

FOR 6005 – Conservation Behavior

University of Florida

School of Forest Resources and Conservation

Fall 2014

Wednesday periods 7-9; 1:55 – 4:55 p.m.

222 Newins Ziegler Hall

In-person Section: 1F61; Online Sections: 1F62, 1F69, 1F76

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Conservation behavior is becoming an increasingly important concept as natural resource managers, development officers, educators, politicians, regulators, and business leaders consider what it takes to nudge people toward sustainable behaviors. Most acknowledge that our behavior plays an important role in creating and resolving environmental challenges. This course will explore what we know about human behavior and apply it to the design of helpful education and communication tools.

A variety of disciplines have something to contribute to the field of conservation behavior. While firmly rooted in psychology, we also explore sociological perspectives as change can occur at the individual and community scales. Disciplines as varied as anthropology, engineering, recreation, economics, and health may also be tapped as we consider motives for and applications of behavior change research.

While it is important to understand environmental issues and solutions, that is not the purpose of this course. Education and communication play essential roles in creating a sustainable future. We will explore the theoretical foundation and application of using education and communication strategies in our collective efforts to reach this goal. This course is geared toward those who will be conducting research on behavior change or working with the public in a variety of formal and nonformal settings to develop strategies that support responsible environmental behavior.

Course Overview:

Link theories of human behavior and change to education and communication strategies designed to move toward sustainability.

Course Objectives:

- Explain the alternative models or theoretical frameworks that can be used for analyzing the questions: Why do some people demonstrate environmentally responsible behaviors (ERB)? What are the barriers to pro-environmental behavior? What encourages the formation of ERB? Identify the similarities and differences among these models.
- Explain a range of education and communication strategies and identify the underlying theoretical assumptions about human behavior.

- Examine current programs that are working toward sustainability by identifying how the programs address change, the behaviors that are targeted, the strategies that are used, and the theoretical frameworks/assumptions that might drive the programs.
- Explore your own ideas and experiences regarding personal behavior change and develop a composite model of what you think works to support behavior change in people like you.

Required Readings:

There is one textbook and a pile of reading materials for this course. It is imperative that you read the materials before class, as much of our class time will be spent discussing the readings. The readings are available on electronic reserve at <https://ares.uflib.ufl.edu/ares/>. You can set your page with your courses and can find this one under FOR 6005 or Monroe. You can also access these readings through Canvas, the online course system.

Off-campus students are encouraged to access the electronic course reserve system through the UF VPN client. The new VPN client is easily installed and configured, and provides easy access to electronic materials. For more information on downloading, installing and using the VPN client, please go to <http://www.uflib.ufl.edu/login/vpn.html> For human assistance, please contact Rhiannon Pollard or Sandy sfrc-online@ifas.ufl.edu. For general information on course reserves, please contact the Course Reserves Unit at 352-273-2520, or email at eres@uflib.ufl.edu.

The text should be available at bookstores or Amazon: McKenzie-Mohr, Douglas. 2011. *Fostering Sustainable Behavior, third edition*. Gabriola Island, BC: New Society Publishers. You can also read the older editions written with William Smith.

Course Policies

This course depends on active student engagement. You will read and discuss a number of models and research studies that contribute to our understanding of conservation behavior. The workload is heavy on theory and thinking in the first half of the course and designed to give you a practical, working knowledge of this literature. The time you spend on reading probably correlates to your ability to engage in productive discussion and the amount you will learn about each theory.

Students are expected to attend class, engage in discussion, submit assignments on time, and participate in group work. Absences will be excused if accompanied by advanced notice or appropriate paperwork. Assignments are to be turned in during class on the day they are due.

Academic Honesty

As a result of completing the registration form at the University of Florida, every student has signed the following statement: "I understand that the University of Florida expects its students to be honest in their academic work. I agree to this commitment to academic

honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.” Please also refer to the UF guidelines on plagiarism at <http://web.uflib.ufl.edu/msl/07b/instructorplagiarism.html> and plan on avoiding all types of plagiarism: stealing, misquoting, insufficient paraphrasing, and duplication.

UF Counseling Services

Resources are available on campus for students having personal problems or lacking clear career and academic goals with interfere with their academic performance. These resources include:

1. University Counseling Center, 301 Peabody Hall, 392-1575 (personal and career counseling);
2. Student Mental Health, Student Health Care Center, 392-1171 (personal counseling);
3. Center for Sexual Assault /Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161 ext. 4231 (counseling related to sexual assault and abuse);
4. Career Resource Center, Reitz Union, 392-1601 (career development assistance and counseling).

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.

Disabilities

Students with disabilities have the right to equal access, use, and benefit of course materials. Please contact me with specific needs and suggestions for how the course can best serve you. It may be helpful to register with the University of Florida Disability Resource Center. They can assist in accommodation. For more information on services for students with disabilities, contact the University of Florida Disability Resource Center at 352-392-8565 or at accessuf@dso.ufl.edu

Grades

Your grade will be determined from the level and frequency of class participation, class worksheets and presentations, attendance, and 8 take-home assignments that total 100 points. The following scale will be used:

Grading Scale

A	3.67 – 4.0	93 – 100%	C	1.67 – 1.99	73 – 76%
A-	3.33 – 3.66	90 – 92%	C-	1.33 – 1.66	70 – 72%
B+	3.00 – 3.32	87 – 89%	D+	1.00 – 1.32	67 – 69%
B	2.67 – 2.99	83 – 86%	D	0.67 – 0.99	63 – 66%
B-	2.33 – 2.66	80 – 82%	D-	0.33 – 0.66	60 – 62%
C+	2.00 – 2.32	77 – 79%	E	0	59% or below

Course Schedule

Aug 27 **1. Introduction, General Framework, Getting Started**

Assignments and Theory Chart

Discuss ideas for personal habitual behavior changes

Section 1: Exploring Theories

Sept 3 **2. Intuitive and traditional models of human behavior change**

Begin to complete the comparison chart

Kibert, C., M. Monroe, A. Peterson, R. Plate, L. Thiele. 2012. Portion of chapter 8: Improving our thinking about sustainability, from *Working toward Sustainability: Ethical decision making in a technological world*. NY: John Wiley & Sons, pages 209--222.

Schultz, P. Wesley. 2002. Knowledge, Information, and Household Recycling: Examining the knowledge-deficit model of behavior change. In Dietz, Thomas and Paul C. Stern (eds) *New Tools for environmental protection: Education, information, and voluntary measures*. Washington DC: National Academy Press, Pages 67-82.

Aronson, E. 1997. Back to the future: Retrospective review of Leon Festinger's A Theory of Cognitive Dissonance. *American Journal of Psychology*. 110 (1): 127-137

Sept 10 **3. Motives, values, emotion, and behavior change**

Due: Assignment 1: Barriers and motives for personal behavior

De Young, Raymond. 2000. Expanding and evaluating motives for environmentally responsible behavior. *Journal of Social Issues*. 56 (3): 509-526.

Schultz, P. W. 2000. Empathizing with nature: The effects of perspective taking on concern for environmental issues. *Journal of Social Issues* 56 (3): 391-406.

Dietz, T., A. Fitzgerald, and R. Shwom. 2005. Environmental Values. *Annual Review of Environment and Resources* 30:335-372.

Sept 17 **4. Responsibility, hope, identity and behavior**

Arnocky, S., M Stroink, and T. DeCicco. 2007. Self-construal predicts environmental concern, cooperation, and conservation. *Journal of Environmental Psychology*. 27(4): 255-264.

Kaiser, F. and T. Shimoda. 1999. Responsibility as a predictor of ecological behavior. *Journal of Environmental Psychology*. 19, 243-253.

Stets, J. E. and P. J. Burke. 2000. Identity theory and social identity theory. *Social Psychology Quarterly*, 63(3): 224-237.

Snyder, C.R., Rand, K. L., and Sigmon, D.R. 2001. Hope theory. A member of the positive psychology family. In *Handbook of positive psychology*, ed. C.R. Snyder and S.J. Lopez, 257-75. New York, NY: Oxford University Press.

Hiroto, D. S. and M. E. P. Seligman. 1975. Generality of learned helplessness in man. *Journal of personality and social psychology*. 31(3): 311-327.

Sept 24 5. Major models of behavior

Ajzen, I. 1985. From intentions to actions: A theory of planned behavior. In Kuhl, J. and J. Beckman (eds) *Action-control: From cognition to behavior*. Heidelberg: Springer, pp 11-39.

Stern, Paul C. 2000. Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*. 56 (3): 407-424.

October 1 6. Communication and social change

Petty, Richard E. and Joseph R. Priester. 1994. Mass Media Attitude Change: Implications of the Elaboration Likelihood model of persuasion. In Bryant, Jennings and Dolf Zillmann, *Media Effects: Advances in theory and research*. Hillsdale NJ: Lawrence Erlbaum Associates. Pages 91-122.

Rogers, Everett. M. 1995. *Diffusion of Innovations*. New York: Free Press. Pages 1-37.

Kaplan S. and Kaplan R. (2009). Creating a larger role for environmental psychology: The Reasonable Person Model as an integrative framework. *Journal of Environmental Psychology*. 29: 329-339.

Section 2: Review and Compare Theories

October 8 7. Presentations and Review (Assignment 3) – no class in NZ this week. Everything is online.

Upload presentations and handouts by classtime on October 8, though you can upload it any time prior to this, of course. View all and comment on at least six presentations by Oct 15 and then complete Assignment 4.

Vining, Joanne and Angela Ebreo. 2002. Emerging theoretical and methodological perspectives on conservation behavior. In Bechtel, Robert and Arza Churchman (eds) *Handbook of Environmental Psychology*. New York: John Wiley, 541-558.

Oct 15 8. Discuss Assignment 4 and Other Theories

Come with questions and a completed chart (Assignment 4).

Section 3: Apply Theories

Oct 22 9. Social Marketing

McKenzie-Mohr, Doug. 2011. *Fostering sustainable behavior: An introduction to community-based social marketing*. Gabriola Island, BC: New Society Publishers.

Oct 29 10. Adult Audiences and Behavior Change

Collins, K. and R. Ison. 2009. Jumping off Arnstein's ladder: Social learning as a new policy paradigm for climate change adaptation. *Environmental Policy and Governance*. 19(6): 358-373

Muro, M. and P. Jeffrey. 2008. A critical review of the theory and application of social learning in participatory natural resource management processes. *Journal of environmental planning and management*. 51(3): 325-344.

Berkes, F. 2009. Evolution of co-management: Role of knowledge generation, bridging organizations, and social learning. *Journal of environmental management*. 90: 1692-1702.

Thaler, R. H. and C. R. Sunstein. 2003. Libertarian Paternalism. *The American Economic Review*. 93(2): 175-179.

Hausman, D. M. and B. Welch. 2010. Debate: To nudge or not to nudge. *Journal of political philosophy*. 18(1): 123-136.

Dietz, T., E. Ostrom, P. C. Stern. 2003. The struggle to govern the commons. *Science*. 302(5652): 1907-1912.

Nov 5 11. Designing campaigns and questioning their value

Geller, Scott. 2002. Chapter 34: The challenge of increasing proenvironment behavior. In Bechtel, Robert and Arza Churchman (eds) *Handbook of Environmental Psychology*.

Weick, Karl E. 1984. Small Wins: Redefining the scale of social problems. *American Psychologist*, 39 (1): 40-49.

De Young, R. 1993. Changing behavior and making it stick: The conceptualization and management of conservation behavior. *Environment and Behavior* 25, 485-505.

Crompton, T. 2008. *Weathercocks and Signposts: The environment movement at a crossroads. A report of the WWF-UK's Strategies for Change Project*. Surrey, UK: WWF.

Tilbury, D. and D. Wortman. 2008. How is community education contributing to sustainability in practice? *Applied Environmental Education and Communication* 7(3): 83-93.

Nov12 12. Using Education and Reaching Youth

Hines, J. M., H. R. Hungerford, A.N. Tomera. 1986/87. Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *Journal of environmental education*. 18 (2): 1-8.

Hungerford, Harold R. and Trudi L. Volk. 1990. Changing learner behavior through environmental education, *Journal of Environmental Education*. 21 (3): 8-22.

Wells, N. M. and K. S. Lekies. 2006. Nature and the life course: Pathways from childhood nature experiences to adult environmentalism. *Children, Youth, and Environments*. 16(1): 1-25.

Billig, S. H. 2000. Research on K-12 school-based service learning: The evidence builds. *Phi Delta Kappan*. May 2000. 658-664.

Uzzell, D. 1999. Education for environmental action in the community: new roles and relationships. *Cambridge Journal of Education*, 29(3): 397-413.

Jensen, B. B. 2002. Knowledge, action, and pro-environmental behavior. *Environmental Education Research*, 8(3): 325-334.

Nov 19 13. Poster Presentations (Assignment 5)

Bring poster to class, review and discuss.

Nov 26 No Class Thanksgiving Break

Section 4: Synthesis

Dec 3 14. Putting it All Together with Climate Change

Kollmus, A. and J. Agyeman. 2002. Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research* 8 (3): 239-260.

Pike, C., B Doppelt, and M. Herr. 2010. *Climate communications and behavior change: A guide for practitioners. The climate leadership initiative*. 54 pages.

OR

Center for Research on Environmental Decisions. 2009. *The psychology of climate change communication: A guide for scientists, journalists, educators, political aides, and the interested public*. 2010. Columbia University, New York. [Cred.columbia.edu/guide](http://cred.columbia.edu/guide).

Dec 10 15. Your Behavior Change Projects (Assignment 6)

Submit your journal and synthesis. Present on what worked and didn't as you engaged in behavior change.

Assignments

1. Barriers and motives for personal behavior

Sept 10 5 points

Throughout this semester you will use readings and class discussions to change your own behavior regarding food, transportation, or energy. During the first two weeks you will select a behavior. For this assignment, you will 1) define the behavior you wish to change, 2) explain why you think this is an important behavior to change, 3) why you haven't changed it yet, 4) what you think are barriers to making this change, and 5) your motivations for wanting to change it. 1-2 pages single spaced. Please keep a journal on your efforts to use for Assignment 6.

2. Three research articles on theories

10 points each

Between weeks 2 and 6, select three theories, models, or authors that you are interested in and find a research-based article that explores this theory with a topic of interest to you. Read the article, write a 1-2 page paper in which you summarize the findings and reflect on the theory, and come to class prepared to discuss how the theory we read has or has not worked in this case. To find cited works, go to www.uflib.ufl.edu, Databases tab, Project Starters, Web of Knowledge, Web of Science, Cited Reference Search, and input Cited Author and Cited Work. Narrow search with social science, etc.

3. Present another behavior change theory

Oct 8 15 points

Using Vining's overview of behavior change theories (and others), identify one that we have not yet covered and become an expert on it. Partner with someone from the online section. Read the author's explanation and find one application of it. Some may not have been applied to conservation topics yet. What can we learn from these authors? Prepare a 1-2 page handout for the class to accompany your short (10 minute) presentation that will help everyone complete their Comparison Charts. Upload your handout and presentation to Voice Thread by October 8.

Antonovsky	Sense of Coherence
Bandura	Self efficacy and outcome expectancy
Brehm and Brehm	Reactance
Chawla	Significant Life Experience
Deci and Ryan	Self Determination
Fazio	Attitudes and Behavior
Haidt	Moral Foundation Theory

Kahneman & Tversky	Cognitive Heuristics
Kals & Schumacher	Emotional Affinity
Krasny	Civic Ecology Education
Millar and Millar	Direct Experience, Information
Prochaska	Stages of Change
Ryff	Scales of psychological well-being
Sansone	Self Regulation
Schwartz	Norm Activation
Seguin & Pelletier	Environmental activism
Tuan	Sense of Place (see Jorgensen and Stedman)
Vaske and Donnelly	Value-Attitude-Behavior Model, Cognitive Hierarchy

4. Application of Theories **Oct 15 10 points**

Complete a take home quiz that asks you to apply these theories to potential survey questions. We will discuss in class on October 15. Everyone submit their original responses and new reflections after class discussion.

5. Case study of a program/project **Nov 19 15 points**

Identify a program or project that is designed to encourage people to engage in or change environmental behavior. Describe the program, critique the degree to which the program is successful, and suggest which theories are or are not working. Explain why. Create a poster that describes your program or project and makes clear the connection to theory. Bring the poster to class. Online students upload to Voice Thread by Nov 19.

6. Reflection & Model of Personal Behavior Change **Dec 10 15 points**

Throughout the semester you have worked on changing a behavior that you selected. Return to your first assignment and reflect on your initial ideas about motivations and barriers. Reflect on your attempts to alter your behavior and what worked and why. What incentives did you try? Did commitment work? To what extent is perceived control or subjective norm a relevant factor? Using what did or did not work for you, describe an all-encompassing model that explains your behavior change using at least four of the theories and models that resonate most strongly with your experience. Consider the context in which this model might hold true – all behaviors, just personal behavior, just public behavior; any behavior or only self-selected behaviors; only when motivated by a class assignment etc.? Then describe how you could use this model to design communication or education programs to change personal behaviors. Due in our last class. About 5 pages, single spaced.

Participation points from participation, questions, attendance **10 points**

Asking questions, providing answers, facilitating conversation, attending class, and engaging in small group work are important components of this class.

Suggested readings to support conservation behavior

Oskamp, S. 2000. Psychological contributions to achieving an ecologically sustainable future for humanity. *Journal of Social Issues*, 56 (3): 373-390.

Meadows, D.J., Meadows, and Randers.2002. Overshoot but not collapse, in *Beyond the Limits*.

Monroe, M. C. 2003. Two avenues for encouraging conservation behaviors, *Human Ec Rev* 10(2): 113-125.

Heimlich, J.E., & Ardoin, N.M. 2008. Understanding Behavior to Understand Behavior Change: A Literature Review. *Environmental Education Research*. Vol. 14, No. 3, pp. 215-237.

Advisory Committee for Environmental Research and Education. 2009. Transitions and tipping points in complex environmental systems. A report by the NSF Advisory Committee for Environmental Research and Education. 56 pages.

Wackernagel, M. et al. 2002. Tracking the ecological overshoot of the human economy. *PNAS*. 99(14): 9266-9271.

Marten, G. et al. 2005. Environmental Tipping Points. *World Watch*. 18(6): 10-14.

Specific Theories and Concepts

Chawla, L. 1998. Significant life experiences revisited: A review of research on sources of environmental sensitivity. *Environmental Education Research*. 4 (4): 369-382. Also of interest: Chawla. 1999. *Journal of Environmental Education* 31 (1): last 2 pages.

NEETF. 2001. Using Environment-based Education to advance learning skills and character development. <http://www.neefusa.org/pdf/EnviroEdReport.pdf>

Jorgensen. B. S. and R. C. Stedman. 2001. Sense of place as an attitude: Lakeshore owners attitudes toward their properties. *Journal of Environmental Psychology*. 21, 233-248.

Adler, P. S. and S-W Kwon. 2002. Social Capital: Prospects for a new concept. *The Academy of Management Review*. 27(1): 17-40.

Pahl-Wostl, C. 2006. The importance of social learning in restoring the multifunctionality of rivers and floodplains. *Ecology and Society*. 11(1): 10. <http://www.ecologyandsociety.org/vol11/iss1/art10/>

Zelezny, L. C. 1999. Educational interventions that improve environmental behaviors. *JEE* 31(1): 5-10.

Keen, M., V. A. Brown, and R. Dyball. 2005. *Social Learning in environmental management: Towards a sustainable future*. London: Earthscan.

Kaplan, Stephen. 2000. Human nature and environmentally responsible behavior. *Journal of Social Issues*. 56 (3): 491-508.

To select a behavior:

Dietz, T., G. T. Gardner, J. Gilligan, P. C. Stern, M. P. Vandenbergh. 2009. Household actions can provide a behavioral wedge to rapidly reduce U.S. carbon emissions. *PNAS*. 106(44): 18452-18456. Available at www.pnas.org/cgi/doi/10.1073/pnas.0908738106

“The problem of what to eat” *Conservation*, July-Sept 2008, 9(3): 28-38