

CCTP 728: Networks and the Creative Process

Syllabus

Thursday, 4:15-6:05

D. Linda Garcia, garciaadl@georgetown.edu

TA: Rachel Shaffer

Office Hours: Tuesday 2:00-5:00

On the shoulders of giants from [Matthew Watkins](#)



Course Description

Describing the basis of his genius, Isaac Newton—one of the most renowned scientists of all time—minimized his own, individual contributions, and explained his monumental intellectual achievements not so much in terms of his own personal attributes, but rather by virtue of his ability to “stand on the shoulder of giants.” Notwithstanding Newton’s humble explanation, we often continue to attribute innovation and creativity to the insights and perseverance of ‘individual genius.’ Thus, for example, we credit Samuel Morse with the invention of the telegraph, and Thomas Edison with that of the light bulb, among other things.

Today, however, many scholars are taking Newton’s claim to heart. Motivated, perhaps, by the rising competition associated with the globally networked economy, as well as our growing appreciation of the complexity of our world, scholars are delving far more deeply into the questions of what constitutes creativity, and how it comes about. Instead of focusing on the individually inspired creative act, they are looking at creativity instead as the result of an emergent,

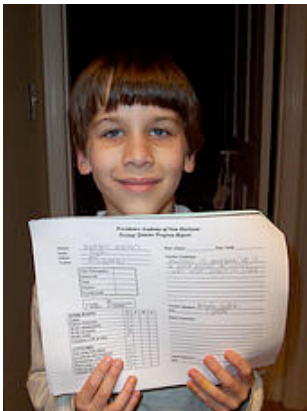


Collaborative Art Making -
Workshop from [Mike Priddy](#)

networked process that stems from the way that individuals interact together in a collaborative setting. Creativity scholars suggest, moreover, that the structure—or, as one might say, architecture—of the creative environment is a key factor determining creative outcomes. Thus, many look to today's more advanced and flexible information and communication technologies as a means of structuring collaborative settings so as to foster greater creativity.

Building upon this growing literature, this course explores the nature of creativity as an emergent process that is carried out by networks of actors who, although interacting freely, are also grounded in a complex social order. In the first few classes, the discussion will focus on historical ways of thinking about 'creativity,' and why and how they might be flawed. Then, to provide students a foundation for further inquiry and analysis, the class will consider the creative process as a whole—placing it within a more theoretical perspective that builds upon symbolic interaction, emergence, and complex adaptive systems. Next, the students will be introduced to the practice of 'improvisation,' and how it has helped collaborative groups generate creative outcomes in areas as diverse as theater, art, music, science, and business. The class will then consider recent advancements in information and communication technologies to determine the extent to which they might better structure collaborative interactions.

Course Requirements and Grading



Mahlon's report card from [sMoRTy71](#)

The course will not only require a considerable amount of reading, which students must be able to discuss in class, but also group engagement and interaction. The class will also be asked to blog the readings and discussions on a weekly bases, as well as keep a daily journal of their own creative experiences. In addition, the students will work in groups on a wiki to develop a short story, which will serve as their final paper. Grades will be apportioned as follows:

Participation in class discussion, which reflects a sound grasp of the readings 25%; blogging 25%; daily journal 25%; final wiki project 25%.



Books to be Purchased

James H. Austin, M.D. 2003. Chase, Chance & Creativity; The Lucky Art of Novelty. Cambridge, MA: The MIT Press

Beinhocker, Erik. 2006. The Origin of Wealth, Harvard Business School Press. Boston, MA.

Buchanan, Mark, 2003. Nexus: Small Worlds and the New Science of Networks. (W.W. Norton & Co., New York,

Florida, Richard. 2002. The Rise of the Creative Class. . .and how it's transforming work, leisure, community, and everyday life.

Johannsson, Frans. 2004. The Medici Effect: Breakthrough Insights at the Intersection of Ideas, Concepts, and Cultures. Harvard Business School Press.

Pink, Daniel H. 2006. A Whole New Mind: Why Right-Brainers Will Rule the Future. Riverhead Books.

Sawyer, Keith R. 2006. Explaining Creativity: The science of Human Innovation. Oxford University Press. United Kingdom

Scott, Alan: 2000, The Cultural Economy of Cities, London: Sage 2000.

Weiner, Robert Paul, 2000. Creativity and Beyond: Cultures, Values and Change. State University Press. Albany, New York.

Session One: January 14, 2010 Overview of Class

In this session, we will look at a film, Creativity in Everyday Life, which will provide the basis for giving an overview of the semester, the subject matter to be discussed, the readings to be covered, as well as the requirement to be fulfilled. This is the time to decide whether this is the class for you!



Session Two: January 21, 2010

Conceptualizing Creativity

The idea of creativity as a positive force and a subject of inquiry did not emerge until the time of Renaissance and the Enlightenment--both periods of considerable change. But formal analysis of the notion of creativity did not take place until the 1950s with the work and encouragement of JP Guilford. Even then, the field was disparate, with individual contributions from multiple disciplines and multiple points of view. Today, the field is blossoming, as papers are proliferating and disciplines are coming together in an effort to develop a more holistic approach to understanding creativity.



Required Readings:

- Sternberg, pp. 3-29. On blackboard.
- Sawyer 9-34.

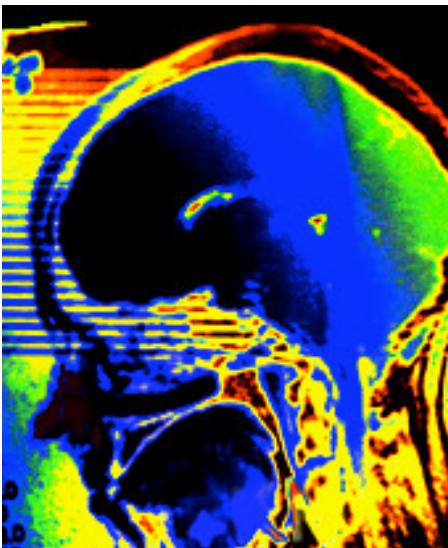
Supplementary Readings

- Alan W. Dyer, "Veblen on Scientific Creativity: The Influence of Charles S. Peirce," Journal of Economic Issues, v. 20, n.1, March 1986, pp. 21-41

Session 3: January 28, 2010

The Individual Creator

In this session, we will focus at the very local level—that of the individual creator.



Early interest in creativity focused on the individual, either as the vessel of a larger, divine force, or as someone endowed with 'genius'. In either case, creativity was presumed to be located in the mind of the individual person. Not surprisingly, therefore, efforts to study creativity and grasp its essentials were based in the cognitive and biological sciences, and later the field of psychology. In this session, we will explore the mental processes that occur when creativity takes place, as well as the personality characteristics that lead individuals to pursue

their creative goals. As well, we will discuss some of the more recent efforts to employ neuroscience to explore creativity.

Our special guest Anna Sofaer, the discoverer of the lunar and solar markings on Fajada Butte in Chaco Canyon will be visiting the class to describe, and answer your questions, about her own creative process in her discovery. It is an exciting story indeed.

Required Readings

Sawyer: pp. 35-96.

Boden, *The Creative Mind: Myths and Mechanisms*, chapters 1-3, On blackboard

Austin, Part Three

cpluhna.nau.edu



Supplementary Readings

Sarnoff A. Mednick, "The Associative Basis of the Creative Process." Psychological Review, 1960, v. 69, n. 3, pp. 320-232.

Solsticeproject.org (explore the site)

"Why Einstein's Brain?" Marian C. Diamond, Ph.D.
http://www.newhorizons.org/neuro/diamond_einstein.htm



Session Four: February 4, 2010 Creativity in Context

While individuals contribute to creative actions, the notion of what constitutes creativity is contextually based.

Hence, the meaning of creativity has changed not only over time, but also across places. Creativity has been supported in some societies, and repressed in others. In this session we will examine the various ways in which societies have characterized creativity, and the social/cultural/institutions that they have adopted to either support or undermine it.

Required Readings:

Robert Paul Weiner, Creativity and Beyond: Cultures, Values &

Supplementary Readings

- Paul DiMaggio, "Culture and Cognition," Annual Review of Sociology, 23, 1997: 263.
- Cameron Ford, *Creative Action in Multiple Domains*

"Changing Political Context in... from
'South Asian Foreign Relations'



'Situated-self' exhibition,... from [moleitau](#)

Session Five: February 11, 2010
Creativity, Serendipity, and The
Individual

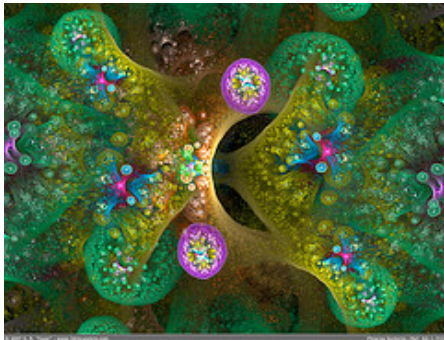
Research has shown that it is not enough to be “smart.” It also takes being well-situated, whether it be with respect to time, place, social station, or social structure. In this session, we will explore the importance of these ‘situational’ factors, and the role that serendipity can play in fostering them. We will also discuss how individuals can position themselves to be present and open to serendipitous events.

Required Readings:

Malcom Gladwell 2008: Outliers: The Stories of Success.

Austin: pp.

Session six: February 8, 2010 Creativity—The Need for A Systems Perspective



Flowing Systems from
exper

While individual scholars have looked at creativity from a variety of perspectives and disciplines, it is only recently that they have conceptualized creativity as a systemic process. In this session, we will consider why a system approach is needed; what a system approach entails; and discuss why a dynamic system model is most appropriate for discussion creativity.

Required Readings

Required Readings

- Mihaly Czikzentmihalyi, Implications for a Systems perspective in the study of creativity. On blackboard
- Sawyer, chapters 7-9

Supplementary readings

- Gerhard Fischer, “Distances and Diversity: Sources for Social Creativity,” University of Southern Colorado, Center for Lifelong Learning and Design, pp. 1-10.

Session Seven: February 25, 2010 The System as Network

Required Readings

- Mark Buchanan, Nexus

Supplementary Readings

- Lee Fleming and Matt Marx, "Managing creativity in small worlds"



The Creative System can best be seen as a network of interconnections, which together constitute a field of interconnected relationships, both horizontal and vertical. In this Session we will examine the "Science of Networks," and anticipate what it might tell us about

Entropy \geq Memory . Creativity ² from
jef safi ('pictosophizing')



Session Eight: March 4, 2010 Creativity and Complexity

As we have seen networks give rise to some unique characteristics that constitute a dynamic, non-linear environment. In this session we will look at what helps to make the system dynamic as creativity and culture co-evolve together. We will also see the role that creativity plays in adaptation to changing dynamics and fitness landscapes.

-

Required Reading:

- Béinhocker. The Origins of Wealth. Pp. 141-277

Supplementary Readings

- Elisa Giaccardi and Gerhard Fischer, "Creativity and Evolution: A Metadesign Perspective,"
- Tim Taylor, *Individuals, Interactions and Environments*.
- Peter J. Bentley, "Component-Based Representations: The Secret of Creativity by Evolution,"

Session Nine: March 18, 2010

Artistic creativity.



As we have seen, creative environment differ significantly, affecting what is and what is not considered creative; and how such creativity takes place. In this session, we will consider artistic creativity. We will see how creativity in the creative realm is greatly enhanced by networked interactions over time and place.

Required Readings:

Sawyer, Section IV.

Session 10: March 25, 2010

The City as a Creative Environment



Property of David Gutierrez

Cities have always been at the center of creative activities. Economic geographers point out that this fact is due to the dense interactions that occur within city clusters. In this session, we will consider why and how certain cultural industries have clustered within specific city environs. We will also look at what other conditions within the city foster creativity, and the role that policy plays in sustaining this positive environment

Dream City Red Color Lights from

Required Readings:

Alan Scott, *The Cultural Economy of Cities*, London Sage.



View of Georgetown University, From... from

Session 11: April 8, 2010 The University as a Creative Environment

The university has traditionally been a conservative institution lagging the many changes in society. Thus, for example, the medieval university resisted the changes associated with industrialization and the specialization of professional expertise. Today we are again undergoing tremendous societal changes, requiring the production of knowledge but also creativity. In this session, we will consider how the university is responding to this challenge.

Required readings

Richard Florida, "The Role of the University Leveraging Talent, Not Technology," on blackboard.

Carl A. Raschke, *The Digital Revolution and the Coming of the Postmodern University*.

Supplementary Readings

Meric S. Gertler & Tara Vinodrai, "Authors of Creativity: "How Do Public Universities Create Competitive and Cohesive Communities? Presented at "Building Excellence: Graduate Education and Research," Taking Public Universities Seriously: A Conference Sponsored by the University of Toronto, December 4, 2004.

Session 12: April 15, 2010 The Creative Business Environment

The global economy has witnessed the rise of the global production network, and the rise of the networked firm. In this session we will consider how the networked firm serves to enhance creativity within the business and work environment, providing agglomeration economies much as in a city.



TeleComHub Social Networking Panel from [ShashiBellamkonda](#)

Required Readings:

- Pink, pp. 1-61
- Florida,

Supplementary Readings

- Richard Florida and Jim Goodnight, "Managing for Creativity,"

Session 13: April 22, 2010 Positioning Ourselves for Success

Social networking provides numerous ways for us to increase and maintain our networks. These networks provide social capital, which can be translated into other forms of capital—material, expertise, and relational. In this session we will look at how positions in social networks give rise to opportunities



Required Readings

Frans Johansson, *The Medici Effect*.

Session Fourteen: April 29, 2010 Everyday Creativity: Comparing Notes

In this session we will compare notes about what we have learned about our own creativity, both from our journals and from the literature.

Required Readings:

Pink: pp. 65-end



Comparing Notes from
[markminperth](#)