

FOR 6005 – Conservation Behavior

University of Florida

School of Forest Resources and Conservation

Fall 2016

Online Sections: 1G41, 1G42, 1G49

Professor: Martha C. Monroe, 846-0878, mcmonroe@ufl.edu

Office Hours: Thursday 9-12 and on request

TA: Lily Maynard, lilytmaynard@ufl.edu

Office Hours: Wednesday 10-12 and on request

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, 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 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 and become comfortable using them.
- 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 Wednesday of each week, as much of the learning about the readings will occur during discussion. The readings are available on electronic reserve at <https://ares.uflib.ufl.edu/ares/> and there is a link to them in the Canvas course at <https://elearning.ufl.edu>. Access from off campus is through the UF VPN client. For more information on downloading, installing and using the VPN client, please go to <http://www.uflib.ufl.edu/login/vpn.html>. For general information on course reserves, please contact the Course Reserves Unit at 352-273-2520, or email at eres@uflib.ufl.edu. If you have questions or trouble with using Canvas or eLearning, please post in the Technical Support Discussion within the course. If you have time-sensitive eLearning trouble please call the UF Helpdesk (open for calls 24/7) at 352-392-4357.

The text should be available at Amazon: McKenzie-Mohr, Douglas. 2011. *Fostering Sustainable Behavior, third edition*. Gabriola Island, BC: New Society Publishers. You will be reading this book for discussion October 5, so please order it immediately.

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 in the first half of the course and designed to give you a 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.

The learning that takes place through readings is greatly enhanced by active discussion. Unfortunately, an online class with presentations and readings rarely allows adequate time for dialogue. To better take advantage of the assignments and readings selected, students will engage in reflection and discussion in Canvas, sometimes responding to specifically posed questions, other times reacting to the thoughts of others. ***Each week two students will serve as on-line facilitators of discussion*** and will determine additional questions or prompts. They will be responsible for facilitating discussion, prompting their peers with questions, and summarizing the main concepts (and making sure there are answers to questions about completing the chart). There is an assignment in Canvas that explains how to sign up to facilitate.

Discussions occur between Wednesday and Saturday, with the first post at least by Thursday noon and the second responses and continued dialogue through Sunday. Please

plan to review any summary posts the following week. Assignments are due by Sunday at midnight, Eastern Standard Time through Canvas or Voice Thread.

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

Week 1 Introduction, General Framework, Getting Started

Watch video and ask questions about Assignments and Theory Chart
Discuss ideas for personal habitual behavior changes
Order book and set up VPN to access readings
Sign up for facilitating discussions and Assignment 5
Read the readings assigned for week 2

Section 1: Exploring Theories

Week 2 Intuitive and traditional models of human behavior change

Begin to complete the comparison chart and discuss Assignment 2

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. (For assignment 2, use Kahneman and Tversky or rationality)

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. (for Assignment 2, use knowledge-deficit)

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 (For assignment 2, use Festinger)

Week 3 Motives, values, emotion, and behavior change

Due: Assignment 1: Barriers and motives for personal behavior
Complete the comparison chart and discuss Assignment 2

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. (for assignment 2, use any of the theories they cite)

Week 4 Responsibility, hope, identity and behavior

Complete the comparison chart and discuss Assignment 3

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.

Week 5 Major models of behavior

Complete the comparison chart and discuss Assignment 3 or 4

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.

Week 6 Communication

Complete the comparison chart and discuss Assignment 4

Start working on Assignment 5

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.

Week 7 Social Marketing

Use your comparison chart to think about what theories social marketing uses!

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

Week 8 Questioning and Using Social Marketing

Finish up Assignment 5

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.

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.

Section 2: Review and Compare Theories

Week 9 Presentations and Review (Assignment 5)

Upload presentations and handouts by midnight Sunday October 16, though you can upload it any time prior to this, of course. View all presentations in Voice Thread and ask questions or provide comments on at least six presentations by Oct 23. Please respond to all comments on your presentation by October 25. Download and work on Assignment 6.

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.

Week 10 Discuss Assignment 6 and Other Theories

Submit a completed worksheet by Sunday October 23. Interact on the discussion threads to ask questions and comment on your ideas. Watch the in-class discussion which will be posted on Thursday Oct. 27 or join the discussion live on Wednesday October 26 from 2:00 to 5:00 EST. Resubmit your worksheet with tracked changes or additional comments that highlight what you've learned.

Section 3: Apply Theories

Week 11 Change at the Community Level and in Resource Management

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.

Diani, M. 1997. Social movements and social capital: A network perspective on movement outcomes. *Mobilization*, 2(2): 129-147.

Pretty, J. 2003. Social Capital and the Collective Management of Resources. *Science*, 302(5652): 1912-1914.

Bodin and Crona. 2009. The role of social networks in natural resource governance: What relational patterns make a difference? *Global environmental change*, 19(3): 366-374.

Week 12 In Context: Considering Audiences and Opportunities

Everyone read the first article, and select at least 3 others from the themed options.

All: 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.

Youth: 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.

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

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

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

Gender: Tindall, D. B., S. Davies, C. Mauboulès. 2003. Activism and conservation behavior in an environmental movement: The contradictory effects of gender. *Society and Natural Resources*, 16(10): 909-932.

Visitors/Nonformal: Peake, Innes, and Dyer. 2009. Ecotourism and conservation: Factors influencing effective conservation messages. *Journal of Sustainable Tourism* 17(1): 107-127.

Visitors/Nonformal: Clayton, Fraser, and Burgess. 2011. Role of Zoos in Fostering Environmental Identity. *Ecopsychology* 3(2): 87-96.

Week 13 Poster Presentations (Assignment 7)

Upload posters to Voice Thread by November 20, then spend all of Thanksgiving Break reviewing and commenting! Return to your poster to respond to comments.

Section 4: Synthesis

Week 14 Putting it All Together with Program Design

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.

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

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.

Kenis, A. and E. Mathijs. 2012. Beyond individual behavior change: the role of power, knowledge and strategy in tackling climate change. *Environmental Education Research*, 18(1): 45-65.

Week 15: Your Behavior Change Projects (Assignment 8)

Submit your synthesis paper and model as an Assignment and also email your paper to your Behavior Buddies. Discuss among yourselves to identify similarities and challenges from your experiences, and develop a joint model with your theories. Share your ideas and results in Discussion. , .

Assignments

1. Barriers and motives for personal behavior **Sept 4 5 points**

Throughout this semester you will use readings and class discussions to change a personal behavior that you select. To give yourself the most fodder for contemplation, please select a habitual behavior that relates to food, transportation, or energy.

For this first assignment, you will 1) define the behavior you wish to change, 2) explain why you think this is an important behavior to change, 3) explain why you haven't changed it yet, 4) describe the barriers you experience to making this change, and 5) describe your motivations for wanting to change it. 1-2 pages, single spaced.

Then, throughout the semester you will keep a journal, try different strategies to adopt a new behavior, discuss your efforts with "behavior buddies" and analyze your efforts in the context of the theories we discuss in this course. Aim to record evidence of your attempts, in addition to your thoughts about your behavior, and to reflect on your progress with your "behavior buddies" during class.

2, 3, and 4. Three research articles on theories **10 points each**

For each assignment, select one theory/paper from class that you are interested in and find a **research-based article** that explores this theory with a topic of interest to you. Please avoid assigned reading for the course (you will have to check ahead in the syllabus). Read the article, write a 1-2 page paper in which you summarize the findings and reflect on the theory you selected, and come to class prepared to discuss how the theory we read has or has not worked in this case. Submit your paper on the day we discuss the theory.

- **Assignment 2 is due at the beginning of week 2 or 3,**
- **Assignment 3 is due at the beginning of week 4 or 5,**
- **Assignment 4 is due at the beginning of week 5 or 6.**

Please note that some authors talk about someone else's theory – please hunt for research articles that test and explore the theory. To find cited works, go to www.uflib.ufl.edu and follow these steps: Click on Databases and Journals tab, then Project Starters, Web of Science, Cited Reference Search, and input Cited Author and Cited Work. Narrow search with social science, etc.

5. Present another behavior change theory **Oct 16 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. You may choose to do this assignment

on your own, or you may partner with someone from class. If you have a partner, make sure you discuss your available time and responsibilities. Partners should report on twice the number of articles that individuals use. You can see the topics available in an assignment in Canvas. Sign up to select your topic there. Find and read the author's explanation of the theory you select and find one application of it (per person). 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 16 and narrate the presentation in Voice Thread. Review all the presentations and comment on at least six by Sunday October 23. Respond to comments and questions by October 25.

Adler and Kwon	Social Capital
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

6. Application of Theories **Oct 23 10 points**

Complete a take home quiz that asks you to apply these theories to potential survey questions. We will discuss during week 10. Everyone will submit their original responses on Sunday and new reflections after watching the video and discussing.

7. Case study of a program/project **Nov 20 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. Upload your poster to Voice Thread by Nov 20 and read everyone's poster by Nov 30.

8. Reflection & Model of Personal Behavior Change **Dec 4 15 points**

Throughout the semester you have worked on changing a personal behavior that you selected. Return to your first assignment and reflect on your initial ideas about motivations and barriers. Review your journal that noted your attempts to alter your behavior and the evidence of your effort. Reflect on what worked and why. What incentives did you try? Did commitment work? To what extent is perceived control or subjective norm a relevant factor? Summarize your experience in the language we used in the course (identifying variables, barriers, theories, etc.) in about 2 single spaced pages.

Then, using what did or did not work for you, develop and describe an all-encompassing synthesis model that explains your behavior change using at least four of the theories and models that resonate most strongly with your experience. You should consider and define 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, with peer support, etc. Then describe how you could use this model to design communication or education programs to change other people’s personal behaviors. The model description should be about 3-4 pages. The final assignment should be a total of 5 pages, single spaced, with a graphic model.

Participation points from participation, questions, attendance 40 points

Asking questions, providing answers, posting in a timely manner and responding to others, facilitating conversation, and engaging in small group work are important components of this class. Up to 2 points will be awarded to coherent posts each week that explore the readings, make connections between these readings and others or with current issues, and respond to other students’ comments and questions. Up to 5 points will be earned by each facilitator during their week.

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