

The Dragons of Inaction: Why We Do Less Than We Should, and How We Can Overcome

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The Problem

Climate change inarguably
is anthropogenic in part.




Social Dilemmas:

Commons Dilemmas



Public Goods Problems

Give the Gift of Love



Liver Transplant December 2000

Be An Organ Donor

www.gatransplant.org

What Causes This?

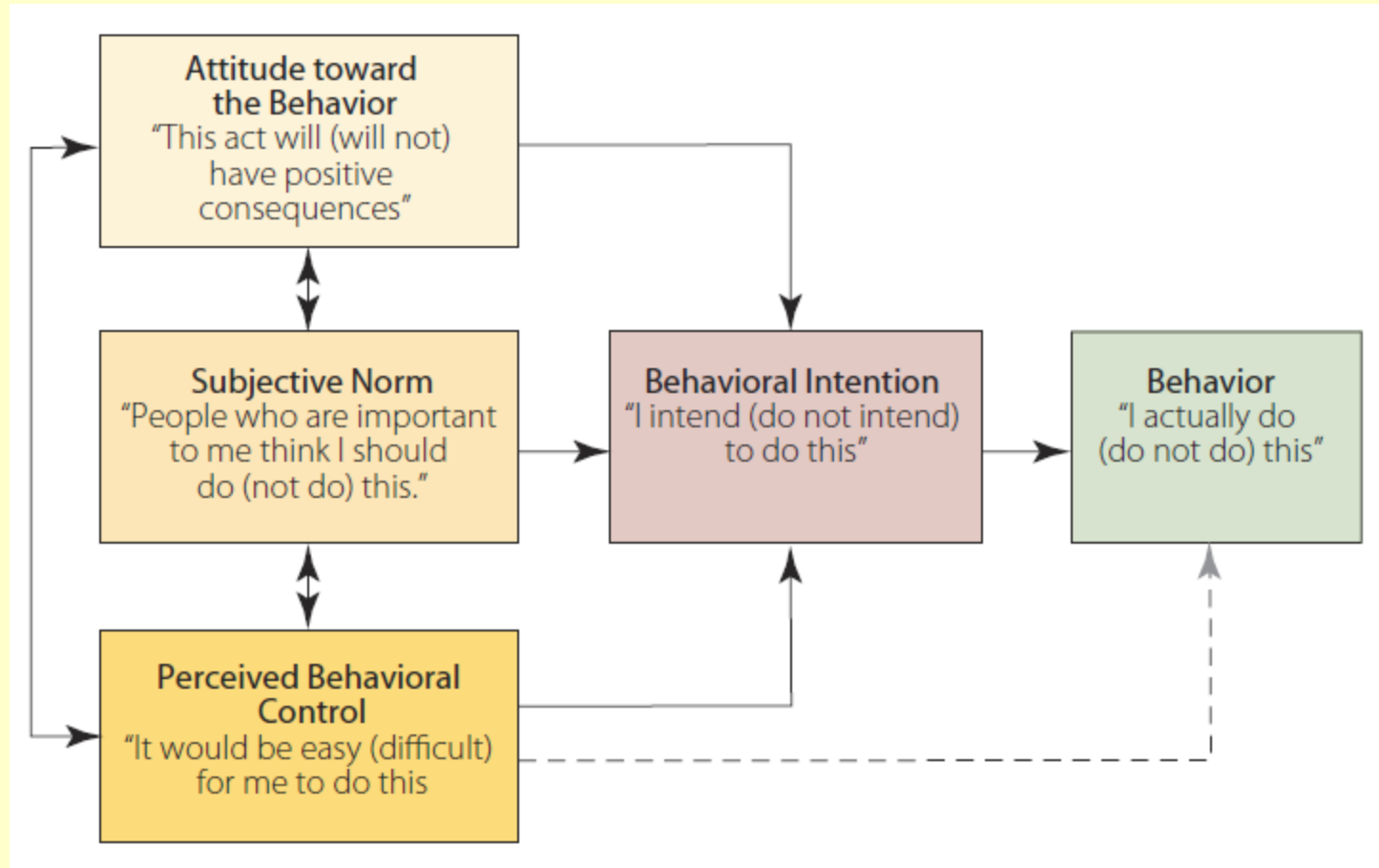
- Various structural influences, including
 - Geophysical factors (Live in Canada without heat?)
 - Economic factors (Marketing, advertising)
 - Technological factors (My ride is so comfy!)
 - Infrastructure problems (Ride a bike in traffic?)



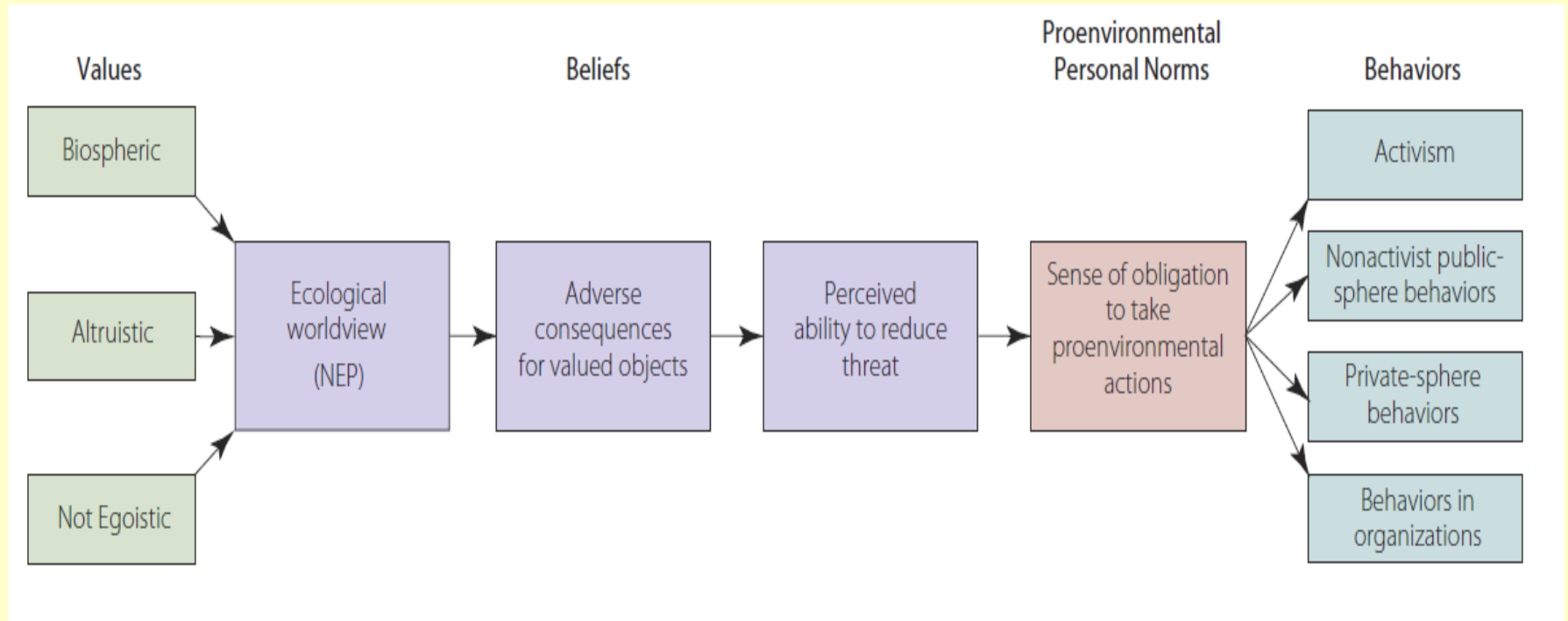
Psychological Factors

- But also psychological factors, broadly:
 - Intrapersonal* factors (personality, values, attitudes, skill, aspirations)
 - Interpersonal* relations (social comparison, trust, friendship, norms, etc.)
 - Decision-making*: Each one of us, everyday, citizen or CEO, makes choices every day, and these choices matter in the aggregate

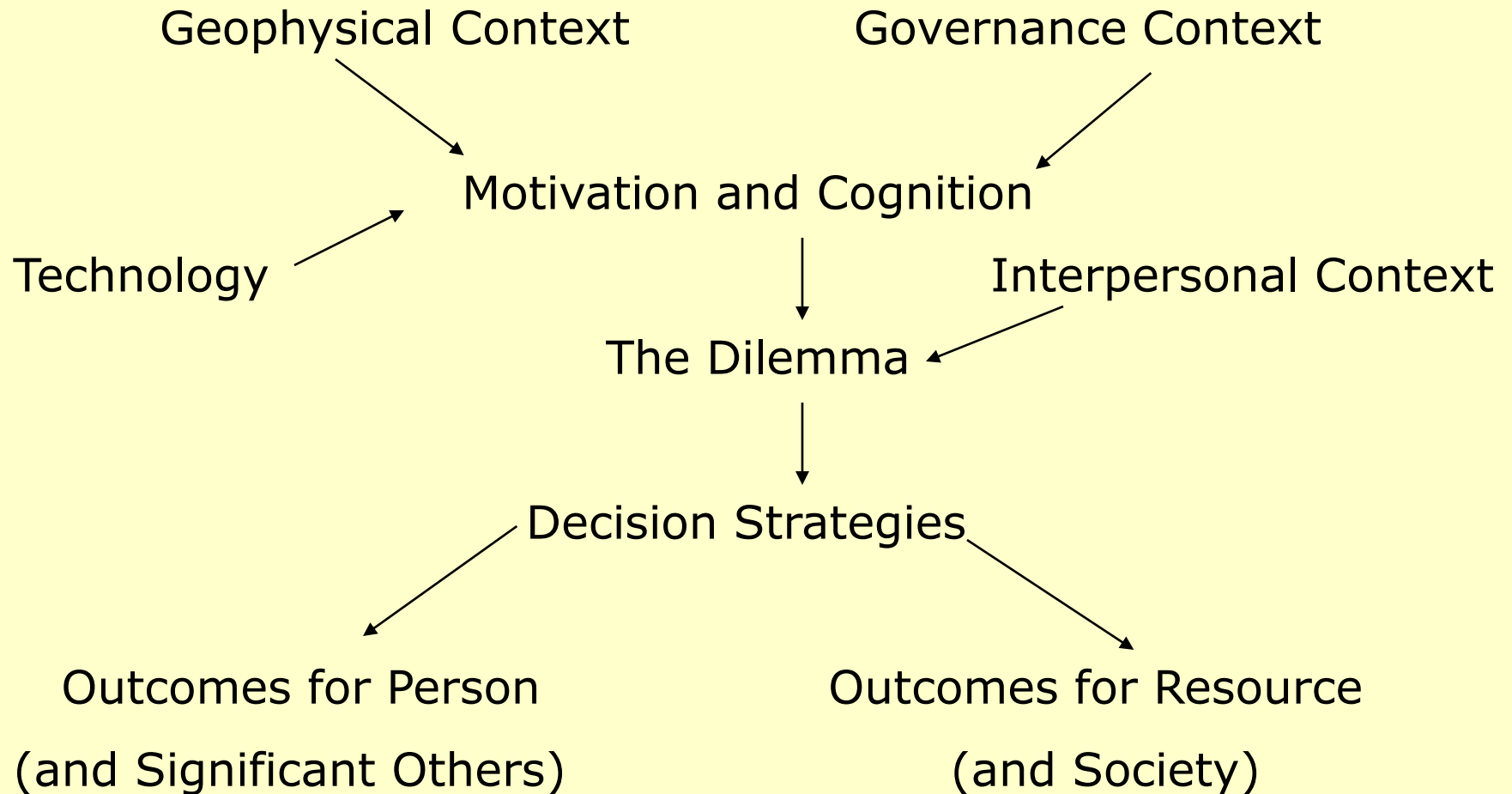
Ajzen's Theory of Planned Behaviour



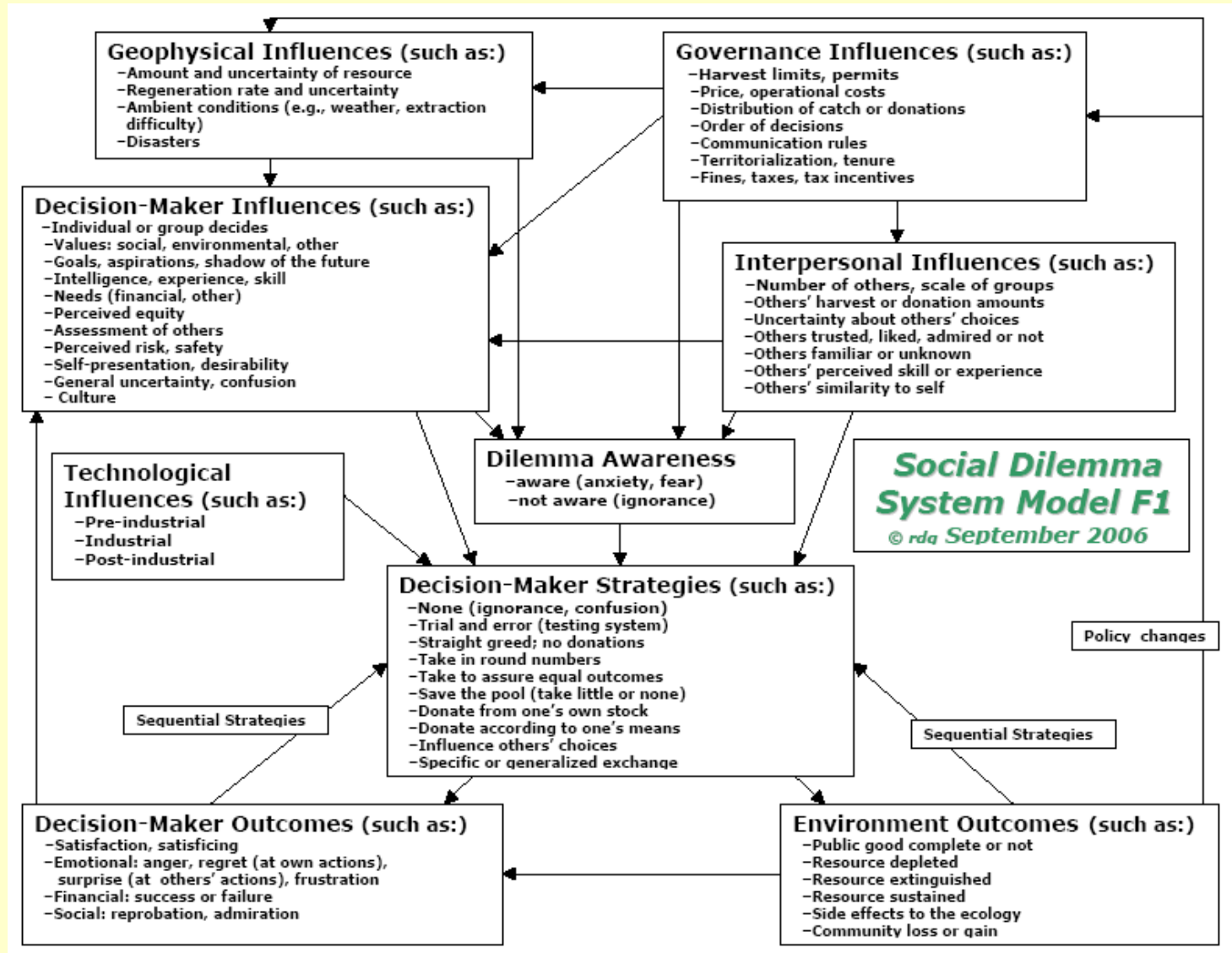
Stern's VBN Model



The Simple Form of the General Model



The Full Version of the General Model



FISH 3.1: A Microworld for Labs

Fishing Simulation

Rules:

Each fish earns you \$20.00.

Each minute at sea costs you \$15.00.

Leaving port costs you \$0.10.

Now in season 1. There are 88 - 118 fish in the sea.

Go out to sea

Return to port

Cast for one fish

Cast for any number:

You are now on the high seas.

	This Season	Overall
Time at sea	0:00:04	0:00:04
Fish caught	0	0
Expenses	\$1.10	\$1.10
Income	\$0.00	\$0.00
Profits	-\$1.10	-\$1.10

Fisher	Status	Fish Caught		Balance	
		This Season	Overall	This Season	Overall
You	Fishing	0	0	-\$1.10	-\$1.10
Sally	Fishing	3	3	\$59.15	\$59.15
Jesse	Fishing	3	3	\$59.40	\$59.40
John	At Port	0	0	\$0.00	\$0.00

Sample Output from FISH 3.1

fish.out - Notepad

File Edit Search Help

FISH 3.1 Simulation Summary: Tue Jun 20 16:05:00 PDT 2000

Fisher	Group	Season	NFInit	FTaken	Profit	IR	GR	IE	GE
Bob	1	1	120	80	\$1548.75	-1	0	-2	0

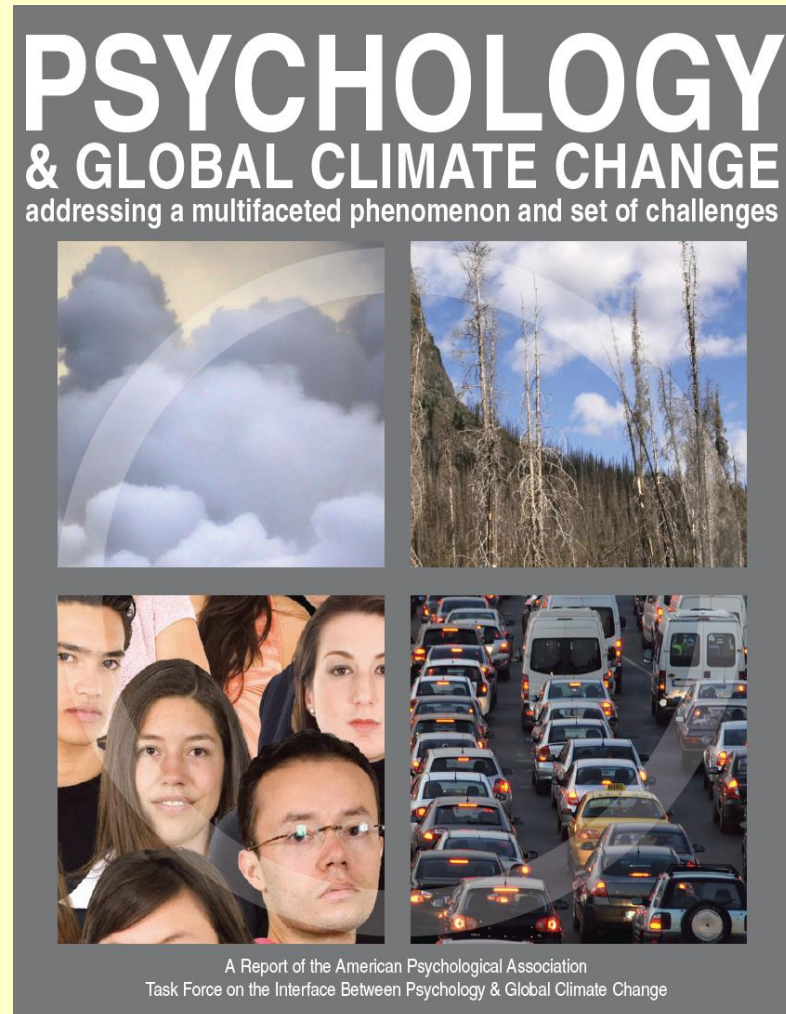
FISH 3.1 Simulation Summary: Tue Jun 20 16:12:58 PDT 2000

Fisher	Group	Season	NFInit	FTaken	Profit	IR	GR	IE	GE
Bob	1	1	120	0	\$0.00	1	0.6667	2	1.3333
		2	120	10	\$177.25	0.75	0.5833	1.5	1.1667
		3	120	0	\$0.00	1	0.6667	2	1.3333
		4	120	0	\$0.00	1	0.6667	2	1.3333
		5	120	0	\$0.00	1	0.6667	2	1.3333

FISH 3.1 Simulation Summary: Mon Nov 06 11:50:19 PST 2000

Fisher	Group	Season	NFInit	FTaken	Profit	IR	GR	IE	GE
Bob	1	1	18	6	\$2.90	0	0.3333	0	0.6667
		2	12	5	\$2.39	-0.25	0.25	-0.333	0.3333
		3	6	0	\$0.00	1	0.6667	1	0.6667
		4	8	5	\$2.42	-0.875	0.125	-0.875	0.125
		5	2	1	\$0.43	-0.5	0.5	-0.5	0.5
		6	2	0	\$0.00	1	1	1	1
		7	4	0	\$0.00	1	0.5	1	0.5
		8	4	0	\$0.00	1	0.5	1	0.5
		9	4	0	\$0.00	1	0.5	1	0.5
		10	4	0	\$0.00	1	0.5	1	0.5

The APA Climate Change Report



Read it all
here



<http://www.apa.org/science/about/publications/climate-change-booklet.pdf>

What to Do?

(These are from various websites)

tenthingstodo

Want to do something to help stop global warming?
Here are 10 simple things you can do and how much carbon dioxide you'll save doing them.

Change a light
Replacing one regular light bulb with a compact fluorescent light bulb will save 150 pounds of carbon dioxide a year.

Drive less
Walk, bike, carpool or take mass transit more often. You'll save one pound of carbon dioxide for every mile you don't drive!

Recycle more
You can save 2,400 pounds of carbon dioxide per year by recycling just half of your household waste.

Check your tires
Keeping your tires inflated properly can improve gas mileage by more than 3%.
Every gallon of gasoline saved keeps 30 pounds of carbon dioxide out of the atmosphere!

Use less hot water
It takes a lot of energy to heat water. Use less hot water by installing a low flow showerhead (350 pounds of CO2 saved per year) and washing your clothes in cold or warm water (500 pounds saved per year).

Avoid products with a lot of packaging
You can save 1,200 pounds of carbon dioxide if you cut down your garbage by 10%.

Adjust your thermostat
Moving your thermostat just 2 degrees in winter and up 2 degrees in summer
You could save about 2,000 pounds of carbon dioxide a year with this simple adjustment.

Plant a tree
A single tree will absorb one ton of carbon dioxide over its lifetime.

Turn off electronic devices
Simply turning off your television, DVD player, stereo, and computer when you're not using them will save you thousands of pounds of carbon dioxide a year.

Spread the word! Encourage your friends to buy An Inconvenient Truth



aninconvenienttruth
available on DVD
November 21
www.climatecrisis.net

YOUR ENVIRONMENT EXTRA
ISSUE 17 NOVEMBER 2007 - JANUARY 2008
Environment Agency

THE

5



things that will save
THE PLANET
Results from a poll of 25 experts



Unfortunately...

**“Man (sic) is not a rational animal,
he is a rationalizing animal.”**

Robert Heinlein in *Assignment in Eternity* (1953)

(Did you think Leon Festinger invented this idea?

**Festinger, L. (1957). *A theory of cognitive dissonance*.
Stanford, CA: Stanford University Press.)**

We Don't Do (All) That We Should

(Not even all that we ourselves think we should!)

(Me too!)

Why not? This is the key question

The 7 Dragons of Non-Sustainability



Seven Dragon Genera

(incorporating 29 species in all)

- **Limited Cognition**
- **Ideologies**
- **Other People**
- **Sunk Costs**
- **Discredence**
- **Perceived Risks**
- **Limited Behaviour**

Limited Cognition

- Ancient Brain
- Ignorance
- Numbness
- Uncertainty
- Discounting
- Optimism Bias
- Lack of Perceived Control



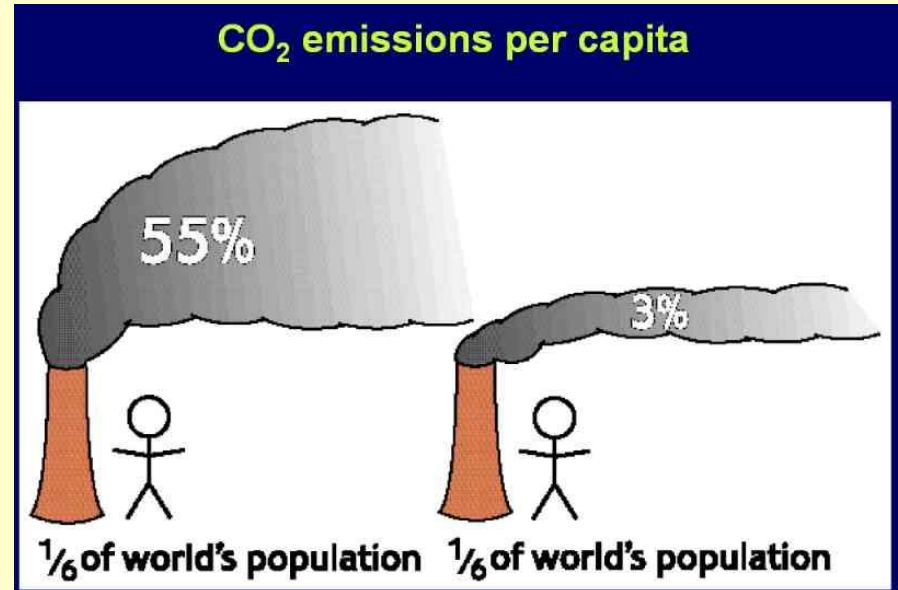
Ideologies

- **Political Worldviews**
- **System Justification**
- **Suprahuman Powers**
- **Technosalvation**



Other People

- Social Comparison
- Social Norms
- Perceived Inequity



Sunk Costs

- **Financial Investments**
- **Behavioural Momentum**
- **Conflicting Goals and Aspirations**




Perceived Risks

- Social
- Psychological
- Financial
- Functional
- Physical
- Temporal



Discredence

- Perceived Program Inadequacy
- Mistrust
- Reactance
- Denial



**"All men having power
ought to be mistrusted."**

James Madison

Limited Behaviour

- Tokenism
- Rebound Effect



Psychology's Role

- It can contribute in at least five ways



Five Ways to Slay Dragons: 1

- **Develop understanding of impactful behaviours**
 - What exactly do people do?
 - Which are the most impactful acts?
 - Learn variations in the rate of these actions
 - Learn what are the antecedents of these actions

Five Ways to Slay Dragons: 2

- **Develop and evaluate interventions**
 - Test information campaigns
 - Explore most effective forms of communication
 - Human factors for making good choices attractive

Level of Changes Travelers Would Be Willing to Make to Combat Climate Change

Significant	9%
Moderate	38%
Minimal	36%
No Change	17%

*Note: 1000 UK Travelers
Source: Institution of Civil Engineers (ICE), November 2009*

108778

www.eMarketerGreen.com



Five Ways to Slay Dragons: 3

- **Work together with other disciplines**
 - Better energy-use meters—but feedback issues
 - Zero-energy buildings, but occupant misuse
 - Green communities, but real participation?



Five Ways to Slay Dragons: 4

- **Make climate change now (because it is)**
 - Community-based diffusion
 - Facilitate amateur scientists
 - Develop social networks



Five Ways to Slay Dragons: 5

- Join in the policy development process
 - Not at the table = Not in the policy
 - Choose your comfort level: organizational, neighbourhood, municipal, regional, state/provincial, federal—but do get involved

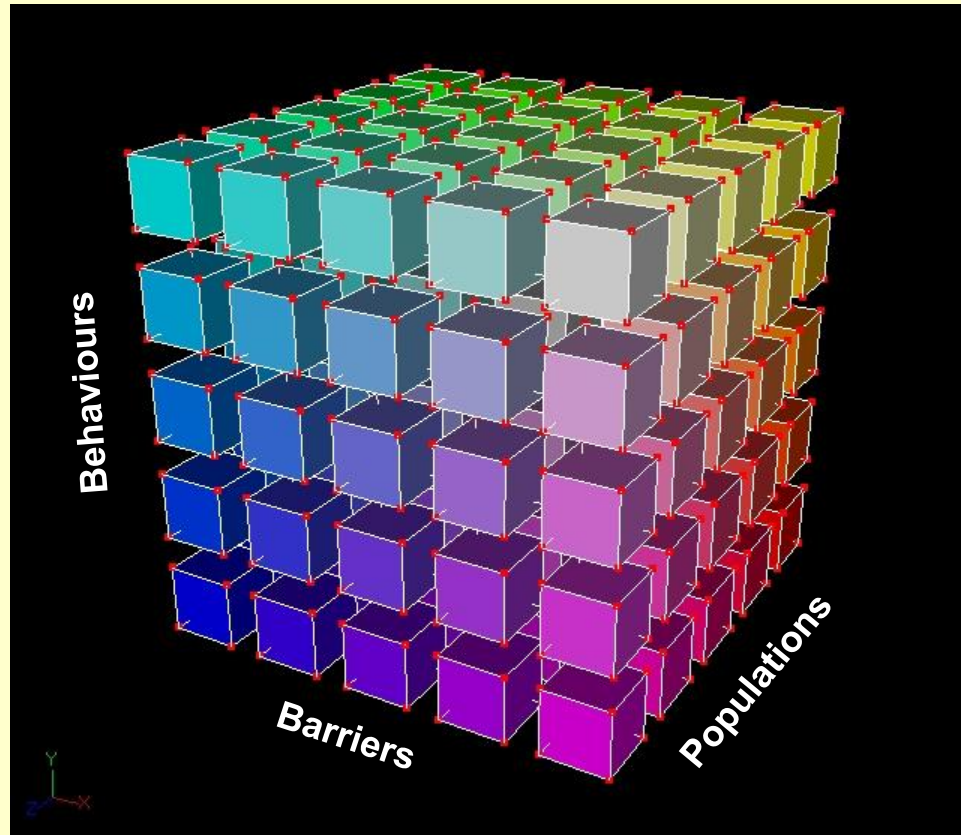


One Size (Policy) Does *Not* Fit All

- ***Which* unsustainable behaviour?**
In terms of sectors: Energy, transport, goods, and food
- ***Which* segment of the population?**
Traditional consumer segments—age, education, etc.
- ***Which* dragon (barrier)?**
29 different psychological barriers (although structural barriers also need attention)

An important challenge for effective policy...

**To maximize mitigation,
policies and practices should be
designed and targeted**



Thank you for your attention!

Questions now? Here I am...



Or questions later? rgifford@uvic.ca