



Regaining Trust in Science - production, provenance and the power of connection

John Roche, Ph.D.
Chief Science Advisor MPI

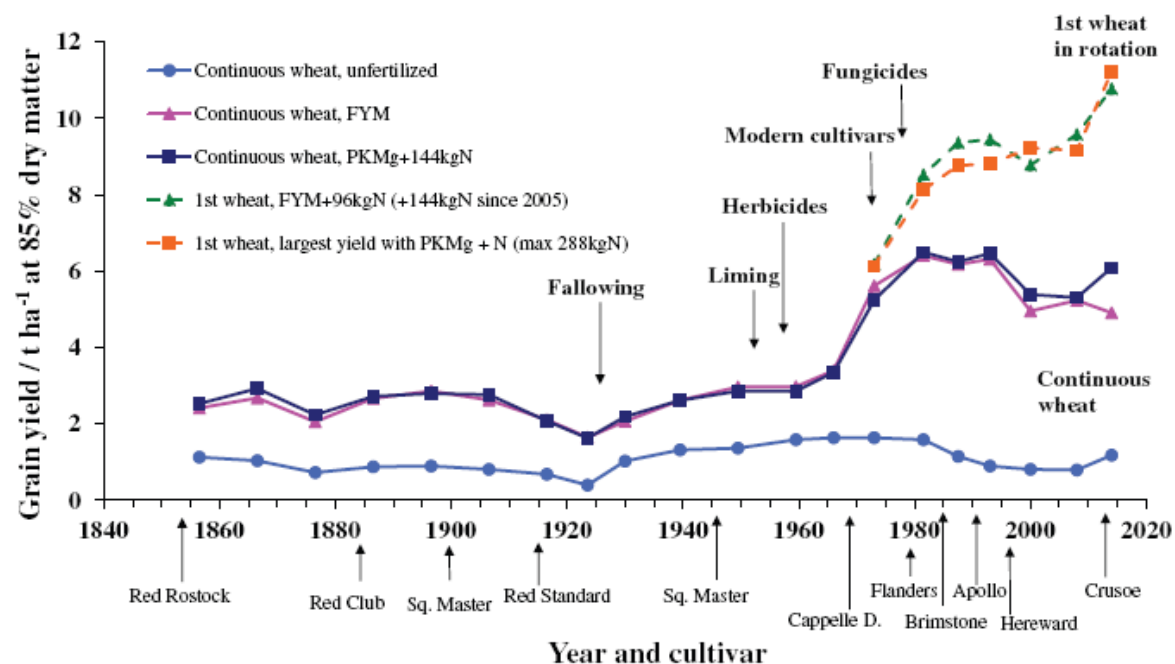
“The first farmer was the first man. And all historic nobility rests on the possession and use of land”

Ralph Waldo Emerson

The importance of long-term experiments in agriculture: their management to ensure continued crop production and soil fertility; the Rothamsted experience

A. E. JOHNSTON & P. R. POULTON

Sustainable Agriculture Sciences Department, Rothamsted Research, West Common, Harpenden, AL5 2JQ, UK






Celebration time



***Farming is a job where
you work 80 hr/wk
for below minimum wage
to feed someone that
thinks you're trying to
poison them!***





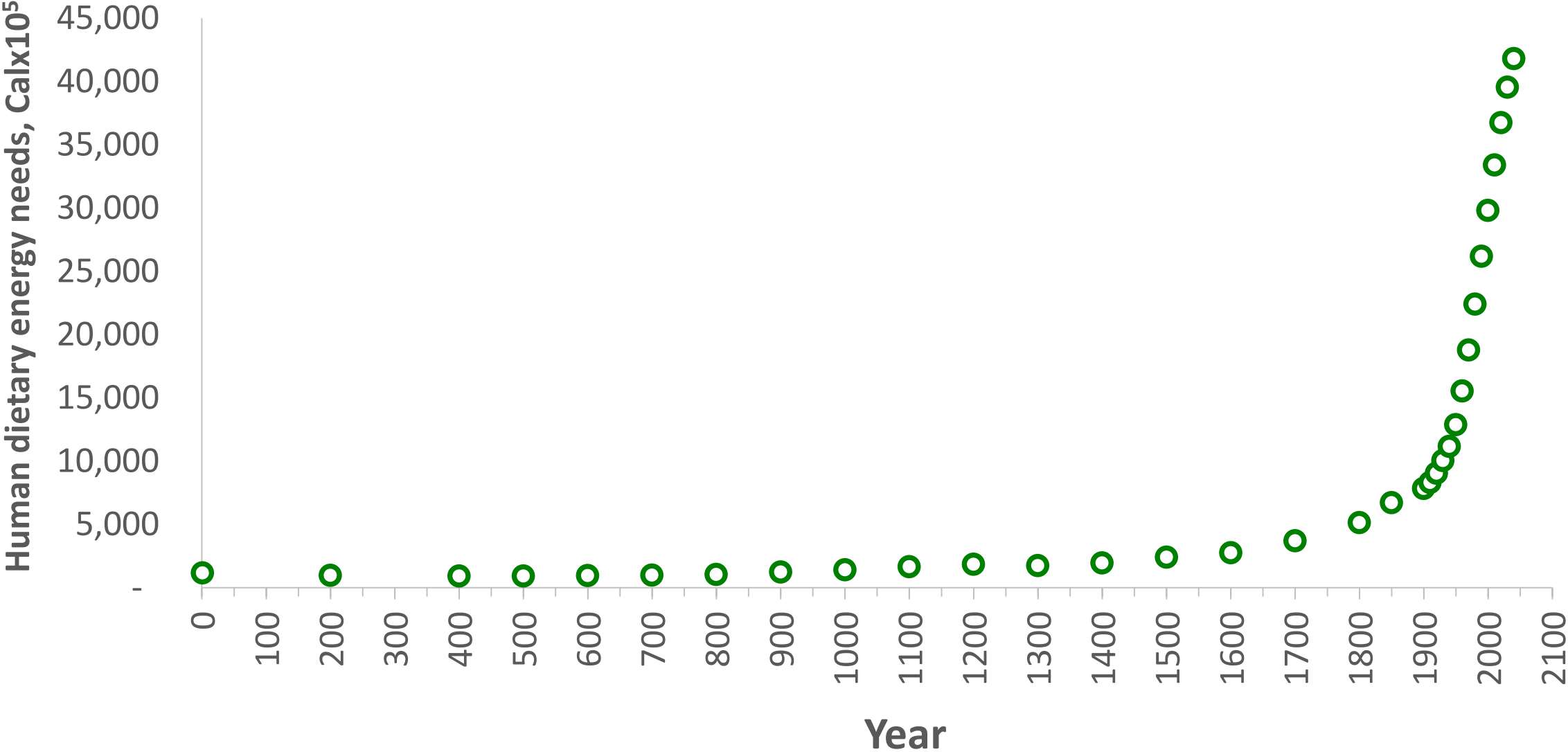
A stylized illustration of a landscape. The sky is split into a red upper half and a blue lower half. In the red sky, there are dark, jagged shapes resembling mountains or clouds. In the blue sky, there are white clouds, three birds in flight, and two green trees. In the foreground, there are three black and white cows on a dark brown ground with small pink dots. A green hill is visible on the right side.

*“People have never cared more
nor known less
about how their food is produced”
-Jack Bobo*

This is really important, because we have a massive challenge facing us



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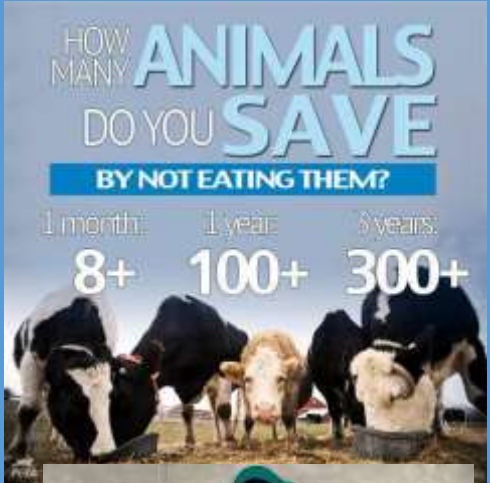
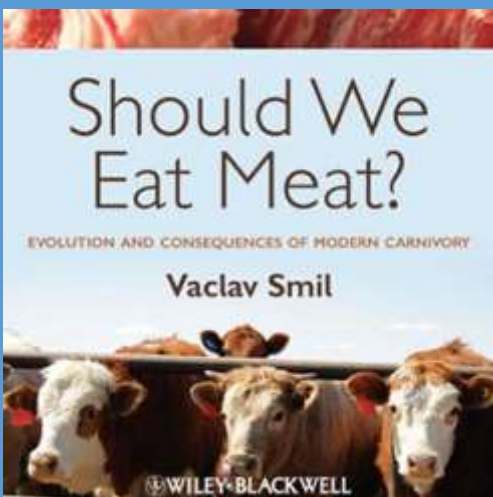


This is really important, because we have a massive challenge facing us





WHAT CONCERNS US AS SCIENTISTS?



"information that is not objective and is used primarily to influence an audience and further an agenda, often by presenting facts selectively to encourage a particular synthesis or perception"



Behistun inscription (c 500 BC)



Opinion

Opinion

Opinion

Opinion

Opinion



Standard setting

PSYCHOLOGY

Prevalence-induced concept change in human judgment

David E. Levari¹, Daniel T. Gilbert^{1*}, Timothy D. Wilson², Beau Sievers³, David M. Amodio⁴, Thalia Wheatley³

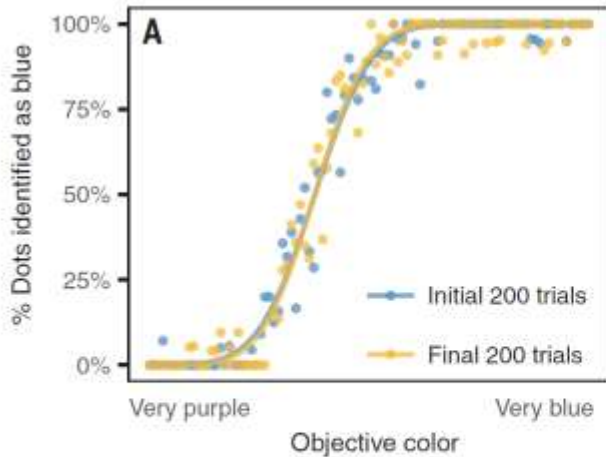


Fig. 1. Results for Study 1. (A) shows the stable prevalence condition, and (B) shows the decreasing prevalence condition. The x axes show the dot's objective color, and the y axes show the percentage of trials on which participants identified that dot as blue.



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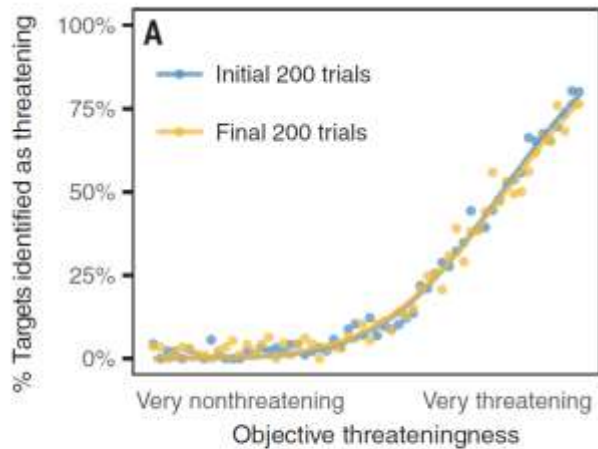


Fig. 2. Results for Study 6. (A) shows the stable prevalence condition, and (B) shows the decreasing prevalence condition. The x axes show the target's objective threateningness (as determined by human raters), and the y axes show the percentage of trials on which participants identified that target as a threat.



Standard setting

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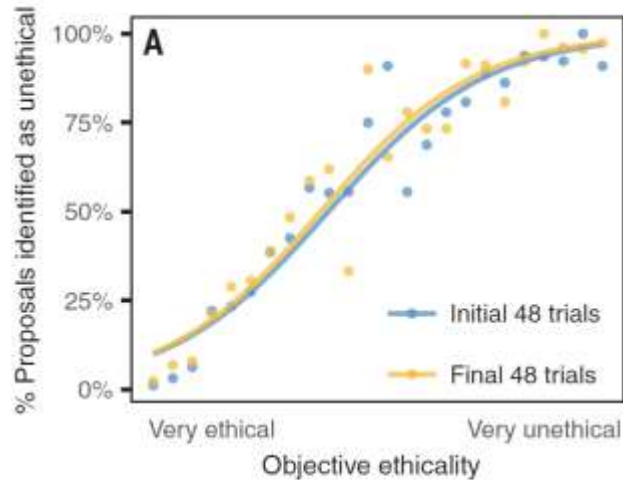


Fig. 3. Results for Study 7. (A) shows the stable prevalence condition, and (B) shows the decreasing prevalence condition. The x axes show the proposal's objective ethicality (as determined by raters), and the y axes show the percentage of trials on which participants rejected the proposal.



What constitutes evidence in a post-science world

PNAS | July 11, 2017 | vol. 114 | no. 28 | 7313–7318

Emotion shapes the diffusion of moralized content in social networks

William J. Brady^a, Julian A. Wills^a, John T. Jost^{a,b}, Joshua A. Tucker^{b,c}, and Jay J. Van Bavel^{a,1}

^aDepartment of Psychology, New York University, New York, NY 10003; ^bDepartment of Politics, New York University, New York, NY 10012; and ^cDepartment of Russian and Slavic Studies, New York University, New York, NY 10012

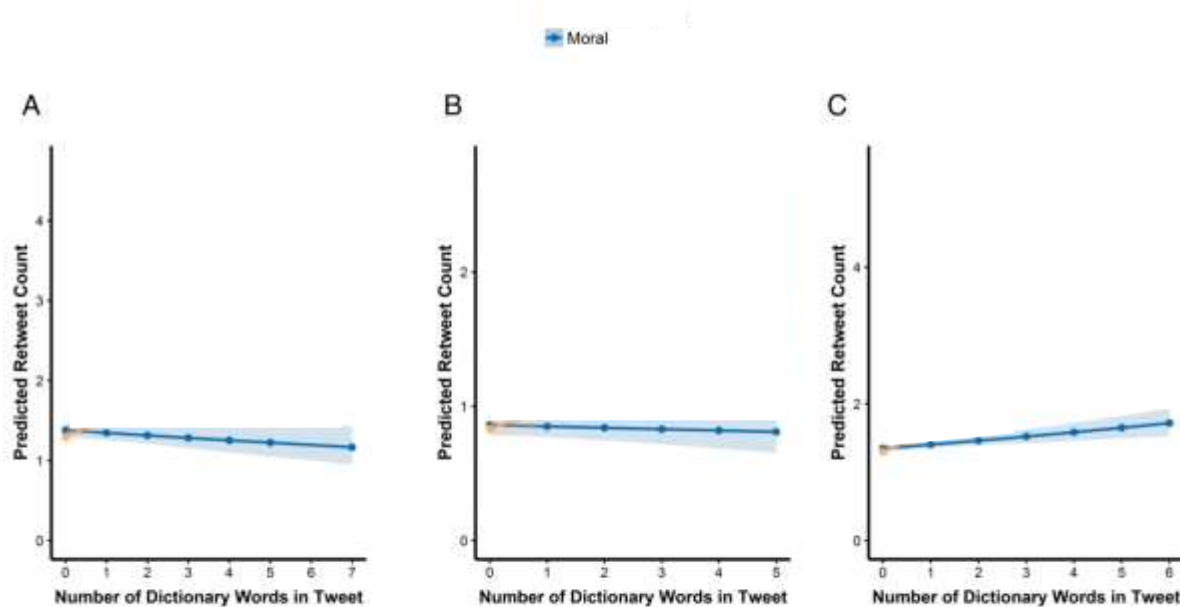
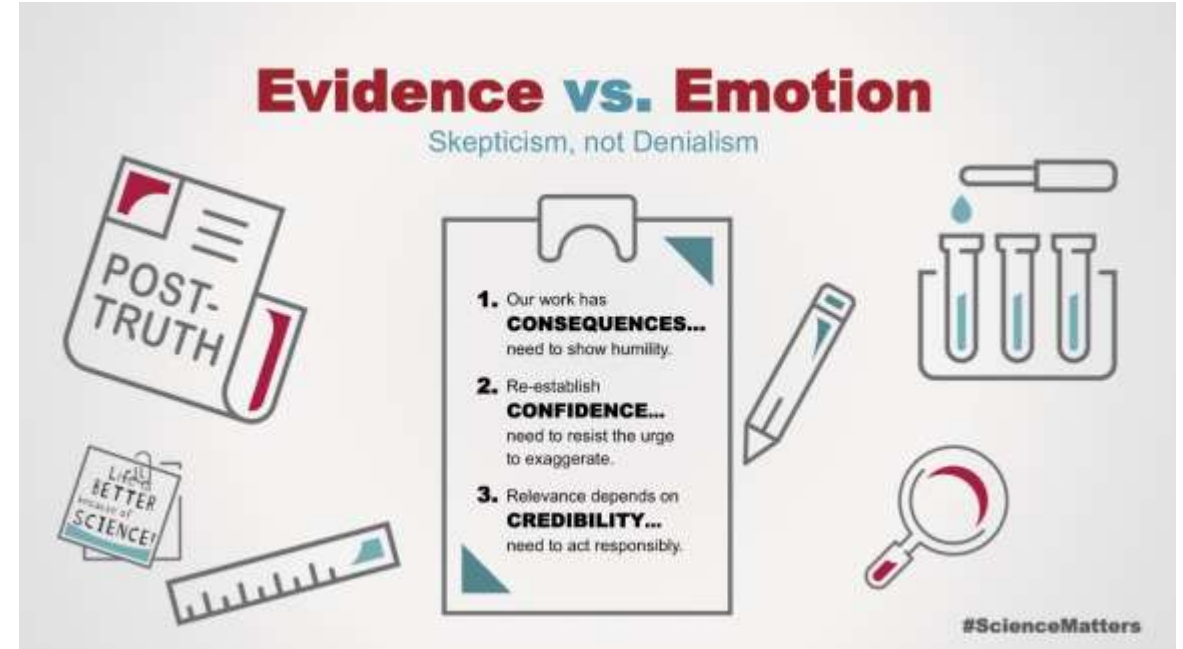
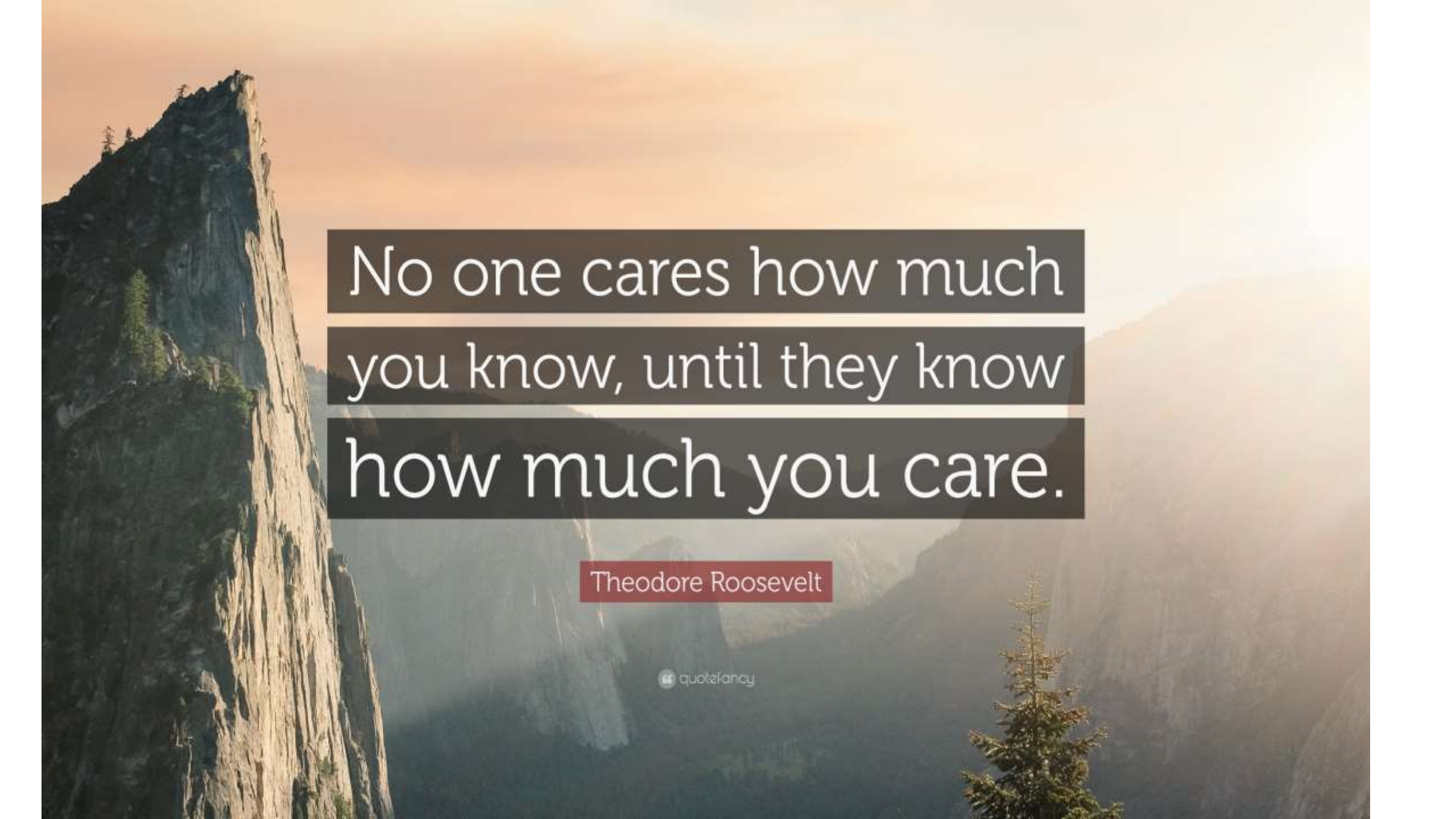


Fig. 1. Moral-emotional language predicts the greatest number of retweets. The graph depicts the number of retweets, at the mean level of continuous and effects-coded covariates, predicted for a given tweet as a function of moral and moral-emotional language present in the tweet. Bands reflect 95% CIs. An increase in moral-emotional language predicted large increases in retweet counts in the domain of (A) gun control, (B) same-sex marriage, and (C) climate change after adjusting for the effects of distinctly moral and distinctly emotional language and covariates.





No one cares how much
you know, until they know
how much you care.

Theodore Roosevelt



Meat in the post-truth era: Mass media discourses on health and disease in the attention economy

Frédéric Leroy ^{a,*}, Malaika Brengman ^b, Wouter Ryckbosch ^c, Peter Scholliers ^d

Search ▾

International
edition ▾

The Guardian

Opinion Psychology

The media exaggerates negative news.
This distortion has consequences

Steven Pinker

“Magazine covers warn us of coming anarchies, plagues, epidemics, and so many ‘crises’ (farm, health, retirement, welfare, energy, deficit) that copywriters have had to escalate to the redundant “serious crisis.”

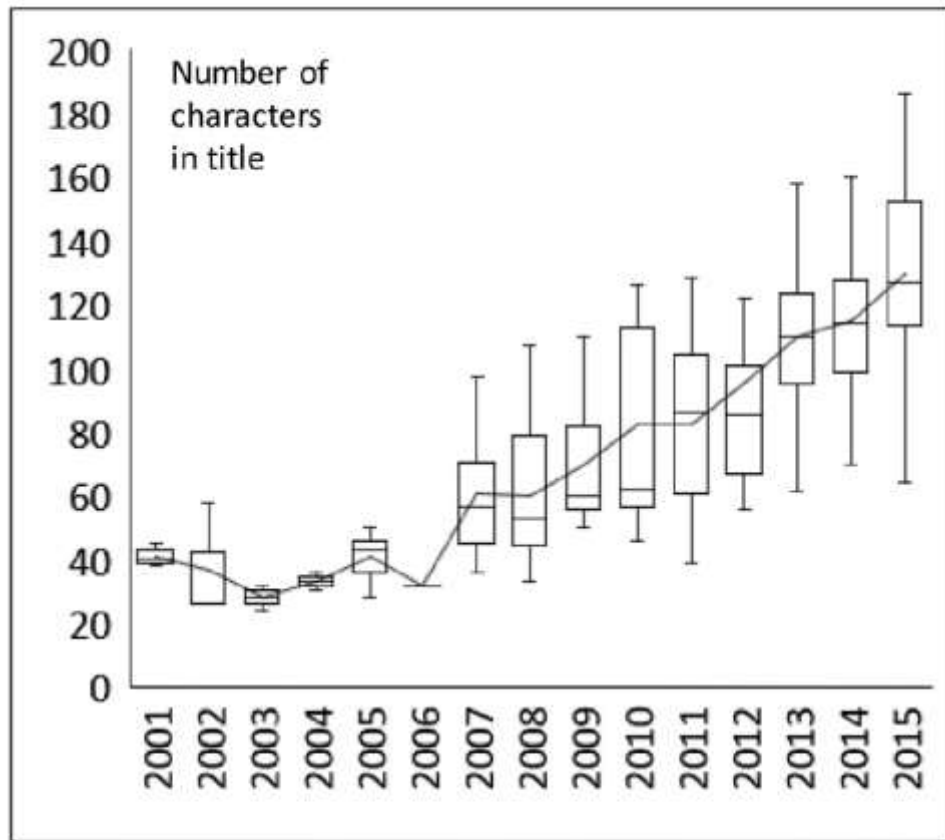


Fig. 5. Increasing sensationalism as reflected in the number of characters counted within the titles of those news items that directly refer to meat (products) or abstention thereof (vegetarianism or veganism), represented per year. For a full overview of these titles see [Supplemental Material \(Table S1\)](#).

Confirmation bias

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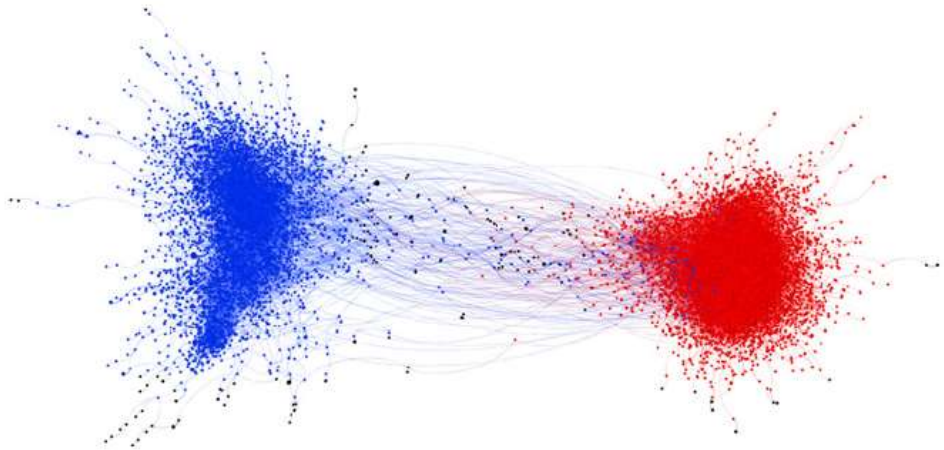


Fig. 3. Network graph of moral contagion shaded by political ideology. The graph represents a depiction of messages containing moral and emotional language, and their retweet activity, across all political topics (gun control, same-sex marriage, climate change). Nodes represent a user who sent a message, and edges (lines) represent a user retweeting another user. The two large communities were shaded based on the mean ideology of each respective community (blue represents a liberal mean, red represents a conservative mean).



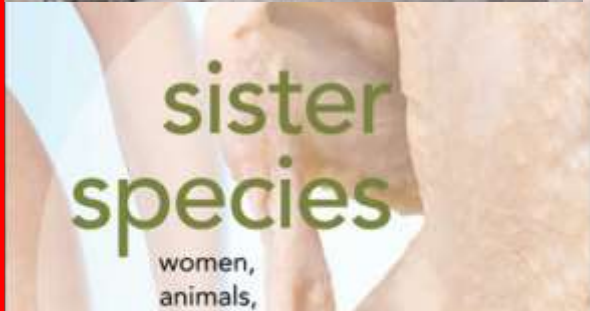
HOW PEOPLE SEE YOU AFT
TELLING THEM YOU'RE VEG



OH, YOU'RE DOING A
JUICE CLEANSE?



PLEASE TELL US EVERYTHING YOU
KNOW ABOUT HEALTH AND FITNESS



MUMMY, I SPAT IT OUT
I PROMISE NEVER TO
EAT MEAT AGAIN
DO YOU STILL LOVE ME



Scientists as part of the problem

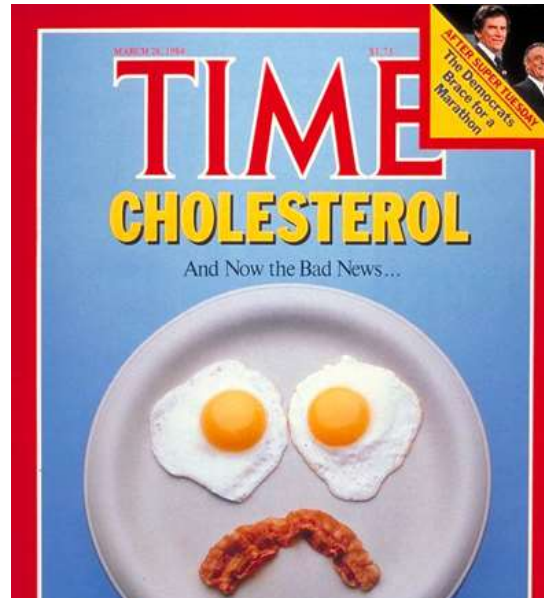
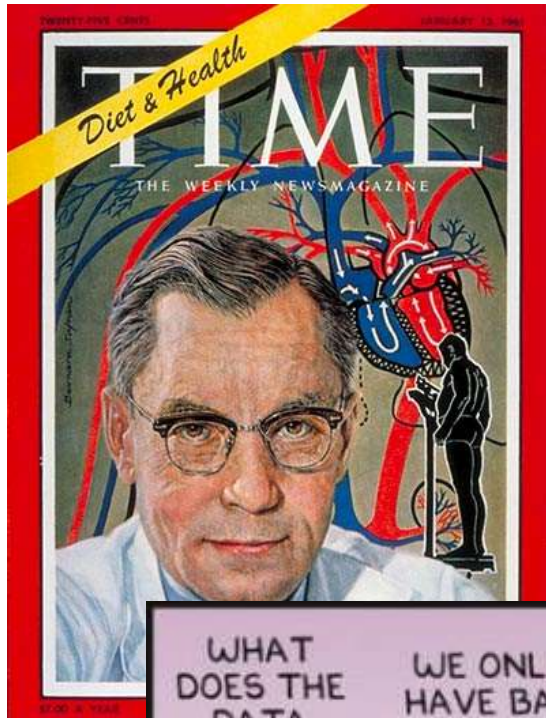
“Should we force science down the throats of those that have no taste for it?”

Is it our duty to drag them kicking and screaming into the twenty-first century?

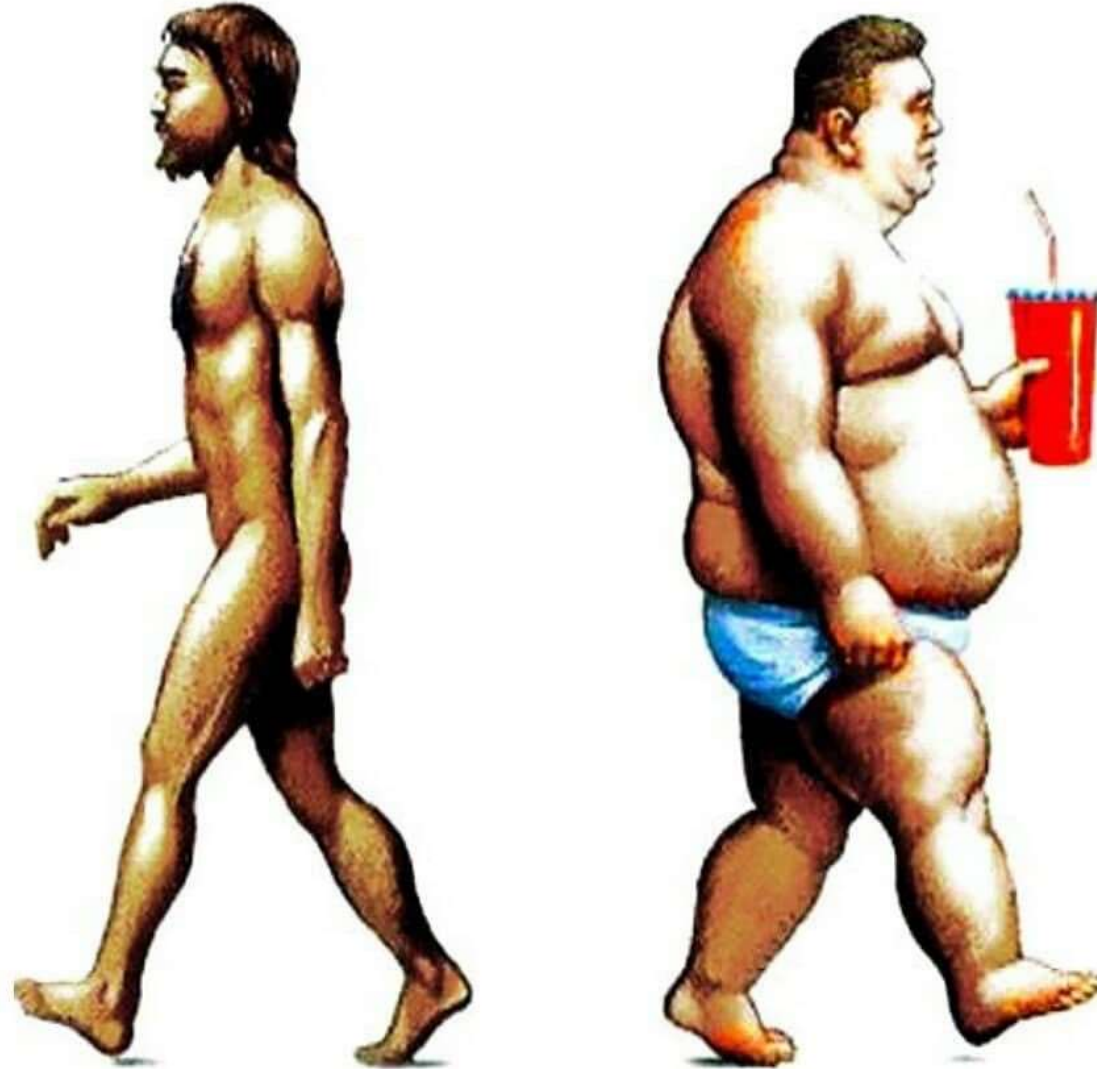
I am afraid that it is.”

- Sir George Porter

How do I know who to believe?



CARNIVORE & CARBIVORE





GOOD NEWS

Fusce accums curs metus, rhoncus nulla gravida.

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A person wearing a red and blue plaid shirt and a dark blue apron is holding a wooden crate filled with fresh produce. The crate contains various items including green beans, yellow cherry tomatoes, red bell peppers, sweet potatoes, onions, apples, and corn. The background is a blurred field with wooden stakes, suggesting a farm or garden setting. The text "People are buying the process, not the product!" is overlaid on the bottom half of the image.

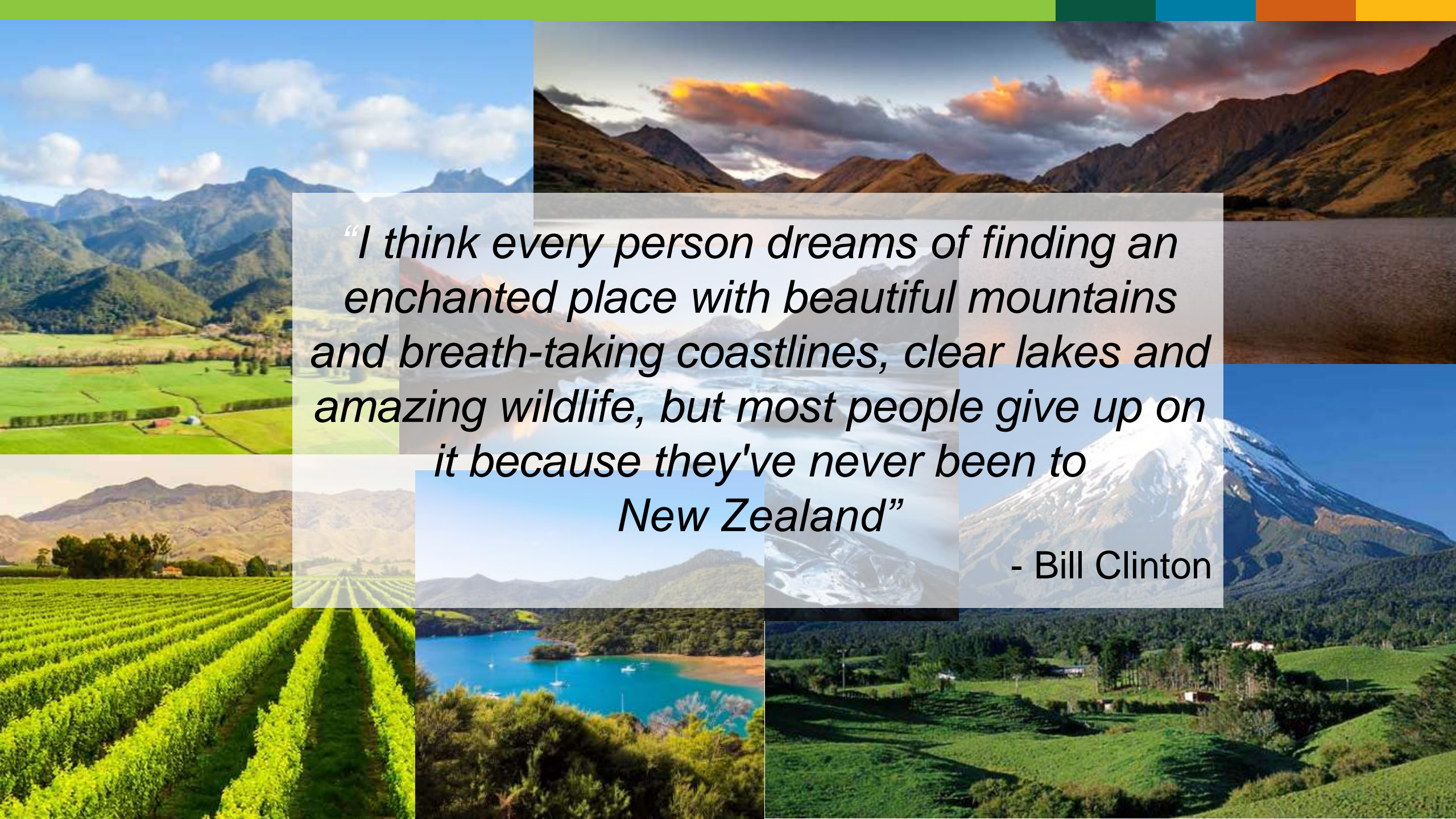
**People are buying the
process,
not the product!**

We have an “emotional” process to sell!

- + We produce the highest quality wholesome foods;
- + A trusted food safety system;
- + Almost all landed fish species are sustainably harvested;
- + ‘free range’ animals producing low C footprint nutritious food;
- + High quality sustainable timber for building;
- + A biosecurity system, second to no one.





The background of the slide is a collage of various New Zealand landscapes. It includes images of rolling green hills, snow-capped mountains, a vibrant blue lake with sailboats, a vineyard with rows of grapevines, and a coastal scene with a small boat. The text is overlaid on a semi-transparent grey rectangle in the center.

“I think every person dreams of finding an enchanted place with beautiful mountains and breath-taking coastlines, clear lakes and amazing wildlife, but most people give up on it because they've never been to New Zealand”

- Bill Clinton

But, we must genuinely engage consumer concerns!

- + Fishing bycatch & biodiversity;
- + Animal welfare;
- + Sustainable waterways;
- + Climate change;
- + Herbicides, pesticides, etc.



And, recognise that expectations will continue to change



Thank you

Contact me:



john.roche@mpi.govt.nz

Follow me:



Down to Earth Advice Ltd



@down2earth_john

“Rest satisfied with doing well, and leave others to talk of you as they please” — Pythagoras

