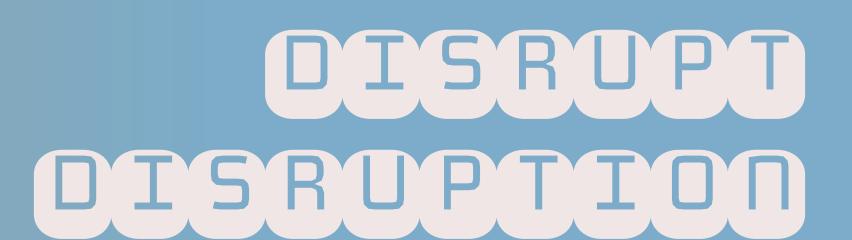
# Climate disruption quiz about framing

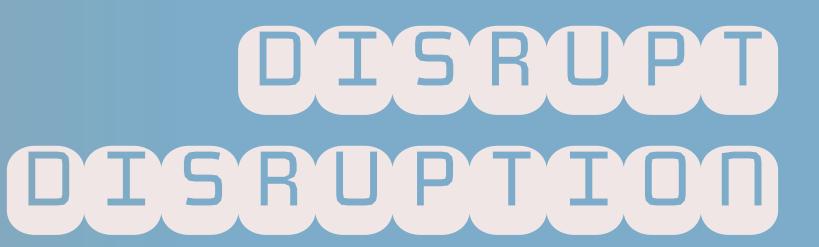
Framing matters!

Context matters – including target audience!

So which way of talking do you think works best? 9 questions



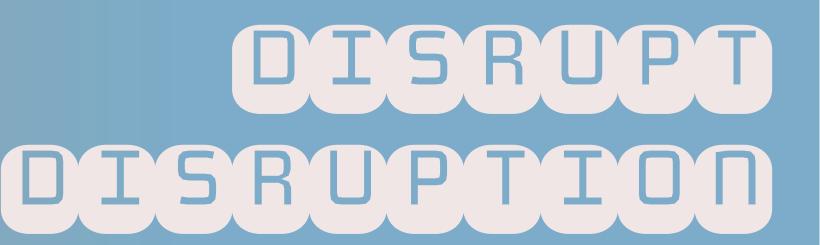
A carbon **tax** would increase the costs of certain products that contribute significantly to climate change and use the money to finance alternative energy.



#### Or

A carbon **offset** would increase the costs of certain products that contribute significantly to climate change and use the money to finance alternative energy.

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### Quiz Wh

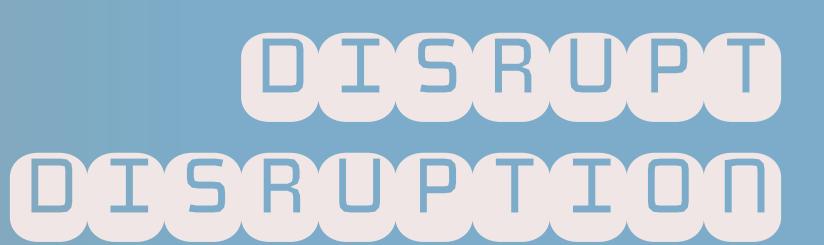
33 % more participants said that they would choose a more expensive product over a cheaper one when the price difference was expressed as a carbon offser rather than as a carbon tax, and support for a mandatory such policy also increased. The effect was largest for conservative participants.

A carbon **offset** would increase the costs of certain products that contribute significantly to climate change and use the money to finance alternative energy.

(CRED & ecoAmerica, 2015)



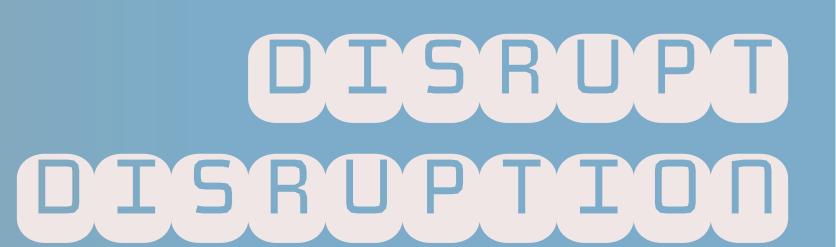
If we continue emitting CO<sub>2</sub> at the same level as now it is **20 % likely** that global warming will not cause abrupt and severe changes to regional weather patterns such as monsoons or the El Niño.



#### Or

If we continue emitting CO<sub>2</sub> at the same level as now it is **10–30 % likely** that global warming will not cause abrupt and severe changes to regional weather patterns such as monsoons or the El Niño.

If we continue emitting CO<sub>2</sub> at the same level as now it is **20 % likely** that global warming will not cause abrupt and severe changes to regional weather patterns such as monsoons or the El Niño.



### Quiz Wh

This framing, more uncertainty (10–30 %), made participants express higher desires to act climate friendly than what less uncertainty (20 %) did. But when it was instead written negatively, as 80 % likely that the scenario would happen, the relationship

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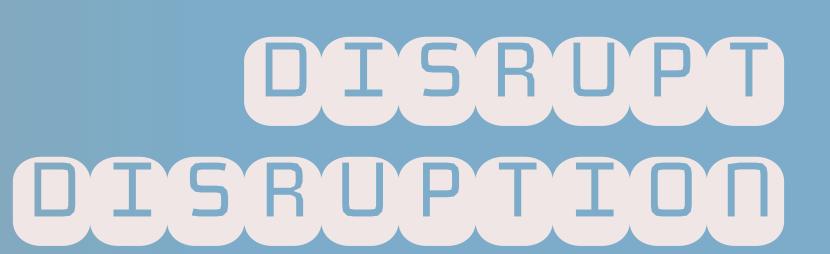
(Morton et al., 2011)

was reversed.



Australia is a unique country. Over 80 % of its apprx. one million species of animals and plants are found nowhere else. Australia has 19 World Heritage sites, including the Great Barrier Reef. All Australians' identity is shaped by this relationship with its rich, wonderful and diverse environment. Having a more responsible relationship with our environment means taking care not just of our animals, plants and landscapes but also preserving our culture, identity and lifestyle for our own future and for the next generations.

(Note: Abbreviated)

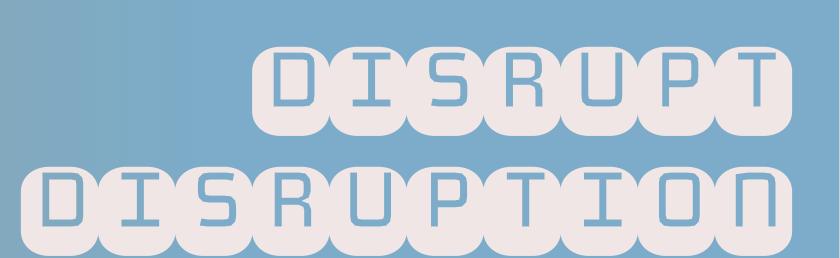


Austrician unique country. Over 80 % of its apprx. one pecies of animals and plants are found

Climate change is happening and human activities are largely responsible. The 20th century saw changes such as rising sea levels, extensive snow melt increased average temperatures. The scientific community is in agreement: if we reduce carbon pollution to an acceptable level the worst effects can be avoided. We need to understand we are all responsible and that it is a moral duty for governments, industries and individuals to act now, not least in order to protect future generations.

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(Note: Abbreviated)

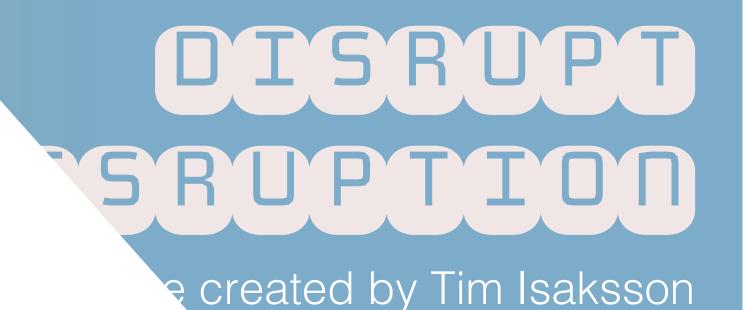


The identity frame fared better than the climate change frame, mainly among participants unvonvinced of humanity's role in climate disruption, who expressed stronger sentiments towards investing in climate-smart measures and towards reducing carbon-intensive consumption.

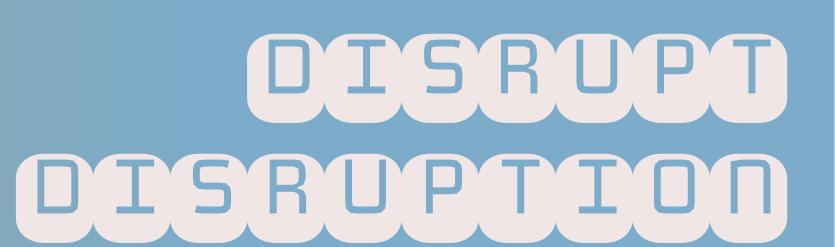
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(Sapiains et al., 2016)



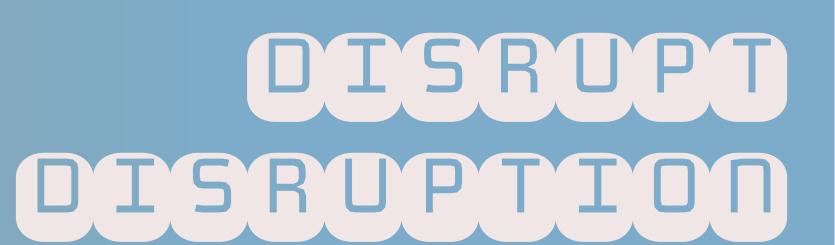
Sea levels will rise by at least 50 cm, and this will occur at some time between 2060 and 2093.



Or

By 2072, sea levels will rise by between 25 and 68 cm, with 50 cm being the average projection

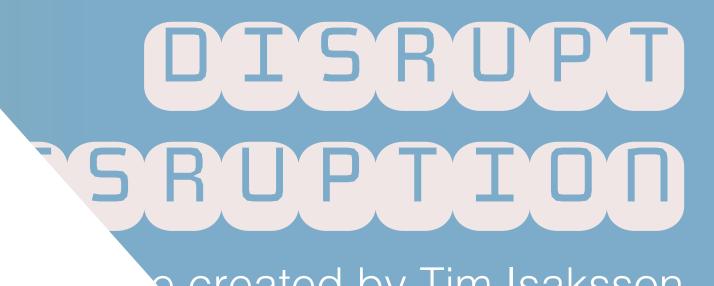
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This frame – certain outcome/uncertain time - lead to more worry about climate disruption and greater desire to counteract it than the uncertain outcome/certain time frame.

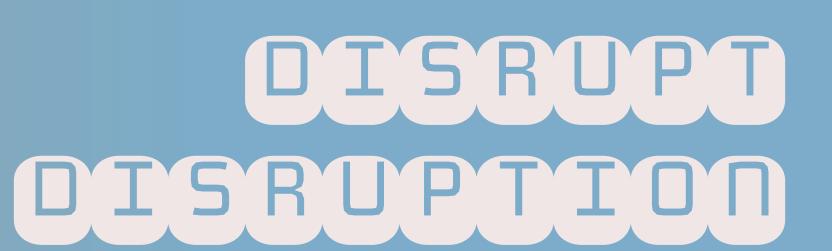
(Ballard & Lewandowsky, 2015)

Sea levels will rise by at least 50 cm, and this will occur at some time between 2060 and 2093.



e created by Tim Isaksson

Show your love for all of humanity and the world in which we live by helping to care for our vulnerable natural environment. Help to reduce the harm done to the environment by taking action. By caring for the natural world you are helping to ensure that everyone around the world gets to enjoy fair access to a sustainable environment. Do the right thing by preventing the suffering of all life-forms and making sure that no one is denied their right to a healthy planet. SHOW YOUR COMPASSION.

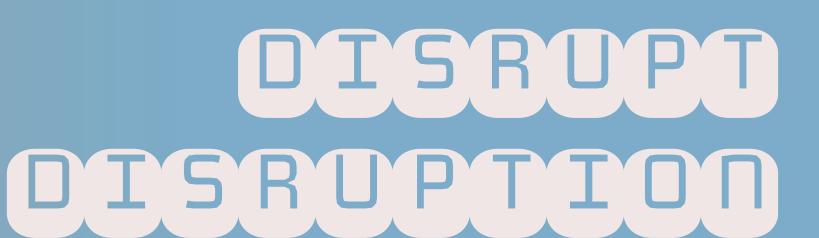


Or

Show your love for all of humanity and the world in which

Show you love your country by joining the fight to protect the purity of America's natural environment. Take pride in the American tradi-tion of performing one's civic duty by taking responsibility for yourself and the land you call home. By taking a tougher stance on protecting the natural environment, you will be honoring all of Cre- ation. Demonstrate your respect by following the examples of your religious and political leaders who defend America's natural envi- ronment. SHOW YOUR PATRIOTISM!

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## Quiz Wh

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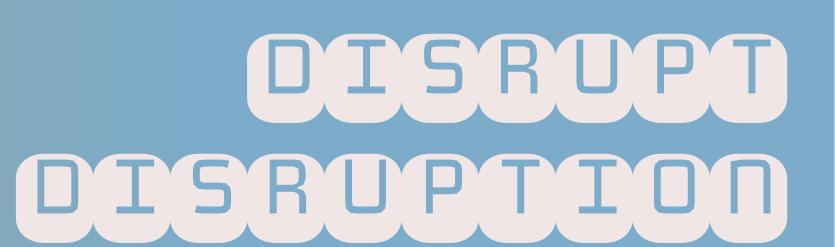
Show you love you protect the purity of A Take pride in the American ing one's civic duty by takk self and the land you call hor er stance on protecting the natu will be honoring all of Cre- ation. L respect by following the examples of and political leaders who defend American envi- ronment. SHOW YOUR PATRIOTIS

For conservative Americans the frame about patriotism, loyalty and nature's purity fared better than the global moral framing: participants wanted to preserve nature more, scored higher on a climate change attitute scale and donated more money to an environmental charity.

(Wolsko et al., 2016)



Researchers have always been interested in the state of the natural environment, and have paid attention to how it has changed over the years. Today, researchers are especially interested in the relationship between people and the environment.



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#### Recearchers have always heen interested in the

Researchers have always been interested in the state of the natural environment, and have paid attention to how it has changed over the ent. years. Today, researchers are especially interested in the relationship between people and the environment.

Being pro-environmental allows us to protect and preserve the American way of life. It is patriotic to conserve he country's natural resources.

DISRUPTION

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Researchers have the state of the natural paid attention to how it years. Today, researchers ed in the relationship between the environment.

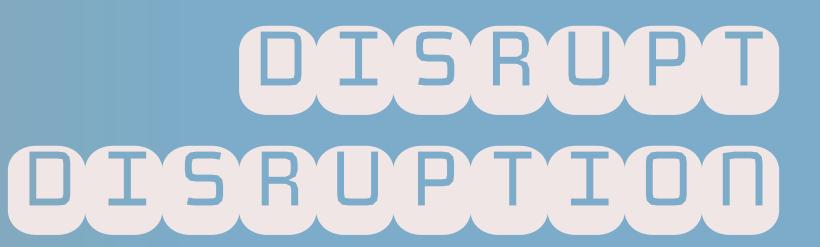
Being pro-environmental allows and preserve the American way of otic to conserve he country's natural

Audience matters! The text about patriotism and status quo preservation made participants with 'system-justifying tendencies' more likely to sign petitions for environmental campaigns and to express various pro-environmental behavior change intentions, while the opposite happened for the other participants.

> (Feygina et al.,

Carbon emissions present a problem that needs to be addressed on a global scale. The rise of carbon emissions continued to grow from 2010 to 2014. The requisite reductions are not happening. The data show that global carbon dioxide emissions rose by 1.1 % in 2012 (adjusted for the underlying trend), similar to the average annual growth since 2000. This period also saw a growth in electricity demand. In 2014 there was again no reduction in emission levels.

(Note: Abbreviated)



#### Or

Carban amissions prosent a problem that poods to be Carbon emissions present a problem that needs to be addressed on a global scale. For the first time the rise of carbon emissions slowed in 2012 — and that has signalled a lasting trend. The requisite reductions are finally happening. The data show that global carbon dioxide emissions rose by 1.1 % in 2012 (adjusted for the underlying trend), compared with a 2.9 % average since 2000. This period also

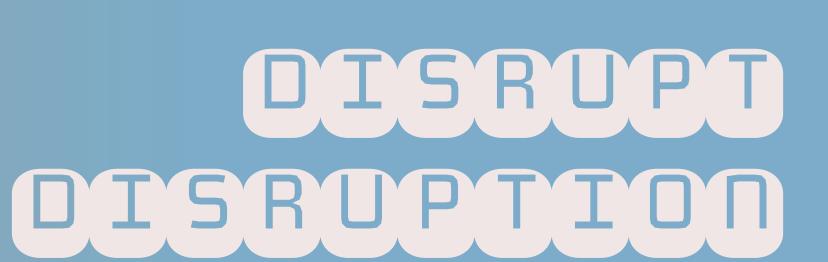
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(Note: Abbreviated)

saw a slower growth in electricity demand. In 2014

annual global emissions were unchanged from the

previous year for the first time in 40 years.



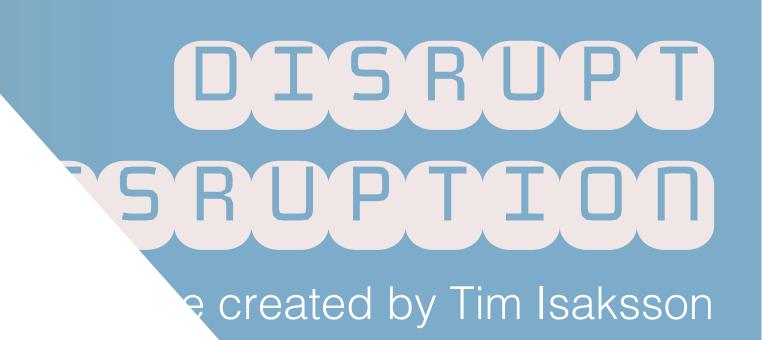
The pessimistic framing fared better than the optimistic in increasing participants motivation to counteract climate disruption. The optimistic framing seemed to make participants perceive the threat as smaller, which seemed to trump its hope-instilling effect.

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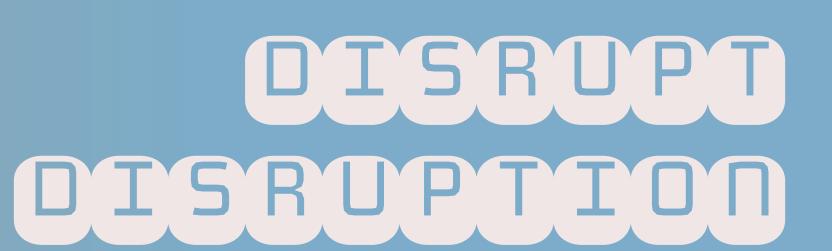
ars.

(Hornsey & Fielding, 2016)



Models show that in 2020, New York's average temperature will be warmer than anything ever recorded there – unless emissions are substantially reduced, the city will experience severe heat waves, very unpredictable weather, and large incidence of mosquito-related diseases in just 5 years. "One of the best things of living here is being able to walk everywhere most of the year", long-time resident Kevin Lee reacted. "If what the scientists predict is true, the heat may be too intense for me." Large emissions reductions can help delay these impacts by 20 to 25 years, which could buy time to allow nature and residents to adapt.

(Note: Highly condensed)



city

able

# Model Of hat in 2020, New York's annual temp-

Models show that in 2066, New York's average temperature will be warmer than anything ever recorded there – unless emissions are substantially reduced, the city will experience severe heat waves, very unpredictable weather, and large incidence of mosquito-related diseases in 50 years. "One of the best things of living here is being able to walk everywhere most of the year", long-time resident Kevin Lee reacted. "If what the scientists predict is true, the heat may be too intense for me." Large emissions reductions can help delay these impacts by 20 to 25 years, which could buy time to allow nature and residents to adapt.

RUPTION

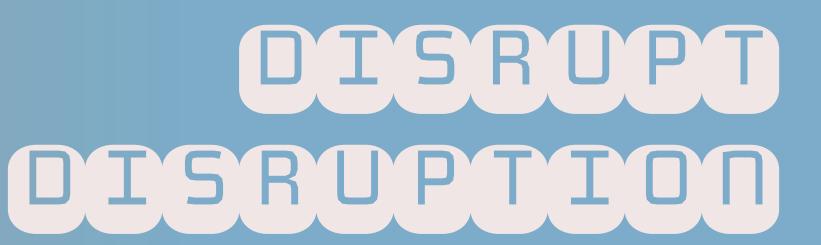
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Conservative students at a university in New York State expressed much higher support for various climate policies when the year was 2066 rather than 2020. Perhaps this has to do with 2020 being so close in time, triggering defensive mechanisms: having one's worldview threatened can lead to subconsciously fuelled denial.

> (Rickard et al., 2016)

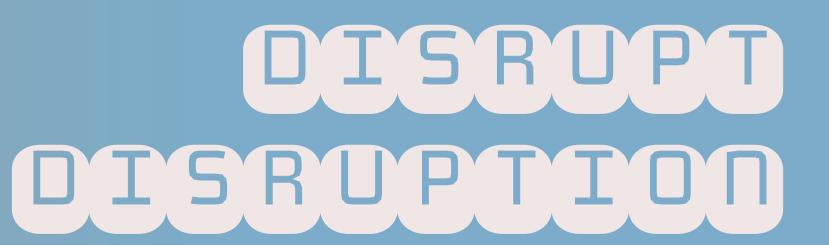
It is **very likely** that hot extremes, heat waves and heavy precipitation events will continue to become more frequent.



#### Or

It is very likely (90–100 %) that hot extremes, heat waves and heavy precipitation events will continue to become more frequent.

It is **very likely** that hot extremes, heat waves and heavy precipitation events will continue to become more frequent.



### Quiz Wh

Although not framing, but still illustrative of the importance of thinking about whom one is talking to (e.g. scientists or the general public) and how one talks. Participants who did not see the "90-100 %" explanation interpreted "very likely" as considerably less than 90 % - a quarter of them even said

It is very likely (90–100 %) that hot extremes, heat waves and heavy precipitation events will continue to become more frequent.

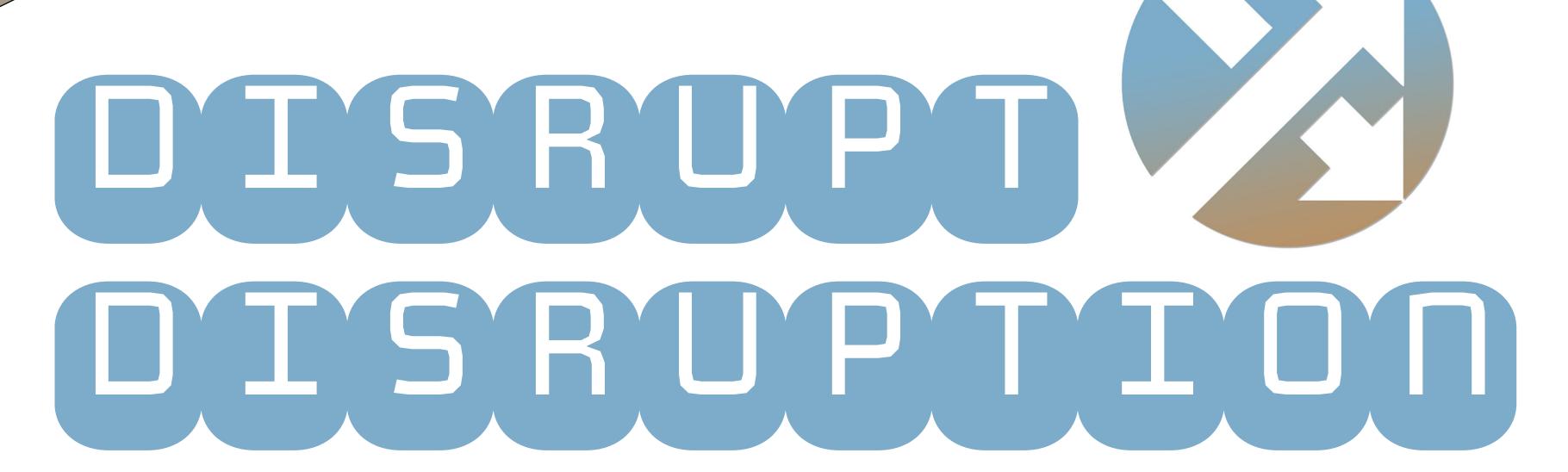
(Budescu et al., 2009)

below 70 %.



Note that these examples don't necessarily hold true everywhere and forever; all social sciences research is context dependent. Moreover, there are question marks regarding how well lab-experimental results actually reflect reality.

Visit



.net

for research-based resources about inclusive climate communication and promising climate nudging

How about these?

"Mitigation" or "Counteraction"?

"Environmental problem" or "Civilizational problem"?

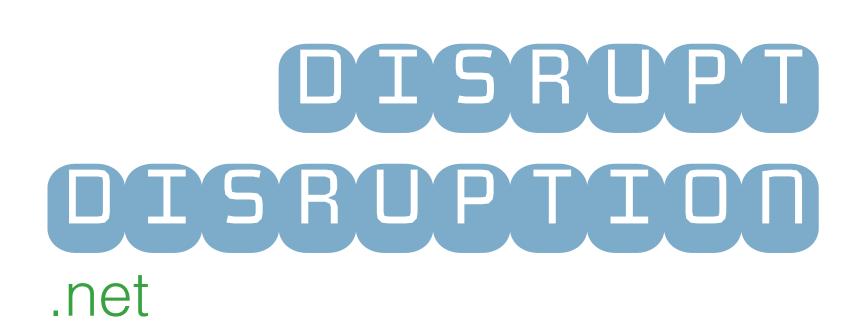
"Every little helps" or "Every large helps"?

"A threat to people, animals and natural environments that you have met and seen" or "A threat to polar bears in the Arctic"?

"A challenge in which sufficient action brings many co-benefits" or "A challenge that forces us to choose between keeping our welfare and fun stuff on the one hand and to make sacrifices for the climate on the other"?

"A mining and drilling problem" or "an emissions problem"?

"Sceptical" or "Unconvinced"?



#### References

- 1: CRED & ecoAmerica. 2014. Connecting on climate: A guide to effective climate change communication.
- 2 Morton, T.A., Rabinovich, A., Marshall, D. & Bretschneider, P. 2011. The future that may (or may not) come: How framing changes responses to uncertainty in climate change communications. Global Environmental Change 21: 103–109.
- 3: Sapiains, R., Beeton, R.J.S., Walker, I.A. 2016. Individual responses to climate change: Framing effects on proenvironmental behaviors. Journal of Applied Social Psychology 46: 483–493.
- 4: Ballard, T. & Lewandowsky, S. 2015. When, not if: the inescapability of an uncertain climate future. Philosophical Transactions of the Royal Society A, 373: 20140464. 10 pp.
- 5 Wolsko, C., Ariceaga, H. & Seiden, J. 2016. Red, white, and blue enough to be green: Effects of moral framing on climate change attitudes and conservation behaviors. Journal of Experimental Social Psychology. 65: 7–19.
- 6: Feygina, I., Jost, J.T., Goldsmith, R.E. 2010. System justification, the denial of global warming, and the possibility of "system-sanctioned change". Personality and Social Psychology Bulletin 36(3): 326–338.
- Hornsey, M.J. & Fielding, K.S. 2016. A cautionary note about messages of hope: Focusing on progress in reducing carbon emissions weakens mitigation motivation. Global Environmental Change 39: 26–34.
- 8: Rickard, L.N., Yang, Z.J. & Schuldt, J.P. 2016. Here and now, there and then: How 'departure dates' influence climate change engagement. Global Environmental Change. DOI: 10.1016/j.gloenvcha.2016.03.003. 11 pp.
- 9: Budescu, D.V., Broomell, S. & Por, H. 2009. Improving communication of uncertainty in the reports of the Intergovernmental Panel on Climate Change. Psychological Science 20(3): 299–308.

