EAS 561 / ENV 361 / PSYCH 362 – Psychology of Environmental Stewardship

Winter 2020 - Mon/Wed 1:00 – 2:20 pm - 1040 DANA

INSTRUCTORS

Raymond De Young	rdeyoung@umich.edu	2034a Dana (Instructor)	Mon 2:30-3:30 or by appt
Peter Siciliano	psicili@umich.edu	2034 Dana (Grad GSI)	Office Hrs:
Cameron Clark	clarkcam@umich.edu	2034 Dana (Undergrad GSI)	Office Hrs:
Kirk Acharya	vacharya@umich.edu	2034 Dana (Undergrad GSI)	Office Hrs:

RESOURCES

All required and optional readings and course materials are available on Canvas.

ASSIGNMENTS & GRADING

Exam 1	20%	February 24
Exam 2	20%	April 20
Projects:		
Story project 1 – SP1 – *StoryCorps* upload (individual)	15%	January 31
Story project 2 – SP2 – *StoryCorps* upload (individual)	15%	March 13
Story project 3 – SP3 – Poster presentation (group)	15%	April 13 & 15
Participation (tasks, attendance, quizzes, etc.)	15%	Throughout term

SCHEDULE

			1/8	Orientation & Story Projects
1/13	Information-based models (RPM)		1/15	Story & Prospection
1/20	MLK DAY – NO CLASS		1/22	Education-Based Models (Hines et al.)
1/27	Social Marketing (CBSM)		1/29	Rational Actor Models (TRA, TPB)
2/3	Norm-Based Models (NAM, VBN)		2/5	Stages of Change & Evaluation Metrics
2/10	Extrinsic Motivation		2/12	Commitment
2/17	Intrinsic Motivation		2/19	*Project Day* – SP3 site description & model select
2/24	**EXAM 1**		2/26	Social & Team-Based Strategies
3/2	WINTER BREAK – NO CLASS		3/4	WINTER BREAK – NO CLASS
3/9	*Project Day* – Evaluating interventions		3/11	Norms, Modeling & Moral Judgement
3/16	Knowledge, Attitudes & Habit		3/18	Prompts
3/23	*Project Day* – SP3 story draft		3/25	Feedback, Planning & Goal Setting
3/30	Framing & Fear (ELM)		4/1	Nudges & Gamification
4/6	*Project Day* – SP3 poster draft		4/8	Consumption & Well-being
4/13	**Poster Presentations** – 1		4/15	**Poster Presentations** – 2
4/20	**EXAM 2**			

ASSIGNMENT DETAILS

EXAMS (40%): Two exams will be given. These will test your comprehension of material covered in lectures, in-class discussions, and assigned readings. Exams may include short answer, fill-in-the-blank, matching, labeling, essay, and/or multiple choice questions. Make-up exams will only be provided for students who offer a written or other formal evidence of emergencies (e.g., an absence outside their immediate control, like serious illness) and **notify us within 48 hours of the missed exam**.

STORY-BASED PROJECTS (45%): The term projects will explore story-based interventions. The first two projects will involve recording interviews with individuals using a _StoryCorps_ app and then uploading the completed interviews to a _StoryCorp_ Community site created for the course. More details on these assignments will be handed out in class.

StoryCorps downloads:
1. The app is available from: https://storycorps.org/participate/storycorps-app
2. Getting started: https://storycorpsorg-staging.s3.amazonaws.com/uploads/Getting-Started.pdf
3. Interview tips: https://storycorpsorg-staging.s3.amazonaws.com/uploads/Interview-Tips.pdf
4. Sound quality management: https://storycorpsorg-staging.s3.amazonaws.com/uploads/Improve-Sound-Quality.pdf

Project overviews:

- **Story Project 1 – Increasing local food consumption.** Individuals will interview members of the SEAS and PITE community regarding their local food consumption, and in particular, changes in their own, their family's or their extended family's relationship to local food over the decades.

  Currently, 99.7% of food is sold through the industrialized food distribution system. In this system farms receive only 17 cents on the retail dollar (Argus Food Stop, 2018). This project will explore ways to change these numbers for the better.

- **Story Project 2 – Preparing for the climate emergency.** Individuals will interview adults on what steps they (their family, or their neighborhood) have taken to prepare for an event caused by the climate crisis. Increasingly, the news is reporting climate-caused emergencies (i.e., the recent fires in Australia being a dramatic example).

  Families and neighborhoods have begun to prepare for such events. Some follow government advice (Ready.gov), others the _WireCutter_ suggestions (https://thewirecutter.com/reviews/emergency-preparedness). Many have only started to consider what it means to be prepared. This project will explore people's readiness to become prepared for events that very recently would be unimaginable.

- **Story Project 3 – Imagining that Ann Arbor achieves carbon neutrality by 2030.** This will be a team-based project that imagines that Ann Arbor achieves its goal by being carbon neutral by 2030. It tells a story of how it happened, making reference to the behavior change models covered in the course.

  Background: In November 2019, Ann Arbor City Council passed Resolution 19-2103: _A Resolution in Support of Creating a Plan to Achieve Ann Arbor Community-Wide Climate Neutrality by 2030_ (A2Zero project at www.a2zero.org). This Resolution commits the City to creating a living plan for achieving carbon neutrality within this decade. This is an incredibly ambitious goal. It will involve an iterative process designed to reduce our collective ecological footprint and enhance community and neighborhood resilience. The collective here is huge: all residential, all commercial, all city, and all U-M

facilities and behaviors (i.e., scope 1, 2 and 3 emissions). The timeline for the initial planning process is very tight. The City Council intends to present the plan to the public on *Earth Day* (April 22, 2020 will mark its 50th anniversary). A great many small experiments will need to be conducted, and a great many behaviors will need to be changed, at all scales.

PARTICIPATION (15%): Active and thoughtful participation in the course is essential. This includes taking part in class activities, asking questions, occasional quizzes, and contributing constructively to all discussion sessions.

GRADING SCHEME

A+ = 97-100	B+ = 87- 89.9	C+ = 77-79.9	D+ = 67-
A = 93-96.9	B = 83-86.9	C = 73-76.9	D = 63-66.9
A- = 90-92.9	B- = 80-82.9	C- = 70-72.9	D- = 60-62.9

CLASS POLICIES

MUTUAL RESPECT: There are expectations for respectful and appropriate behavior. Please be polite of others in class. Every effort will be made to create and maintain an open atmosphere for discussion, and any effort to disrespect or demean others will NOT be tolerated.

Please be aware of your own behavior and how it affects the atmosphere of the classroom. Perhaps the most significant contribution one can make is demonstrating to one another that you are an attentive and alert participant. Students who can't control themselves will be asked to leave. One of our most important goals is to maintain an atmosphere that encourages intellectually curiosity and thoughtful discourse. In particular:

1. **Leaving class:** Avoid stepping out of the classroom during the class period to go to the bathroom, take a phone call, etc. These activities disturb and distract the instructor and students from our focus on the matters at hand; they demonstrate a lack of consideration for others. Take care of these activities prior to the start of class. If you have a health issue, please speak with the instructors before the start of class.

2. **Electronic equipment policy:** Laptops, tablets, and smartphones are wonderful devices, but they often get in the way of listening to others and sharing our thoughts. Research in psychology, education, and other fields has consistently indicated that these devices can interfere with our ability to learn and process new information. **Given this, we have decided that class periods are an electronic-free zone.** Except for particular project days (announced in advance, and in the syllabus) no devices (e.g., computers, tablets, smartphones) will be allowed. If you decide to ignore this rule, please be aware that texting or doing work on your laptop will have a significant negative impact on your participation grade. **Please turn off these devices before coming into class** and/or leave them out of sight. Exceptions will be made only through an official medical or learning accommodation. If we have to ask you to set aside your device during class time, you have demonstrated that you are not only inattentive to the class discussion but that you lack consideration for your instructors and classmates. Your grade will be affected.

LATE ASSIGNMENTS: Late assignments will be deducted 5% for each day late, and after 5 days will be given a grade of 0 (zero), unless a legitimate reason for lateness is given within 48 hours or prior arrangements were made with the instructor. Students having difficulty completing assignments should contact their GSI *before* assignment due dates to discuss any issues that may be affecting their ability to complete work.

REGISTRATION & SPECIAL ACCOMMODATIONS: Standard LSA and SEAS guidelines will be followed without exception for dropping/adding of this course, disabilities, etc. If students need special accommodations for exams or assignments appropriate documentation must be provided in advance.

CHEATING & PLAGIARISM: Cheating, plagiarizing, and/or unacceptable collaboration will result in a grade of 0 (zero) for the entire assignment and sent to the Assistant Dean of Student Academic Affairs if serious enough.

Academic misconduct will have serious consequences and you should be conscious of it, especially when writing exams or papers. The LSA website (www.lsa.umich.edu/academicintegrity/examples.html) states that academic misconduct includes but is not limited to the following:

*Cheating***:** Cheating is committing fraud and/or deception on a record, report, paper, computer assignment,   examination, or any other course requirement. Examples of cheating include:
  * Obtaining work or information from someone else and submitting it under one's own name.
  * Using unauthorized notes, or study aids, or information from another student or student's paper on an examination.
  * Communicating answers with another person during an exam.
  * Altering graded work after it has been returned, and then submitting the work for regrading.
  * Allowing another person to do one's work and submitting it under one's own name.
  * Preprogramming a calculator to contain answers or other unauthorized information for exams.
  * Submitting substantially the same paper for two or more classes in the same or different terms without the   expressed approval of each instructor.
  * Taking an exam for another person or having someone take an exam for you.
  * Fabricating data which were not gathered in accordance with the appropriate methods for collecting or generating   data and failing to include a substantially accurate account of the method by which the data were gathered or   collected.

*Plagiarism***:** Plagiarism is representing someone else's ideas, words, statements, or other work as one's own without   proper acknowledgment or citation. Examples of plagiarism include:
  * Copying word for word or lifting phrases or a special term from a source or reference, whether oral, printed, or on the internet, without proper attribution.
  * Paraphrasing, that is, using another person's written words or ideas, albeit in one's own words, as if they were one's own thought.
  * Borrowing facts, statistics, graphs, or other illustrative material without proper reference, unless the information is common knowledge, in common public use.

*Unacceptable collaboration***:** Collaboration is unacceptable when a student works with another or others on a project and then submits written work which is represented explicitly or implicitly as the student's own individual work. Using answers, solutions, or ideas that are the result of collaboration without citing the fact of collaboration is improper. Students also engage in unacceptable collaboration when they expressly have been instructed to do their own work and have not been given prior approval by the instructor to collaborate.

Note that the LSA website has further examples including aiding and abetting dishonesty, classroom disturbances, tampering with computers, and falsification of data/records/official documents.

READINGS

GENERAL ADVICE
The purpose of the readings is not to memorize lots of facts. Rather, they are intended to help you better understand the models and strategies for encouraging pro-environmental behavior. With that in mind:

  * Treat the readings as an exploration, an active process of making sense, of discovering nuggets of insight into the various factors that influence human behavior. There are several resources available on Canvas about *Active Reading* that may aid this process.

  * As you read, note your own reactions, especially things that surprise you. Pay special attention to passages that contradict your previous understanding, another reading, or conventional wisdom. Be sure to share these thoughts during your weekly discussion section.

ORIENTATION TO COURSE, STORIES, AND *STORYCORPS*

ORIENTATION, the STORY PROJECTS, and *STORYCORPS*   **Wednesday, January 8**

Monbiot, G. (2015). Consume more, conserve more: Sorry, but we just can't do both, *The Guardian*, November 24. Available at https://www.theguardian.com/commentisfree/2015/nov/24/consume-conserve-economic-growth-sustainability

Weir, K. (2019) Confronting the climate crisis, Monitor on Psychology, 50(10), 28.

Review the following documents:
> StoryCorps (2020) Homepage: https://storycorps.org (Listen to a few stories).
> StoryCorps (2020) Best Practices for Conducting an Interview: https://youtu.be/PHs5UvwhKD0
> StoryCorps (2020) Getting started: https://storycorpsorg-staging.s3.amazonaws.com/uploads/Getting-Started.pdf
> StoryCorps (2020) Interview tips: https://storycorpsorg-staging.s3.amazonaws.com/uploads/Interview-Tips.pdf
> StoryCorps (2020) Sound quality: https://storycorpsorg-staging.s3.amazonaws.com/uploads/Improve-Sound-Quality.pdf

Install and explore the *StoryCorps* app from: https://storycorps.org/participate/storycorps-app

[Optional] Lenton, et al. (2019) Climate tipping points - Too risky to bet against, Nature, 575, 592-595

[Optional] Clayton, et al. (2016) Expanding the role for psychology in addressing environmental challenges, Am Psych, 71(3), 199-215.

BEHAVIOR CHANGE MODELS & THEORIES

INFORMATION PROCESSING MODELS   **Monday, January 13**

Basu, A, & Kaplan, R. (2015). The Reasonable Person Model: Introducing the framework and the chapters. In R. Kaplan & A. Basu (Eds.) *Fostering reasonableness: Supportive environments for bringing out our best* (excerpt pp.1-16). Ann Arbor, MI: Michigan Publishing.

Verplanken, B. (2002). Environmental concern: The key to communication effects and behavioural change (pp. 213-222). In Bartels, G. (Editor) *Marketing for Sustainability: Towards transactional policy-making*. Amsterdam: IOS Press.

STORY and PROSPECTION   **Wednesday, January 15**

De Young, R. & M. C. Monroe, (1996). Some fundamentals of engaging stories. *Environmental Education Research*, 2, 171-187.

Seligman, M. E., P. Railton, R. F. Baumeister & C. Sripada (2013). Navigating into the future or driven by the past. *Perspectives on Psychological Science*, 8(2): 119-141.

Meadows, Donella H. (1994). Envisioning a sustainable world. Presented at the *Third Biennial Meeting of the International Society for Ecological Economics*, October 24-28, 1994, San Jose, Costa Rica.

[Optional] Oettingen, G., & Reininger, K. M. (2016). The power of prospection: mental contrasting and behavior change. *Social and Personality Psychology Compass*, 10(11), 591-604.

MLK DAY (NO CLASS)   **Monday, January 20**

EDUCATION-BASED MODELS   **Wednesday, January 22**

Hines, J. M., H. R. Hungerford & A. N. Tomera (1987). Analysis and synthesis of research on responsible
    environmental behavior: A meta-analysis. *Journal of Environmental Education*, 18(2): 1-8.
Hungerford H.R. & T. Volk (1990). Changing learner behavior through environmental education. *Journal of
    Environmental Education*, 21(3): 8-21.

COMMUNITY-BASED SOCIAL MARKETING   **Monday, January 27**

McKenzie-Mohr, D. (2011). Fostering sustainable behavior (pp. 1-10). *Fostering sustainable behavior: An
    introduction to Community-Based-Social Marketing*. Gabriola Island, BC: New Society Publishers.
McKenzie-Mohr, D. (2011). Step 1: Selecting behaviors (pp. 11-20). *Fostering sustainable behavior: An
    introduction to Community-Based-Social Marketing*. Gabriola Island, BC: New Society Publishers.
Dressen, P., & B. Hillebrand (2002). Adoption and diffusion of green innovations (pp. 343-355). In Bartels, G.
    (Editor) *Marketing for Sustainability: Towards transactional policy-making*. Amsterdam: IOS Press.

RATIONAL ACTOR MODELS   **Wednesday, January 29**

Ajzen, I. & M. Fishbein (1980). A theory of reasoned action. (Chapter 1, pp. 5-9). *Understanding Attitudes and
    Predicting Social Behavior*. NJ: Prentice-Hall.
Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior & Human Dec. Processes*, 50: 179-211.
[Optional] Donald, I. J., S. R. Cooper & S. M. Conchie (2014). An extended theory of planned behaviour model of
    the psychological factors affecting commuters' transport mode use. *Journal of Environmental Psychology*,
    40: 39-48.
[Optional] Sniehotta, F. F., Presseau, J., & Araújo-Soares, V. (2014). Time to retire the theory of planned
    behaviour. *Health Psychology*, 8(1): 1-7.

NORM-BASED MODELS   **Monday, February 3**

Stern, P. C. (2000). New environmental theories: toward a coherent theory of environmentally significant
    behavior. *Journal of Social Issues*, 56(3), 407-424.
Van der Werff, E. & L. Steg (2015). One model to predict them all: Predicting energy behaviours with the norm
    activation model. *Energy Research & Social Science*, 6: 8-14.
[Optional] Bamberg, S. & P. Schmidt (2003). Incentives, morality or habit?: Predicting students' car use for
    university routes with the models of Ajzen, Schwartz & Trandis. *Environment and Behavior*, 35: 264-285.
[Optional] Wall, R., P. Devine-Wright & G. Mill (2007). Comparing and combining theories to explain
    proenvironmental intentions. *Environment and Behavior*, 39: 731-753.

STAGES OF CHANGE MODEL and EVALUATION METRICS   **Wednesday, February 5**

Bamberg, S. (2013). Applying the stage model of self-regulated behavioral change in a car use reduction
    intervention. *Journal of Environmental Psychology*, 33: 68-75.
De Young, R. (1993). Changing behavior and making it stick: The conceptualization and management of
    conservation behavior. *Environment and Behavior*, 25:485-505.
Nilsson, A., Bergquist, M., & Schultz, W. P. (2017). Spillover effects in environmental behaviors, across time and
    context: A review and research agenda. *Environmental Education Research*, 23(4): 573-589.
Kaplan, R. & S. Kaplan (1996). The restorative environment (pp. 177-182). In *The Experience of Nature: A
    Psychological Perspective*. NY: Cambridge University Press.
[Optional] Bamberg, S. (2013). Changing environmentally harmful behaviors: A stage model of self-regulated
    behavioral change. *Journal of Environmental Psychology*, 34, 151-159.
[Optional] Carter, D. M. (2011). Recognizing the role of positive emotions in fostering environmentally
    responsible behaviors. *Ecopsychology*, 3(1): 65-69.
[Optional] McGregor, I. & B. Little (1998). Personal projects, happiness, and meaning: On doing well and being
    yourself. *Journal of Personality and Social Psychology*. 74(2): 494-512.

[Optional] Thøgersen, J. & T. Crompton (2009) Simple and Painless?: The Limitations of Spillover in Environmental Campaigning. *Journal of Consumer Policy*. 32: 141–163.

[Optional] Verplanken, B. (2018). Promoting sustainability: Towards a segmentation model of individual and household behaviour and behaviour change. *Sustainable Development*, 26(3), 193-205.

[Optional] Moore H.E. and Boldero, J. (2017). Designing Interventions that Last: A Classification of Environmental Behaviors in Relation to the Activities, Costs, and Effort Involved for Adoption and Maintenance. *Frontiers in Psychology*, 8(1874). doi: 10.3389/fpsyg.2017.01874

BEHAVIOR CHANGE STRATEGIES

EXTRINSIC MOTIVATION   **Monday, February 10**

Gneezy, U., Meier, S., & Rey-Biel, P. (2011). When and why incentives (don't) work to modify behavior. *Journal of Economic Perspectives*, 25(4), 191-210.

Maki, A., Burns, R. J., Ha, L., & Rothman, A. J. (2016). Paying people to protect the environment: A meta-analysis of financial incentive interventions to promote proenvironmental behaviors. *Journal of Environmental Psychology*, 47, 242-255.

COMMITMENT   **Wednesday, February 12**

Katzev, R. D. (1986). The impact of commitment in promoting consumer energy conservation. (Chapter 21, pp. 280-294). In E. Monnier, G. Gaskell, P. Ester, B. Joerges, B. Lapillonne, C. Midden and L. Puiseux (Eds.). *Consumer Behavior and Energy Policy: An International Perspective*. NY: Praeger.

Lokhorst, A. M., Werner, C., Staats, H., van Dijk, E., & Gale, J. L. (2013). Commitment and behavior change: A meta-analysis and critical review of commitment-making strategies in environmental research. *Environment and Behavior*, 45(1), 3-34.

INTRINSIC MOTIVATION   **Monday, February 17**

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

Howell, R.A. (2013). It's not (just) ''the environment, stupid!" Values, motivations, and routes to engagement of people adopting lower-carbon lifestyles. *Global Environmental Change*, 23(1): 281-290.

Pink , D. (2010). *Drive: The surprising truth about what motivates us*. (Video)

[Optional] Cooke, C. & K. Fielding (2009). Fun environmentalism!: Potential contributions of autonomy supportive psychology to sustainable lifestyles. *Management of Environmental Quality*. 21(2): 155-164.

[Optional] Aitken, N. M., Pelletier, L. G., & Baxter, D. E. (2016). Doing the difficult stuff: Influence of self-determined motivation toward the environment on transportation proenvironmental behavior. *Ecopsychology*, 8(2), 153-162.

Project Day – Story Project 3: Site description and model selection   **Wednesday, February 19**

EXAM 1   **Monday, February 24**

SOCIAL & TEAM-BASED STRATEGIES   **Wednesday, February 26**

Staats, H., P. Harland & H. Wilke (2004). Effecting durable change: A team approach to improve environmental behavior in the household. *Environment and Behavior*, 36: 341-367.

Fisher, J., & Irvine, K. (2016). Reducing energy use and carbon emissions: a critical assessment of small-group interventions. *Energies*, 9(3), 172.

[Optional] Parnell, R. & O. P. Larsen (2005). Informing the development of domestic energy efficiency initiatives: An everyday householder-centered framework. *Environment & Behavior*. 37: 787-807.

WINTER BREAK (NO CLASS)	Monday, March 2

WINTER BREAK (NO CLASS)	Wednesday, March 4

Project Day – Evaluating interventions	**Monday, March 9**

NORMS, MODELING, & MORAL JUDGEMENT   **Wednesday, March 11**

Cialdini, R. (2003). Crafting normative messages to protect the environment. *Current Directions in Psychological Science*, 12: 105-109.

Schultz, P. W., J. M. Nolan, R. B. Cialdini, N. J. Goldstein & V. Griskevicius (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science*, 18: 429-434.

Van der Werff, E., L. Steg & K. Keizer (2013). It is a moral issue: The relationship between environmental self-identity, obligation-based intrinsic motivation and pro-environmental behavior. *Global Environmental Change*, 23(5): 1258-1265

[Optional] Sparkman, G., & Walton, G. M. (2017). Dynamic norms promote sustainable behavior, even if it is counternormative. *Psychological Science*, 28(11), 1663-1674.

[Optional] Nolan, J. M., P. W. Schultz, R. B. Cialdini, N. J. Goldstein, & V. Griskevicius (2008). Normative social influence is underdetected. *Personality and Social Psychology Bulletin*. 34(7): 913-923.

KNOWLEDGE, ATTITUDES, & HABIT   **Monday, March 16**

Kaiser, R. G. & U. Fuhrer (2003). Ecological behavior's dependency on different forms of knowledge. *Applied Psychology: An International Review,* 52(4): Excerpt 598-613. **NOTE only pp. 598-604 are required**

Christiano, A. & Neimand, A. (2017) Stop raising awareness already. *Stanford Social Innovation Review*, 15: 34-41.

Kurz, T., Gardner, B., Verplanken, B., & Abraham, C. (2015). Habitual behaviors or patterns of practice? Explaining and changing repetitive climate-relevant actions. *Wiley Interdisciplinary Reviews: Climate Change*, 6(1), 113-128.

[Optional] Holland, R. W., H. Aarts, & D. Langendam (2006). Breaking and creating habits on the working floor: A field-experiment on the power of implementation intentions. *Journal of Experimental Social Psychology*. 42: 776-783.

[Optional] Verplanken, B., I. Walker, A. Davis, M. Jurasek (2008). Context change and travel mode choice: Combining the habit discontinuity and self-activation hypotheses. *Journal of Environmental Psychology,* 28: 121- 127.

PROMPTS   **Wednesday, March 18**

Aronson, E. & M. O'Leary (1982-1983). The relative effectiveness of models and prompts on energy conservation: A field experiment in a shower room. *Journal of Environmental Systems*, 12: 219-224.

Sussman, R., Greeno, M., Gifford, R., & Scannell, L. (2013). The effectiveness of models and prompts on waste diversion: A field experiment on composting by cafeteria patrons. *Journal of Applied Social Psychology*, 43(1), 24-34.

[Optional] Katzev, R. D. & T. R. Johnson (1987). Antecedent communications: Prompts. (Chapter 2, pp. 23-52). *Promoting Energy Conservation: An Analysis of Behavioral Research*. Boulder, CO: Westview Press.

Project Day – Story Project 3: Draft of story	**Monday, March 23**

FEEDBACK, PLANNING & GOAL-SETTING   <u>**Wednesday, March 25**</u>

Sanguinetti, A., Dombrovski, K., & Sikand, S. (2018). Information, timing, and display: a design-behavior framework for improving the effectiveness of eco-feedback. *Energy Research & Social Science*, 39, 55-68.

Buchanan, K., Russo, R., & Anderson, B. (2015). The question of energy reduction: The problem(s) with feedback. *Energy Policy*, 77, 89-96.

Rogers, T., Milkman, K. L., John, L. K., & Norton, M. I. (2015). Beyond good intentions: Prompting people to make plans improves follow-through on important tasks. *Behavioral Science & Policy*, 1(2), 33-41.

[Optional] Fischer, C. (2008). Feedback on household electricity consumption: A tool for saving energy? *Energy Efficiency*. 1:79-104.

[Optional] Darby, S. (2001). Making it obvious: Designing feedback into energy consumption. In Bertoldi, Ricci & de Almeida (Eds.) *Energy Efficiency in Household Appliances and Lighting*. Heidelberg: Springer.

FRAMING & FEAR   <u>**Monday, March 30**</u>

Nisbet, M. C. (2009). Communicating climate change: Why frames matter for public engagement. *Environment*, 51(2):12-23.

Thaler, A. D. (2016). When I talk about Climate Change, I don't talk about science. Southern Fried Science. Available at http://www.southernfriedscience.com/when-i-talk-about-climate-change-i-dont-talk- about-science/

Nordhaus, T. & M. Shellenberger (2014). Global warming scare tactics. *New York Times*, April 8.

[Optional] Schwarz, N., Newman, E., & Leach, W. (2016). Making the truth stick & the myths fade: Lessons from cognitive psychology. *Behavioral Science & Policy*, 2(1), 85-95.

NUDGES & GAMIFICATION   <u>**Monday, April 1**</u>

Byerly, H., Balmford, A., Ferraro, P. J., Hammond Wagner, C., Palchak, E., Polasky, S., ... & Fisher, B. (2018). Nudging pro-environmental behavior: Evidence and opportunities. *Frontiers in Ecology and the Environment*, 16(3), 159-168.

Hertwig, R. & T. Grune-Yanoff (2017) Nudging and Boosting: Steering or empowering good decisions. *Perspectives on Psychological Science.* 12(6), 973-986.

Froehlich, J. *(2015). Gamifying* green: gamification and environmental sustainability (Ch. 23, Pp. 563-596). In S. Walz & S. Deterdomg (Eds.) *Gameful World: Approaches, Issues, Applications*. Cambridge: MIT Press.

[Optional] Schubert, C. (2017). Green nudges: Do they work? Are they ethical?. *Ecological Econ*, 132, 329-342.

Project Day – Story Project 3: Draft of Poster   **Monday, April 6**

CONSUMPTION, & WELL-BEING   <u>**Wednesday, April 8**</u>

Venhoeven, L. A., J. Willem Bolderdijk & L. Steg (2013). Explaining the paradox: How pro-environmental behaviour can both thwart and foster well-being. *Sustainability*, 5: 1372-1386.

Kasser, T. (2017). Living both well and sustainably: A review of the literature, with some reflections on future research, interventions and policy. *Philosophical Transactions of Royal Society A*, 375(2095), 20160369.

[Optional] Kasser, T. (2009). Psychological need satisfaction, personal well-being, and ecological sustainability. *Ecopsychology*, 1(4), 175-180.

[Optional] Van Lange, P. & J. A. Joireman (2008). How we can promote behavior that serves all of us in the future. *Social Issues and Policy Review*. 2(1): 127-157.

[Optional] Van Lange, P. A., Joireman, J., & Milinski, M. (2018). Climate change: What psychology can offer in terms of insights and solutions. *Current Directions in Psychological Science*, 27(4), 269-274.

Poster Presentations   **Monday, April 13 and Wednesday, April 15**

EXAM 2   **Monday, April 20**