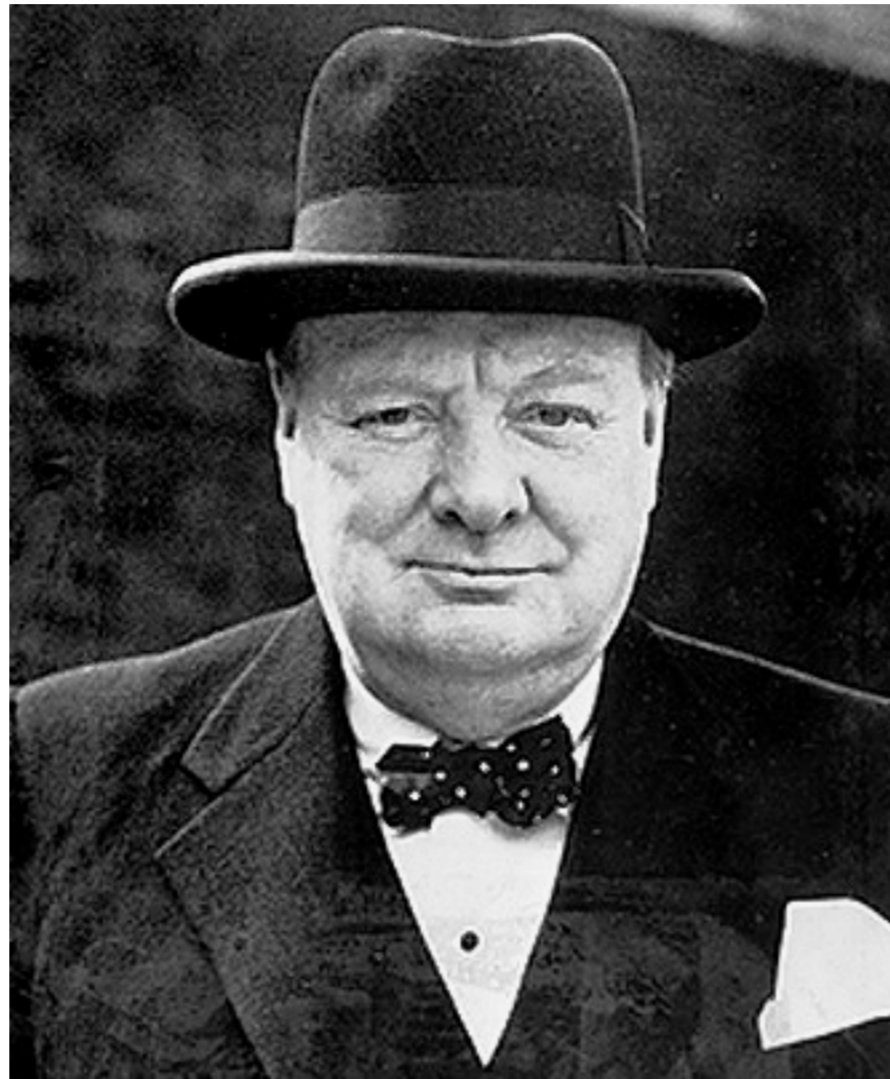
"We shape our dwellings and afterwards our dwellings shape our lives"

Churchill, W. (1943). *HC Deb 28 October 1943 c403.*

Structure and behaviour

10

pedagogy implied by tool – teacher in control
actually maybe not even teacher – 99.17% didn't change defaults on nearly 7000 courses in Blackboard, frinstance. Dron, J. (2006). *Any color you like, as long as it's Blackboard®.* Paper presented at the E-Learn 2006, Hawaii.

interesting point: LMS assembly of not only electronic tools but educational system process and pedagogies (e.g. timetables, exam systems, courses, teacher feedback systems etc)
So – taken a soft technology and turned it into a hard one, and now the hard one has become prescriptive.
mention Dai's concerns about lockin and silos

Generations of distance learning technology

Hard — **Soft**

I	individual	Instructivist	postal service, telephone, books, TV, radio, audio recordings
II	Group	Social-constructivist	forums, newsgroups, email, conferencing, LMS, VLE
III	Net	Connectivist	blogs, wikis, RSS, Twitter, link sharing
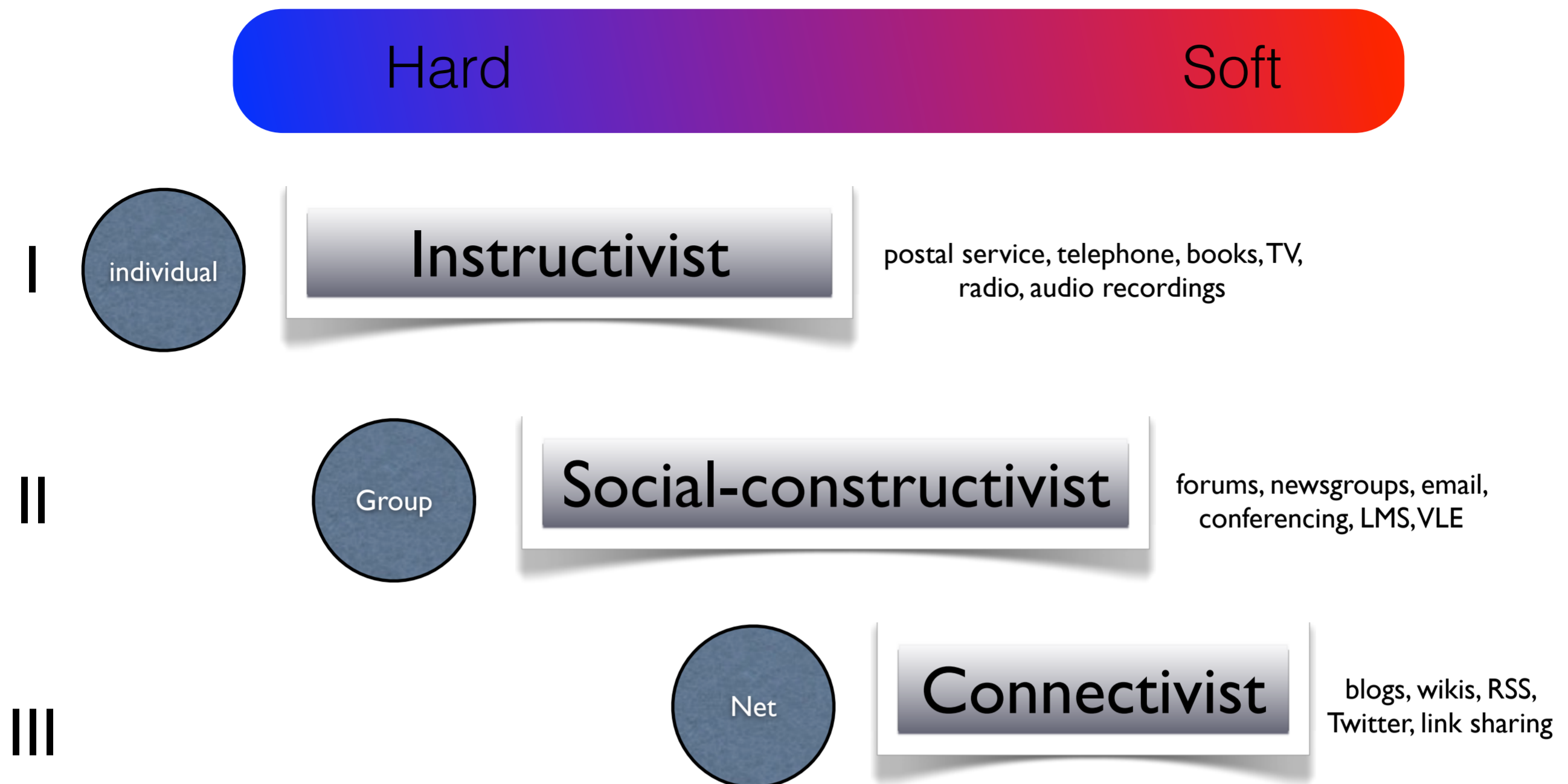
Anderson, T., & Dron, J. (2011). Three Generations of Distance Education Pedagogy. *International Review of Research in Open and Distance Learning, 12*(3).

Monday, 24 October 2011

See Anderson & Dron 3 generations of distance education technology
Instructivist: pedagogy etc entirely embedded – very hard
Consturctivist: process still instructor determined, but greater flexibility and adaptability
connectivist: very soft and flexible – process invented as we go along, technologies assembled (which makes them soft)
moving to a model that is controllable according to contextual, individual and social needs
soft– orchestration by people
hard – orchestration built into process/machine
no such thing as pure hard or soft (probably)
all technologies are assemblies – depending on perspecitve and scale, they can seem harder or softer.
all depends on your point of view – to a programmer a computer is soft, to a sales clerk using a cash register, it might seem quite hard. Ditto for a teacher an LMS may appear moderately soft, but hard to a student required to use one (but it is softest of all to the developer).

Hard is easy

hard technologies have their processes embedded - may be laws or rules or part of the software or hardware -
notably, LMSs embed implicit pedagogies

in hard technologies, the orchestration is a part of the technology.

hard technologies tell us what to do - they reduce choices. So, they make things easy. and reliable, fast, free from error

Soft is hard

by which I mean soft technologies are more difficult (and unreliable, slow)

the orchestration in soft technologies is done (or doable) by people

We have to invent social technologies and to literally be a part of them

Softer technologies increase the adjacent possible by enabling and/or making more likely new choices to be made. They enable creativity

More choices come at a price - we have to make them. That is one thing that makes them difficult or hard.

A sense of scale

cognitivist/
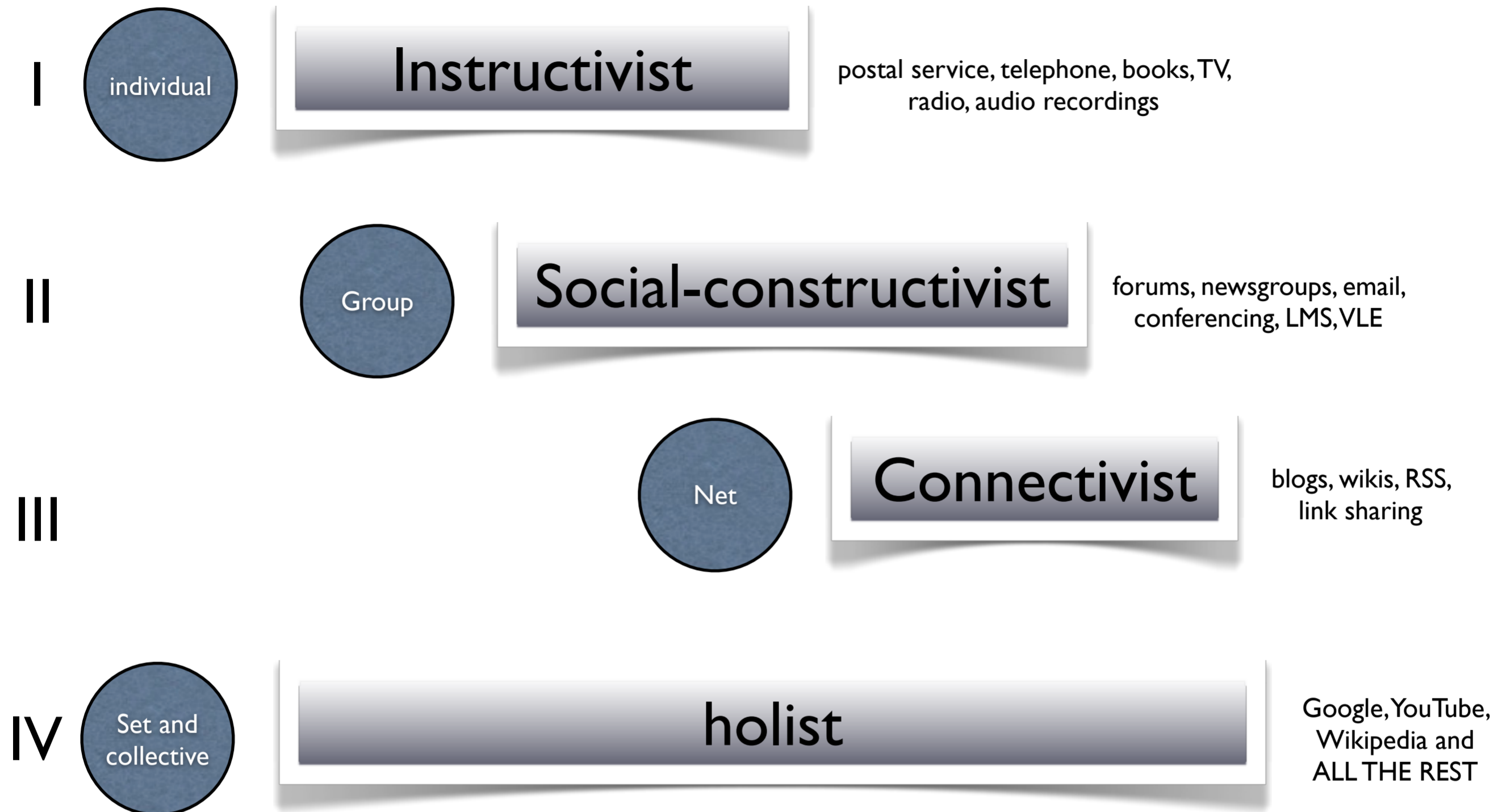behaviourist
social
constructivist
connectivist

most effective methods so far involve a blend of techniques – still need the stuff from which to learn, still need to form groups to learn with

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II   (Group)   Social-constructivist   forums, newsgroups, email, conferencing, LMS, VLE

III   (Net)   Connectivist   blogs, wikis, RSS, link sharing

IV   (Set and collective)   holist   Google, YouTube, Wikipedia and ALL THE REST

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Instructivist: pedagogy etc entirely embedded – very hard
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moving to a model that is controllable according to contextual, individual and social needs, making use of sets and collective intelligence – GOOGLE AND WIKIPEDIA MOST SUCCESSFUL ADVANCED LEARNING TECHNOLOGIES IN THE WORLD (maybe after language, writing....)

The most widely used computer-based learning technologies in the world?

both examples of collective intelligence – combination of intelligent decisions of many people
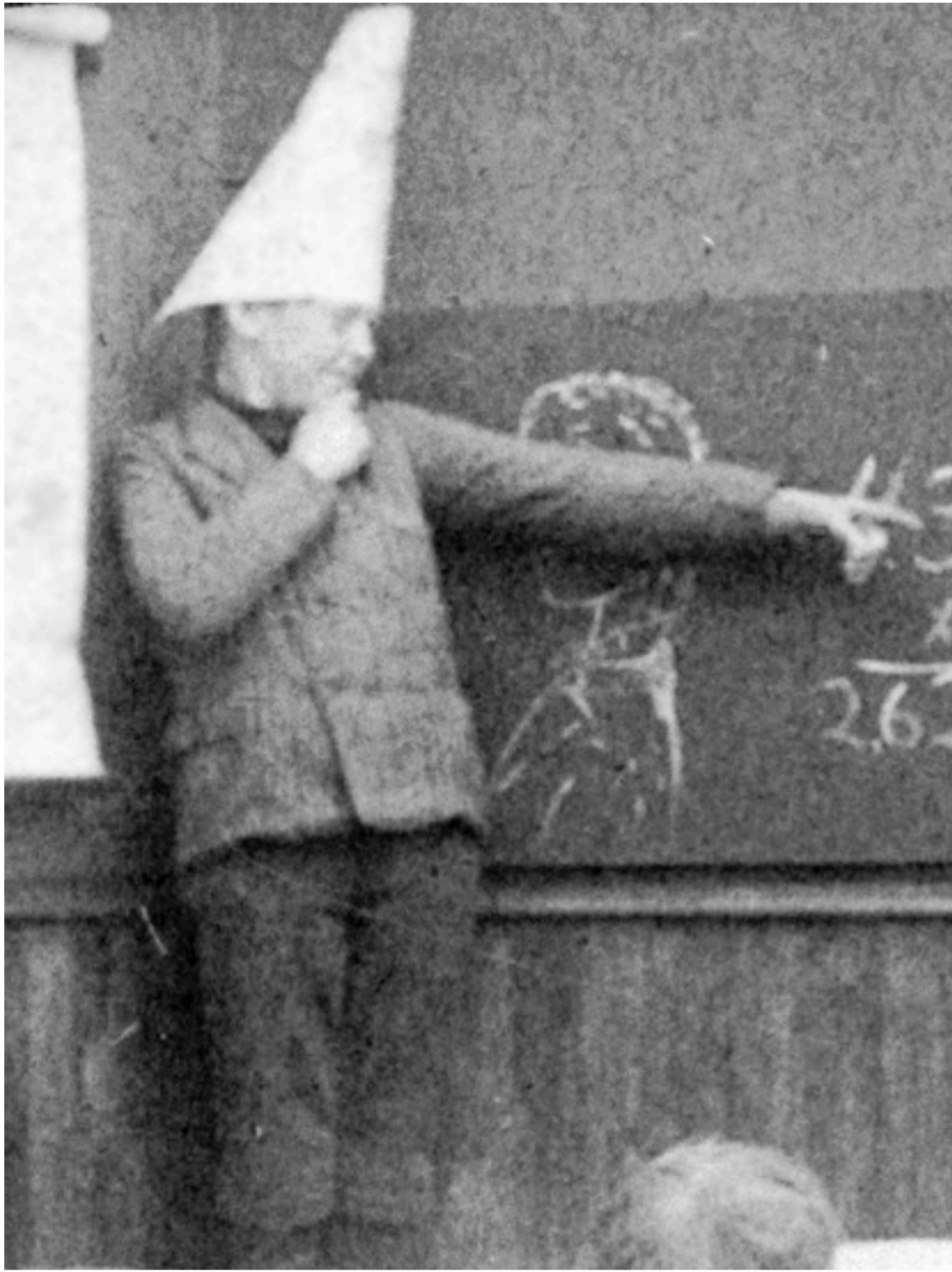
three stupid errors educators make

http://commons.wikimedia.org/wiki/File:Dunce_cap_from_LOC_3c04163u.png

actually, they are all variations on one simple but pervasive error: failure to understand that pedagogies are actually technologies and that you thus have to look at the entire technology assembly in order to understand or use them.

error 1: pedagogy first

note – including pedagogy

The dance of technology

ref Terry Anderson. *Anderson, T. (2009, 7-10 June). The dance of technology and pedagogy in self-paced distance education.* Paper presented at the M-2009 conference, Maastricht, Netherlands.
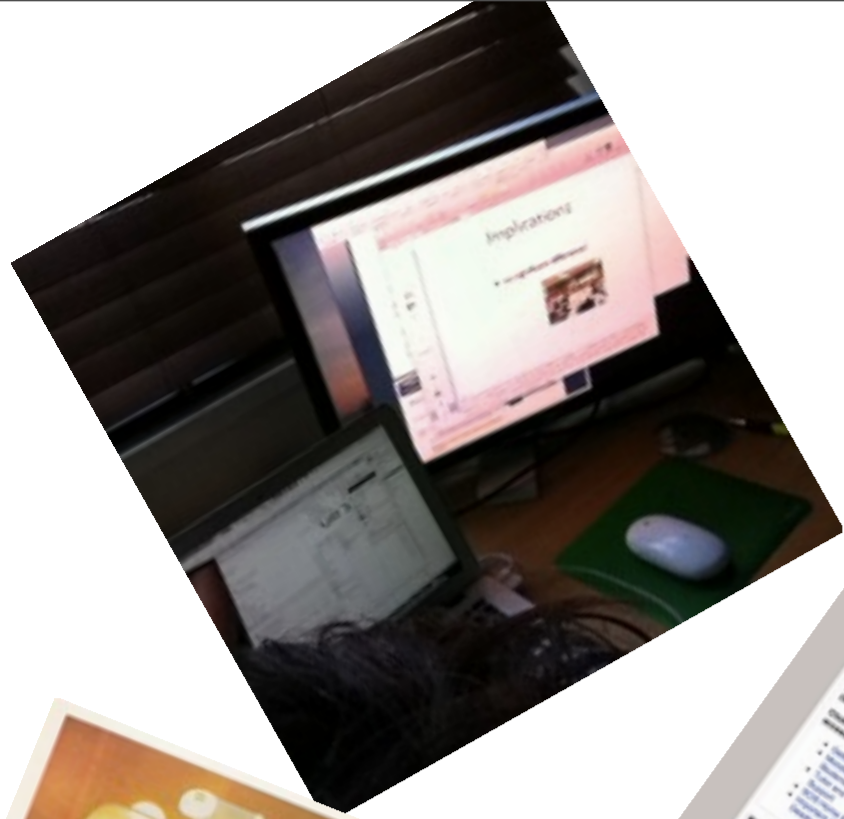
actually a process of coevolution
it is not a question of whether technology comes first or pedagogy comes first - they have to work together

all technologies are assemblies, but some technologies like to lead the dance

error 2: no significant difference

this is a stupid question to ask – as should be obvious by now!

no significant difference?

http://www.flickr.com/photos/library_of_congress/163782226/sizes/o/in/photostream/

http://4.bp.blogspot.com/_sGYUL_EWNCB5I/AAAAAAAABeA/1964-worlds-fair-s

http://upload.wikimedia.org/wikipedia/commons/6/6e/Mennonite_Classroom_Pennsylvania_1942.jpg

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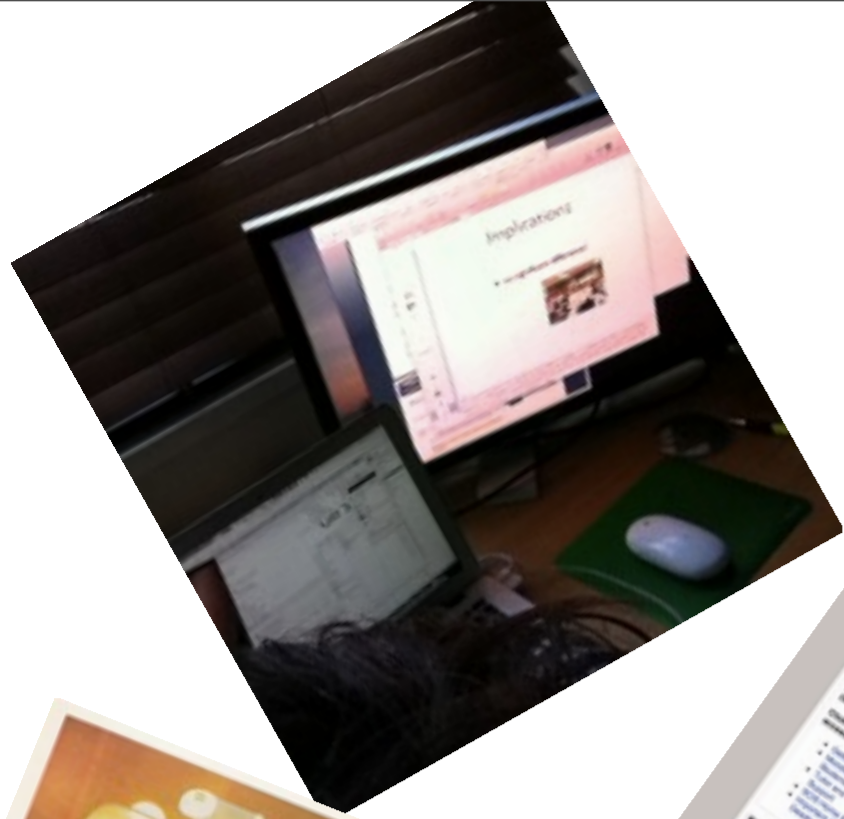
http://www.flickr.com/photos/cornelluniversitylibrary/3855473015/in/set-72157622140446726/

http://commons.wikimedia.org/wiki/File:AHW_Prof_Moritz

Vast majority of metastudies say there is no difference or e-learning a bit better (but not surprising because people tend to report the successes).
It's not surprising there's no sig diff because individual bits of technology don't matter – it's about how tech is assembled. if we think of pedagogy as something separate we ask the wrong questions. actually it mainly depends on a) how it is assembled and b) the passion of the teacher (and other things like relevance, motivation, social support....etc)

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error 3: pedagogy matters most

or for that matter any technology – remember, pedagogies are technologies.

Good people do bad things

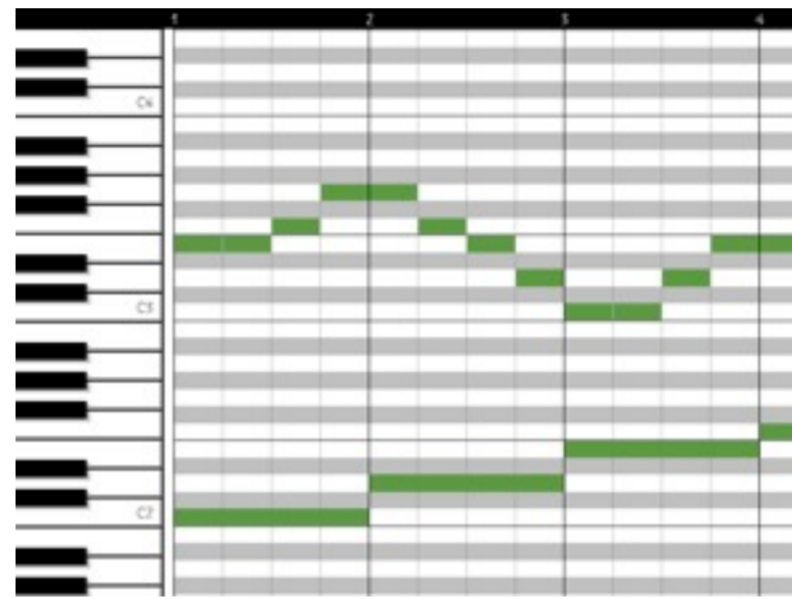http://commons.wikimedia.org/wiki/File:Satan_Exulting_over_Eve.jpg

bad pedagogies don't matter if teacher has passion, for subject and learners – describe UoB NTFS teacher with terrible pedagogies

It ain't what you do...

http://www.blues.ru/bluesmen/WC_Handy/

http://upload.wikimedia.org/wikipedia/commons/b/bb/Computer_music_piano_roll.png

limited technique   perfect technique

bad people do good things. e,.g. musical technique – might be perfect but music lacks soul (though better than bad technique and no soul – can be quite competent without talent). on the other hand, great music with 3 chords and a broken guitar.
GOOD teachers can use pretty bad tools (including pedagogies) and do well
BAD teachers can improve with good tools but good tools can be used badly

...it's the way that you do it

If you don't live it, it won't come out of your horn
(Charlie Parker)

thank you
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