

The Future of the University as a Design Problem

Undergrad Section: ARCH 5290 (35309) and Grad Section: ARCH 5290 (35309)

Professor Ann Pendleton-Jullian (Professor of Architecture)

fall 2014 (3 credits) open to juniors, seniors and grad students

M 9:10-11:55. KN 177. This time is tentative. We will arrange the most convenient time for interested students at the first meeting.



What if we create a university that is an ecology of dynamic attractors instead of a closed campus?

or . . . What if we transform the university through mechanisms that infuse serious play into all aspects of learning?

This course will take on the design of a new model for the university as a learning-focused ecosystem. It will be taught in a unique format as a “liberal education studio,” which combines the qualities of a *seminar* (intensive inquiry and dialogue) with an architecture studio (design of contexts in which things happen). Using many methodologies, and engaging a variety of disciplines, we will take Ohio State University as our beginning point as we work to design a research university for the world of 2033. We will be applying a rigorous but speculative design process that will entertain both the pragmatic and radical.

So, what exactly are we going to make? Beginning with an understanding of the tradition of liberal education, research, and the American land grant university, we will design new speculative models for the university working off of work that has been done in similar but different studios at Georgetown University spr 2013 + spr 2014. Students can choose to either begin over or take systems and components from previous work and turn it on end or dig deeper.

What if we design a university to create students with Hacker dispositions: highly creative, collaborative, resilient, agile, failure secure, and skilled at pushing boundaries of all sorts?

What if we use the social questing structure and learning practices of World of Warcraft or Minecraft to transform the university into a new culture of learning?

What if we build a new kind of globally distributed university that, as a network of networks, taps into a global learning ecosystem to create global communities of practice around things like data-ethics or governance or . . . ?

These were just some of the what-if propositions that the students at Georgetown University came up with as the concepts for their projects.

The course will be run interactively and flexibly; structured in three parts: precedent studies and two design phases. Design will begin with a world-building project. World building is a concept borrowed from new film production methods where whole worlds with coherent qualities are imagined as contexts within which stories happen (think *Minority Report*).

The core skills needed for this course are strong liberal education skills of critical and creative thinking, collaborative project orientation, interest in the future of education, and agile thinking at the level of living systems. *Although very helpful, no prior drawing experience is necessary.*

The design studio will accept up to 15 students. Along the way we will engage a wide range of readings, outside experts (including for midterm and final presentations), and resources on learning, liberal education, and alternative educational systems. The work is intended to be part of an ongoing national conversation on the redesign of higher education.

DESIGN SEMINAR: DESIGNING THE UNIVERSITY FOR THE YEAR 2034

FALL 2014: ANN PENDLETON-JULLIAN plus OTHERS

WEEK	CLASSES	% of grade	WORK	READINGS
1	INTRODUCTION + FRAMING THE DESIGN PROBLEM UNDERSTANDING THE CONTEXT	9.8.14	meeting each other + talk on the legacy of the American Univ logistics	assigned readings about context of 21st cent
2		9.15.14	discussion on readings talk on information visualization and diagramming	
3	PRECEDENTS STUDY	9.22.14	discussion on readings + precedents selected by teams of 2-3 precedent work start up	assigned precedent starter readings + ind research
4		9.29.14	team work sessions with desk crits	
5	PRECEDENTS STUDIES DUE THE PROJECT OF THE UNIVERSITY in 2033 one week charrette: IN SEARCH OF A POV	10.6.14	25% TEACHING EACH OTHER about PRECEDENTS PROJECT INTRO	assigned readings about issues and innovation in higher ed
6	INDIVIDUAL SKETCH IDEAS PRESENTED BROKERING OF TEAMS	10.13.14	10% PRESENTING INDIVIDUAL SKETCH IDEAS BROKERING TEAMS OF 3 and team work start up	
7		10.20.14	team work sessions with desk crits talk on worldbuilding	choosing scaffolding readings relative to team concepts
8		10.27.14	TEAM WORK SESSION IN CLASS	
9		11.3.14	PIN-UP and work session	
10		11.10.14	25% (WAY PAST) MID-TERM REVIEW w/ guest critics	
11		11.17.14	team work sessions with desk crits	
12		11.24.14	PIN-UP w/ guest critics debriefing, next steps and desk crits	
13		12.1.14	informal pin-up: working on final presentation techniques work session	
14	FINAL CLASS	12.8.14	30% FINAL REVIEW w/ guest critics 10% collated semester work and reflections	

THE UNIVERSITY IN 2033: a design problem
readings:

“IN THE AIR”

Networks and society

David Ronfeldt, "Tribes, Institutions, Markets, Networks. A Framework about Societal Evolution" w/ my notes. http://www.youtube.com/watch?v=UBuIH9_04vc

Nicholas Christakis and James Fowler, *Connected: How Your Friends' Friends' Friends Affect Everything You Feel, Think and Do*. NY, NY: Little, Brown and Co., 2009. "Preface" and "Chptr 1: In the Thick of It" pp. x-xiii and 1-12.

Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. Yale University Press, 2006. "Introduction. A Moment of Opportunity and Challenge" pp. 1 -34.

Participatory everything

Pekka Himanen, "The Hacker Ethic as the Culture of the Information Age" in M. Castells, editor, *The Network Society: A Cross-cultural perspective.*" 2004. pp. 420-430.

John Keene, "Monitory Democracy" paper and first 25-30 minutes of his lecture in Castelló de la Plana, Spain: <http://johnkeane.net/04/topics-of-interest/democracy-21st-century/monitory-democracy>

Steven Johnson, *Future Perfect: The Case for Progress in a Networked Age*. NY, NY Penguin Books, 2012. "The Peer Progressives and Peer Networks at Work" pp. 3-52.

Resilience

Joshua Cooper Ramo, *The Age of the Unthinkable*. NY, NY: Little Brown and Co., 2009. "Chptr. 8: The Management Secrets of Hizb'allah" pp. 169-199.

Richard T.T. Forman, *Land Mosaics. The Ecology of Landscape and Regions*, Cambridge University Press, 1995. Pp. 351-353, 502-512. (Disturbance is directly allied with resilience)

C.S. Holling, "Resilience and Stability of Ecological Systems" 1973. (This is the seminal article on resilience in ecology theory.)

Andrew Zolli and Ann Marie Healy, *Resilience. Why Things Bounce Back*, NY 2012, "Introduction: The Resilience Imperative," pp. 1-24.

Ecologies: environmental, social and mental (independence of mind)

- Felix Guattari, *The Three Ecologies*. (translated by Pindar and Sutton). London: Continuum International, 2008 (original in French in 1989). Pp. 1-10 and 19-35.
- Gregory Bateson, *Steps to an Ecology of Mind*, The University of Chicago Press, 2000. Foreword by Mary Catherine Bateson. pp.vii-xviii; and “introduction: The Science of Mind and Order” pp. xxiii-xxxii.
- Noam Chomsky, “Human intelligence and the environment” in *ISR*, Issue 76, March-April 2011.
- Jeremy Rifkin, *The Third Industrial Revolution, How Lateral Power is Transforming Energy, the Economy, and the World*. 2011. “Chptr 1: The Real Economic Crisis Everyone Missed” and “Chptr 2: A New Narrative” pp. 9-72.

Complexity and emergence

- Melanie Mitchell, *Complexity: A Guided Tour*. Oxford University Press, 2009. “Preface”, “Chptr 1: What is Complexity?” and portion of “Chptr 2: Dynamics, Chaos and Prediction” pp. ix-xiii, 3-27.
- Steven Johnson, *Emergence. The connected lives of ants, brains, cities and software*. NY, NY Scribner, 2001. “chptr 2: Street Level.” pp. 73-100.
- Robert E. Ulanowicz, *A Third Window: Natural Life Beyond Newton and Darwin*. Templeton Press, 2009. Stuart A. Kauffman’s “Foreword” and “Introduction” pp. ix-xvii and 1-12. (If you like this – I believe it is an important, although little known, book – chapters 2-5 and especially 4 are good. This is a new epistemological window on the world.)
- David Snowden, “How to Organize a Children’s Birthday Party.”
<http://www.youtube.com/watch?v=Miw92eZaJg>

Knowing, making, playing

- Chris Anderson, *Makers. The New Industrial Revolution*, NY, 2012. pp. 3-41.
- Johan Huizinga, *Homo Ludens*, 1950, “Chptr I: Nature and Significance of Play as a Cultural Phenomenon” and “Chptr VI: Playing and Knowing” pp. 1-27, 105-118.
- Mary Flanagan, *Critical Play*, MIT Press 2009, “Introduction to Critical Play” pp. 1-15. “An ontology for the 21st century” concept ppt. (ApJ and JSB)

Globalism: complex problems and identity

“World Economic Forum Global Risk Landscape 2012” (WEF_Global Risks
2012_Geopolitical slide deck_Elaine Dezenski.pptx)
Alejandro González Iñárritu, *Babel* (2006)

Equity and human development

Amartya Sen, “Introduction” to *Development as Freedom*.
Martha Nussbaum, *Creating Capabilities: The Human Development Approach*, 2011.
“Preface” and “chptr 1: A woman Seeking Justice” and (optional) “chptr 8:
Capabilities and Contemporary Issues.” pp. ix-xii, 1-17, 143 -188.

Power

Parag Khanna, *The Second World. How Emerging Powers are Redefining Global
Competition in the Twenty-first Century*, Random House, 2009. “Introduction”
and “Conclusion: The Search for Equilibrium” pp. xiii-xxvii, 321-342
Joseph S Nye, *The Future of Power*, 2011. “Preface” and “Chptr 1: Ehat is Power in
Global Affairs?” pp. ix-xviii, 3-24.
Ayesha and Parag Khanna, “The Future is Now. Power and Technik” *Foreign Policy
Journal*, September, October 2011.
A Pendleton-Jullian, “Power” @ TEDx GU 2012. (ppt. deck)
<http://www.youtube.com/watch?v=3Q2YgeKbbt4>

THE EDUCATION LANDSCAPE

Higher education is often characterized as being in a phase of “creative destruction.” This implies the unbundling and reengineering of education, as we know it. Educational drivers of change are seen as costs, technology, productivity, learning sciences, global access. There are also social drivers. Additionally, three important and valuable mechanisms - open education, connected learning, and the move towards outcomes-based education – are moving along quick trajectories without clear understanding of what they are aiming to accomplish systemically – what they are aiming at – and what the unintended consequences of these will be. But all of these are in the education landscape now and are under discussion.

DIAGNOSES AND PREDICTIONS: Parsing the Now (Unbundling)

- Nathan Harden, “The End of the University as We Know It,” *American Interest* (Winter, 2013). <http://www.the-american-interest.com/article.cfm?piece=1352>
- Clay Shirky, “Napster, Udacity and the Academy” <http://www.shirky.com/weblog/2012/11/napster-udacity-and-the-academy/> (posted by Andrew M to the blog)
- Moody’s Investor Service, “US Higher Education Outlook Negative in 2013,” January 16, 2013.
- Anderson, et. al., *The Impact of the Internet on the Future of Higher Education* (Pew) http://pewinternet.org/~media/Files/Reports/2012/PIP_Future_of_Higher_Ed.pdf

COSTS-ACCESS-QUALITY

- Measuring Up 2008: The National Report Card on Higher Education (2008). National Center for Public Policy and Higher Education. Retrieved from <http://measuringup2008.highereducation.org/> (Look up your state)
- William Bowen, “The ‘Cost Disease’ in Higher Education: Is Technology the Answer?” and “Prospects for an Online Fix: Can We Harness Technology in the Service of Our Aspirations?” (The Tanner Lectures, Stanford University, October, 2012). <http://www.ithaka.org/sites/default/files/files/ITHAKA-TheCostDiseaseinHigherEducation.pdf>
- Sir John Daniel, “What role for Open Universities when eLearning becomes universal?” <http://sirjohn.ca/wordpress/wpcontent/uploads/2012/08/120917KNOUForumPPT.pdf>

OPEN EDUCATION

- UNESCO Open Educational Resources (OER)—[OER Congress Declaration on Open Education Resources](#)
- Open Educational Resource University (OERu)
http://wikieducator.org/OER_university
- Paul Stacey on the Open Educational Resource University (OERu) Concept
<http://edtechfrontier.com/2011/02/22/open-educational-resource-university-oeru/>
- OERu Resource Foundation
<http://wikieducator.org/OERF:Home>
- *David Wiley blog: Iterating toward Openness*
<http://opencontent.org>
- David Wiley, “Open Education and the Future” (TEDx NY talk):
<http://www.youtube.com/watch?v=Rb0syrgsH6M>

Additional:

- Hilton, et. al., The Four R’s of Openness and ALMS Analysis: Frameworks for Open Resources.
- Laura Czerniewicz “Educational Technology for Equity,” in *Rebooting the Academy: Twelve Tech Innovators Who are Transforming Higher Education..* Jeffrey Young and Tim McCormick, eds. Chronicle of Higher Education, 2012
- Toru Iiyoshi and Vijay Kumar, eds. *Open Education: The Collective Advancement of Education through Open Technology, Open Content, and Open Knowledge.* MIT Press, 2011.
- Lisa Spiro and Bryan Alexander, “Open Education in the Liberal Arts: A NITLE Working Paper,” March/April 2012.
- Massive Online Open-Source Courses:
 - Udacity <https://www.udacity.com/>
 - Coursera <https://www.coursera.org/>
 - edX <https://www.edx.org/>
 - Open Learning Initiative
- Collections:
 - Khan Academy <https://www.khanacademy.org/>
 - Connexions <http://cnx.org/>
- Communities:
 - DS106 (Jim Groom) (Digital Storytelling Community)
 - <http://ds106.us/>
 - Net, Power and Light: TogetherLearn
 - <http://getspin.com/experiences/togetherlearn/>

LEARNING and WAYS of KNOWING

Frameworks:

- Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century
[http://www7.national-academies.org/bota/Education for Life and Work report brief.pdf](http://www7.national-academies.org/bota/Education%20for%20Life%20and%20Work%20report%20brief.pdf)
 full book: https://download.nap.edu/catalog.php?record_id=13398
- Partnership for 21st Century Skills
<http://www.p21.org/>
- Framework for 21st Century Learning
- http://www.p21.org/storage/documents/1_p21_framework_2-pager.pdf

New Learning / Media Ecologies:

- Cathy Davidson, *Now you See it: How Technology and Brain Science Will Transform Schools and Business for the 21st Century*. Penguin, 2012.
- Douglas Thomas and John Seely Brown, “Cultivating the Imagination for a World of Constant Change.” <http://net.educause.edu/ir/library/pdf/ff1208s.pdf>
- Jenkins, Henry, *Confronting the Challenges of Participatory Culture*. MacArthur Foundation, 2009.
- Mimi Ito, et al., “Connected Learning. An agenda for Research and Design” Summary. 2013.
- Mihai Spariosu, Education, Intercultural Knowledge, and the Global Practitioners of Tomorrow (May 2008) or “Tertiary Education for Sustainable Human Development” (November 2007).
- Complexity, Computing, Contemplation, Learning?
<http://learningemergence.net/2011/05/04/cccl/>
- Paul Farmer, Commencement Address (starts at 11:43); Farmer is a world famous medical anthropologist who in this address discusses the need to instill the capacity for “thinking fractally” and recognizing the “adjacent possible” in order to address the world’s most difficult problems.
<http://www.georgetown.edu/video/1242670725343.html>
- David Levy, “No Time to Think”
<http://www.youtube.com/watch?v=KHGcvj3JiGA>
- Alex Soojung-Kim Pang, “Contemplative Computing”
<http://askpang.typepad.com/articles/c0ntemplat1ve.pdf>
- Paulus and Horth, “Navigating Complex Challenges: Creative Competencies for Contemporary Leadership”

<http://www.ccl.org/leadership/pdf/news/newsletters/navigatingcomplexchallenges.pdf>

- Simon Buckingham Shum, "On Social Learning, Sensemaking Capacity and Collective Intelligence" <http://people.kmi.open.ac.uk/sbs/2010/08/social-learning-sensemaking-ci/>

LEARNING MEASUREMENT / Outcomes-based Education

Learning Analytics, Educational Data Mining

- "Learning Analytics" Policy Brief, UNESCO (Simon Buckingham Shum) <http://iite.unesco.org/pics/publications/en/files/3214711.pdf>
- Simon Buckingham Shum, "Our Learning Analytics are our Pedagogy" <http://www.slideshare.net/sbs/our-learning-analytics-are-our-pedagogy>
- Wabash Center for Inquiry into the Liberal Arts, "Wabash National Study of Liberal Arts Outcomes," <http://www.liberalarts.wabash.edu/study-overview/>
- Learning Analytics (George Siemens, leader of the first MOOC) <http://www.learninganalytics.net/>
- Learning Emergence <http://learningemergence.net>

Certification / Alternative Assessment

- The [Degree Qualification Profile \(DQP\)](http://degreeprofile.org/) (Lumina Foundation) <http://degreeprofile.org/>
- Doug Lederman, "What Degrees Should Mean" *Inside Higher Ed* http://www.insidehighered.com/news/2011/01/25/defining_what_a_college_degree_recipient_should_know_and_be_able_to_do
- Barry Joseph (and scores of others), "Six Ways of Looking at Badges Designed for Learning" [Google Doc]
- <https://docs.google.com/a/georgetown.edu/document/d/1LgJ56eoGrTRdXtdMePc-sXHlugB9a4ppr2QrIYHDmuM/edit>
- Daniel Hickey, "Initial Questions about Digital Badges and Learning," on Re-Mediating Assessment blog: <http://remediatingassessment.blogspot.com/2012/10/daniel-hickey-this-post-suggests-some.html>
- Shum and Crick, "Learning Dispositions and Transferable Competencies: Pedagogy, Modelling and Learning Analytics" <http://oro.open.ac.uk/32823/1/SBS-RDC-LAK12-ORO.pdf>
- Jennifer Demski, "E-portfolios: Are We There Yet?" *Campus Technology* (February 28, 2012)

- Darren Cambridge, "Eportfolios, Blogs and Social Network Sites: Networked and Symphonic Selves," from *Eportfolios for Lifelong Learning and Assessment*. Jossey-Bass, 2011.

"Grading 2.0: Evaluation in the Digital Age," HASTAC discussion thread.

<http://hastac.org/forums/hastac-scholars-discussions/grading-20-evaluation-digital-age>

INNOVATION: RETHINKING THE DNA of HIGHER EDUCATION

Christensen, Clayton, and Henry Eyring, *The Innovative University: Changing the DNA of Higher Education from the Inside Out*. Jossey-Bass, 2011. Ch. 23.

A. Pendleton-Jullian, "Design Education and Innovation Ecotones" (2009).

Michael Crow, "Reinventing the Public Research University,"

<http://net.educause.edu/ir/library/pdf/ff1203s.pdf>

Mark C. Taylor, *Crisis on Campus: A Bold Plan for Reforming Our Colleges and Universities*. Alfred Knopf, 2010.

GLOBAL CONTEXTS AND COMPETITION

Father Nicholas, S. J., "Depth, Universality, and Learned Ministry: Challenges to Jesuit Higher Education Today,"

http://www.sjweb.info/documents/ansj/100423_Mexico%20City_Higher%20Education%20Today_ENG.pdf

Phillip Brown, H. Lauder, D. Ashton (2011), *The Global Auction*. New York, NY: Oxford University Press.

Ben Wildavsky, "The New Global University Marketplace,"

<http://net.educause.edu/ir/library/pdf/ff1108s.pdf>

Closing the College Attainment Gap between the U.S. and Most Educated Countries, and the Contributions to be made by the States. (April 2010). The National Center for Higher Education Management Systems.

Zumeta, W., Breneman, D. W., Callan, P., & Finney, J. E. (2012). *Financing American Higher Education in the Era of Globalization*. Cambridge, MA: Harvard Education Press.

HIGHER EDUCATION AS PRIVATE/PUBLIC GOOD

Baum, S., Ma, J., & Payea, K. (2010). *Education pays: The benefits of higher education for individuals and society*. <http://www.pewsocialtrends.org/2011/05/15/is-college-worth-it/>

- Taylor, P., et al. (2011). *Is College Worth It? College Presidents, Public Assess Value, Quality and Mission of Higher Education*. Washington, DC: Pew Research Center.
- Carnevale, et. al (2011). *What's it Worth? The Economic Value of College Majors*. Washington: Georgetown Center on Education and the Workforce.
- Carnevale, et. al (2011). *The Undereducated American*. Washington: Georgetown Center on Education and the Workforce. [Read Executive Summary only]
- Sandy Baum and Michael McPherson, "Is Education a Public Good or a Private Good," *Chronicle of Higher Education*, January 18, 2011.
<http://chronicle.com/blogs/innovations/is-education-a-public-good-or-a-private-good/28329>