



# PSYCHOLOGY FOR CONSERVATION

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## About myself:

- WWF-Hong Kong member
- Associate Professor, Division of Social Science, HKUST
- Teaching (introductory psychology, social psychology; ongoing collaboration with the education team of WWF-HK)
- Research (conservation psychology, environmental psychology)

# 1. Why Psychology?

Technological innovation

More efficient appliances and alternative energy sources are the solution?

“It is wholly a confusion of ideas to suppose that the economical use of fuel is equivalent to a diminished consumption. The very contrary is the truth.... Every improvement of the engine, when effected, does but accelerate anew the consumption of coal.”

~ Stanley Jevons (1865)

“Regulation and voluntary agreements have led to improvements in new car fuel economy, but these have made remarkably little difference to the actual ‘on the road’ fuel economy of the UK car fleet. ‘Rebound effects’ have emerged, such as changes in drivers’ and car buyers’ behaviour, compensating for the vehicle improvement.”

~ Potter & Parkhurst (2005)

Mind the rebound effect!

## Rebound effects

- Direct rebound effects: due to the desire of consumers to use more of any product or service due to its lower price;
- Indirect rebound effects: due to the fact that, with lower energy price, more income is available to spend on other products and services, such as holidays, which involves consuming energy;
- Economy wide effects: due to long-term changes in the economy caused by technological innovation, changes in consumer preferences (e.g., outdoor lighting, mobile computers)

~ Herring & Roy (2007)

Mind the rebound effect!

## Information provision

Information about environmental issues can motivate actions?

“Householders who were interested in enhancing the energy efficiency of their homes participated in a comprehensive workshop on residential energy conservation. Despite significant changes in knowledge and attitudes, behavior did not change.”

~ Geller (1981)

“Householders who volunteered to participate in a 10-week study of water conservation received a booklet that described the relationship between water use and energy use, and methods were described that could conserve water. Even though great attention was given to the booklet, it had no impact upon water consumption.”

~ Geller et al. (1983)

Gap between knowledge and action

Scrutinize your assumptions about human behavior!  
Throw away the invalid ones!



Editorial, *Conservation Biology* (Vol.17, No.3, 2003)

“The disconnect between our biological knowledge and conservation success has led to a growing sense among scientists and practitioners that social factors are often the primary determinants of success or failure. Although it may seem counterintuitive that the foremost influences on the success of environmental policy could be social, conservation interventions are the product of human decision making processes and require changes in human behavior to succeed. Thus, conservation policies and practices are inherently social phenomena, as are the intended and unintended changes in human behavior they induce.”

## 2. Conservation Psychology

Conservation psychology:

- Understands why people behave in ways that help or hurt the natural environment
- Promotes behavior that protects the natural environment

# 1: The role of mutual influences

Common strategy:  
to influence individuals by telling them what they should do

Caring for the environment. Reuse your bags.

**R&CYCLE.**  
**CAN YOU**  
**AFFORD**  
**NOT TO**



**HELP SAVE THE ENVIRONMENT**

You can show your respect for nature and help save the environment by reusing your towels during your stay.

Alternative strategy:

to make use of the mutual influences among people by telling them  
what others do

**JOIN YOUR FELLOW GUESTS IN HELPING TO  
SAVE THE ENVIRONMENT**

In a study conducted in Fall 2003, 75% of the guests who stayed in this room (#313) participated in our new resource savings program by using their towels more than once. You can join your fellow guests in this program to help save the environment by reusing your towels during your stay

**HELP SAVE THE ENVIRONMENT**

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~ Goldstein et al. (2008)

## JOIN YOUR FELLOW GUESTS IN HELPING TO SAVE THE ENVIRONMENT

In a study conducted in Fall 2003, 75% of the guests participated in this program. 49.3% of guests in room (#313) reused towels more than once. You can join your fellow guests in this program to help save the environment by reusing your towels during your stay.

## HELP SAVE THE ENVIRONMENT

You can show your respect for nature and help save the environment by reusing your towels during your stay. 37.2% of guests participated in this program.

## JOIN YOUR FELLOW GUESTS IN HELPING TO SAVE THE ENVIRONMENT

In a study conducted in Fall 2003, 75% of the guests participated in this program. 44.0% of guests in room (#313) reused towels more than once. You can join your fellow guests in this program to help save the environment by reusing your towels during your stay.

~ Goldstein et al. (2008)

Caring for the environment. Reuse your bags.

Shoppers in this store believe that re-using shopping bags is a worthwhile way to help the environment.

Please continue to re-use your bags.

~ de Groot et al. (2013)



Caring for **3.12 bags** our bags.

Shoppers in this store believe that re-using  
shopping b **2.04 bags** help the

Please continue to re-use your bags.

~ de Groot et al. (2013)

## 2: Barriers to behavior

Common assumption:

Arousing environmental concern automatically motivates  
environmental actions

“When 500 people were interviewed regarding their personal responsibility for picking up litter, 94% acknowledged responsibility. When leaving the interview, however, only 2% picked up litter that had been “planted” by the researcher.”

~ Bickman (1972)

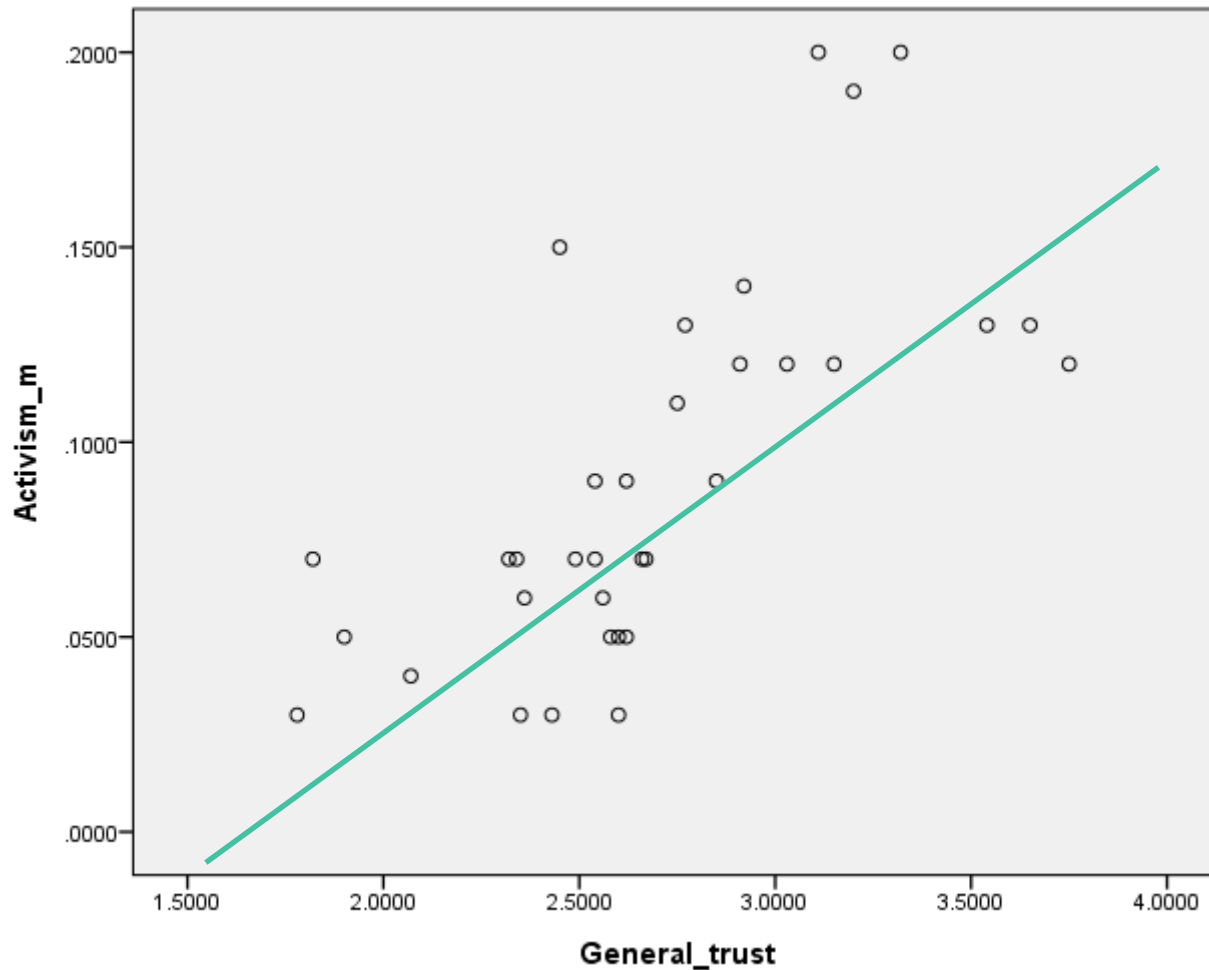
“Hines et al. for example, report an average correlation of 0.35 in their meta-analysis of 128 studies; Eckes and Six (1994) found only an average correlation of 0.26 in their meta-analysis (17 studies). Taken together, the general attitude environmental concern seems to explain not more than 10% variance of specific environmental behaviors.”

~ Bamberg (2003)

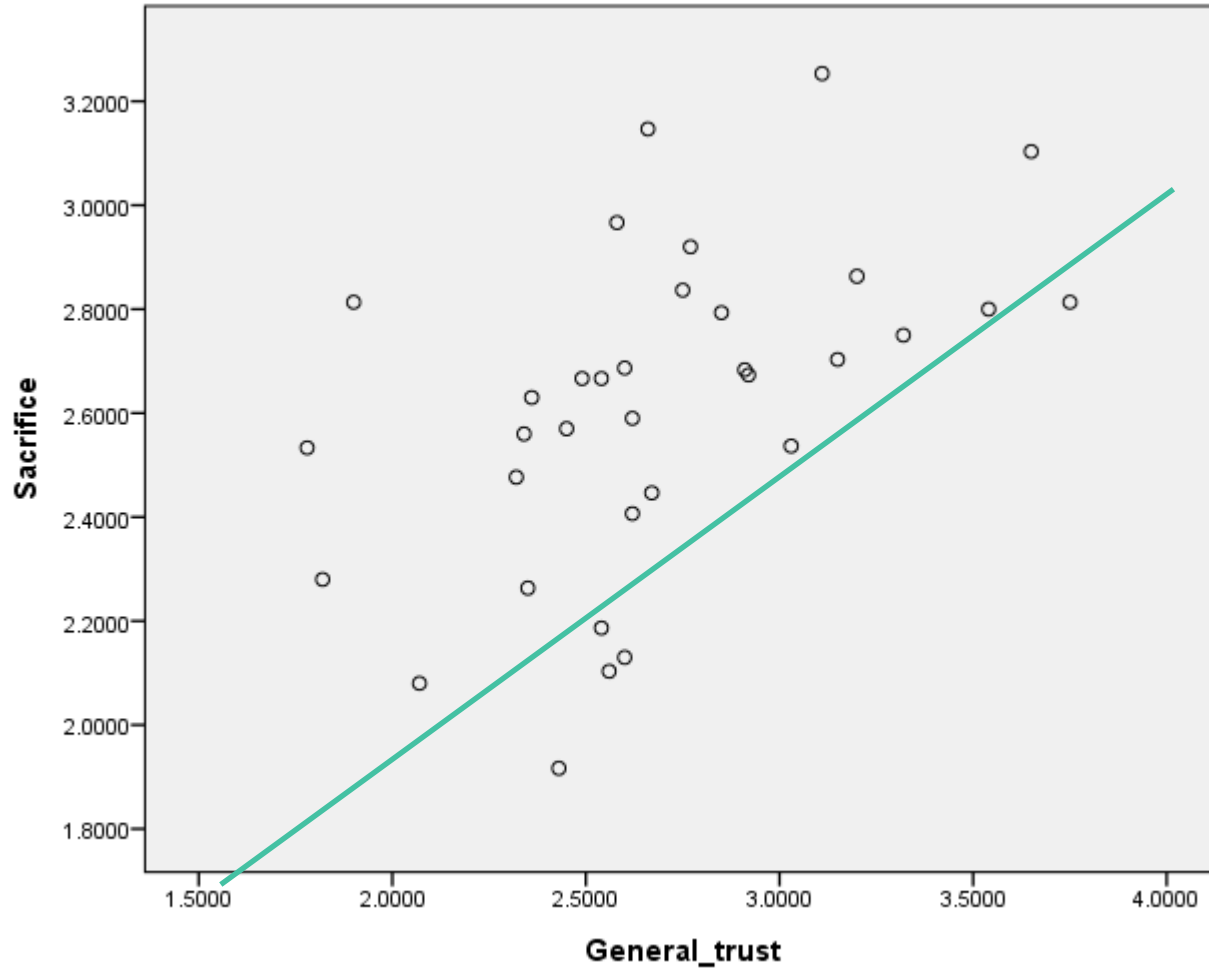
Mind the attitude-behavior gap!

## Some barriers to behavior

1. **Sense of inefficacy:** Because climate change is a global problem, many individuals believe they can do nothing about it as individuals (Tam, in press)
2. **Lack of perceived control:** People do not have confidence in their ability to perceive the desirable behavior (Bandura, 2000)
3. **Social mistrust:** People fear of being victimized by free-riders; they question why they should contribute when others do not (Gifford, 2007; Tam, 2013)



There is stronger active support for environmental activities among citizens in countries with greater trust  
~ Tam (2013)



There is more willingness to sacrifice own well-being for the environment among citizens in countries with greater trust  
~ Tam (2013)

Alternative strategies:

Sharing success stories; equipping people with skills and implementation plans; building trust

## 3: Spillover effect

Common assumption:  
Positive spillover



“Our concern is that, at best, many campaigns for small and environmentally insignificant behavioural changes are tacitly justified through an unexamined assumption that these will contribute to delivery on more ambitious and environmentally relevant changes. At worst, we suspect that in many cases such campaigns are embarked upon without any reflection on the contribution that they may, or may not, make to achieving the ambitious changes that are needed.  
~ Thorgensen & Crompton (2009), in a collaborative report published by WWF-UK

Mind negative spillover!

“We install tankless water heaters — then take longer showers. We drive SUVs to see Al Gore’s speeches on global warming...”

~ Rosenwald (2010)

“Past good deeds can liberate individuals to engage in behaviors that are immoral, unethical, or otherwise problematic, behaviors that they would otherwise avoid for fear of feeling or appearing Immoral... moral self-licensing occurs because good deeds make people feel secure in their moral self-regard.”

~ Merritt et al. (2010)

Mind the moral licensing effect!

## Little Things Store

### Announcements

None at this time

### Shopping Basket

The table in the middle of this page is your shopping basket. Increase the quantity by clicking on the "+" sign. Decrease the quantity by clicking on the "-" sign. You can buy only 1 of each item.

Click on a product name to see a picture and get more details.

	Price	Quantity	Subtotal
 Seventh Generation - Liquid Laundry Detergent	\$8	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 Tide - Liquid Laundry Detergent	\$8	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 Energizer - Rechargeable Batteries	\$5	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 Avalon Organics - Shampoo	\$5	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 Stonyfield Farm - Organic Yogurt	\$5	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 Speed Stick - Deodorant Stick	\$4	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 Tom's of Maine - Natural Deodorant Stick	\$4	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 NOMA - Compact Fluorescent Light Bulb	\$4	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 Back to Nature - Macaroni and Cheese Dinner	\$4	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 Organic Kettle Chips	\$3	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 Bounty - Kitchen Paper Towels	\$2	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
 Seventh Generation - Kitchen Paper Towels	\$2	0 <input type="button" value="+"/> <input type="button" value="-"/>	\$0
<b>TOTAL</b>			\$0

### Check-Out

When you are done shopping, press the "Check-Out" button below.

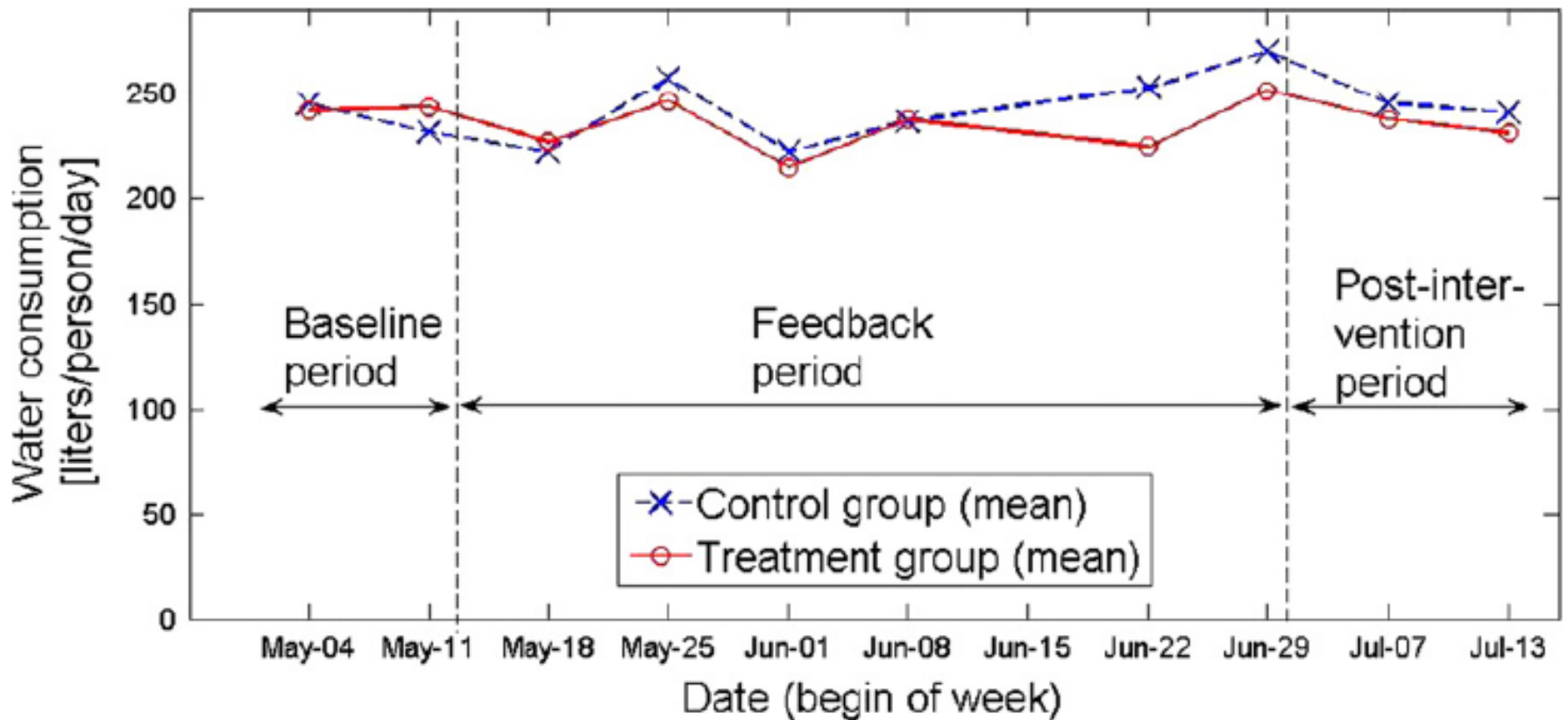
Remember your TOTAL basket value cannot be over \$25.

If you don't want to buy anything, please check-out with an empty basket.

**Continue**

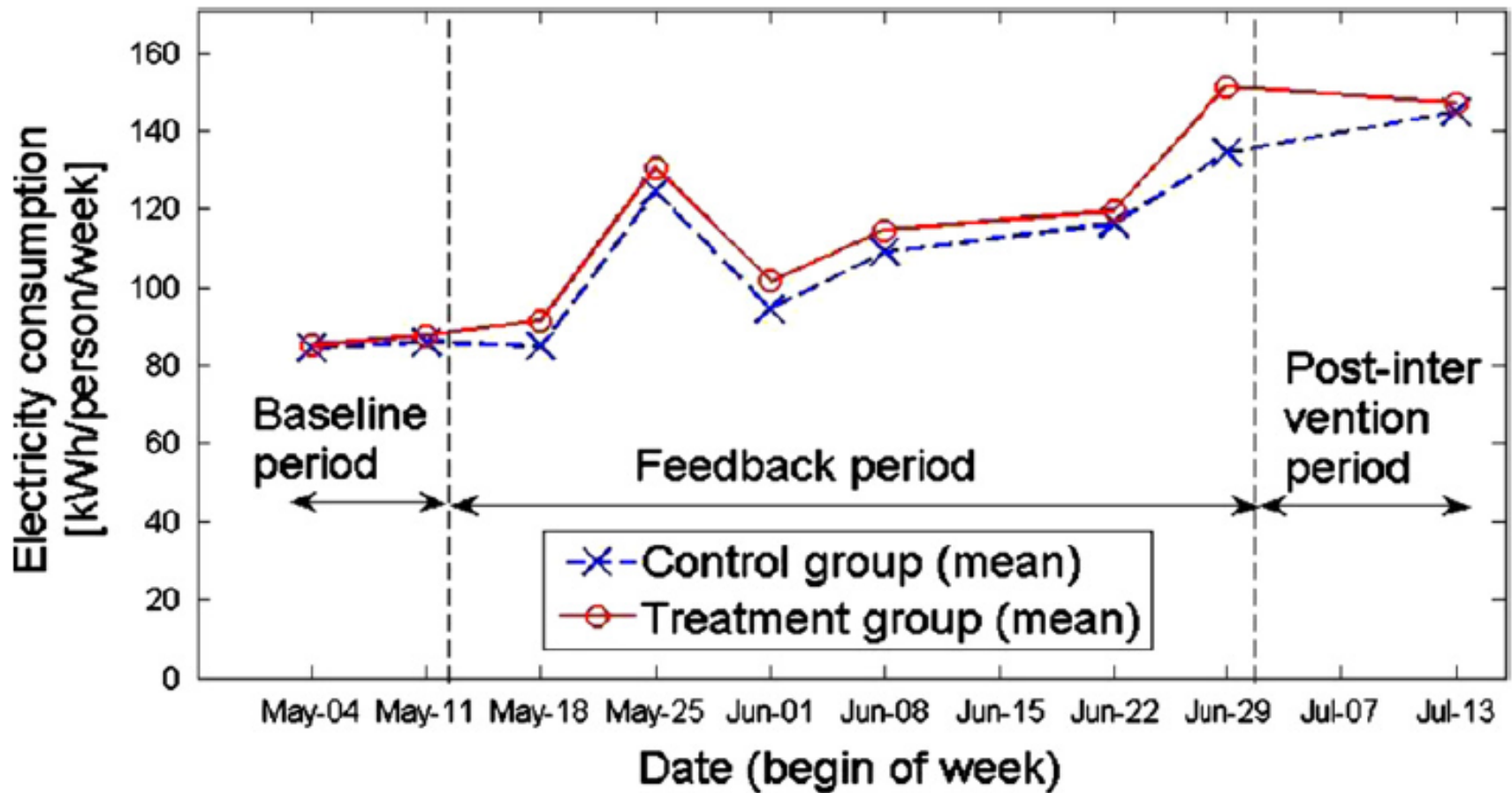
After shopping in a green store (vs. conventional store), participants were more likely to cheat in a laboratory task (\$0.56 vs. \$0.08)!

~ Mazar & Zhong (2010)



The conservation program (providing feedback to households about their water usage level) reduced water consumption

~ Tiefenbeck et al. (in press)



However, the program at the same time increased electricity consumption  
 ~ Tiefenbeck et al. (in press)

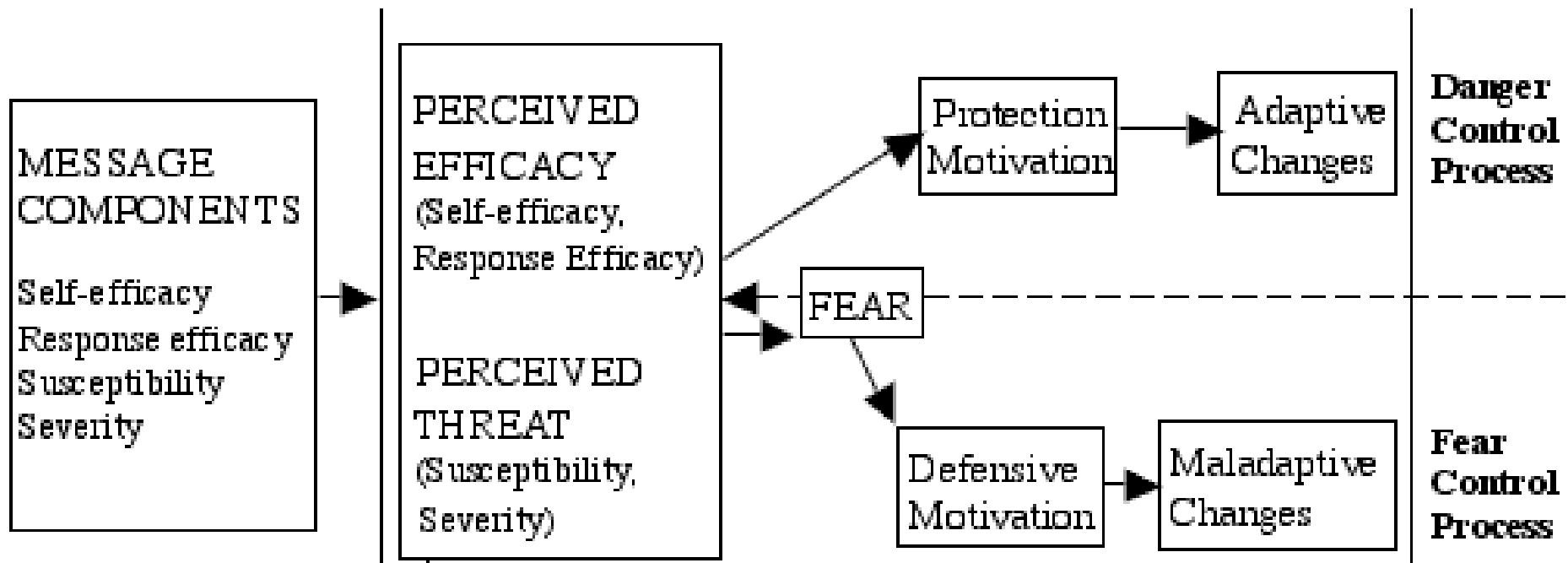
“Environmental campaigners should be clear with themselves about whether a campaign is aimed at delivering a specific behavioural change (the actual focus of the campaign) or whether it is aimed at helping to elicit a wider set of behavioural changes (through positive spillover effects)... Be clear about the environmental reasons for behavioral change... Make explicit the connections between different pro-environmental behaviors...”

~ Thorgensen & Crompton (2009), in a collaborative report published by WWF-UK

## 4: Use of dire messages

Common assumption:

Dire messages arouse people's fear and thereby motivate coping actions



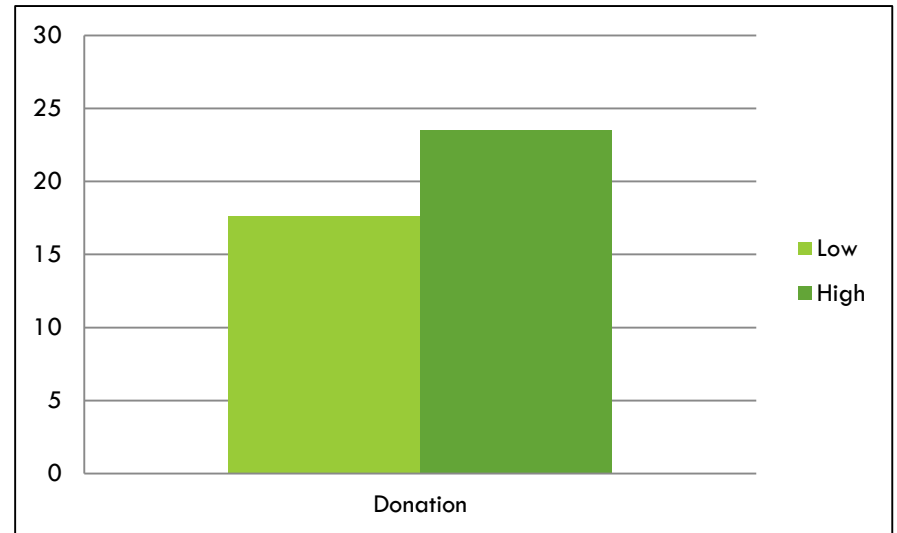
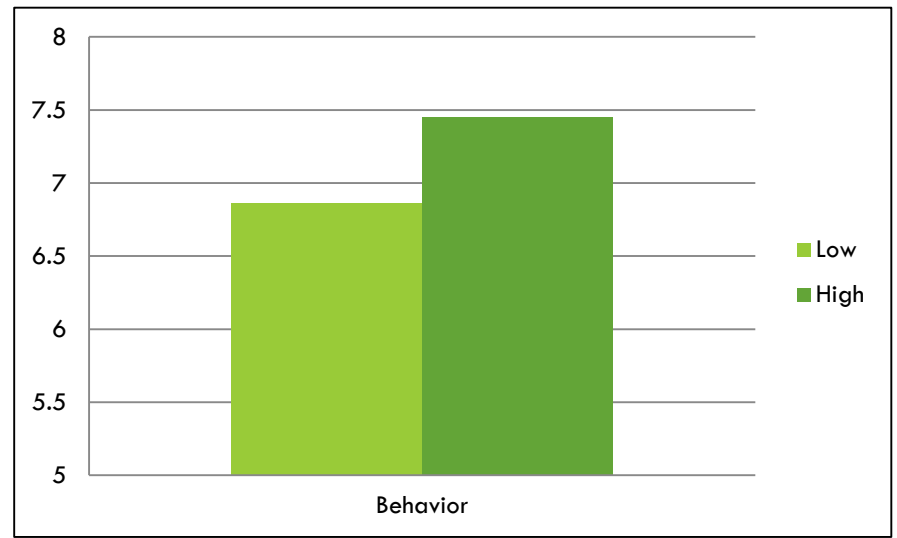
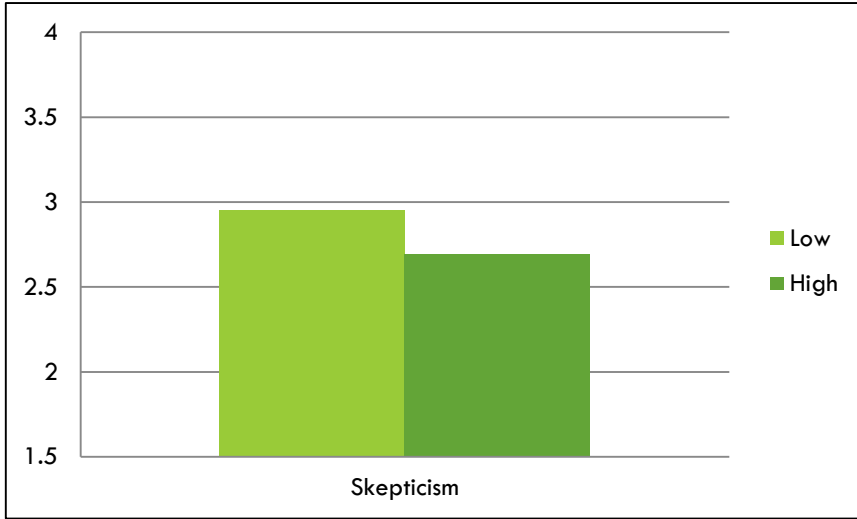
~ Maloney, Lapinski, & Witte (2011)

Two possible responses to dire messages



“Roszak (1994) warned about the counterproductive ‘green guilt and ecological overload’ conveyed by many environmental initiatives. People must have a sense of the positive impacts of behavioral change to muster support for and cooperation with proenvironmental actions, and to overcome the inclination for hopelessness...”

~ Koger (2011)



Individuals who reported more feelings of gratefulness toward the natural world were more intended to engage in conservation behavior, less skeptical about climate change, and donated more money to WWF-HK

Tam (2013)

The role of positive emotions (e.g., gratitude)

### 3. Take-home messages

Scrutinize your assumptions about human behavior.

In your conservation programs

1. take advantage of the mutual influences among people;
2. demolish barriers to conservation behavior;
3. facilitate positive spillover; and
4. consider using positive messages rather than dire messages.

Study psychology!

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