Guidelines for Personal Change Project:
Reducing your Carbon Footprint

Adapted from Scott, Amel, Koger, & Manning (2016), *Psychology for Sustainability*, 4th ed. New York: Routledge.

You can follow the steps below to modify your own unsustainable behavior. Changing your own behavior can be a step toward changing the behavior of others; modeling is a powerful social influence. It can also serve as a springboard to systemic change by inspiring you to actively shape the societal contingencies that constrain your behaviors.

Step 1. Define the problem. As an illustration, a self-control project could focus on reducing paper waste. In this case, *the problem* is that approximately 35% of the world's timber harvest is used to produce paper. Paper is the largest component (constituting 28% or 70 million tons) of the municipal solid waste generated in the Unites States (U.S. Environmental Protection Agency, 2013). Although about 66% of used paper is recovered for recycling, every stage of paper production and consumption constitutes a significant environmental threat (e.g., Vanasselt, 2001): Most wood extraction procedures lead to deforestation and the loss of forest diversity; toxic liquid pollutants are released during pulp- and papermaking; paper products in landfills generate methane, a gas that contributes to climate change; and the incineration of paper bleached with chlorine releases dioxin, a highly toxic chemical that is a known carcinogen and endocrine (hormone) disruptor. Thus, even small actions undertaken by many people could significantly reduce the harmful impacts of paper manufacturing, use, and disposal.
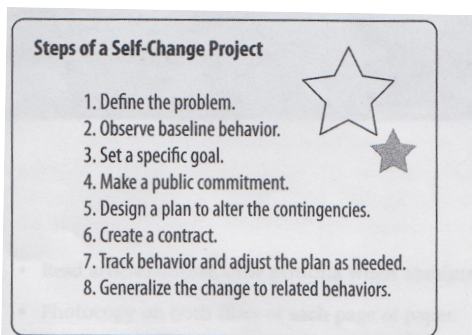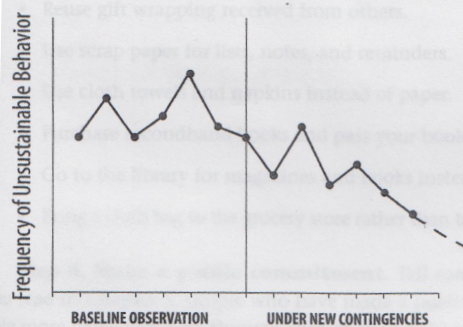

FIGURE A.1 *Steps of a Self-Change Project.*

FIGURE A.2 *Example of a Behavioral Graph.*

Step 2. Observe baseline behavior. Start by identifying the variety of different behaviors involved with your paper use. Think about their relative importance. For instance, maybe you throw out a lot of paper packaging, accumulate a lot of grocery bags, print a ton of reports single-sided, and throw away scads of paper napkins. Which of these dominates your paper use? Which has the most downstream impact? Keeping it simple but significant will give you the most bang for your buck, so after you have learned where you can make improvements, pick one or two changes as your focus. After you have picked a behavior, count and graph it over a period of time, say two weeks *prior to initiating any attempt at change.* This provides a **baseline** measure of behavior as it is occurring with existing contingencies.

Given this picture of unaltered behaviors, you can also **monitor situational factors** that influence them. For example, you may be good at photocopying on two sides of the paper unless you are rushed. Because the photocopy machine is more likely to jam when making double-sided copies, you might avoid doing it when you have limited time. Similarly, it might be easy to use cloth napkins instead of paper when at home, but not when you go out to eat. Analysis like this might reveal that your

paper overuse occurs because of time pressure or convenience. Figure A.2 shows what a behavioral record would look like in graph form, both for the baseline period and the period where the contingencies are changed.

Step 3. Set a specific goal. An intention to reduce consumption or minimize paper waste is too vague. Defining the goal *specifically*, in behavioral terms, enhances your ability to track progress, which increases probability of success. With respect to paper use, your goal might be to reduce it by 50%. The goal should represent a significant but realistic change. In behavioral terms, this could involve specific actions such as the following:

- Read articles online, only printing when absolutely necessary.
- Photocopy on both sides of each page of paper.
- Print drafts of manuscripts and informal notes on the backs of scrap paper.
- Reuse gift-wrapping received from others.
- Use scrap paper for lists, notes and reminders.
- Use cloth towels and napkins instead of paper.
- Purchase secondhand books and pass your books onto others.
- Go to the library for magazines and books instead of purchasing your own.
- Bring a cloth bag to the grocery store rather than taking paper (or plastic) ones.
- Bring cloth bags for all shopping.
- Shower less.
- Stop or reduce use of plastic water bottles.
- Reduce use of plastic forks and knives from take-out restaurants. Bring your own!
- Compost your food waste.
- Convince your co-workers to forego a Keurig machine at work, and encourage them to bring travel mugs to work. (Depending on how large your work group is, you can take turns buying boxed coffee for the group.)
- Take public transportation to work.

Step 4. Make a public commitment. Tell someone about the project. People who have made a public commitment are considerably more likely to follow through with changing the behavior. Post your progress on our Discussion Board in Blackboard.

Step 5. Design a plan to alter the contingencies. Figure out ways you can change the *antecedents and consequences* of your undesired and desired behaviors. For example, to reduce napkin use, you could keep a cloth napkin in your purse, briefcase, or backpack so you'll have it with you when you go to meals. If it is easier to reuse envelopes opened with a letter opener than ones that get torn when you open them by hand, place a letter opener where you open the mail. Designing such antecedent conditions enables more effective cuing of one's behavior.

     Manipulating consequent stimuli can also be very helpful. When you successfully change your behavior, you can reward yourself with a special treat. Perhaps inviting a friend to lunch, swimming for an hour, or watching a movie would be reinforcing events. (Make sure the reinforcer doesn't contradict your overall goal. For instance, a new magazine subscription would be contraindicated in this example!)

     Similarly, you could institute punishers. You could ask a friend or family member to scold you (or you could scold yourself) when you forget to bring your own bags to the store (positive punishment). By keeping a running account of the costs associated with your paper use (e.g., how much you spend on paper towels and napkins, printer paper, and giftwrap), you can experience more directly the adverse impacts of waste (i.e., negative punishers). If this loss of money is not significant

enough to create discomfort, you can require yourself to do something more costly when you waste paper, such as donate money to an organization that plants trees, or plant some trees yourself.

Step 6. Create a contract. Drawing up a formal contract makes your plans concrete. The contract should specify the goal behaviors and consequent contingencies. For example, it might say, "I will print all my assignments double-sided. If I successfully do this for a whole week, I will reward myself with a movie. If I fail to do this for a whole week, I will make a $10 donation to an environmental group." Keep your contract visible (make it your computer wallpaper!).

Step 7. Track behavior and adjust the plan as needed. Continue to record and graph your behaviors. This way you can judge the extent to which the altered antecedent and consequent strategies are successfully changing your paper use. If you are experiencing less success than you had anticipated, revisit your contingency plan and make necessary adjustments.

Step 8. Generalize the change to related behaviors. At some point, your new behaviors should become habitual, or at least performed more often than not. Then you might start noticing ways in which you can include additional behaviors within the same domain, For example, the goal of conserving paper might broaden to include reducing food packaging. You might be inspired to make changes in other categories, too, like conserving energy by lowering the thermostat in the winter, unplugging devices or appliances when not in use, carpooling and bicycling instead of driving alone, or reducing your plastic water bottle consumption.

Good luck!

For inspiration: Review the carbon footprint results you posted on Blackboard. You might also want to view online "The Story of Stuff" (google it).