

University of Massachusetts at Boston

Critical and Creative Thinking graduate program

College of Advancing & Professional Studies

Design for Living Complexities (Seminar in Critical Thinking)

CrCrTh 611

Syllabus, Summer 2014

I. Quick access to key information and links that should be bookmarked on your browser

followed by

II. [Information to get started](#), orient yourself, and refer back to from time to time.

III. [Contract](#): What is expected overall.

IV. [Schedule of classes](#): What is expected each session and why -- how each session contributes to the unfolding of the course (starting with list of links to specific sessions).

POST-IT the start of each component in your [printed version](#) of this syllabus

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Class time & location	4-7pm, W-2-157 (Online students join all course sessions by google+ hangout, with URL listed on Private google+ community below)
Report glitches in online materials	using this form
BOOKMARK THIS! Syllabus	crcrth611sui.wikispaces.umb.edu , with a menu of useful links at the top right
BOOKMARK THIS! Private google+ community	https://plus.google.com/communities/115356330015478934396

II. Information to get started, orient yourself, and refer back to from time to time

Design is about intentionality in construction, which involves a range of materials, a sequence of steps, and principles that inform the choice of material and the steps. Design always involves putting people as well as

materials into place, which may happen by working with the known properties of the people and materials, trying out new arrangements, or working around their constraints (at least temporarily).

Critical thinking involves understanding ideas and practices better when we examine them in relation to alternatives. In a sense, critical thinking is in design from the start, because design cannot proceed without the idea that there are alternatives to the current way of doing things. This course exposes and explores alternative designs through history (showing that things have by no means always been the way they are now), "archeology of the present" (shedding light on what we might have taken for granted or left as someone else's responsibility/specialty), comparison (looking at the ways things are arranged in different organizations and cultures), and ill-defined problems (in cases of real-world "living complexity" that invite a range of responses).

Each course session takes up an issue about design, introduced in a presentation (drawing on videos and other materials available online), followed by in-class work on a case related to that issue and, at the start of the next session, reports on students' design sketches to address the case. With each design sketch, students add to or revise a growing set of principles for critical thinking in design. The design sketches and principles will, with students' permission, be made accessible to a wider online audience and serve as part of an evolving online text for subsequent years.

PREREQUISITES and preparation assumed for this course

Graduate standing or permission of instructor. In lieu of other formal prerequisites, your previous studies should have prepared you a. to formulate and pursue library research and internet exploration and b. to write, seek feedback, and revise in systematic and efficient ways with minimal supervision (see [research and study competencies](#)). You should be prepared to make time outside class--at least 75-80 hours during the course--for undistracted work on the course and to view each assignment and each session in relation to the unfolding of learning during the course. (That is, do not expect the syllabus and online links to allow you to cut to the chase about what to do for the following day's class.)

Texts and Materials

Reading to warm up for the course:

Huler, S. (2010). *On the Grid: A Plot of Land, An Average Neighborhood, and the Systems that Make Our World Work*. Emmaus, PA: Rodale Books.

Ulrich, K. T. (2010). *Design: Creation of Artifacts in Society*. Philadelphia: University of Pennsylvania. Available for free from

<http://opim.wharton.upenn.edu/~ulrich/designbook.html>

Readings are given in the session-by-session description. Access to readings that are not open access will require registered students to login to this wiki or to ebrary via the UMB library.

Source for many of the course tools & processes: Taylor, P. and J. Szteiter (2012) [Taking Yourself Seriously: Processes of Research and Engagement](#), Arlington, MA: The Pumping Station (Available in hard copy from online retailers or as pdf from <http://thepumpingstation.org>)

Online links may duplicate pages in this text, but, if you buy the printed or pdf text, you can refer to that instead of reading the pages online and you have a reference work to consult after the course.

TECHNICAL SET UP

Make bookmarks on your browser to quick access links (see sect. I of syllabus); Set up access to online bibliographic databases; Arrange bibliographic software for references; Sign up for google+ and join google+ communities.

For students from a distance: Install plugins for hangouts; Establish high bandwidth internet access; Procure reliable headset; Practice screensharing of document on hangouts (see [tips](#)).

WRITING SUPPORT: For graduate students, see <http://cct.wikispaces.umb.edu/writingsupport>.

ACCOMMODATIONS: Sections 504 and the Americans with Disabilities Act of 1990 offer guidelines for curriculum modifications and adaptations for students with documented disabilities. The student must present any adaptation recommendations to the professors within a reasonable period, preferably by the end of the Drop/Add period.

CODE OF CONDUCT: The University's Student Code of Conduct (http://www.umb.edu/life_on_campus/policies/code) exists to maintain and protect an environment conducive to learning. It sets clear standards of respect for members of the University community and their property, as well as laying out the procedures for addressing unacceptable conduct. Students can expect faculty members and the Office of the Dean of Students to look after the welfare of the University community and, at the same time, to take an educational approach in which students violating the Code might learn from their mistakes and understand how their behavior affects others.

Students are advised to retain a copy of this syllabus in personal files for use when applying for certification, licensure, or transfer credit.

This syllabus is subject to change, but workload expectations will not be increased after the semester starts. (Version 11 July '14)

III. Contract: What is expected overall

- The course revolves around written design sketches and presentations as well as participation items. These items include active participation during class based on preparation between classes, peer commentary on drafts, and more. Expectations and due dates are given on the assignment [checklist](#).
- You should aim to complete at least 10 of the 13 written assignments and presentations (preferably, 9 sketches posted and presented on the due day and revised in response to comments + Plan for continuing exploration + Process Review) as well as 28 of 35 participation items fulfilled.
- The written assignments are commented on, but not graded. Not grading keeps the focus on interaction around written work. You are expected to read comments carefully, consult with the peer commenter or instructor if you don't understand a comment they made, revise thoughtfully in response to the comments, and resubmit.
- It is expected that you will spend at least 6.5 hours per session outside class time reading, researching, and writing. The course works by building from topic to the next so late submissions detract significantly from the learning possible in class sessions. However, each student can ask for extensions on two assignments or participation items, moving the due date as far back as the last session. (No explanation is needed; simply record the extension on your assignment checklist.)
- Use your assignment checklist (copied from [Checklist](#)) to keep a log of assignments and participation items completed and to keep track of due dates. Do not expect class-time or meetings with the instructor to be taken up reminding you.

- Allowing a fraction of assignments to be skipped without penalty or explanation accommodates the contingencies of your lives. If you reach the target of 10 writing/presentation assignments and 28 participation items—and the goal is to work with everyone to achieve that—you get at least a B+ and a [rubric](#) is used to determine B+, A- or A. (This unusual but simple system is designed to keep the attention off grades and on teaching/learning interactions.) The instructor gets the final say on assessment using the rubric, but students are encouraged to supply their own self-assessment.
- Overall points are converted to letter grades as follows: The minimum grade for A is 95 points, for A- is 87.5, for B+ is 80, for B is 72.5; for B- is 65; for C+ is 57.5; and for C is 50 points.

Written work and presentations (2/3 of grade)

edit

Post each to the g+ private community. Feel free to upload any assignment to google drive as a pdf or on your personal blog, then, in the post, provide a link to that.

For each session after session 1:

- Design sketch for the case introduced and workshopped in the previous session. Sketch presented during the first part of the session and posted to the private g+ community before the session. The design sketch should a) be 3+ pages, b) explicitly address critical thinking (using, say, at least one of the approaches to critical thinking in the course description), and c) result in additions or revisions to a growing set of principles for critical thinking in design (11 x 3 points [=2 for posted & presented on time; 1 for content & length]). (Suggestions welcome for additions or substitutions to the readings and videos used in the course.)

Begin your post with #x, where x is the sketch number, followed by the title of your sketch and a one-paragraph overview of what follows.

By 2 weeks after the last class meeting, but *preferably earlier and not all in one bunch*:

- Thoughtful revision of the 11 design sketches in response to comments from instructor and from peers (11 x 2).

By 2 weeks after the last class meeting:

- Plan for continuing exploration of design for living complexities (primed by a [list of angles not covered](#) in the course) (5).

(1000-2000 words) demonstrating how and when you plan to explore, perhaps in your work situation or community, the principles for critical thinking about design developed during the course and the angles not covered so as to continue to supplement or revise those principles.

- Process review (5).

Identify four to six examples or exhibits that capture the process of development of your work and your thinking about the subject of the course. The examples chosen need not be your best work—you might drafts of submissions and then show how you revised in response to comments, comments you made on other students' drafts, and so on. Review your process and explain your choices in a 250-500 word essay followed by annotations that include links to each individual example or exhibit.

Participation (1/3 grade)

- Attendance and participation (12 sessions = 12 items)
- Coming prepared for sessions, having done the readings (12 items)
- Comments on other students' proposals (within 3 days of posting; 6 times = 6 items)

To indicate that you will be commenting on a draft, insert your name in the comment box following the post, then edit the box to add your comments within 3 days. (Don't comment on

a draft if someone else already is unless there are no others to comment on.)

- Filled-in checklist, indicating which proposals can be made accessible to a wider online audience (1 item),
- scanned and submitted to instructor by email at time of final submissions (1 item).
- Narrative course evaluation completed and code submitted to cct@umb.edu (before time of final submissions) (3 items)

Rubric

edit

Assess yourself on each of the following 12 qualities, * [= "fulfilled very well", 2 points], OK [= "did an OK job, but room for more development/attention", 1 point], or - [= "to be honest, this was not my strength in this course", 0 points]

- A sequence of assignments paced more or less as in syllabus (and revisions on time),
 - often revised thoroughly and with new thinking in response to comments.
- Sketches innovative,
 - well planned and carried out with considerable initiative.
- Sketch presentations clear and well structured, with
 - reports with supporting references and detail, and professionally presented.
- Digging deep on the approaches to critical thinking in the course description, and
 - contributing additions or revisions to a growing set of principles for critical thinking in design.
- Active, prepared participation to build class, especially workshop periods, as learning community,
 - including conscientious peer commentary on other student's assignments.
- Process review that shows deep reflection on your development through the semester and
 - plan for exploration maps out the future directions in which you plan to develop.

IV. Schedule of classes: What is expected each session and why -- how each session contributes to the unfolding of the course

Session-by-session links: [1\(M14\)](#), [2\(Tu15\)](#), [3\(W16\)](#), [4\(Th17\)](#), [5\(M21\)](#), [6\(Tu22\)](#), [7\(W23\)](#), [8\(Th24\)](#), [9\(M28\)](#), [10\(Tu29\)](#), [11\(W30\)](#), [12\(Th31\)](#)

Schedule of Sessions, with readings and cases

Reading, before course starts, to warm up:

edit

Huler, S. (2010). *On the Grid: A Plot of Land, An Average Neighborhood, and the Systems that Make Our World Work*. Emmaus, PA: Rodale Books. ([concluding chapter](#))

Ulrich, K. T. (2010). *Design: Creation of Artifacts in Society*. Philadelphia: University of Pennsylvania. Available for free from <http://opim.wharton.upenn.edu/~ulrich/designbook.html>

Reading for session 1: see below

Preparation:

Procure twenty sticks of (uncooked) spaghetti, one yard of masking tape, one yard of string and one marshmallow.

Note: Up to the break is not streamed, but CE & MOOC participants are welcome to explore Marshmallow

challenge on their own and post on the public g+ community what they learn

Ice-breaker: [Marshmallow challenge](#) followed by discussion of the design principles involved.

[Freewrite](#) on personal interests in design, critical thinking, and living complexities.

Overview of course requirements for registered students

BREAK

Overview of course rationale and rhythm

1: Waste

Design principle: Byproducts are products

[Crampton](#), N. J. (1999). "Introduction & How to Think about Waste Prevention". Pp. vii-14 in Preventing Waste at the Source, Boca Raton, FL: CRC Press

[Laschke](#), M., M. Hassenzahl, et al. "Things with attitude: Transformational Products."

Presentation (with narration given live and on the recorded version)

Note: For this and several other sessions, there are copyrighted videos (marked ©) to view on your own-- they won't appear in the streamed and recorded presentation. To prepare for this, keep a tab open to the wikipage for the session. When the break for such a video occurs, go that tab, click on the video link and view it on the tab that will open. Close the tab video when you are done, then return to the streamed presentation.

Four laws of ecology popularized by Barry Commoner recast as four design principles:

- 1) Everything is connected to everything else ([snowgeese example](#)).
- 2) Everything must go somewhere.
- 3) Nature knows best.
- 4) There is no such thing as a free lunch.

Commoner's Principle 2

- http://en.wikipedia.org/wiki/Great_Pacific_garbage_patch ©
- [Sewers of Paris](#) ©

Freewrite on identifying critical thinking principles for design, especially in relation to waste, then sharing and brief discussion

Commoner's Principles 1 & 2 leading into design principle of byproducts are products

- [the Engine and the atmosphere are part of the one system](#)

Unexpected by-products

Music

- [Sounds from telegraph wires](#)
- [Cellist & harmonic singing](#)
- [Percussive guitar](#)

Drugs

- [Viagra](#)
- [Thalidomide](#)

Other by-products: useable; expected?

- ["Weeds"](#)
- [Recycling increase versus increase in amount of packaging](#)

Discard Studies

- [Discard Studies](#)

Further freewriting on investigating or inquiring towards exposing more critical thinking principles for design, especially in relation to waste, then sharing and discussion

BREAK

Note: After the break is not streamed, but CE & MOOC participants are welcome to explore the case and report to the public g+ community. CE participants can share on the private g+ community for the CEs.

Workshop on case related to Waste—byproducts are products

"How to respond to ways of subverting an ideal scheme of emissions tax and tariffs"

Broad Steps: Read & understand ideal system, imagine ways it is or could be or should be subverted, design a response to counter that subversion.

Ideal scheme = <http://wp.me/pPWGi-vR>

Subversion might include counter-arguments, schemes based on different principles, ignoring it, adopting it in name but not spirit, un/anticipated by-products, media misrepresentation (as evident in Discard Studies account of Occupy)

Response = *that's what you have to design!*

(Remember, with each design sketch, you add to or revise a growing set of principles for critical thinking in design.)

Tools to help: Freewriting to collect your ideas, [Pair-share](#) to clarify and stimulate your thinking, [Ten questions](#) to tease out an angle of inquiry

The design sketch should a) be 3+ pages, b) explicitly dig deep on at least one of the approaches to critical thinking in the course description, and c) result in additions or revisions to a growing set of principles for critical thinking in design.

Post each to the g+ private community. Feel free to upload any assignment to google drive as a pdf or on your personal blog, then, in the post, provide a link to that.

Begin your post with #x, where x is the sketch number, followed by the title of your sketch and a one-paragraph overview of what follows.

Note: Up to the break is not streamed, but CE & MOOC participants are welcome to post design

edit

sketches on the public g+ community what they learn [not repeated in the syllabus from here on]

Reports (starting each session)

Initial design sketches from the case of the previous session, with Q&A and [Plus-Delta feedback](#) using [this form](#)

[not repeated in the syllabus from here on]

BREAK

2: Play

A yin and yang of design is intentional planning and play, to the extent that play involves ongoing experimenting and adjustment in putting people as well as materials into place.

Reading:

Paley, V. (1993). [You Can't Say You Can't Play](#). Cambridge, MA: Harvard University Press.

([commentaries](#))

or

[Paley](#) , V. (1997). [The Girl with the Brown Crayon](#). Cambridge, MA: Harvard University Press.

Presentation

- [Ray & Charles Eames](#) © (see also [products & perspectives](#))
- MIT Media Lab's Lifelong Kindergarten: [Computer Clubhouse](#)
- Vivian Paley: [Paley on teacher's role in play](#) , moral lesson on Paley's "You Can't Say You Can't Play," and the [image of creativity-in-context](#) from The Girl with the Brown Crayon.

[Freewrite](#) on identifying more critical thinking principles for design, especially in relation to play, then sharing and discussion

BREAK

Case on extending Play

On average, children play less outdoors even though streets are safer. Moreover, play declines during adolescence into adulthood. So design a program to shift the norms, practices, misperceptions, or environments EITHER back towards more play outdoors and unsupervised play, or towards related alternatives OR to extend play to older ages OR both.

Suggested preparatory steps:

1. To warm up your thinking, identify models provided by 4H, Scouting, MADD, Little League sports, [Louv & Leave no Child Inside](#) (also [video](#)), [OpEd on delinquency](#) , [National Institute for Play](#) , [Institute of Play](#) , [Kymerica](#) , [Computer clubhouses](#) , etc. Then [freewrite](#) about what interests or intrigues you.
2. Once you have a focus, direction, or tentative idea, develop that focus by bouncing it off someone else and exploring the internet for any efforts along similar lines.

edit

3: Gathering into community

Putting people into place—as designers, users, co-designer-user—may happen by working with

what you know about people, facilitating new arrangements, or working around their constraints.

Readings:

Fleischman, P. (1999). Seedfolks. New York: HarperCollins. ([abridged version](#) , [ebook](#))

[Rusk, N.](#) , M. Resnick, et al. (2009). "Origins and Guiding Principles of the Computer Clubhouse" In The Computer Clubhouse: Constructionism and Creativity in Youth Communities, Y. Kafai, K. Peppler and R. Chapman (Eds.) New York: Teachers College Press.

Presentation

- [Scratch](#) :Imagine, Program, Share -- "A creative learning community with more than 3 million projects shared"

From [Learning Creative Learning](#) course:

Find out about and visit a creative learning space in your local area.

By "creative learning space," we're thinking of a place in which people are creating projects --and learning from each other as part of the process.

Here are some questions you may want to note when visiting. You could focus on one or two, and share back to the group. If you are already an active participant, share your experience.

Projects - What kinds of projects are people working on? How would you describe the range or diversity of projects?

Interests - Where do the ideas for the projects come from? Are the projects based on individual, group, or community interests?

Learning Community - Do people help each other learn? Are there mentors in the space? Is there a trajectory of participation from newcomer to leadership roles?

Values - How do people treat each other in the community? Are there community guidelines or values that are discussed or agreed upon?

Space - Which aspects of the physical space support the creative learning process? What materials are available?

- Luanne Witkowski's [Basic Training](#) (see also [abstract of capstone synthesis](#) and [website](#))
- [Planned Lifetime Advocacy Network](#)
- [Strategic Participatory Planning](#) ([background](#))
- [Lucas Aerospace plan](#)
- B. Martin on [civil defence](#)
- [4Rs](#) ([background](#))
- [Deep drivers of successful workshops](#) ([background](#))
- [Woody Guthrie's "Heaven"](#)

Case on Gathering into Community

"Learning from experience in the past and elsewhere to prepare one's community for epidemics that may or may not happen"

The design sketch could be a plan with timeline, or a method of gathering people together, or a resource package (e.g., key issues, concepts, arguments, evidence, references, websites, summaries of case studies, quotes, images, organizations, people to contact, research already under way, research questions and proposals), or a portfolio of images to stir discussion, or...

1. Your "community" might be your neighborhood or town, but it could also be your profession, your workplace, your ethnic group, your political group, etc.
2. To warm up your thinking about what goes on in epidemics, you might look, depending on your background and interests, into the [effect on communities](#) or the fate of orphans from the 1918 flu

pandemic, [1918 flu photo](#) , [competing approaches](#) to scientific detective work and action recommendations in the SARS epidemic, the scapegoating of jews in the time of the Black Death, [new ebola](#) , [climate change and disease spread](#) ,...

3. To warm up your thinking about how communities respond, consider [Cuban Emergency Response System](#) (not for epidemics) , [Lifeboat ethics](#) , a [PBL case on improving responses to extreme climate events](#) and [one student's response](#).

edit

4: Enabling

All disabilities can be reframed as opportunities to a) enable others and b) learn from those who are differently abled

Readings:

[Davis](#), L. J. (2013). "Introduction: Normality, Power, Culture". Pp. 1-14 in The Disability Studies Reader. L. Davis (Ed.) New York: Routledge

[Jay](#) , M. (2014) "The Geel question." Aeon Magazine

Presentation

- [Walkable roller-coaster](#)
- [Universal Design](#)
- [Bliss Symbolics](#) ([audio on originator](#))
- Disability studies
- [Tek Robot](#)
- [Hobcart](#) (from Lucas Aerospace alternative)
- Prosthetics, [low tech](#) , [hi-tech](#) , [low cost](#)
- [Human Givens approach to psychiatric care](#)
- [Planned Lifetime Advocacy Network](#)
- Geel, Belgium, integrating the mentally ill into families and community life

Case: "Communities enabling the elderly"

1. Take the following as inspiration: the model of Geel in Belgium where the mentally ill are integrated into families and community life, ADA-mandated accommodations--enablers--for the disabled, the [AARP intergenerational mentoring project](#) .

2. What would it look like for a community to integrate the *elderly* into community life and enable their full participation? How would the *transition* to there from where we are now be organized?

edit

5: Design thinking education

To make design thinking available to all, ask students or collaborator to imagine that you don't say "it's not my problem" or "this seems too hard for me to solve," and imagine instead that, whatever your age or background, you can rise to the challenge and contribute, through a series of steps, to a prototype to be tested in the real world.

Reading:

[Schwab](#), M. G. (1989?). Participatory Research with Third Graders: An Exploratory Study of School Lunch.
[Co \(Coeylen\) Barry](#) 's TEDx Denver Teachers 2013 talk (10 minutes)

Presentation

Design Thinking:

- [CREATEDU](#)
- [LimeDesign](#)
- [Santa Catalina School](#)
- [Design thinking](#) , David Kelley of IDEO ©

- [Challenge and Skill](#) , by [Oliverbeatson](#)
- [Tinkering](#)
- [Creative learning spaces](#) (Computer Clubhouse from Session 2 on Play)

Explore resources and report back:

- [Learning Creative Learning](#) , MIT Media Lab
- [K-12 Lab wiki](#) : How to implement design thinking in your school:
- [Design Thinking For Educators](#)
- [Notosh](#) : working in the creative sectors and in schools every week
- [Artisan Asylum](#)
- [Ideo website](#)

Case for Design thinking for all: Prosthetics and improvements for "normal" people

This case invites you to stretch beyond prosthetics and improvements that already exist for "normal" people, such as lactose-free milk, eyeglasses, shoes, etc. What would be involved, say, if bottle milk could be fed to nipples so that all men and women could breast feed? If the clothing of young people disrupted associations with one gender or the other? If there was an easy-to-access place to register problems in roadways and signage that prompted rapid fixes? Etc.

Steps:

1. Warm up your thinking by brainstorming recent or longstanding frustrations you have had with your body or your surroundings, then convert that into a possible prosthetics or improvement.
2. Choose one problem to be solved by a design team, then spell out who might be drawn into your "dream team" of designers and how your design studio will operate.
3. Remember to identify design principles.

edit

6: Craft, improvisation, innovation and uptake

Craft, innovation, improvisation and uptake are well-managed learning.

Reading: E. Ries, The Lean Startup, <http://theleanstartup.com/principles>

Presentation

- [David Pye](#) , furniture designer, [6 principles](#)

- [Evolution of products](#)
- Diffusion of innovations (Everett Hughes)
- [Crossing the chasm](#) (Moore) © ([Moore on Dancing man](#)) ©
- [Development of a social search engine](#)
- [Lean Startup](#) ©

Case: Modern apprenticeships, communities of practice, scaffolding

The last session implied that everyone can be involved in design. That does not, however, mean that problems should be left to amateurs or that everyone can be content remaining as an amateur in design. In this case, you map out pathways through which a person develops and refines skills in design and/or in critical thinking. This person may be yourself or someone you might teach or mentor. The pathways may involve apprenticeships, communities of practice, scaffolding [where "scaffolding" need not be restricted to its meaning in education (namely, the teacher starts with a final structure in mind and provides the students a reliable series of steps they use to come to understand the ideas and be proficient in the practices)], [family lineages](#) , etc.

edit

7: Standards, Conventions, Modularity and Infrastructure

"All invention is borrowing" (D. Pye, furniture designer); infrastructure already in place, standards and modularity enable the designer to know the properties of borrowed materials and have some sense of the possibilities and limits of adaptation into new arrangements. Indeed, Pye's dictum reminds us to build on what is already in place, not assume that new is better.

Reading: Frederick, M. (2007). 101 Things I Learned in Architecture School. Cambridge, MA: MIT Press ([ebrary](#))

Presentation

- [Material properties](#)
- Frederick on architectural conventions ([password required](#))
- [Lidwell](#) et al. on graphic design conventions
- [Subway maps redesigned](#) ([text](#))
- [Hassan Fathy](#)
- [Cal Earth](#)
- Modularity in Brad Bellows's Kuala Lumpur housing project
- Infrastructure building in patient advocacy groups (e.g., [National Down Syndrome Society](#))

Case: Borrowing

The internet began with researchers transferring files and messages, but has since been "borrowed" for online shopping and pornography, among other things. For this case borrow the internet further so that offices, classrooms, or the university can be retrofitted. Not rebuilt from scratch, but respecting the infrastructure that is already in place. Preferably, any new aspects take into account existing conventions and the cost-savings that come with modularity. No need to confine yourself to retrofitting physical structures—you might borrow the internet to retrofit what a class is.

8: Local particularity

"All design is local" (to paraphrase Tip O'Neill)—ultimately what is designed has to work for particular people using the materials that can be made available in their particular setting.

To that end, extend [Gathering into community](#): a) the knowledge of the people most affected by the given issue needs to be brought into play and b) participation needs to be facilitated in ways that ensure that the full range of participants are invested in collaborating to bring the resulting design to fruition.

Moreover, extend [innovation and uptake](#): Do not rely on early adopters of innovations, but pay attention to users who, while prepared to adopt innovations, need them to be integrated with their own practical day-to-day concerns and specific situations.

Finally, acknowledging local distinctiveness or vernacular is a way of demanding that the new keeps places worked in, lived in, allows for diversity and non-conformity, maintains employment etc.

Reading:

[Taylor](#) , P. J. and J. Szteiter (2012). "Action research and participation". Pp. 260-268 in Taking Yourself Seriously: Processes of Research and Engagement. Arlington, MA: The Pumping Station

[Taylor](#) , P. J. (2009). "Step-by-step presentation of the Cycles and Epicycles framework of Action Research."

Presentation

- [Ivan Illich and convivial technology](#)
- [1970s counter-culture](#) ([password-protected full text](#))

- [Foodsheds](#)
- [Food Democracy Now](#)
- [Cuban movie on post-oil adaptations](#) ©

- [Transition towns](#)
- [Permaculture](#) (requires signup to view)

- [Klindienst](#) on ethnic gardening
- [Local Distinctiveness](#) , Common Ground
- [Slow foods](#)
- [Personalized google maps](#) (for local knowledge or against diversity?)

- [Strategic participatory planning. again](#)
- [Action Research](#) , Cycles and Epicycles

Case: "Sustenance in the city"

Modeled on [bioregional calculator](#) , or on [10+10 questions](#) , create a guide for planning your transition to sustainability, e.g., What role models can you find for changing your habits? Who are your local experts, for e.g. safe soils to grow foods in, composting, exercise, car alternatives, stream restoration, safe fishing, pest

control, local dialects, local history & archeology, etc....? What non-local experts or sources of knowledge do you need as well?

edit

9: Spanning distance

People distant in space can have their cultures profoundly shifted by mediated connections, especially those made around new technologies and the commodities they give rise to. Reciprocally, profound shifts can happen to people distant in origins who come together through migration of people and culture.

Reading:

[Perlman](#) , J. (1990). "A Dual Strategy for Deliberate Social Change in Cities." *Cities* 7(1): 3-15.

[Berger](#), J. (1975). "The Seventh Man." *Race and Class* 16(3): 251-257.

Presentation

- [Eric Wolf](#) 's account of changes in the Mundurucu in the Amazon as rubber began to be used in Europe in C19
- [Social history of bicycles](#) , [another history](#) (to 6:26)
- Mike Davis on Late Victorian Holocausts, [wikipedia](#) ([review](#))

- [John Berger](#) on migrant workers in Europe

- [Electronic Waste](#)
- [Clothing factories](#) , [another view](#) , ([regulation and monitoring](#)), [another article](#)

- Perlman on MegaCities project

Case on ethical long-distance connections

How can consumers come together to take stock of their "mediated connections" to distant people and design alternative relations with them?

1. Consider [Megacities project](#) as a positive model of spanning distance, but not specifically in connection with consuming products.
2. Consider [FairTrade and criticisms](#) as a way to identify critical thinking themes about the design of fair trade -- or what it means for trade to be fair.
3. Freewrite to arrive at an angle or focus: Are you more interested in designing an ethical system for a specific product, defining what ethical principles are for mediated connections, gathering people together to design an ethical system, establishing and maintaining the necessary communication or information systems, influencing people's attitudes or behaviors, ...?

edit

10: Integration of diverse social and material worlds

Instead of dividing real world complexities into many local situations (as if they were well-bounded systems with other processes pushed into the background or hidden for the time being), we can examine "intersecting processes" that cut across scales, involve heterogeneous components, and

develop over time.

There is always a tension between, on one hand, local knowledge and solidarities forged through working and living together in particular places and, on the other hand, application of trans-local perspectives, abstractions, or other resources--or withholding such resources.

Within the intersecting processes, there are multiple potential points of engagement for a designer, which need to be linked together "transversally" in a manner that is intentional and explicit. In other words, if sustained engagement in local situations is desired to ensure that design is not a "solution.. for the problems that people don't have" (Myles Horton), what else is needed to mitigate the consequences of decisions made in governments and corporations operating on a larger spatial and temporal arena?

Reading: [Taylor](#), P. J. (2005). "Epilogue: Three Stories". Pp. 203-213 in *Unruly Complexity: Ecology, Interpretation, Engagement*. Chicago: University of Chicago Press

Presentation

- [I. McHarg. Design with nature](#)
- [Eco-innovation lab](#)
- [Urmadic university](#) (excerpt to 3:47)

- [Intersecting processes and transversal engagements: community history;](#)
- [personal life course;](#)
- [Collective account of influence of Science for the People](#)

- Taylor, *Unruly Complexity*, Epilogue

Case: Compose your life as intersecting processes

0. When you present your sketch, feel free to mask items that are too personal to share--the point of the case is not to reveal every detail, but to go through the process of teasing out different strands that shape our past and possible future lives.

1. Follow the directions for a [Wall of wonder/historical scan](#) where your own life is "project to be undertaken" and you are "setting the scene" for this project. Because you are doing this for yourself, you will need to generate 30-40 Post-its.
2. "Local" is Personal event or experience that was significant to you (something in your family, life course, workplace, studies, etc.); "Regional" is Intermediate-level event or activity, a specific arena or project you have been involved in; "Global" = Wider-world event or change that led to or influenced your personal & intermediate-level experiences.
3. Once you have the Post-its, follow the script under "At the end of a group project or course," but in this case there is no-one else than you posing and answering the questions.
4. At the end, sketch out some possible transversal engagements.

edit

11: Keeping track

Possibilities for surveillance are an unavoidable by-product of standards and of keeping track of the effects of one's design.

Reading:

[Gawande](#) , A. (2007) "The checklist." The New Yorker (December 10).

[Morozov](#) , E. (2013) "The real privacy problem." MIT Technology Review.

Presentation

- [Standards](#) (review of book by L. Busch)
- [Record keeping "saves lives"](#)
- Gawande's Checklist Manifesto ([review](#))
- [Scorecard](#)
- [Ontario Health Study](#) ([same study, different promo](#))
- [Frank](#) on uneven playing field of genetic and environmental surveillance for health
- Morozov: internet contrarian, [example](#)
- [Critique of stream restoration standards](#) and privatization of services
- [Witness seminars](#) in social history of environmental health

Case of Health surveillance serving the community and the individual

Scorecard uses official registries of chemical production to allow people to note their possible chemical exposures and decide how to respond. Some people might become activists, some might move, some might do nothing. Consider what might be possible—both intended and unintended—if each of us were able to keep track of our possible chemical exposures (using Scorecard), other environmental conditions and life circumstances, family health history, and possible genetic information? For this case, specify and explain standards you would propose for health-related surveillance.

12: Improving by taking stock (from design to adoption & adaption by others)

edit

Making space to reflect, using various tools or processes, before proceeding either from one phase to another or on from an activity or event, makes it more difficult to simply continue along previous lines, opening up possibilities of alternative paths to proceed.

Reading:

[Taylor](#) , P. J. (2008). "Developing Critical Thinking is Like a Journey". Pp. 155-169 in Teachers and Teaching Strategies, Problems and Innovations. G. F. Ollington (Ed.) Hauppauge, NY: Nova Science Publishers

[Strauss](#) , C. and A. Fuad-Luke. n.d. The Slow Design Principles: A new interrogative and reflexive tool for design research and practice

Presentation

- [Strauss](#) & Fuad-Luke, Slow Design Principles
- Taylor, [From reflective to redirective to refractive practice](#) ([text](#))

- Taylor, [Taking stock as an ethical imperative](#)
- Taylor, [Evaluation of academic leaders](#)
- Critical thinking as a journey, including [challenges](#) for teacher/facilitator

BREAK

[Dialogue hour](#) on where have we come & where do we go from here

[Written course evaluation](#)

[Closing Circle](#)