

Quarter: Fall 2011  
Date/Time: Tuesday, 12:30-3:20 PM  
Location: Social Ecology I, Room 112

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## Social Ecology 200 SEMINAR IN SOCIAL ECOLOGY

(Course Web Site: <https://eee.uci.edu/10f/51000/index.html>)

(Course Readings & Lecture Slides: [https://webfiles.uci.edu/xythoswfs/webui/\\_xy-7025801\\_1](https://webfiles.uci.edu/xythoswfs/webui/_xy-7025801_1))

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### Overview

The term, *ecology*, pertains broadly to the interrelations between organisms and their environments. From its early roots in biology, the ecological paradigm has evolved within several disciplines to provide a general framework for understanding the nature of people's transactions with their physical and sociocultural surroundings. The field of *social ecology* gives greater attention to the social, institutional, and cultural contexts of people-environment relations than did earlier versions of human ecology, which were more closely oriented to economic factors, biological processes, and the geographic environment.

The academic mission of the School of Social Ecology is to train students to analyze research and policy questions from a broad, *ecological perspective* that *integrates multiple disciplines* and *links basic theory and research with community problem-solving*. In keeping with this mission, the present course offers a broad overview of social ecology as a framework for cross-disciplinary research and community problem-solving. The assigned readings and class discussions highlight core principles and over-arching themes inherent in the social ecological perspective.

Initial readings trace the roots of the ecological paradigm in various disciplines and provide an historical perspective on the development of social ecology as a multidisciplinary field, both at UCI and beyond. Subsequent course sessions examine conceptual and methodological principles of social ecology and systems theory, including the concepts of interdependence, multi-level analysis of people-environment transactions, and the contextual scope of theory, research, and community intervention. Also, distinctions between multidisciplinary, interdisciplinary, and transdisciplinary research are discussed. Examples of social ecological theories, research projects, and

community interventions are examined from the perspectives of Social Ecology's academic departments and programs: Criminology, Law and Society; Psychology and Social Behavior; Planning, Policy, and Design; and the Program in Public Health. Finally, the implications of social ecological analyses for understanding contemporary societal and environmental changes are discussed.

### Course Requirements

Students are expected to carefully review all assigned readings listed in the attached course calendar prior to discussion of those readings in class; and to attend and participate actively in class discussions each week (**10 points**). You can download PDF copies of all class readings from the following UCI web files folder:

[https://webfiles.uci.edu/xythoswfs/webui/\\_xy-7025801\\_1](https://webfiles.uci.edu/xythoswfs/webui/_xy-7025801_1)

Two in-class essays will be completed on October 18 and November 8, focusing on the lectures and readings covered during weeks 1-3, and 4-6, respectively (**20 points each**).

You are also required to submit either an individual or team term project by the 10th week of the quarter (on November 29). Individuals and teams have the option of submitting either: (1) an term paper plus references (9-10 pp. for individuals; 18-20 pp. for teams); or (2) a powerpoint presentation (of about 18-20 slides) and an annotated bibliography containing at least five annotated references (with a brief paragraph highlighting the main points covered in each of the annotated articles). If you choose the team option, teams may consist of between 2-4 students and must include individuals representing at least two different disciplinary backgrounds or departmental affiliations within the School.

For both individual and team projects, you are expected to develop a transdisciplinary, social ecological analysis of a particular community problem or public policy issue. The term project will count for **50 points** toward your final grade in the course.

A 1-2 page outline of your proposed project is due by the 6th week of the quarter (on November 1). The outlines can be concise (i.e., a 1-2 page outline of topics that will be covered in your paper or powerpoint presentation). The outline should make clear your goals for the project in relation to the issues listed below—your analysis of these issues constitute the main elements of your project and should be explicitly addressed in your paper or powerpoint presentation:

(1) the environmental or community topic/problem you will address and why it is societally significant (i.e., warrants study and possibly research-based interventions to alleviate the problem);

(2) why would a social ecological approach to the topic or problem be advantageous?

(3) in what respects will your approach to the problem be social ecological?--i.e., what specific principle/s of social ecological analysis will be emphasized in your approach to the problem? Which concepts and methods will be used in your theoretical analysis and/or proposed study or community intervention?

(4) in what ways do you expect your project to reflect an interdisciplinary or transdisciplinary approach to the topic or problem (and after completing the project, were those expectations met)?

(5) what are the potential policy implications of your conceptual analysis and/or proposed research or program evaluation?

(6) list any key publications or other sources that you will draw upon as you develop your project (this listing can be a partial rather than complete bibliography for your project; the more complete version can be turned in with your project on December 4).

(7) Please send me and Beth an electronic version (e.g., MS Word file) of your term project outline so that we can add comments to your outline using the "track changes" function in Word, and return the outline with my comments. For team projects, we just need one electronic copy from each team, rather than multiple printed copies of the outline from each team member. Please list all team members' names and e-mail addresses at the top of the first page of your outline.

### **Extra Credit Option for Students Opting to Develop an NSF Fellowship Proposal**

*Students who are interested in developing a National Science Foundation Graduate Research Fellowship proposal can earn 5 points of extra credit in this course. At our first class session on September 27<sup>th</sup>, Associate Dean of UCI's Graduate Division and Professor of Criminology, Law, and Society in Social Ecology will describe the opportunities associated with the NSF GRF program and the requirements for submitting a fellowship proposal to NSF by mid-November 2011.*

If you would like to pursue this extra credit option in SE200, please submit a draft two-page research statement (following the NSF guidelines) that outlines your proposed research. Have your faculty advisor review the proposal with you and offer her/his suggestions on it. Then submit your revised research proposal, along with a statement indicating that your faculty advisor has reviewed and approved it, to the designated EEE drop box for SE200 *by no later than Friday October 14<sup>th</sup>*. Also include a your own statement (not to exceed one typed page) reflecting on whether or not (and if so, in what ways) your proposed NSF research incorporates any of the SE200 course principles and themes addressed during weeks 1-3 of the course.

If your draft research statement submitted by October 14 culminates in an actual fellowship proposal submitted to NSF in mid-November, then you have the option of

turning in your complete fellowship proposal as your SE200 term project, which is due on November 29. If you decide to submit your final NSF proposal as your SE200 term project, then you should also include an additional one-page statement commenting on whether or not your proposal incorporates any of the principles and themes covered in this class over the course of the fall quarter (i.e., from weeks 1 through 10), and in what ways they have influenced the conceptualization of your research proposal.

Also, for the outline of your SE200 term project that is due on November 1, you will have the option of submitting a progress report on the development of your NSF fellowship project up to that point in the course, in lieu of developing one of the other term project options described above. However, if you prefer to develop an SE200 term project that is distinct from the extra-credit research synopsis submitted on October 14<sup>th</sup>, then you can choose to outline and complete that alternative project in lieu of handing in a completed NSF fellowship proposal on November 29.

**Course Calendar**  
**SEMINAR IN SOCIAL ECOLOGY**  
Schedule of Discussion Topics and Reading Assignments

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**Section I. Historical and Conceptual Foundations of Social Ecology**

The first section of the course reviews key developments in the history of Social Ecology, both as an interdisciplinary field and as an academic unit at UCI. Conceptual and methodological principles of ecological research are discussed.

Week 1  
September 27

**The Ecological Paradigm: Principles of Biological, Human, and Social Ecology**

**Assignment:**

Alihan, M.A. (1938). The doctrine and its setting (Chap. 1). Social ecology: A critical analysis. NY: Cooper Square Publishers, 1-10.

Binder, A. (1972). A new context for psychology: Social ecology. American Psychologist, *27*, 903-908.

Catalano, R. (1979). The biological basis of the ecological paradigm (Chap. 2); The ecological paradigm (Chap. 4). Health, behavior and the community: An Ecological Perspective. New York: Pergamon Press, 13-27, 64-86.

Christakis, N. A., & Fowler, J. H. (2007). The spread of obesity in a large social network over 32 years. The New England Journal of Medicine, *357*(4), 370-379.

<http://www.nejm.org/doi/full/10.1056/NEJMsa066082>  
<http://www.cdc.gov/obesity/data/trends.html#State>

Rashad, I., & Grossman, M. (2004). The economics of obesity. [https://wfs.gc.cuny.edu/PAnderson1/www/Papers/public interest published version 6-04.pdf?uniq=-vxuadc](https://wfs.gc.cuny.edu/PAnderson1/www/Papers/public%20interest%20published%20version%206-04.pdf?uniq=-vxuadc)

**Optional:**

Barbarasi, A-L., & Bonabeau, E. (May 2003). Scale-free networks. Scientific American, pp. 50-59. Available online from: <http://www.barabasilab.com/pubs.php>

Fowler, J.H., & Christakis, N.A. (2008). Dynamic spread of happiness in a large social network: Longitudinal analysis over 20 years in the Framingham Heart Study. British Medical Journal, *337*; a2338. Available online at:

[http://www.bmj.com/cgi/content/full/337/dec04\\_2/a2338](http://www.bmj.com/cgi/content/full/337/dec04_2/a2338)

Hawley, A. (1950). Human ecology: A theory of community structure. New York: Ronald Press, 3-10

Also, the Internet sites listed below provide additional information about the principles and themes of Social Ecology. See for example the Conceptual Social Ecology web page, the working definitions of Social Ecology posted at the SE275 site.

Conceptual Social Ecology:

<http://www.soceco.uci.edu/cse/cse.html>

Interdisciplinary Research in Social Ecology (SE275):

<http://eee.uci.edu/97s/51025/>

Institute for Social Ecology

<http://www.social-ecology.org/>

**Discussion  
Questions:**

What are the core principles or themes of ecological analysis? Are the principles of community structure proposed by the Chicago School human ecologists generalizable to urban areas throughout the US and beyond? What are some of the strengths and limitations of applying biological principles to the analysis of human communities? What societal circumstances contributed to the development of the Program in Social Ecology at UC Irvine during the early 1970s; and the obesity epidemic between 1980-present? In what respects does the Irvine School of Social Ecology incorporate or depart from earlier formulations of human ecology?

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Week 2  
October 4

**Levels of Analysis, Environmental Structure, and Contextual Scope of Ecological Inquiry**

**Assignment:**

Bullard, R.D., & Johnson, G.S. (2000). Environmental justice: Grassroots activism and its impact on public policy decision making. Journal of Social Issues, 56, 555-562.

Firey, W. (1945). Sentiment and symbolism as ecological variables. American Sociological Review, 10, 140-148.

Lynch, K. (1960). The image of the environment (Chap. 1); The city image and its elements (Chap. 3). The image of the city. Cambridge, MA: 1960, 1-13, 46-48.

Michelson, W. (1970). What human ecology left behind in the dust (Chap. 1). Man and his urban environment: A sociological approach. Reading, MA: Addison-Wesley, 3-32.

Stokols, D., Misra, S., Runnerstrom, M.G., and Hipp, J.A. (2009). Psychology in an age of ecological crisis: From personal angst to collective action. American Psychologist, 64 (3), 181-193.

Wicker, A.W. (1979). Introduction; Behavior settings (Chap. 1). An introduction to ecological psychology. Monterey, CA: Brooks/Cole, 1-5, 6-15.

**Optional:**

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. American Psychologist, 32, 513-530.

Milgram, S., & Jodelet, D. (1976). Psychological maps of Paris. In H.M. Proshansky, W.H. Ittelson, & L.G. Rivlin (Eds.), Environmental psychology. Second edition. New York: Holt, Rinehart, & Winston, 104-124.

Stokols, D. (1987). Conceptual strategies of environmental psychology. In D. Stokols & I. Altman (Eds.), Handbook of Environmental Psychology. NY: John Wiley & Sons, 42-47, 50-58.

**Discussion Questions:**

To what extent does the School of Social Ecology at UCI address Michelson's criticisms of earlier perspectives on human ecology? Which assumptions emphasized by the Chicago School human ecologists are challenged by Firey's analysis of sentiment and symbolism and Lynch's study of urban imageability? In what respects do biomes, behavior settings, and urban communities constitute ecological units of analysis? What are the distinctive attributes of contextual analyses of people-environment relations? What is meant by the *contextual scope* of a theory, research project, or community intervention? What are some of the ways in which global environmental, technological, and social changes are altering the structure and functioning of people's local environments?

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Week 3  
October 11

**Systems Theory as a Basis for Social Ecological Research: Homeostasis, Disequilibrium, and Deviation Amplification**

**Assignment:** Katz, D., & Kahn, R.L. (1966). Organizations and the system concept. The social psychology of organizations. NY: John Wiley & Sons, 14-29 [especially pp. 19-26].

Maruyama, M. (1963). The second cybernetics: Deviation-amplifying mutual causal processes. American Scientist, 51, 164-179.

Miller, J.G. (1978). The need for a general theory of living systems. In J.G. Miller, Living Systems. NY: McGraw-Hill, 1-8.

Milgram, S. (1970). The experience of living in cities. Science, 167, 1461-1468.

Wynne-Edwards, V.C. (1962). Self-regulating systems in populations of animals. Science, 147, 1543-1548.

**Optional:** Bales, R.F. (1949). Adaptive and integrative changes as sources of strain in social systems. In R.F. Bales, Interaction process analysis: A method for the study of small groups. Cambridge, MA: Addison-Wesley, 127-131.

Evans, G.W. (2004). The environment of childhood poverty. American Psychologist, 59, 77-92.

Selye, H. (1973). The evolution of the stress concept. American Scientist, 61, 692-699.

Simmel, G. (1950). The metropolis and mental life. Sociology of Georg Simmel. Glencoe, IL: The Free Press, 344-356.

Weick, K.E. (1974). Middle-range theories of social systems. Behavioral Science, 19, 357-367.

**Discussion  
Questions:**

What are the distinctive properties of open systems as outlined by Miller and Katz & Kahn? How do Milgram's analysis of urban life, Selye's conceptualization of stress, Bales' model of group dynamics, and Wynne-Edwards' theory of internal checks on population size exemplify system processes? In what ways do Maruyama's and Weick's analyses extend earlier formulations of systems theory? What are the strengths and limitations of systems theory as a framework for social ecological research?

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Week 3, Friday  
October 14      **\*Due date for submission of Extra Credit Projects\*** (*draft two-page research statement that provides the basis for an NSF Graduate Research Fellowship Proposal, along with a statement indicating that your faculty advisor has reviewed and approved your proposal*)

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Week 4  
October 18      **Interdependence of the Social and Physical Environment and Their Influence on Behavior and Well-being**

**Essay #1**      (*covering readings and lectures during weeks 1-3*)

**Assignment:**      Altman, I. (1975). Introduction. The environment and social behavior. Monterey, CA: Brooks/Cole Publishing Co., pp. 1-9.

Appleyard, D. (1981). Livable streets. Berkeley, CA: University of California Press. Chapters 1, 2 & 8 (15-28, 29-40, 139-144).

Baum, A., Fleming, R., & Davidson, L.M. (1983). Natural disaster and technological catastrophe. Environment and Behavior, 15, 333-354.

Gehl, J., & Gemzoe, L. (1996). The scale of the city center: Small units and many doors. Public spaces, public life. Copenhagen: The Danish Architectural Press, 32-33.

Katz, P. (1998). New urbanism. In W. van Vliet--(Ed.), The encyclopedia of housing. Thousand Oaks, CA: Sage Publications, 397-400.

Newman, O. (1973). Defensible Space. New York: Macmillan Publishing Co., 1-19.

Ulrich, R.S. (1984). View through a window may influence recovery from surgery. Science, 224, 420-421.

**Optional:**      Bullard, R.D. (1990). Dumping in Dixie: Race, class, and environmental quality. Boulder, CO: Westview Press, 1-36, 97-126.

Platt, J. (1973). Social traps. American Psychologist, 28, 641-651.

Wirth, L. (1938). Urbanism as a way of life. The American Journal of Sociology, 44, 1-24.

See also the following web sites on environmental justice and the new urbanism:

<http://www.umich.edu/~snre492/index.html>

<http://www.ejrc.cau.edu/>

<http://www.cnu.org/>

## Discussion

### Questions:

Interdependence between the physical and social dimensions of environments is a core theme in systems theory. In what respects is the interdependence between physical and social features of environments variable or constant? How do Altman's analysis of privacy, Appleyard's study of residential streets, Baum et al.'s analysis of technological and natural disasters, and Newman's theory of defensible space reflect the interdependent influence of the physical and social environment on behavior and well-being? What assumptions about the joint influence of physical and social environmental conditions are evident in Bullard's conceptualization of environmental racism and in Katz' formulation of the "new urbanism" as a framework for urban planning?

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Week 5  
October 25

## Disciplines, Paradigms, and Cross-Disciplinary Research

### Assignment:

Campbell, D.T. Ethnocentrism of disciplines and the fish-scale model of omniscience, 328-348. In M. Sherif & C. W. Sherif (Eds.), Interdisciplinary relationships in the social sciences. Chicago: Aldine Press, 1969.

Durkheim, E. The rules of sociological method. NY: The Free Press, 1-31.

Jessor, R. (1958). The problem of reductionism in psychology. Psychological Review, 65, 170-178.

Lewin, K. Principles of topological psychology. NY: McGraw-Hill, 1936, 11-13, 18-29.

Rosenfield, P.L. (1992). The potential of transdisciplinary research for sustaining and extending linkages between the health and social sciences. Social Science and Medicine, 35, 1343-1357.

Shapere, D. (1971). The paradigm concept. Science, 172, 706-709.

Stokols, D. (2006). Toward a science of transdisciplinary action research. American Journal of Community Psychology, 38, 63-77.

**Optional:**

Kuhn, T. (1970). The structure of scientific revolutions. Chicago: University of Chicago Press.

National Cancer Institute Science of Team Science Resources and American Journal of Preventive Medicine 2008 Supplement on the Science of Team Science:

<http://cancercontrol.cancer.gov/brp/scienceteam/index.html>

<http://cancercontrol.cancer.gov/brp/scienceteam/ajpm.html>

Northwestern University Science of Team Science Conferences:

<http://scienceofteamspace.northwestern.edu/2010-conference>

Stokols, D. (1998). The future of interdisciplinarity in the School of Social Ecology. Paper presented at the Social Ecology Associates Annual Awards Reception, University of California, Irvine. Available at: <http://eee.uci.edu/98f/50990/readings.htm>

Stokols, D., Harvey, R., Gress, J., Fuqua, J., & Phillips, K. (2005). *In Vivo* studies of transdisciplinary scientific collaboration: Lessons learned and implications for active living research. American Journal of Preventive Medicine, 28(2S2), 202-213.

TD-Net, Swiss National Academy of Arts and Sciences:

<http://www.transdisciplinarity.ch/e/index.php>

**Discussion  
Questions:**

What criteria are used by Durkheim and Lewin to demarcate the disciplines of psychology and sociology? In what ways are the notions of "distinct scientific disciplines", "disciplinary boundaries", and reductionism relevant to the development of social ecological theories? How are the concepts of discipline, paradigm, and theory interrelated yet distinct? According to Campbell, what are the major factors that constrain or facilitate interdisciplinary research? By what criteria does Rosenfield distinguish between multidisciplinary, interdisciplinary, and transdisciplinary research? How have these criteria been operationalized in recent studies of cross-disciplinary scientific collaboration?

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**Section II. Applying Social Ecological Theory and Research to**

## **Community Problem-Solving**

This section of the course examines applications of social ecological theory and research to the analysis and resolution of community problems, from the vantage point of Social Ecology's four academic departments.

Week 6  
November 1

### **Social Ecological Analyses of Community Problems and Unintended Side Effects of Community Interventions**

#### **Assignment:**

#### **\*Outlines of Term Projects Due\***

Altman, D. G. (1995). Sustaining interventions in community systems: On the relationships between researchers and communities. Health Psychology, *14*, 526-536.

Barksy, A.J. (1988). The paradox of health. New England Journal of Medicine, *318*, 414-418.

Geller, E.S. (1991) Where's the validity in social validity? Journal of Applied Behavior Analysis, *24*, 189-204.

Everett, P.B., Hayward, S.C., & Meyers, A.W. (1974). The effects of a token reinforcement procedure on bus ridership. Journal of Applied Behavior Analysis, *7*, 1-9.

Schulz, R., & Hanusa, B.H. (1976). Long-term effects of control and predictability-enhancing interventions: Findings and ethical issues. Journal of Personality and Social Psychology, *36*, 1194-1202.

Stokols, D. (1996). Translating social ecological theory into guidelines for community health promotion. American Journal of Health Promotion, *10*, 282-298 [especially pp. 287-295].

#### **Optional:**

Sarbin, T.R. (1970). The culture of poverty, social identity, and cognitive outcomes. In Allen, V.L. (Ed.), Psychological Factors in Poverty. Chicago: Markham Publishing Company, 29-47.

See also the following web site on building capacity for community change: <http://ctb.ku.edu/en/connect/>

#### **Discussion Questions:**

Compare and contrast the concepts of scientific and social validity. In what respects are the community interventions evaluated by

Schulz & Hanusa's and Everett et al. socially valid or invalid?  
What is meant by the "ecological depth" of intervention outcomes?  
What circumstances enhance the sustainability of community interventions?

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Week 7  
November 8      **Action Research and the Development of Transformational Theories**

**Essay #2**      *(covering readings and lectures during weeks 4-6)*

**Assignment:**      Gergen, K.J. (1978). Toward generative theory. Journal of Personality and Social Psychology, *36*, 1344-1360.

Platt, J.R. (1964). Strong inference. Science, *146*, 347-353.

**Optional:**      Stokols, D. (1988). Transformational processes in people-environment relations. In McGrath, J.E. (Ed.), The Social Psychology of Time: New Perspectives. Newbury Park, CA: Sage Publications, 233-252

**Discussion Questions:**      The articles by Gergen and Platt suggest rather different criteria for gauging the value of scientific research. What are the key functions of theory according to these authors? Are Gergen's and Platt's assumptions about the usefulness of scientific theories compatible or mutually exclusive? What conceptual "tradeoffs" should be considered when developing theories of broad vs. narrow contextual scope? What are the distinguishing features of transformational vs. non-transformational theories of people-environment transactions?

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Week 8  
November 15      **Social Ecological Analyses of Societal and Environmental Change**

**Assignment:**      Carr, N. (2008). Is Google making us stupid? The Atlantic Online (July-August) <http://www.theatlantic.com/doc/200807/google>

Hallowell, E.M. (2005). Overloaded circuits—Why smart people underperform. Harvard Business Review, January issue, 1-9.

Negroponte, N.P. (1995). The post-information age. In Being Digital. NY: Vintage Books, 163-171.

Putnam, P.D. (1995). Bowling alone: America's declining social capital. Journal of Democracy, 6, 65-78.

Shirky, C. (2010). Does the Internet make you smarter?  
<http://online.wsj.com/article/SB10001424052748704025304575284973472694334.html> The Wall Street Journal, June 4, 2010.

**Optional:**

Rosen, C. (2007). Virtual friendship and the new narcissism. The New Atlantis, 17 (Summer), 15-31.  
<http://www.thenewatlantis.com/publications/virtual-friendship-and-the-new-narcissism>

See also the following web sites on Healthy Communities Programs, sponsored by the National Civic League; and the "Digital Divide" in America

<http://ncl.org/about/>  
<http://www.ntia.doc.gov/ntiahome/digitaldivide/>  
<http://www.ntia.doc.gov/ntiahome/fttn99/contents.html>  
<http://www.ntia.doc.gov/ntiahome/fttn00/contents00.html>

**Discussion Questions:**

What are some of the social, behavioral, and health consequences of society's increasing reliance on digital communications? What are the defining features of "social capital" discussed by Putnam? In what ways do telecommunications technologies either strengthen or erode the social capital of a community?

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Week 9  
November 22

**Presentation and Class Discussion of Term Projects - I**

**Assignment:**

**\*First Set of Term Projects Submitted and Presented in Class\***

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Week 10  
November 29

**Presentation and Class Discussion of Term Projects - II**  
**Concluding Discussion of Course Themes**

**Assignment:**

**\*Second Set of Term Projects Submitted and Presented in Class\***

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