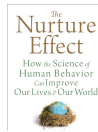


Mobilizing Behavioral Science to Address Climate Change

Workshop at ACBS WorldCon in Montréal
2018-07-26

Tony Biglan
Senior Scientist
Oregon Research Institute
tony@ori.org

Magnus Johansson
PhD Candidate
Oslo Metropolitan University
pgm.johansson@gmail.com

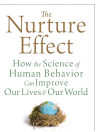


The evolution of this workshop



OsloMet University, November 2017

2

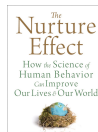


The evolution of this workshop



ABAI San Diego, May 2018

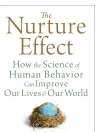
3



Learning objectives

- describe the major threats to human wellbeing that are posed by climate change
- specify at least five policies that could have benefit in reducing greenhouse gas emissions
- create a plan for conducting experimental evaluations of community intervention strategies to get communities to adopt effective climate change policies

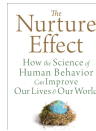
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Purpose

- Create a joint effort to make behavioral science contribute to the issues of climate change and sustainability
- Specifying *what* behavior science can bring to the table
- *How* we can work on making contributions on multiple levels
- Collaboration!

5

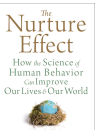


If you would like a copy of *The Nurture Effect*

Go to

<https://tonybiglan.com/thenurtureeffect/> to get a copy for the cost of shipping and handling.

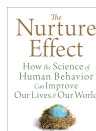
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Collaborative effort on climate change

- Email markv@ori.org if you want to contribute in some way
- More on this later on...

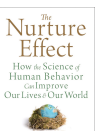
7



Getting to Know You

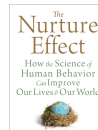
- Your concerns about climate change?
- What's your work situation?
- Are you currently working on anything relevant to climate change?
- **Your thoughts on what behavioral sciences can contribute?**

8



A SCIENCE MORE ADEQUATE TO THE HUMAN CONDITION

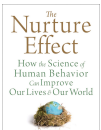
9



If ten years from now...

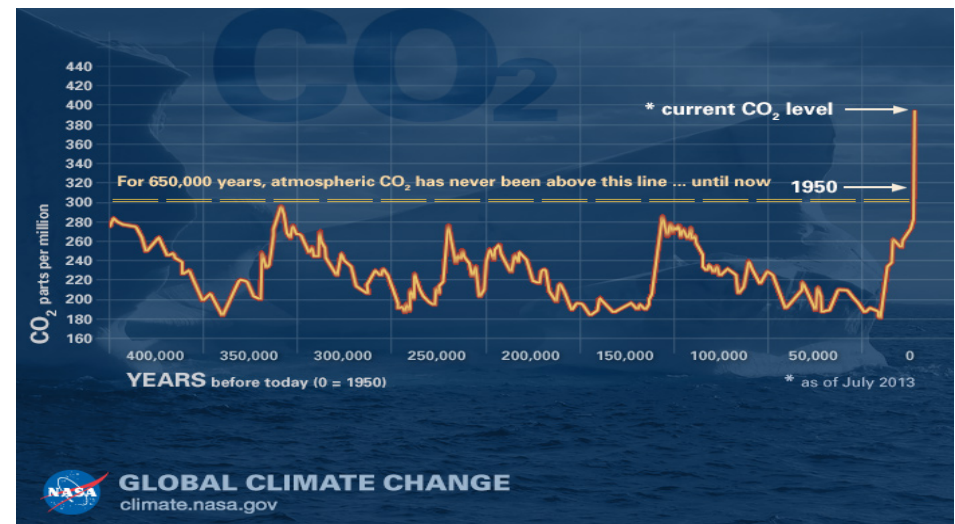
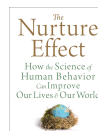
- Behavioral science had come to be seen as the fundamental science needed to ensure human wellbeing...
- Behavioral science was making huge contributions to wellbeing...
- Behavioral science was foundational in
 - Policy discussions
 - Governance
- What would you be doing?
- What would your organization be doing?

10

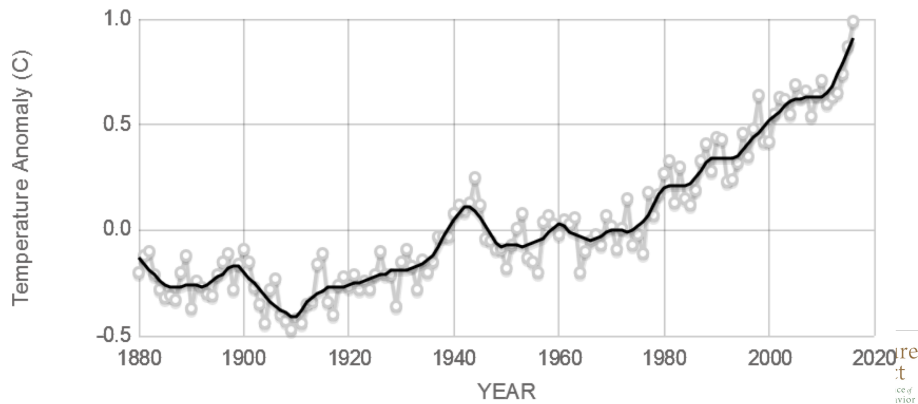


CLIMATE CHANGE: WHERE WE STAND

11



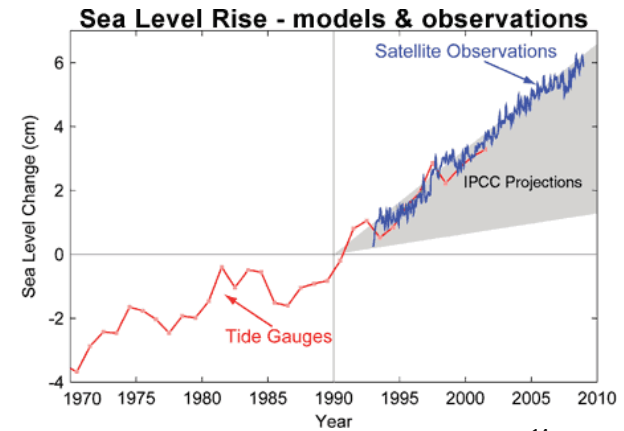
Temperature



Source: climate.nasa.gov <https://climate.nasa.gov/vital-signs/global-temperature/>

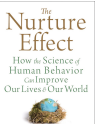
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Sea Level Rise



<https://www.skepticalscience.com/sea-level-rise-predictions.htm>

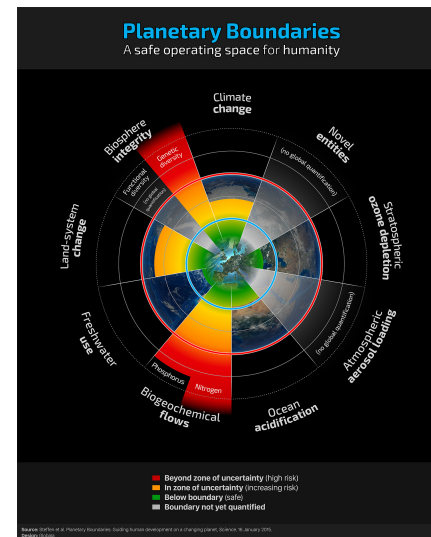
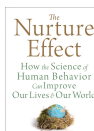
14



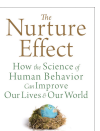
Consequences Worldwide

- More severe heat waves
- More very heavy rain falls
- More severe hurricanes.
- More drought
- Species loss
- Climate refugees

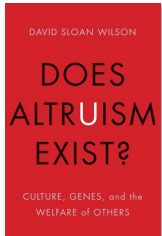
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16

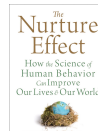


Planetary altruism



The selection of best practices must be intentional, because we cannot wait for natural selection and there is no process of between-planet selection to select for functional organization at the planetary scale. (Wilson, 2015, p.146)

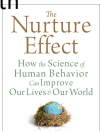
17



"Wicked" problem

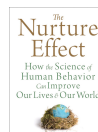
- Immediate consequences outweigh delayed consequences
- Consequences for the individual usually outweigh consequences for others
- Simple, familiar ideas that are wrong are often preferred over complex, alien ideas that are correct
- Susceptibility to social reinforcement can incline us toward extreme views
- Strong aversives presented abruptly prompt appropriate action, but strong aversives following a long string of aversives that gradually increase in strength often don't

Chance, P. (2007). The Ultimate Challenge: Prove B. F. Skinner Wrong. *The Behavior Analyst*, 30(2), 153-160. 18



WHAT CAN WE DO?

19



Hawken – Drawdown (2017)

- The Most Comprehensive Plan Ever Proposed to Reverse Global Warming
- The 100 most substantive solutions to reverse global warming, based on meticulous research by leading scientists and policymakers around the world

20



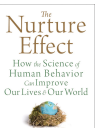
1. Think a bit about this list
2. Discuss in groups of 2-3 ppl
3. What could be relevant for you, that you could see yourself working on?

		Factor	TOTAL ATMOSPHERIC CO2-EQ REDUCTION (GT)
1	Refrigerant Management	Materials	89.74
2	Wind Turbines (Onshore)	Energy	84.60
3	Reduced Food Waste	Food	70.53
4	Plant-Rich Diet	Food	66.11
5	Tropical Forests	Land Use	61.23
6	Educating Girls	Women and Girls	59.60
7	Family Planning	Women and Girls	59.60
8	Solar Farms	Energy	36.90
9	Silvopasture	Food	31.19
10	Rooftop Solar	Energy	24.60
11	Regenerative Agriculture	Food	23.15

Using Hawken's list will require behavior change on multiple levels

- Which are those levels? Come up with some examples
- How can we be useful as behavioral practitioners and scientists?

22

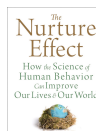


2002 – Kahneman (& Tversky)

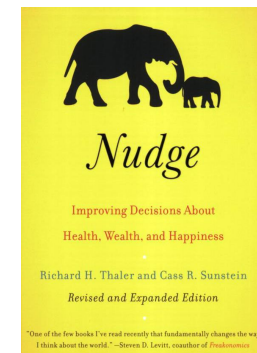
- “for having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty”



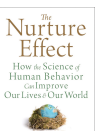
25 July, 2018



2008 – Nudge (Thaler & Sunstein)

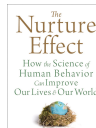


25 July, 2018



2009 – Sunstein appointed by Obama

- White House Office of Information and Regulatory Affairs (OIRA)

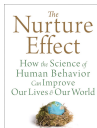
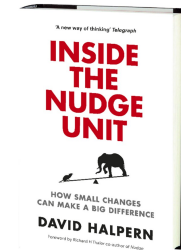


2010 – UK THE BEHAVIORAL INSIGHTS TEAM

News > UK > UK Politics First Obama, now Cameron embraces 'nudge theory'

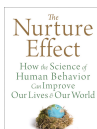
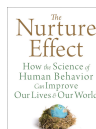
Andy McSmith reports on the doctrine sweeping Downing Street
Wednesday 11 August 2010 23:00 BST | [0 comments](#)

Test, Learn, Adapt:
Developing Public Policy with
Randomised Controlled Trials



Basic principles of nudging

- Simplification and framing of information
- Changing the physical environment
- Setting default choices
- Use social norms



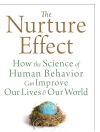


- Reduce accidental attention to negative behavior and reduce physiological arousal

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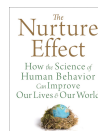


30



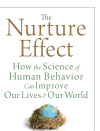
Science of Persuasion

- Goldstein, Martin & Cialdini (2010)
- Signs in hotel rooms about reuse of towels
 - “Consider our environment, please reuse your towel” 35% reuse
 - “75% of our guests reuse their towel, please do so as well” +26%
 - “75% of people staying in this room reuse their towel” +33%

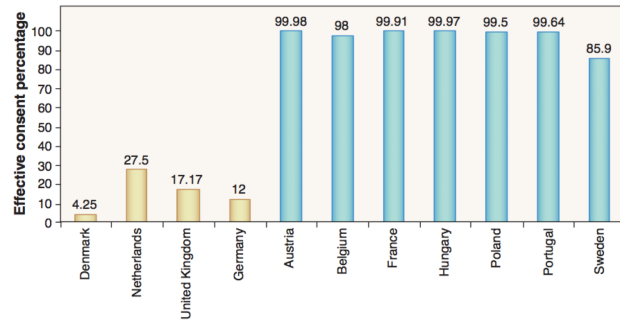


Nudging example

- The size of your plate at a buffet affects the amount of food waste
- Norwegian study shows that by reducing plate size from (on average) 24cm to 21cm, food waste is reduced by about 20%.

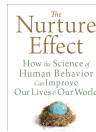


Organ donation - opt-in/opt-out (default choice)



Effective consent rates, by country. Explicit consent (opt-in, gold) and presumed consent (opt-out, blue).

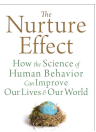
Johnson, E. J., & Goldstein, D. (2003). Do defaults save lives? *Science*, 302, 1338-1339.



Economics and politics are close

- Political theory about how to understand human behavior is largely built on economic theory.
- Shared language
- Personal connections
- How can contextual behavioral science build that kind of rapport and influence with decision makers?

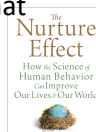
34



How can we "sell" our science?

- Give concrete examples of behavioral science contributions
- Identify stakeholders and their interests/reinforcers to adapt your message
- Provide specific ideas about how to solve a current issue that is relevant to stakeholders (and how to evaluate experimentally)
- Something similar might have been tried before? Let's share what we do and what we want to do, and support efforts

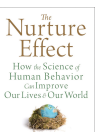
35



Communication

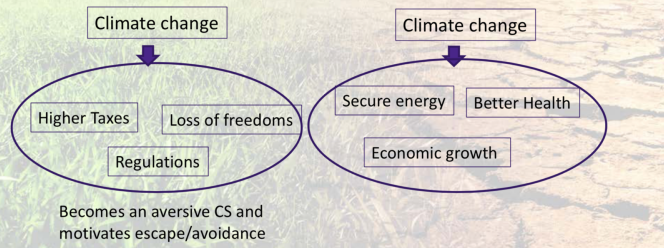
- We live in a time of great political polarization
- Climate change has become one of the most polarized issues
- We need to find ways to make everyone care, and stop using non-workable methods like scaring, shaming, patronizing, etc
- Find common ground, shared values of some sort (see Moral Foundations Theory, for instance)

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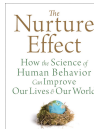


Climate change and Relational Frames (e.g. Hayes & Hayes, 1992)

- Climate change talk is sometimes placed in frames of coordination with negative stimuli
- Solution? Establish climate-change verbal stimuli as parts of positive verbal frames



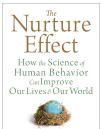
Borrowed from ABAI pres by
Cynthia J Pietras
cynthia.pietras@wmich.edu



The importance of evidence-based policy

- Climate change – we don't have much time!
- *Example* - Sweden has had a green party in a coalition government for the last 4 years
 - Doubled public spending on environmental reform
 - 7 out of 8 largest reforms have not been evaluated
 - “Feel good politics” – symbolic action?

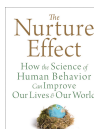
38



We need more climate change research

- Research on *climate relevant behavior*
- Research on the effects of climate policies (before implementing them at a large scale)

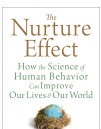
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Obstacles?

- The belief that behavior is the result of attitudes and beliefs
- The belief that randomized controlled trials are the only valid method for identifying causal influences
 - The success of RCTs
 - But RCTs test interventions that were initially developed in single case research

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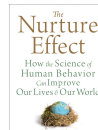




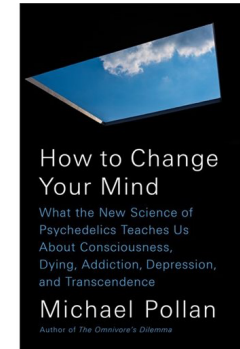
If we are going to create the behavioral science more adequate to the human condition?

- What should we be doing more of?

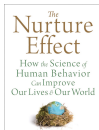
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Connectedness

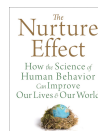


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Create a take-home message – 3 things you take with you from this workshop

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Collaborative effort on climate change

- Email markv@ori.org if you want to contribute in some way
- Creating a wiki with relevant information collected in one place
- Review of experimental evaluations of behavior change
- What do you want to contribute?

tony@ori.org
pgm.johansson@gmail.com

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