PROPOSAL INFORMATION

Project Title: Why Can't We Be Sustainable Later? Examining the Role of Environmental Attitudes on Sustainable Behaviors in the Present and in the Future

PRINCIPAL STUDENT INVESTIGATOR (PROPOSER) INFORMATION

Name: Julie E. Delose
Email: jdelose@gmail.com
Phone: 407-463-0871
Degree Program / Graduation Date: Social Psychology; PhD-Expected May 2017

FACULTY / STAFF SPONSOR INFORMATION

Name: Michelle R. vanDellen, PhD.
Email: mvd@uga.edu
Phone: 706-542-5153
Title / Department: Assistant Professor in the Department of Psychology

ADDITIONAL PROPOSAL INFORMATION

The proposal includes the following fields (check all that apply):

  _x_ Education
  _x_ Research
  ____ Service
  ____ Campus Operations
  ____ Sustainability + Arts submission

Summary of Budget:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Funding</td>
<td>$4,500</td>
</tr>
<tr>
<td>Equipment</td>
<td>$</td>
</tr>
<tr>
<td>Supplies / General Expenses</td>
<td>$170</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$4,670</td>
</tr>
</tbody>
</table>

Campus Sustainability Grant Application Form, REV 08.18.15
Campus Sustainability Grant Application – Compliance Form

Please answer all of the following questions, and explain in full where required.

Will this project require compliance review in any of the following areas?
Please place an “X” on the appropriate line to indicate “Yes” or “No” for all three compliance areas.

1. Animal Use
   _____ Yes
   __X__ No
If “Yes,” please reference the section and page number in the proposal describing animal use:

For more information contact:
706-542-5933

2. Biohazardous Materials
   _____ Yes
   __X__ No
If “Yes,” please reference the section and page number in the proposal describing biohazardous material use:

For more information contact:
706-542-9876

3. Human Subjects
   __X__ Yes
   _____ No
If “Yes,” please reference the section and page number in the proposal describing human subject use:
Pg. 2 under Study Design. Before running the study we would get approval from the IRB.

For more information contact:
706-542-5318

Name: Julie E. Delose

Title: Why Can't We Be Sustainable Later? Examining the Role of Environmental Attitudes on Sustainable Behaviors in the Present and in the Future

Date: September 16, 2015 __X__ By placing an “X” on this line, I certify I will fulfill all requirements pertaining to compliance if this grant is approved.
Campus Sustainability Grant Application – Budget Sheet

Complete all sections.

I. Personnel **

<table>
<thead>
<tr>
<th>Number</th>
<th>Amount/Person</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractors</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>UGA Staff</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>UGA Student</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>150 Study Participants: $30 per person</td>
<td>$4500</td>
</tr>
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</table>

Total Amount: $4500

II. Equipment**

<table>
<thead>
<tr>
<th>Specific Equipment Items</th>
<th>Length of Use</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

Total Cost: $

III. Supplies/General Expenses**

<table>
<thead>
<tr>
<th>Specific Supply Items</th>
<th>Comment</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. paper towels</td>
<td>$ 100</td>
<td></td>
</tr>
<tr>
<td>2. paint</td>
<td>$ 50</td>
<td></td>
</tr>
<tr>
<td>3. paper</td>
<td>$ 20</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

Total Cost: $170

*Acceptable personnel funding include: 1) hiring outside consultants or contractors to perform required project tasks, 2) UGA Facilities Management Division staff labor charges for project implementation, 3) UGA student workers managed by participating UGA department to perform required project tasks.

**If more space is needed, please attach a separate document listing specific items and their costs.

Note: All Campus Sustainability Grant funds must be expended before June 30th.
Campus Sustainability Grants Program - Application Form 2013-2014

The following additional proposal components to this application are included in a separate document:

- Project Overview (Attach; 2-page limit)
- Implementation Plan (Attach; 4-page limit)
- Communications Plan (Attach; 1-page limit)
- Faculty / Staff Sponsor Letter of Support (Attach; 1-page limit)
- List of Anticipated Grant Project Metrics (Attach; 1-page limit; see Campus Sustainability Grants Program – Reporting Guidelines for reference)
Why Can't We Act Sustainably Later? People’s Predictions of Difficulty and Value of Enacting Sustainable Behaviors in the Present and in the Future

Project Overview

Sustainable solutions are crucial for reducing the amount of resources used and the amount of waste and pollution expended, but many sustainable ideas require individuals to carry them out. That is, individuals must behave in sustainable ways in order for sustainability to have an actual impact on the environment. Some sustainable behaviors are relatively easy and do not take much effort, such as recycling a plastic bottle on the way to class. However, other sustainable behaviors require more effort (e.g., driving old batteries to a distant facility). To better understand how individuals can act more sustainably, the current proposal examines the context of sustainability through the lens of goal pursuit and self-control.

Individuals pursue many goals on a daily basis, many of which require one to exert self-control in order to prioritize a higher-order goal (e.g., maintain a healthy weight) over a lower-order goal (e.g., indulge in a warm pastry). Self-control is defined as the ability to resist a dominant response, and when self-control is successfully exerted the higher-order goal is achieved. Higher-order goals tend to carry rewards that will manifest in the future, whereas lower-order goals carry immediate rewards. Sustainable behaviors often require self-control: in the moment it is easier to throw old batteries in the trash but disposing of them at a facility has future, beneficial consequences. Because sustainability often manifests in the future and many times has unseen benefits to society as a whole instead of just a single individual, the case can be made that acting sustainably is a higher-order goal and not acting sustainably is a lower-order goal. Thus, acting sustainably can require an individual to exert self-control.

Prior research indicates people would rather put off self-control for later and instead act on lower-order goals in the present. Additionally, my research shows people think self-control tasks (i.e., tasks that require effort) will be easier to complete in the future rather than in the present. Consequently, individuals may believe that acting sustainably will be easier and more valuable to do in the future instead of now. If people think behaviors that are good for the environment will be easier and more valuable to complete in the future, will they ever actually do them? This question is the focus of my research.

In addition, I hope to examine how strong (vs. weak) pro-environmental values affect predictions of how difficult and how valuable one thinks it will be to act sustainably in the present vs. in the future. I predict individuals who have a strong pro-environmental value will think similarly about the difficulty and value of enacting sustainable behaviors in the present and the future but individuals with a weak pro-environmental value will think it will be easier and more valuable to act sustainably in the future (vs. the present). This rationale comes from research on goal commitment. Individuals who are more committed to a goal are more likely to continue to pursue it even after making progress. Thus, individuals with a strong pro-environmental value should be more committed to acting sustainably and consequently should think about the difficulty and value of enacting sustainable behaviors similarly, irrespective of temporal distance because they value the environment. Those with a weak pro-environmental view are most likely not committed to acting sustainably and consequently may believe sustainable behaviors will be easier to pursue and more valuable to pursue later instead of now.

In order to test these hypotheses, I propose a longitudinal research study to examine UGA students’ attitudes about how difficult and how valuable they perceive it to be to engage in sustainable behaviors over time. The current proposal will examine if people with a strong (vs. weak) pro-environmental value think differently about how much self-control they will have to exert and how valuable the behavior is in the present and at different times in the future. I will also test whether predictions of difficulty and value predict actual sustainable behaviors. Dr.
 Michelle vanDellen, an Assistant Professor in the Department of Psychology, will be heavily involved in this project and is the faculty supporter of this research.

**Study Design**

**Participants.** One hundred fifty UGA students will be recruited and will receive compensation for their participation. We will recruit participants by putting up flyers around UGA campus and contacting student organizations.

**Procedure.** This study will consist of four sessions and is summarized in the table below:

<table>
<thead>
<tr>
<th>Session</th>
<th>Timeline</th>
<th>Duration</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Baseline</td>
<td>30 minutes</td>
<td>Psychology building lab</td>
</tr>
<tr>
<td>Two</td>
<td>+ 1 Week</td>
<td>15 minutes</td>
<td>Online on personal device</td>
</tr>
<tr>
<td>Three</td>
<td>+ 2 Weeks</td>
<td>15 minutes</td>
<td>Online on personal device</td>
</tr>
<tr>
<td>Four</td>
<td>+ 3 Weeks</td>
<td>30 minutes</td>
<td>Psychology building lab</td>
</tr>
</tbody>
</table>

After providing consent, participants will complete a survey in the lab. First, they will complete a prediction task where they will rate how difficult they think it would be to do certain behaviors (e.g., taking shorter showers, using less paper towels, recycling paper products) now, tomorrow, in 3 days, in 1 week, in 2 weeks, and in 3 weeks. They will also rate how valuable the same behaviors will be to enact at the different times. These questions will be presented in random order for each participant. Participants will also complete questionnaires to measure environmental attitudes, self-control, commitment to sustainability, and demographics.

One and two weeks after Session 1, participants will receive an email with a survey link. The survey will ask them to complete the same prediction task as in Session 1. Then, they will rate how often in the last week they have completed a list of sustainable behaviors. Three weeks after Session 1, participants will come back into the lab for the final session. In this session participants will ostensibly be asked to complete a second study investigating personality and creativity. Participants will complete some personality questionnaires. Afterwards, they will be asked to create a finger painting. Because all participants will have paint on their hands with paint on them, all participants will have to wash their hands. Unbeknownst to participants, we will count how many paper towels they use to dry their hands. This measure of paper towel use will allow us to determine if participants’ predictions of enacting sustainable behaviors predict how they actually behave when they are given the opportunity to act sustainably (i.e., use less resources).

The proposed research will enhance UGA’s 2020 Strategic Plan for sustainability because it may inform one of the reasons why it is difficult for people to act in sustainable ways. Additionally, my research will be the beginning of sustainability research conducted in the Department of Psychology at UGA. My research results will be disseminated to the UGA community, and I will present my findings to various classes and conferences. I also plan to play a role in strategic priority ‘d’ to integrate sustainability into student’s UGA experience by designing my own course and teaching it in Fall 2016 and/or Spring 2017.

**References:**
Implementation Plan

Proposal Description & Research Questions

The behaviors individuals on UGA campus enact on a daily basis influence everyone. Creating an atmosphere on UGA campus that shows high commitment to reducing waste, saving energy, and recycling is crucial for ensuring that future UGA members will get to enjoy the same benefits as the current members of the UGA community (i.e., students, faculty, administrators, staff). Conducting research on how people think about pursuing actions that will benefit UGA and society is one way to promote sustainability on campus. Because cognitions about the difficulty of goal pursuit often influence goals (e.g., Delose, vanDellen, Hoyle, 2014), it is important to examine how UGA members think enacting sustainable behaviors in the present and in the future. Being able to conduct the proposed research will allow me to begin research on the psychology of sustainability, which I hope to be just the first of many studies. I plan to examine how to encourage people to act more sustainably and determine individual differences that play a key role in who is more likely to act sustainably.

The main objective of the proposed research is to determine how people perceive the difficulty and value of engaging in sustainable behaviors in the present and in the near and distant future. The proposed research is designed to test four aims.

**Aim 1:** I will examine how predictions of difficulty of engaging in sustainable behaviors change over time.

**Aim 2:** I will examine how predictions of how valuable engaging in sustainable behaviors change over time.

**Aim 3:** I will examine whether people with a strong (vs. weak) pro-environmental value think differently about how the difficulty and value of enacting sustainable behaviors in the present and at different times in the future.

**Aim 4:** I will test whether predictions of difficulty and value of enacting sustainable behaviors predict actual sustainable behaviors.

A longitudinal study design will test these four aims. Participants (N ≈ 150) will first sign a consent form to show they understand the procedures and want to participate in a four part study. Participants will complete an online survey where they will first rate how difficult they think it would be to enact sustainable behaviors (e.g., taking shorter showers, using less paper towels, recycling paper products, using a re-usable bag for groceries) now, tomorrow, in 3 days, in 1 week, in 2 weeks, and in 3 weeks. They will also rate how valuable the same behaviors will be to enact at the different times. These questions will be presented in random order for each participant. In order to test how individual differences may influence predictions, participants will also complete items that measure environmental attitudes, self-control, commitment to sustainability, and demographic information. One and two weeks after Session 1, participants will receive an email with a survey link to complete the same prediction task as in Session 1. Participants will also rate how often in the last week they have completed a list of sustainable behaviors. Three weeks after Session 1 (the last session of the study) participants will come back into the lab and will be asked to complete a different study that is investigating personality and creativity. Thus, participants should be unaware that the other sessions of the study are related to the last session. In this last session of the study, participants will complete personality
questionnaires that will be part of the cover story about the study. Then, because the study is ostensibly about creativity, participants will be given paper and paint and will be asked to create a finger painting that they think is a reflection of their own personality. They will be told that they can paint anything they would like and would be given 15 minutes to paint. After 15 minutes is up, participants will be told they can wash their hands in the bathroom, which is in our lab space. The amount of paper-towels that are in the bathroom will be counted by an experimenter before and after each participant’s arrival. The amount of paper towels each participant uses will be a primary measure of enacting a sustainable behavior. Zero or one will be the cutoff for sustainable behavior and using more than one paper towel will signify less sustainable action. This measure of paper towel use will allow us to determine if participants’ predictions of enacting sustainable behaviors predict how they actually behave when they are given the opportunity to act sustainably (i.e., use less resources).

Although attitudes are not the best predictors of actual behavior (Wicker, 1969), based on my findings I hope to come with certain messages that I could test in further research to determine what kinds of messages would lead to changes in sustainable attitudes, and hopefully, to sustainable behaviors. The Elaboration Likelihood Model (ELM) of persuasion (Petty & Cacioppo, 1979, 1984) states that people process messages differently, depending on whether the issue is relevant or not and the state of the perceiver such as feeling tired or fatigued. Thus, for a person uninterested in the environment and who is also tired, the best way to change his/her attitude would be through superficial aspects of the message since the individual would not process the message deeply. The individual would be more likely to be influenced by consensus of others and by attractive people endorsing the message. I could run an experiment to determine what messages are most effective in changing people’s attitudes about the environment and whether attitudes predict future behavior. For example, in the future I would like to examine what kinds of messages could increase the use of public transportation and biking to school, eating more local food products, and wasting less food and other materials, and individual differences involved in the effectiveness of the messages.

**Merit and Feasibility of Project Implementation**

I have been a graduate student in the Department of Psychology for about 3.5 years. Since my time at UGA I have been running studies in the Motivation and Behaviors Lab with P.I. Dr. Michelle vanDellen. We conduct many studies each semester with human participants. I have completed the CITI Social and Behavioral Ethics Training and have been an active member in study designs, completing forms for study approval, preparing studies, running studies, training and mentoring undergraduate research assistants, data analysis, and manuscript writing and publishing. Before data collection for the proposed research, I will get approval from the Institutional Review Board (IRB) to conduct my research. The proposed research will take place in Dr. vanDellen’s lab space in the Psychology Building at UGA. Additionally, I will recruit three to four research assistants to help me with running the study, all of which who will have completed the CITI behavioral training. Research assistants will be trained to conduct the lab study at the baseline and last session (Session 1 and 4). I will create the online survey using Qualtrics, an online survey created which I have a lot of experience working with.

Participants will read a consent form that details the study procedures, risks and benefits, and other information. After reading through the consent form, they will provide their signature if they choose to participate. Because the study spans three weeks, participants will receive monetary compensation at the completion of the study. The entire study will only take about 90 minutes per participant and compensation for completing the study in its entirety is $30. To keep track of the monetary compensation for participants I will have a petty cash account set up and will keep the money secured in a locked cabinet. Participants will get paid for the amount of
surveys and lab sessions they complete. Completing Session 1 and Session 4 will earn participants $10 each, and completing Session 2 and Session 3 will earn participants $5 each. If participants do not show up for their last session, they will still receive compensation for the other three sessions ($20), and we will send an email to ask them to come to the lab to pick up the money or mail them the money if they are not able to come back into the lab. At the last session, participants will be debriefed about the nature of the study and will be allowed to ask any questions that they have.

In sum, I have all the necessary technology and skills to run the proposed research. In addition, I will conduct the proposed research based on the highest standards of behavioral research and will document all of my work throughout the project.

**Proposal Time-Line**

I will begin recruiting participants in January 2015, after approval is granted from the IRB. Based on previous studies with similar sample sizes, I expect data collection to be complete by May 6, 2016. Thus, all of the funds for this project will be expended by May 6, 2016. Starting on May 9, 2016 I will begin the data analysis stage and will go through the data to account for missing data and will complete imputation procedures for missing data when appropriate. After the data is cleaned up I will begin the preliminary analyses to examine whether there is change over time in prediction of difficulty and value. If there is, I will move to further analyses and will be able to examine whether predictions influence actual behavior. Data analysis will take about three weeks to complete, and I hope to be finished with all analyses by May 30, 2015. Then, I can focus on writing up the results for presentations. Thus, all stages of my proposed research will be completed before June 30, 2016.

**References:**


Communications Plan

My research project will be promoted around UGA campus so UGA students can be active participants in the research. I will create posters about the study around campus. Thus, the results of my research will be based off of actual UGA students so the results will have generalizability. After data collection and data analysis I will present the findings to the UGA community. I will present my results at conferences on an off campus. This past January I attended UGA’s Sustainability Science Symposium, and if that conference is offered again, I would love to present my research there. In addition, I will be attending the annual national conference by the Society of Personality and Social Psychology (SPSP) in January 2016. I be attending a preconference on the psychology of sustainability and I hope to learn a lot more about how to encourage sustainable behaviors and the barriers involved in human action. Potentially, attending this preconference will give be more insight to how people think about sustainable behaviors and I may be able to present my research at the SPSP conference in 2017.

Moreover, I plan to present the results of my research to multiple graduate and undergraduate level classes in the Psychology Department and other departments around campus. After this first research study is conducted, I hope to run additional studies to examine what kinds of messages are more likely to encourage sustainable behaviors. Furthermore, in the future I would love to design my own undergraduate course about the Psychology of Sustainability, and by doing so I would be spreading sustainable to UGA students. In this class I would not discuss my own research results. I also think it would be a good idea to inspire students to come up with their own research ideas and design a study. Furthermore, the last two years I have done the annual fun run toward sustainability at the Georgia Botanical Gardens and before and after the run there were tables of information and people talking about different sustainable ideas and solutions. I think it would be beneficial if I was able to have a table there and could discuss my research and interact with others.

Overall, I plan to spread my research results to the UGA community by presenting my findings to various classes and conferences. Spreading this research has the potential for people to become more aware about how people think about self-control and how self-control and sustainability can be connected. Hopefully my research will inspire people to realize that sustainable behaviors need to happen now—not in the future—and to behave more sustainably, even in a small way. Thousands of small behaviors add up fast.
List of Anticipated Grant Project Beneficiaries & Metrics

After the completion of the proposed research, I will complete a final report about the project and its outcomes. I will first describe what I did, how many participants were run, what the results suggest, and how the results contribute to UGA’s 2020 Strategic Plan. I also hope to report that I am in the process of starting to design a course titled The Psychology of Sustainability.

My final report will also include detailed information about how each dollar was spent on the project. I will also list the classes that I discussed my grant project in and the presentations I gave. Because I also plan to discuss my research at student organization I will document those as well. I will keep track of the number of people who I discuss the project and results with.

The proposed research will most likely lead to further research questions that I would like to pursue so I will also discuss further research ideas. The actual results will be the primary way to show the outcome of the research. Thus, the specific metrics of the proposed project are not very easily counted. Because before I can really measure changes in attitudes or behavior I need to conduct research, the metrics will be in form of number of participants I am able to obtain. One way to get participants involved in the research is to debrief them at the end of the study. Thus, at the very least, the participants will become aware of the hypotheses and will be influenced just by taking part in the study. Last, pictures of the study materials, experimenters, data analyses, etc. will also be included in my final report.
November 9, 2015

It is my pleasure to write this letter in support of Julie Delose’s proposal for a campus sustainability grant. I am currently serving as Julie’s major professor in the Behavioral and Brain Sciences program in the Department of Psychology at the University of Georgia. I have known Julie since July of 2012; I know Julie and her work very well.

Julie is a naturally inquisitive person. She has many broad interests and she enjoys learning and thinking about a variety of issues. She is open-minded and enjoys being challenged to learn from new perspectives. Since her arrival at UGA, Julie has been eagerly seeking opportunities to apply social psychological methods and research to better understand how and when people behave in sustainable ways. She has now developed significant expertise in how people think about the future and has begun applying these ideas to sustainability research. Her proposal has the potential to inform a variety of sustainability programs. Her research may inform how messages are created, how they are delivered, and what people are most likely to need certain types of messages. Her work has the potential to lead to a real change in how people promote sustainability. The importance of Julie’s work is that it will lead to evidence-based messaging and interventions to promote sustainability.

I enthusiastically support Julie’s research proposal. I have already given her advice on the development of the idea and methods and I will continue to serve as research mentor for Julie as she leads the project. Julie will be conducting the research using my laboratory space on campus. Her project will be prioritized and she will be given the first opportunity to reserve space. Additionally, Julie will have a team of research assistants available to be trained on running the project. (Julie is already a fantastic mentor and I suspect her to be highly efficient at training and supervising research staff). Julie has all of the methodological expertise she needs to conduct the project but I will be available to consult on statistical analyses and development of research publications arising from the project. I will additionally continue consulting on methods and measures and will be involved in guiding Julie through the process of managing a budget for a research project.

I could say many more things about Julie but I hope I have said enough. As her major professor, I am supportive of her identifying a future career path related to her interests in sustainability and believe that this opportunity may help Julie in this way. I fully support her receipt of this funding. If you have any questions about Julie or her application, please do not hesitate to contact me at mvd@uga.edu or 713-560-3092.

Sincerely,

Michelle R. vanDellen, PhD