Wrong about each other: Widespread social misperceptions and their links to policy support and misinformation

Results from multiple national-scale behavioral monitoring surveys on COVID-19, climate change, and trust and misinformation

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Impact Canada

Government of Canada   Gouvernement du Canada

Behavioural science at Impact Canada

Who we are

Impact Canada, within the Government of Canada's Privy Council Office, **is tasked with scaling up and mainstreaming "outcomes-based" policy/program methods**, such as the application of insights and methodologies from the behavioural sciences. Taken together these actions are focused on **bridging the gap between policy development and effective implementation**.

Our Programs of Research

Since 2017, our team has used **insights and methods from behavioural science (BeSci) to promote better outcomes for Canadians**.

In 2020, we transitioned to a new model of applied behavioural science wherein we establish **large multi-year programs of research in partnership with federal departments who lead priority files**.

In partnership with these departments, **we conduct research to identify behavioural challenges, explore factors underlying them, and design and test – online and in the real world – interventions with potential for high impact.**

Background and context

- **Our perceptions of others' beliefs, attitudes, and behaviors powerfully shape our own**; when individuals perceive that something is the 'social norm', they might conform to that norm

- Yet, **little is known about the influence of perceived norms** in Canada, especially in policy contexts

Our evidence base

IIU research draws on a range of data collection methods and embedded online experiments that it has led or co-led with a range of partners. This includes:

The COVID-19 Snapshot Monitoring Study (COSMO Canada)
- Longitudinal nationally-representative survey measuring Canadians' pandemic-related attitudes, beliefs, and behaviours
- April 2020 – May 2023; each wave includes ~2000 Canadians (sometimes including oversampled populations of interest)
- In partnership with Public Health Agency of Canada

Program of Applied Research on Climate Action (PARCA)
- Longitudinal nationally-representative survey measuring Canadians' climate and environment-related attitudes, beliefs, and behaviours.
- December 2021 – February 2023; each wave includes ~2000 Canadians
- In partnership with Environment and Climate Change Canada and Natural Resources Canada

### The Trust, Information, and Digital Ecosystems Study (TIDES)
- Cross-sectional, nationally-representative survey series to broaden and deepen understanding of trust and its cross-cutting impacts, in connection with related factors (misinformation, literacies, social cohesion, and confidence in democracy)
- Wave 1 fielded in November-December 2022; Wave 2 fielded in March 2023; each wave includes ~3400 Canadians
- In partnership with Public Health Agency of Canada

Methodology

- We measure two statistics:

  - **ground truth**: the **% of Canadians who actually agree with a statement, or a behaviour, or believe a false or misleading statement**. For example: *To the best of your knowledge, how accurate or inaccurate are the claims in each of the following statements?*

  - **consensus estimate**: the **best guess as to what is the % of Canadians who agree with the statement, or a behaviour, or a belief**. For example: *Approximately what percentage of Canadian adults do you think would believe the following claims (i.e., rate the statements as at least somewhat accurate)?'*

- We then compare these statistics to measure misperception

Canadians overestimate the extent to which false statements are believed

- The average consensus estimate for false claims was 26 percentage points over the true value.
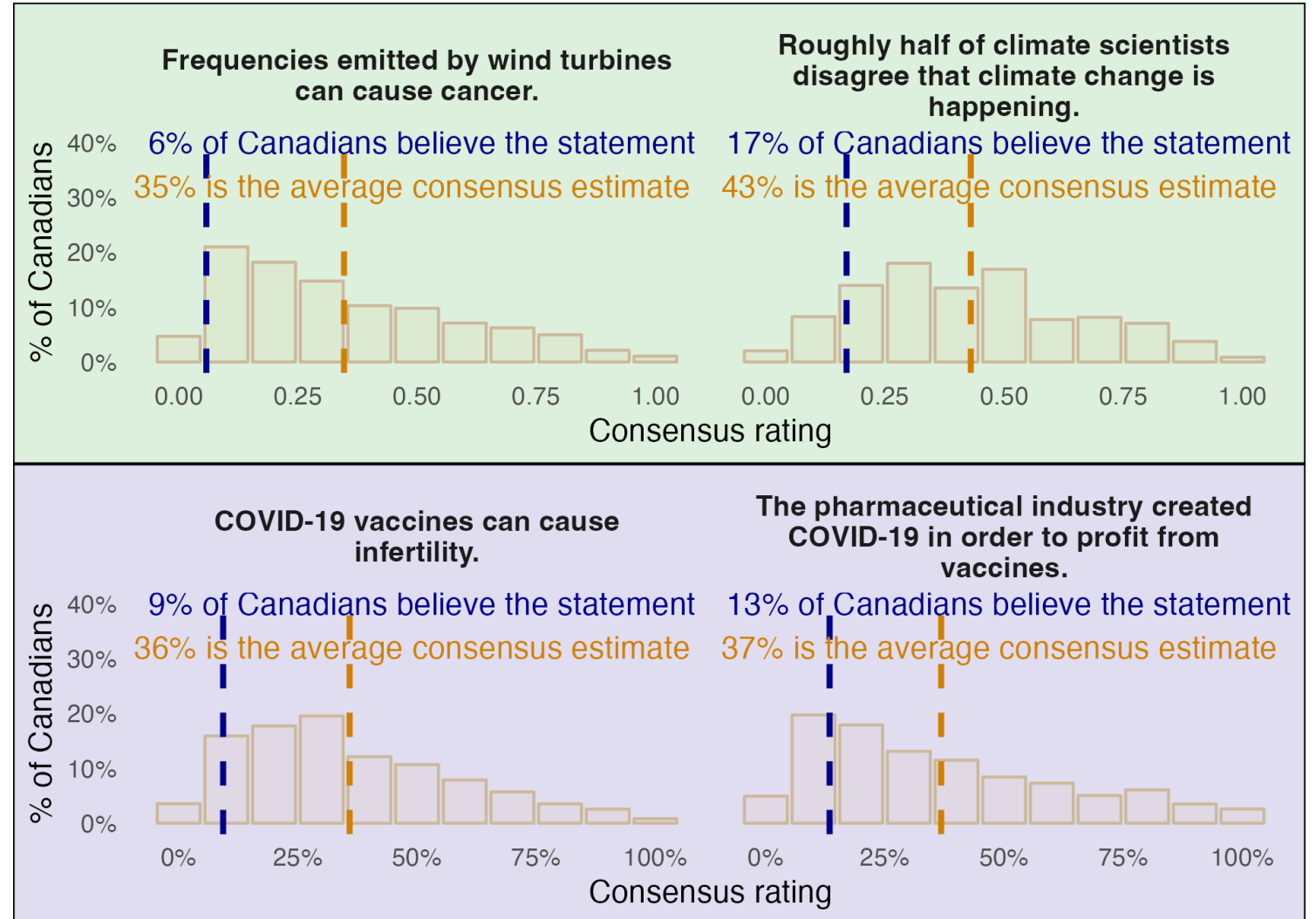
Belief is social: Greater belief in misinformation is associated with overestimations of how many other Canadians believe it
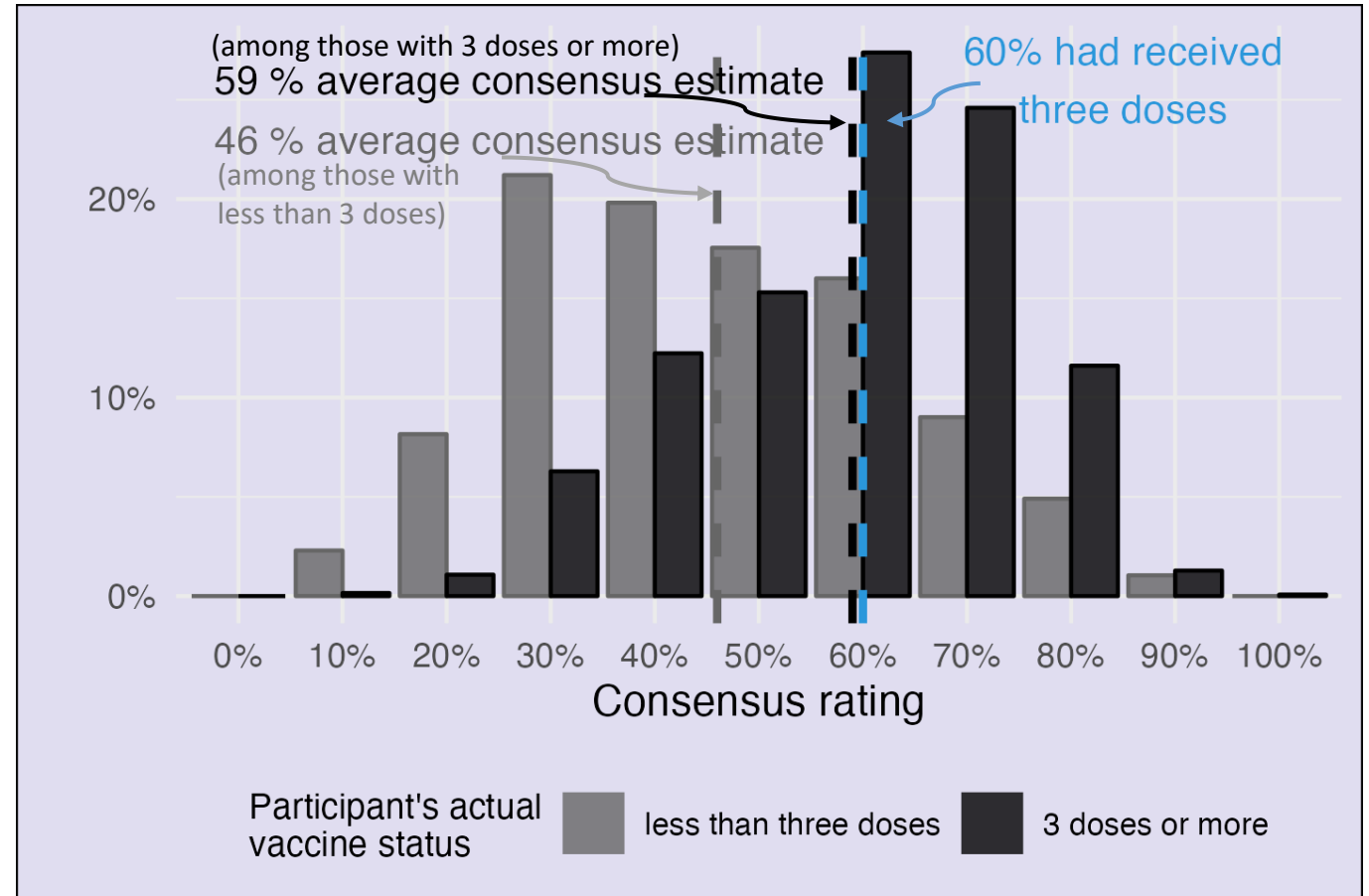
- The more people believe misinformation, the more they think other people believe it as well.

- This is known as the **'false consensus effect'** in the scientific literature.

- Similar pattern with true claims: those who think true claim are false underestimate the number of people who believe them.
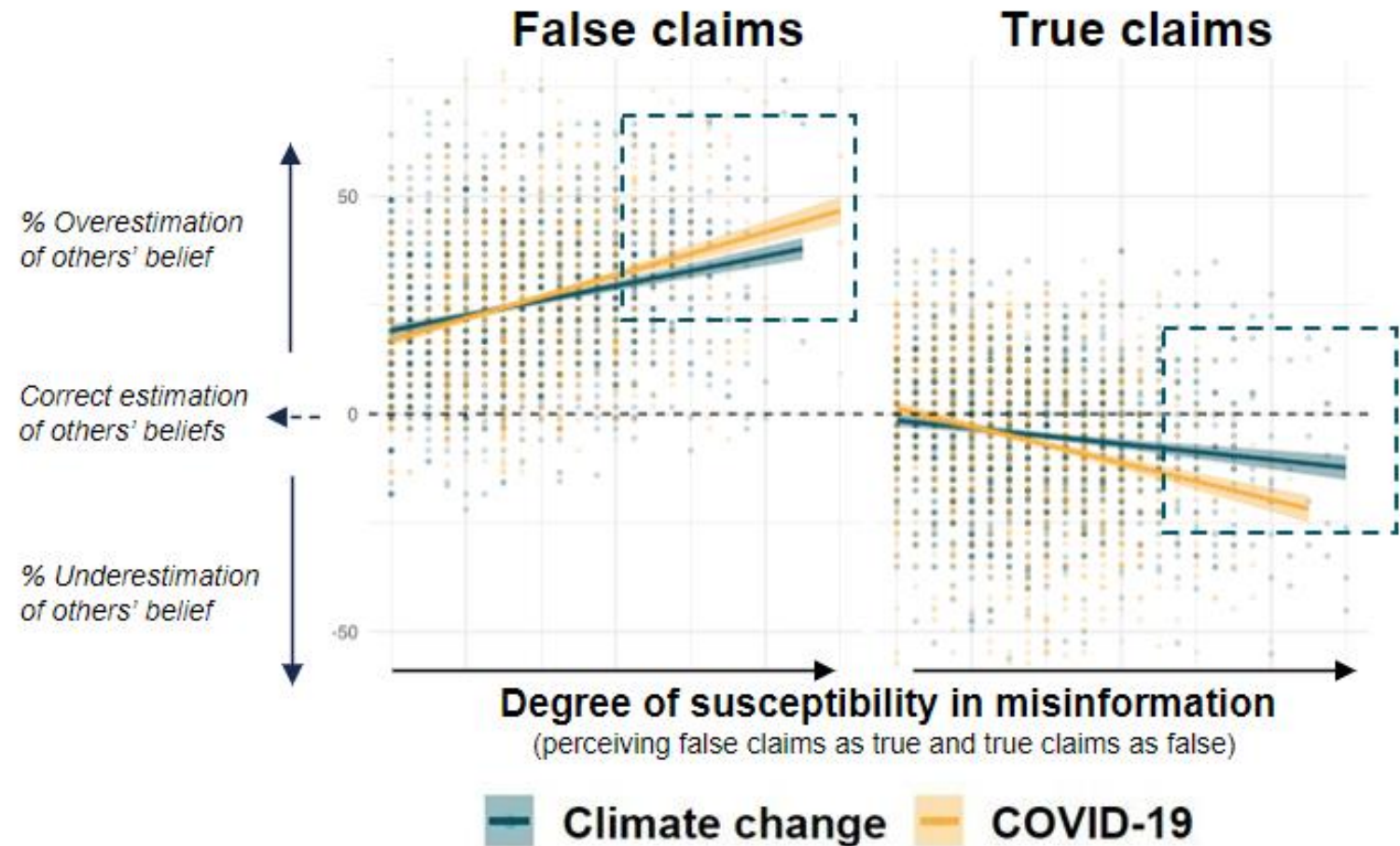
Those who believe others are vaccinated more likely to be vaccinated

- **Unvaccinated and under-vaccinated people significantly underestimated population vaccine uptake**, falsely perceiving themselves (those with fewer than 3 doses) to be the majority

- These results highlight a **potential connection between false social perceptions and consequential real-world behaviours**.

What % of Canadians have had at least three doses of COVID-19 vaccine

(among those with 3 doses or more)
59 % average consensus estimate

46 % average consensus estimate
(among those with less than 3 doses)

60% had received three doses

Consensus rating

Participant's actual vaccine status — less than three doses — 3 doses or more

Key takeaways and next steps

- **Widespread misperceptions about belief in misinformation, support for climate action, and COVID-19 vaccination.**

- On average, **those who believe misinformation, do not support climate action, and are not vaccinated**, are **more likely to overestimate** the extent to which other Canadians share similar beliefs and attitudes.

- Prior research suggests that recalibrating individuals' social consensus perceptions (by sharing objective public data) can create scalable change through the influence of social norms (Bursztyn & Yang, 2022; Mildenberger & Tingly, 2019)

- **Experimental interventions** (e.g., recalibration through survey experiment) is the next step.

- Imperative to design interventions that **respect autonomy and individual agency.**

Thank you!

To learn more about Impact Canada and connect with us at

https://**impact.canada**.ca

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Annex 1 - TIDES statements

Variable	Consensus estimate	Ground truth	Consensus estimate among not accurate	Consensus estimate among accurate
CON_F_CLI_1-Roughly half of climate scientists disagree that climate change is happening.	0.43	0.17	0.41	0.52
CON_F_CLI_2-Frequencies emitted by wind turbines can cause cancer.	0.35	0.06	0.33	0.57
CON_F_CLI_3-Natural gas is as clean an energy source as wind or solar.	0.48	0.24	0.45	0.56
CON_F_CLI_4-Adapting to the impacts of climate change is cheaper than preventing it.	0.51	0.27	0.49	0.56
CON_F_COV_1-The pharmaceutical industry created COVID-19 in order to profit from vaccines.	0.37	0.13	0.33	0.62
CON_F_COV_2-COVID-19 vaccines can cause infertility.	0.36	0.09	0.35	0.45
CON_F_COV_3-No children in Canada under age 10 have died from COVID-19.	0.41	0.13	0.39	0.53
CON_F_COV_4-A cardiac unit in a Canadian children's hospital was expanded to treat COVID-19 vaccine side effects.	0.43	0.18	0.4	0.58
CON_T_CLI_1-Most climate models are generally accurate in their estimates of long-term changes in global temperature.	0.57	0.59	0.54	0.59
CON_T_CLI_2-2020 was the second warmest year since measurements began in the 1850s.	0.6	0.42	0.56	0.65
CON_T_CLI_3-Oil companies have had evidence of human-caused climate change for several decades.	0.6	0.64	0.54	0.63
CON_T_CLI_4-Record cold temperatures can still occur in a world that is warming overall.	0.58	0.86	0.56	0.58
CON_T_COV_1-Thermometers cannot detect COVID-19.	0.57	0.65	0.46	0.62
CON_T_COV_2-COVID-19 vaccination does not increase the risk of miscarriage.	0.55	0.49	0.49	0.59
CON_T_COV_3-Some COVID-19 patients still have COVID-19 after symptoms disappear.	0.6	0.7	0.47	0.66
CON_T_COV_4-A small number of people in Canada have had allergic reactions to the COVID-19 vaccine.	0.61	0.75	0.53	0.64

Interpretation note: 17% of Canadians (from EKOS probabilistic-based survey; weighted) think that "Roughly half of climate scientists disagree that climate change is happening" is an accurate statement. In average, 43% of Canadians think that other Canadians think that is accurate. Among those who said it's accurate the consensus is 52% and among those who didn't it's 41%. _F_ denote inaccurate statements and _T_ denote accurate statements.

Annex 2 - PARCA Questions about policy attitudes

Variables PARCA	Consensus estimate	Ground truth	Consensus estimate among those who do not agree	Consensus estimate among those who agree
Banning the sale of gas and diesel-powered cars and light duty trucks by 2035 [agree]	0.33	0.53	0.22	0.43
Climate change is a threat that requires urgent action [agree]	0.46	0.75	0.3	0.51
How worried do you feel about the issue of climate change [worried]	0.38	0.49	0.31	0.47
I am willing to make substantial changes to my life to help limit climate change [agree]	0.4	0.69	0.28	0.46
Setting a national price on carbon (carbon tax) [agree]	0.34	0.59	0.22	0.42
Subsidizing the purchase of zero-emission vehicles like electric cars [agree]	0.52	0.67	0.31	0.63

Interpretation note: 53% of Canadians (from EKOS probabilistic-based survey; weighted) agree with the hypothetical policy "Banning the sale of gas and diesel-powered cars and light duty trucks by 2035". In average, Canadians think that 33% of other Canadians agree. Among those who support the policy it's 43% and among those who do not 22%.

Annex 3 - COSMO Questions about behaviours

Variable	Consensus estimate	Ground truth	Consensus estimate among those with [0-2] doses	Consensus estimate among those with 3+ doses
Received at least three doses of COVID-19 vaccines [Yes]	0.55	0.72	0.46	0.59
Wore face mask when mandatory [Always/Often]	0.73	0.79	0.56	0.77

Interpretation note: 72% of Canadians (from EKOS probabilistic-based survey; weighted) said they received three doses of COVID-19 vaccine. The consensus estimate is 55%. Among those who received three doses the consensus estimate is 59% while it's 46% among those who did not receive three doses.