

# **The Dragons of Inaction:**

**Understanding and Overcoming the Intention-Behaviour Climate Gap**

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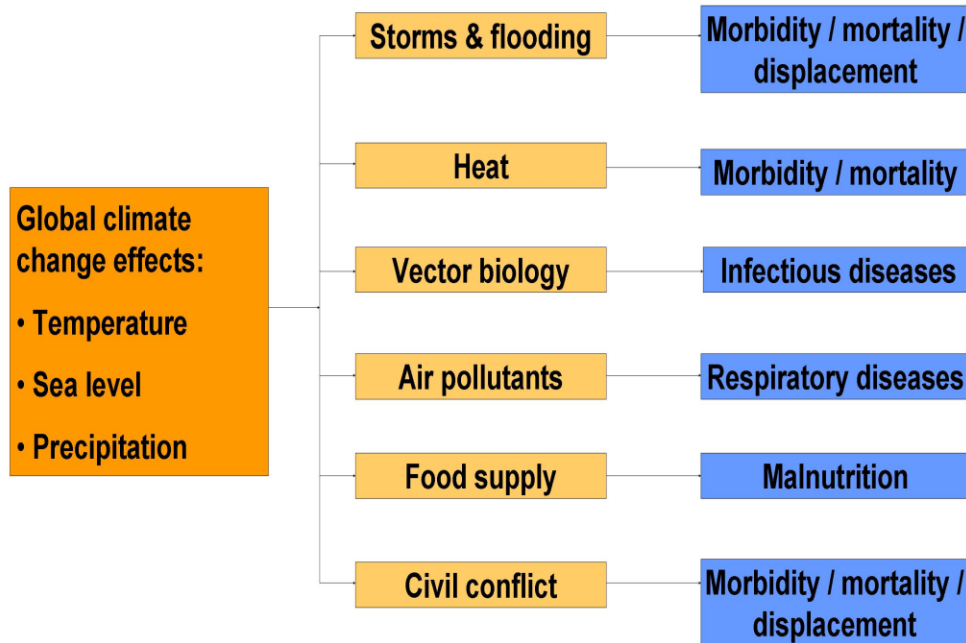
# The Problem

**Environmental damage is inarguably anthropogenic,  
at least to a significant degree.**



# It Is, and Will Be, Very Serious

## Potential Impacts of Global Climate Change on Human Health



# What They Say...

**There's one issue that will define the contours of this century more dramatically than any other, and that is the urgent and growing threat of a changing climate.**

**Barack Obama**

**We need to act. We need to mitigate the impact of human influence, but more important, we need to protect ourselves against the consequences of change. And those consequences are here. We are on the front line.**

**Charles Brindamour, Intact CEO  
(Intact is the largest provider of property  
and casualty insurance in Canada)**

**I would say we're in a climate crisis... action needs to be taken. The concern is whether we will spend another decade doing worthy things, but not enough. A question for every company, every financial institution, every asset manager, pension fund, or insurer: What's your plan?**

**Mark Carney  
Governor of the Bank of England**

# Some Causes of Climate Problems

- Various structural-macro influences, including...
  - Geophysical factors (Can't live without heat or A/C?)
  - Economic factors (Marketing, grow-or-die capitalism)
  - Technological factors (My ride is so comfy!)
  - Infrastructure problems (Ride a bike in traffic?)
  - Political constraints (Getting legislation passed is hard)



# But Ultimately, It's About...Us

Citizens, from the average person to the CEO,  
including you and me,  
are the agents of emissions

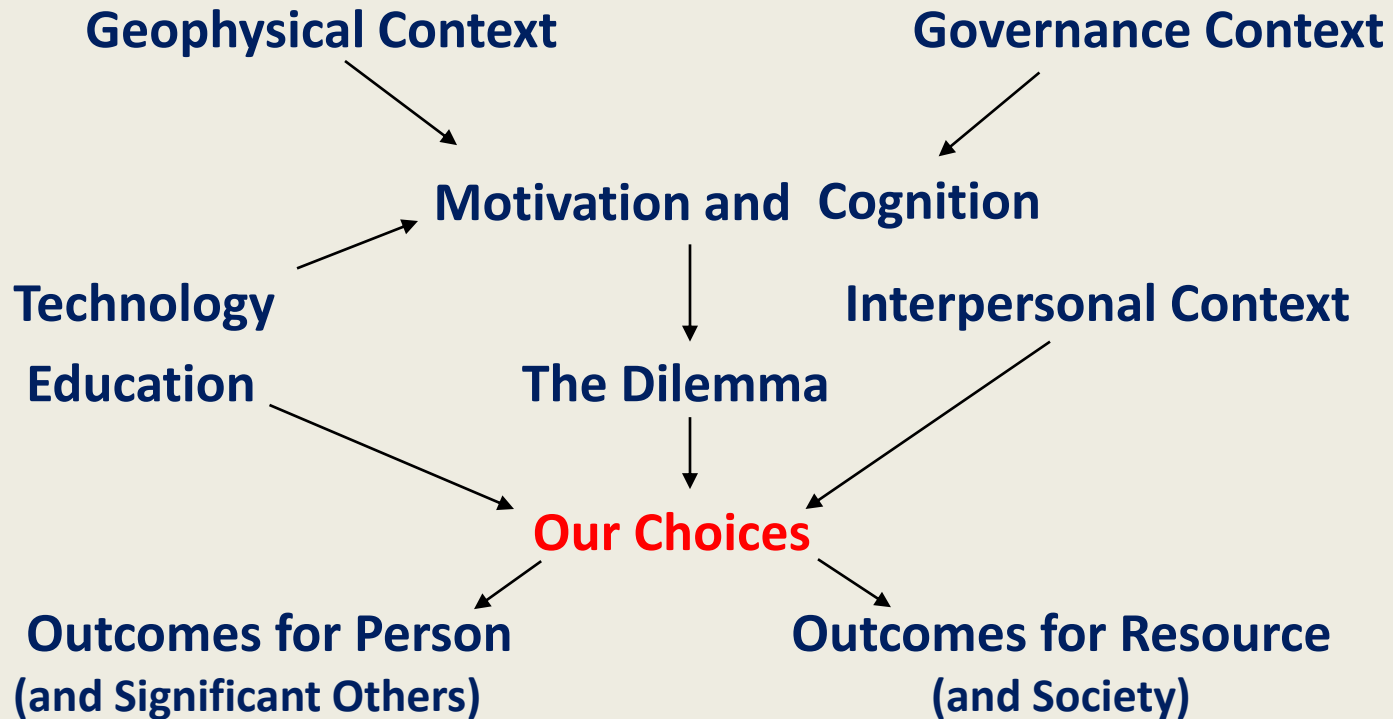
- Each of us makes choices every day
- These choices matter in the aggregate
- Government? It generally leads by following us
- Industry? It depends on our purchase choices

**“There are no environmental problems, only human problems”**

**We are not managing our emissions well enough (yet)**

**Why not?**

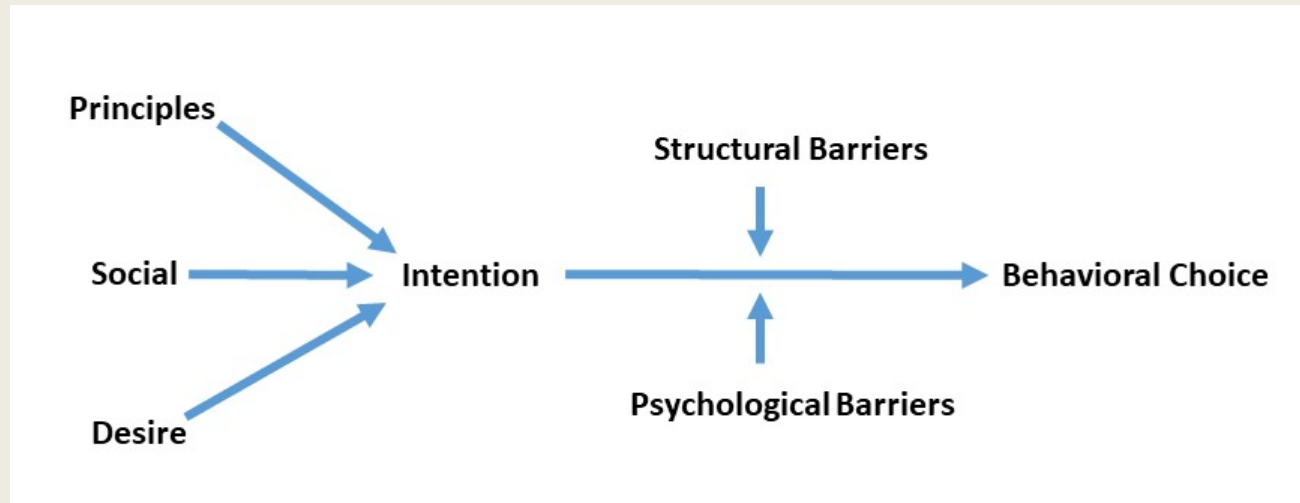
# My General Model



Gifford, R. (2006). A general model of social dilemmas. *International Journal of Ecological Economics and Statistics*, 5, 23-40.



# The Theory of Behavioural Choice



Gifford, R., Lacroix, K., & Chen, A. (2018). Understanding responses to climate change: Psychological barriers to mitigation and a new theory of behavioural choice. In Clayton, S. & Manning, C. *Psychology and climate change: Human perceptions, impacts, and responses* (pp. 161-184). London. UK: Academic Press.

**Information, persuasion, pleas, incentives,  
and even belief in climate-positive actions  
often don't work**

**Why not? This is the key question**

**Well, partly because...**

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

**Robert Heinlein, *Assignment in Eternity* (1953)**

# So, 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%.

**Use less hot water**  
Every gallon of gasoline saved keeps 20 pounds of carbon dioxide out of the atmosphere!

**Avoid products with a lot of packaging**  
It takes a lot of energy to heat water. Use less hot water by installing a low-flow showerhead (150 pounds of CO2 saved per year) and washing your clothes in cold or warm water (500 pounds saved per year).

**Adjust your thermostat**  
You can save 1,200 pounds of carbon dioxide if you cut down your garbage by 10%.

**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**

**an inconvenient truth**  
available on DVD  
November 21  
[www.climatecrisis.net](http://www.climatecrisis.net)

**YOUR ENVIRONMENT EXTRA**  
ISSUE 19 NOVEMBER 2007 - JANUARY 2008  
Environment Agency

**THE 50**

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



# In Sum, We Don't Do (All) That We Should

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

Why not? Answer:

## The Dragons of Inaction



# Seven Dragon Genera

(incorporating 38 species in all, so far)

- Limited Cognition
- Ideologies
- Other People
- Investments
- Discredence
- Perceived Risks
- Limited Behaviour



(For details see: “The Dragons of Inaction” in *American Psychologist*, 2011)

Or visit: [dragonsofinaction.com](http://dragonsofinaction.com)

# Limited Cognition

- Ancient Brain
- Information Deficit
- Environmental Numbness
- Uncertainty
- Temporal Discounting
- Spatial Discounting
- Optimism Bias
- Perceived Lack of Control
- Time-is-Money Thinking
- Perceived Physical Inability



# Ideologies

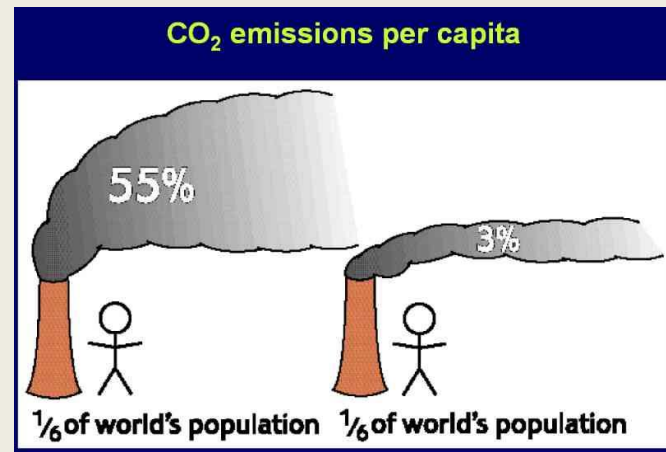
- **Political Worldviews**
- **System Justification**
- **Suprahuman Powers**
- **Technosalvation**





# Other People and Choice of Media Sources

- Social Comparison
- Social Norms
- Perceived Inequity
- Authority Rules
- Because I Can!
- Confirmation Bias
- Better than Average



# Sunk Costs

- Financial Investments
- Behavioural Momentum
- Conflicting Goals and Aspirations
- (Lack of) Place Attachment




# Perceived Risks

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



# Discredence

- Perceived Program Inadequacy
- Mistrust
- Reactance
- Contrarian Personality
- Denial



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

**James Madison**

# Limited Behaviour

- Tokenism
- Rebound Effect  
(The Jevons Paradox)



PS: The dragons can now be studied empirically, using this new published scale:

Lacroix, K., Gifford, R., & Chen, A. (2019). Developing and validating the Dragons of Inaction Psychological Barriers (DIPB) scale. *Journal of Environmental Psychology*, 63, 9-18.

**So, What *Can* We Do?**

# The Role of Behavioural Science

## Seven solutions



# Seven Ways to Slay Dragons

## 1. Develop a better understanding of impactful behaviours:

- What exactly *do* people do? Measure actual behaviour
- Learn which *are* the most impactful choices
- Identify the chief dragons for defined groups
- Learn which are the easiest, cheapest to overcome
- Learn which choices are simply not going to change
- Assess the variations in the rates of the key behaviour choices
- Discover the antecedents of these choices



Yes, this is a  
daunting task,  
but do it we must!



# Seven Ways to Slay Dragons

## 2. Develop and evaluate interventions:

- About 22 messaging strategies are under study by environmental psychologists now
- Evaluate the effectiveness of interventions

# Seven Ways to Slay Dragons

## 3. Work together!

- More physical knowledge (climate scientists)
- Better technology (engineers)
- Better emergency planning (...who's that?)
- Better buildings and communities (architects and urban planners)
- Better understanding of citizens' choices (environmental psychologists)
- Better policies (government policy analysts)



# Seven Ways to Slay Dragons

## 4. Make environment “Now” (because it is!):

- Community-based (network) diffusion
- Facilitate amateur scientists
- Develop social networks



# Seven Ways to Slay Dragons

## 5. Join the policy development process:

- Not at the table = Not in the policy
- Choose your comfort level: Organizational, neighbourhood, municipal, regional, provincial, national—but do get involved!



# Some Ways to Slay Dragons

## 6. Reward the mules!



**Hey...we're doing all we can!**

# Some Ways to Slay Dragons

## 7. Reward the honeybees, too!



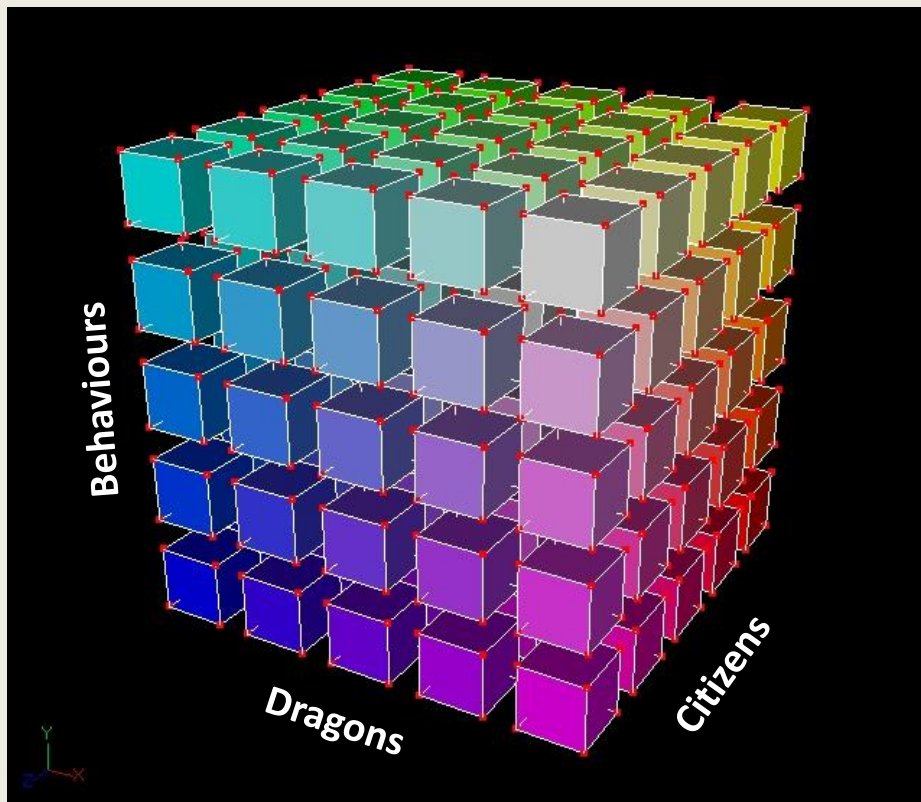
Much, *perhaps most*, pro-climate positive behaviour is NOT done to mitigate climate change, e.g.,

- ✓ Cycling mainly for health
- ✓ Insulating to save money
- ✓ Voluntary simplicity lifestyles
- ✓ Childless by choice

**Honeybees are helping, even if they are not on board the climate wagon! Reward them!**



To accelerate climate-positive behaviour,  
we must better understand:  
(a) the varieties of citizens,  
(b) the variations in their actions, and  
(c) their main dragons



# The Take-Home Message

Climate Change Action =



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# Thank You for Listening!

Questions now? Here I am...

Or later? [rgifford@uvic.ca](mailto:rgifford@uvic.ca)

Or check out the dragons online:

[\*\*Dragonsofinaction.com\*\*](http://Dragonsofinaction.com)