OSC Canadian Science Attitudes Research

August 17, 2017

Léger

METHODOLOGY

QUANTITATIVE RESEARCH INSTRUMENT

A survey of 1,514 Canadians was completed online between August 15th to 16th, 2017 using Leger's online panel, *LegerWeb.*

A probability sample of the same size would yield a margin of error of +/-2.5%, 19 times out of 20**.**

ABOUT LEGER'S ONLINE PANEL

Leger's online panel has approximately 475,000 members nationally – with between 10,000 and 20,000 new members added each month, and has a retention rate of 90%.

QUALITY CONTROL

Stringent quality assurance measures allow Leger to achieve the high-quality standards set by the company. As a result, its methods of data collection and storage outperform the norms set by WAPOR (The World Association for Public Opinion Research). These measures are applied at every stage of the project: from data collection to processing, through to analysis. We aim to answer our clients' needs with honesty, total confidentiality, and integrity.

LEGEND

Personal Beliefs	Gut Feeling	Balanced	Analytical
Xx%	Xx%	Xx%	Xx%

KEY FINDINGS

Decision-making process lies along a spectrum and placement on this spectrum guides scientific beliefs…

- While most (62%) are balanced decision-makers, others are split between being more intuitive (21%) vs. analytical (15%).
- Intuitive/Personal feeling decision-makers (69%) are much more likely to see science as opinion, while balanced (82%) and analytical (87%) decision-makers are more likely to see it as fact.
- Balanced and analytical decision-makers consider themselves to be more science-literate (66%/84%) and able to comprehend science in the media (71%/82%).

Traditional institutions are more trusted than disseminated digital or influencer networks …

- Science-related sources like museums/science centres (89%), scientists (88%), and educational institutions (87%) are most trusted, while social media (18%) and celebrity (9%) influencers are least trusted; Government (43%) falls in between
- Traditional media sources (newspapers, radio, television) are much more trusted than social media (20%) or blogs (19%)
- Interestingly, while family and friends (80%) scores high on trust, word of mouth (25%) does not.
- On the whole, Quebecers show higher levels of distrust to these information sources than the Rest of Canada.

Science is not a consensus, many still are skeptical…

- There is a divide among Canadians who believe scientific findings are objective facts (81%) versus those who see them as a matter of opinion (43%). Analytical thinkers lean towards 'fact' (87%) while intuitive/gut feel decision-makers more see them as opinion (69%/61%).
- Despite seeming most "pro-science", analytical decision-makers are most likely to see findings to be reported selectively to support media objectives (72%) or political positions (67%).

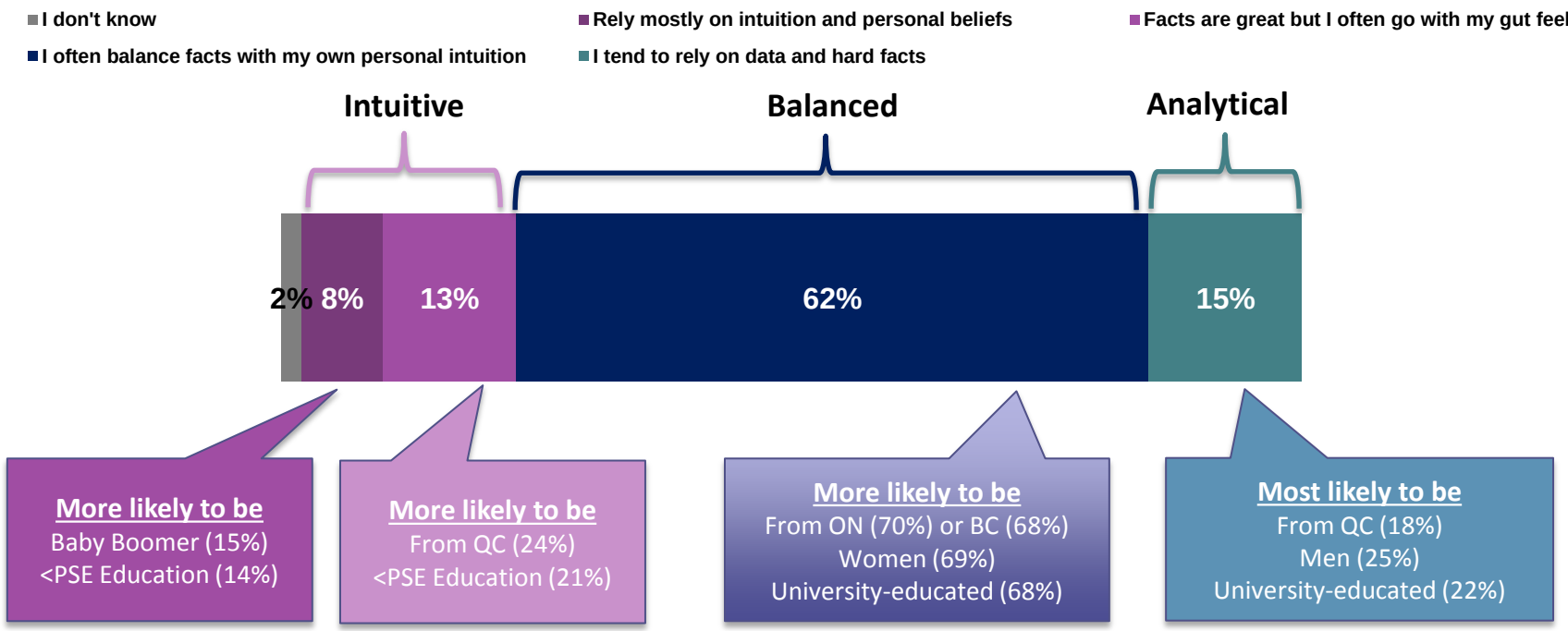
Canadians want applicable and modern approaches to science, less research and "ivory tower"…

- Canadians are twice as likely to want future funding to go towards science/tech with real-world application (59%) compared to traditional research and knowledge building (31%).
- Many (80%) want more funding for science research and education while some (26%) don't believe Canada is a world leader. Most (60%) cannot name any major scientific accomplishments.
- Few believe that women (39%) and minority communities (36%) are adequately represented in Canadian sciences.

DECISION-MAKING IN EVERYDAY LIFE

While most Canadians utilize a balance of facts and intuition (62%) when making every day decisions, they are more likely to go with their intuition to some extent (21%) over pure data (15%). Quebecers (51% choose analytical or intuitive) are least likely to declare this balance, while those with more education more lean to needing hard facts.

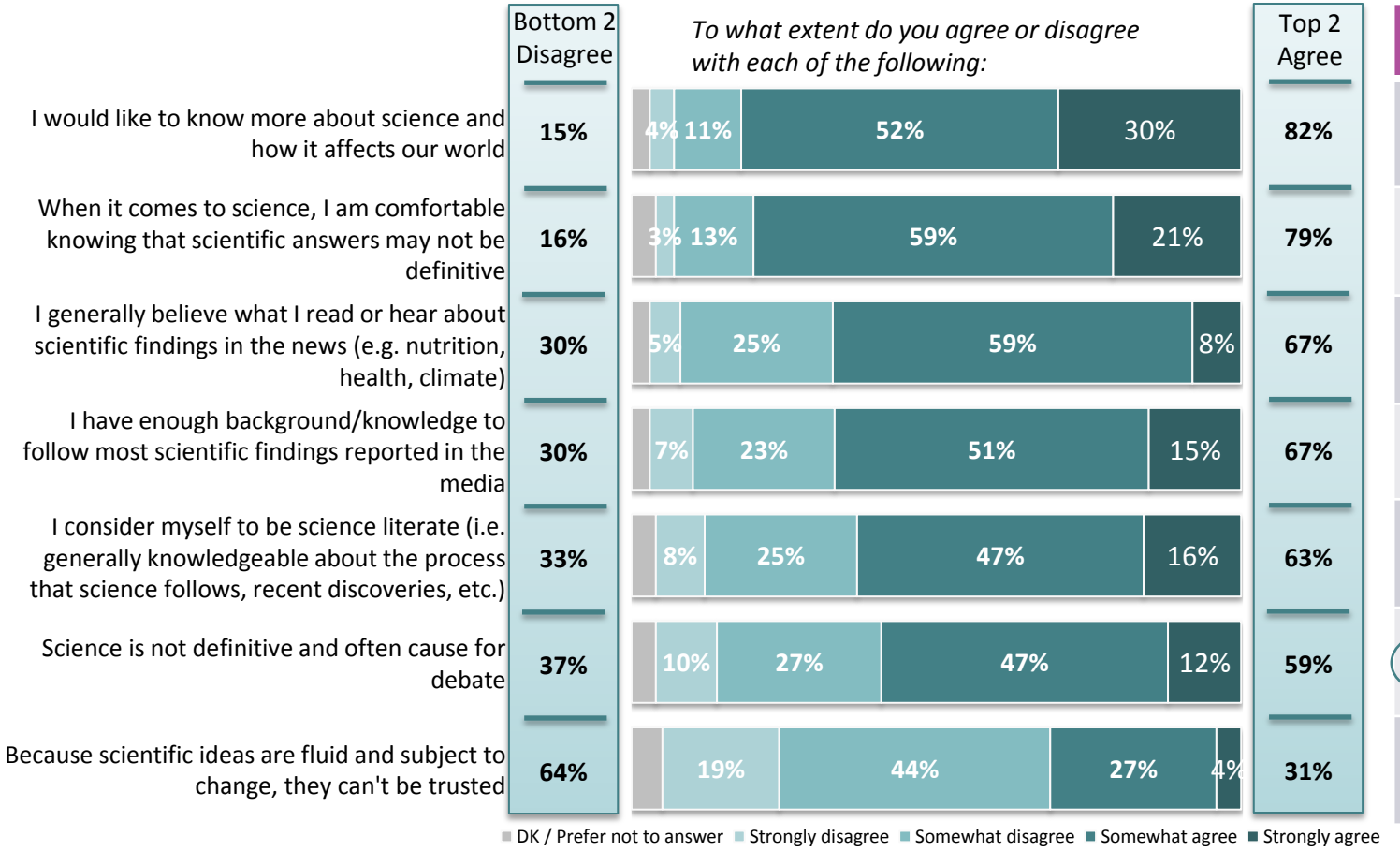
Which of the following best describes how you make decisions in your everyday life?



Q1. Which of the following best describes how you make decisions in your everyday life? Base: total sample (n=1,514)

SCIENCE KNOWLEDGE AND BELIEFS

Most Canadians feel they are capable of understanding scientific findings. Despite this acknowledgement, roughly three in ten consider themselves "science illiterate" (33%) and that they don't have the ability to follow science reports in the media (30%). A similar proportion (31%) believe science can't be trusted since it always subject to change. Men (70%) are more likely to consider themselves to be "science literate" than women (57%)



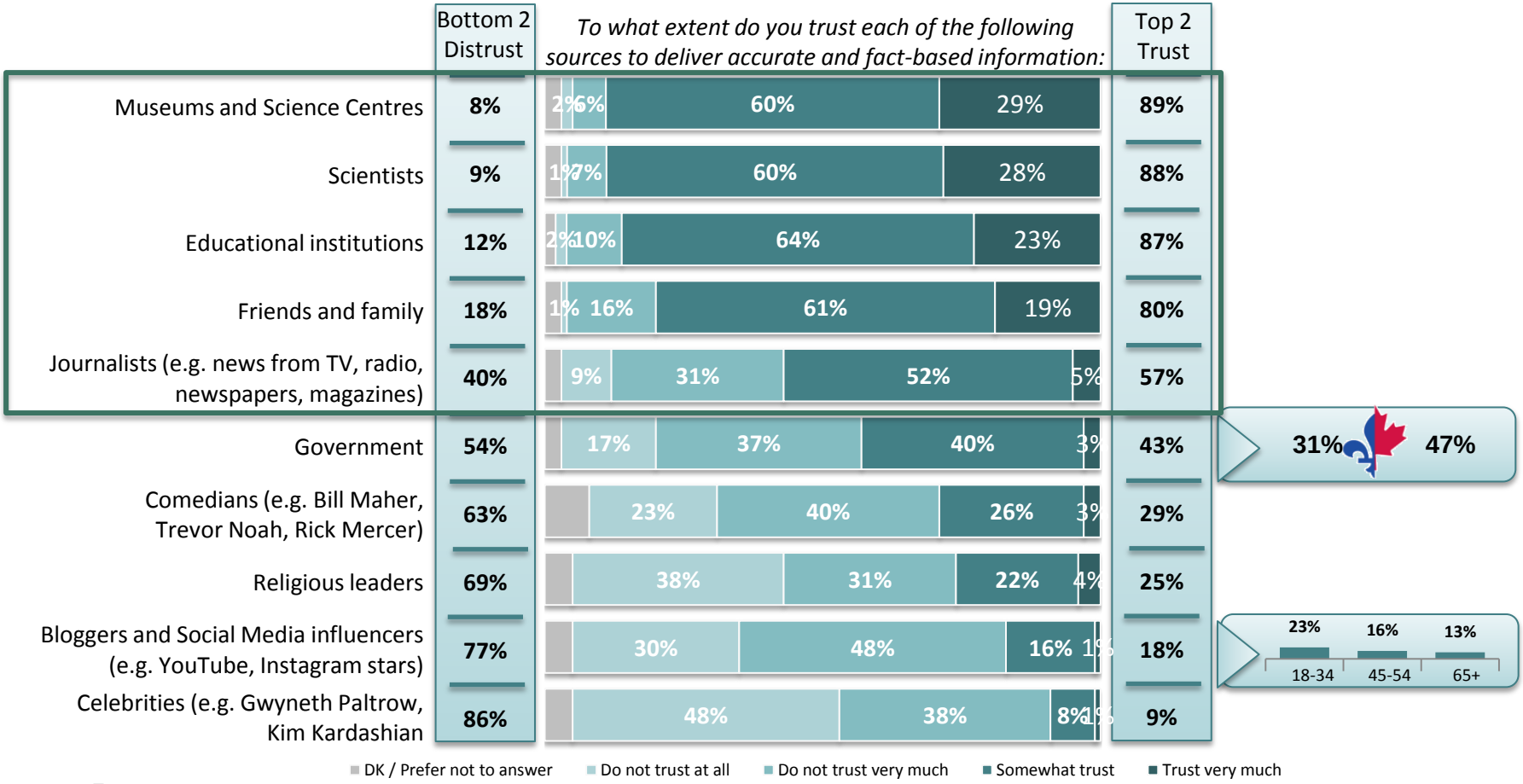
	PB.	Gut.	Bal.	Ana.
I would like to know more about science and how it affects our world	63%	68%	85%	92%
When it comes to science, I am comfortable knowing that scientific answers may not be definitive	69%	78%	82%	75%
I generally believe what I read or hear about scientific findings in the news (e.g. nutrition, health, climate)	53%	58%	69%	77%
I have enough background/knowledge to follow most scientific findings reported in the media	50%	44%	71%	82%
I consider myself to be science literate (i.e. generally knowledgeable about the process that science follows, recent discoveries, etc.)	43%	41%	66%	84%
Science is not definitive and often cause for debate	65%	65%	58%	55%
Because scientific ideas are fluid and subject to change, they can't be trusted	32%	40%	28%	35%

Q2. To what extent do you agree or disagree with each of the following: Base: total sample (n=1,514)

Significantly higher

TRUST OF SOURCES FOR ACCURATE, FACT-BASED INFORMATION (INFLUENCERS)

Traditional institutions, like educational and science-centered sources, are most trusted when it comes to providing factual information. From an influencer perspective, trusted sources are close-to-home while indirect connections like social media stars, bloggers, and celebrities are least trusted. Millennials are more likely to trust digital influencers, which declines the older Canadians are.



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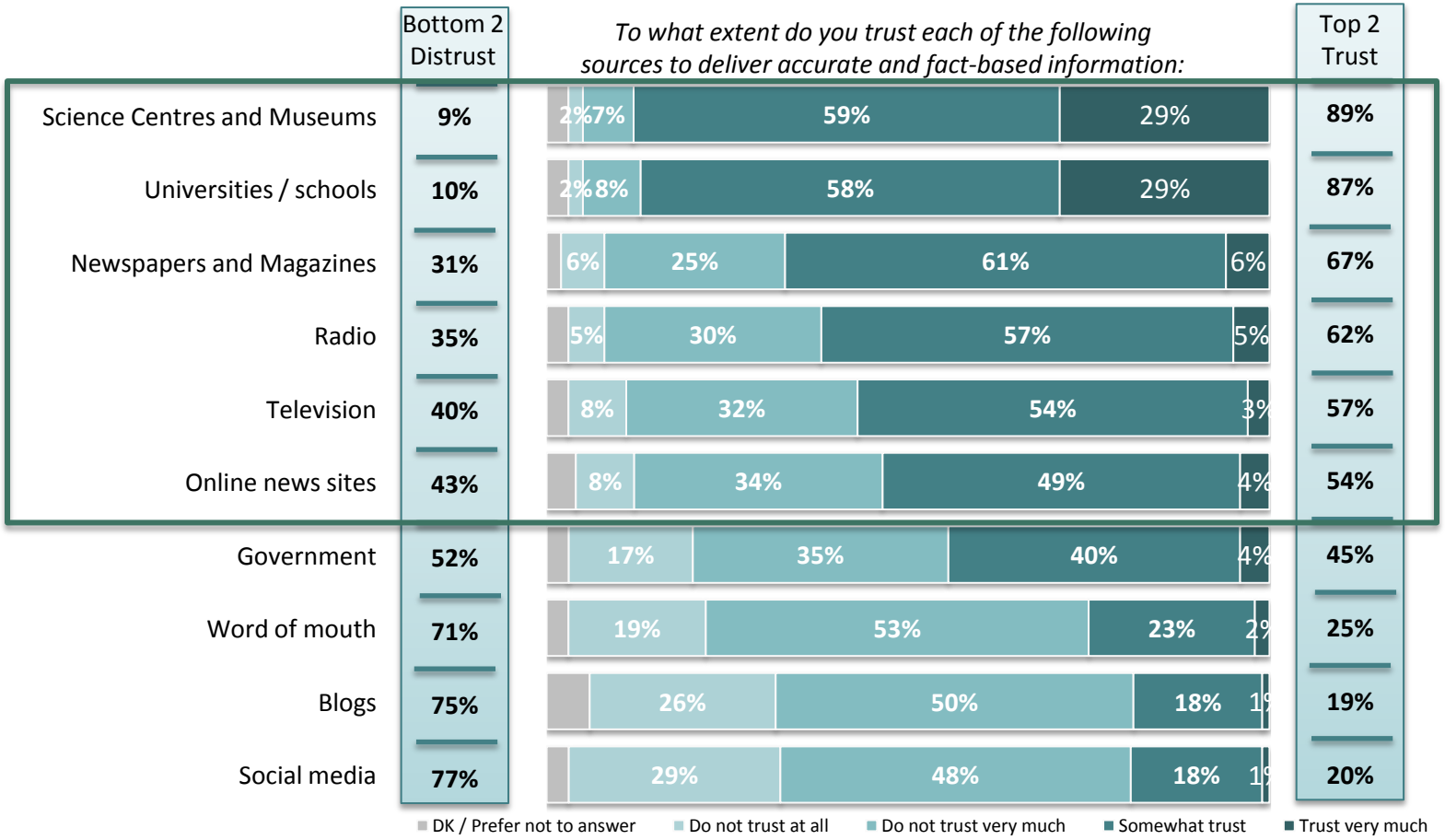
Q3. To what extent do you trust each of the following sources to deliver accurate and fact-based information: Base: total sample (n=1,514)

TRUST OF SOURCES FOR ACCURATE, FACT-BASED INFORMATION (MEDIUMS)

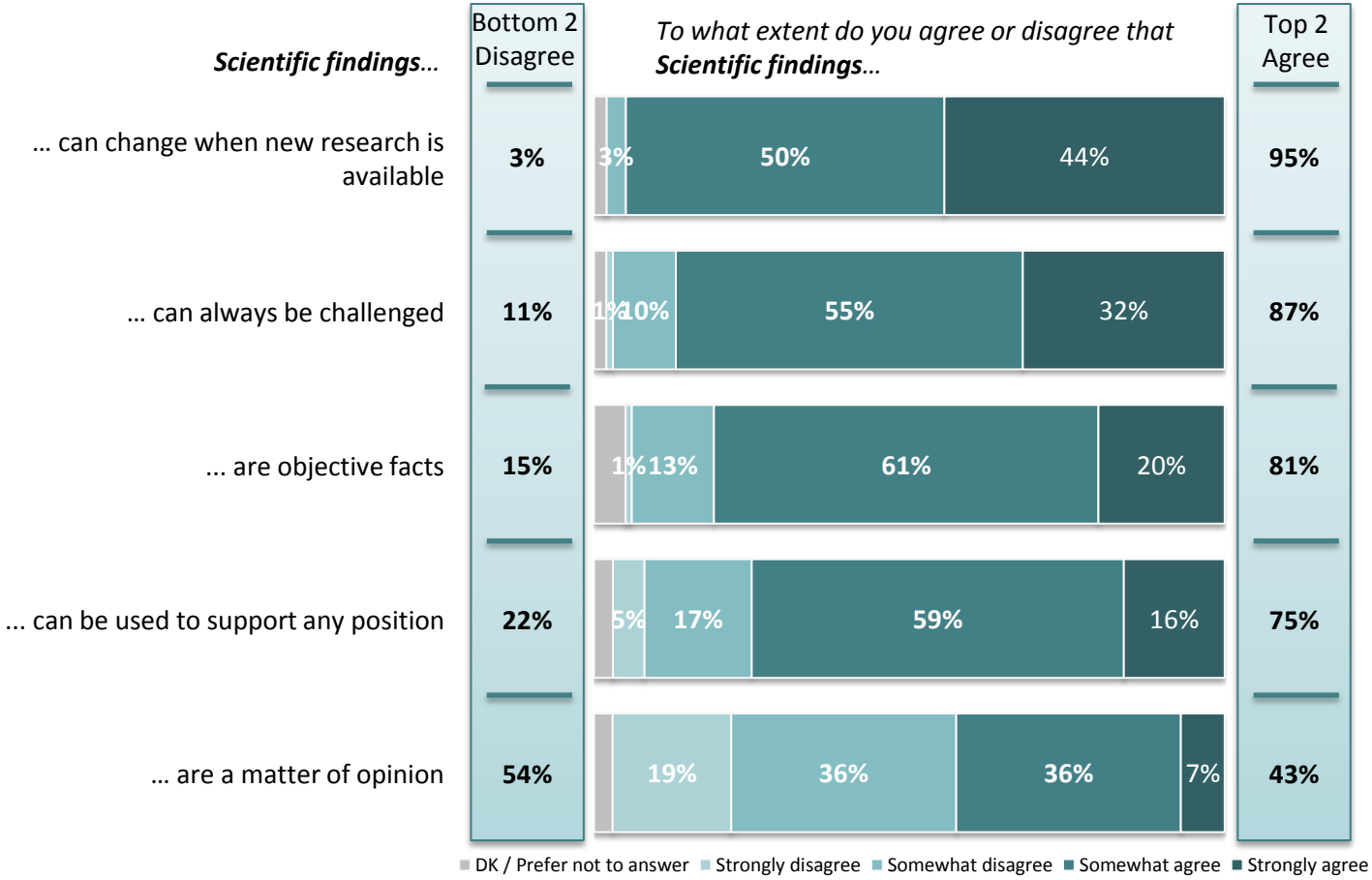
Outside of educational sources, traditional media platforms are most trusted, led by newspapers (67%) and radio (62%). More horizontal communications like blogs, social media, and word of mouth show high levels of distrust, as does government (52% distrust) albeit less so. Interestingly, while Canadians showed high trust in receiving information from family and friends (80%) they show lower levels when it comes to overall word of mouth (25%).



Q4. To what extent do you trust each of the following sources to deliver accurate and fact-based information: Base: total sample (n=1,514)

BELIEFS ABOUT SCIENTIFIC FINDINGS

Interestingly, while most (81%) believe that scientific findings are objective facts, nearly half (43%) believe they are a matter of opinion. This gap is driven by intuitive decision-makers who are more likely to see findings as opinion, while those who are more balanced or data-driven tend to see findings as objective. The older Canadians are, the more likely they are to believe science is a matter of opinion (47% 65+ vs. 35% 18-34) and can always be challenged (92% 65+ vs. 82% 18-34).



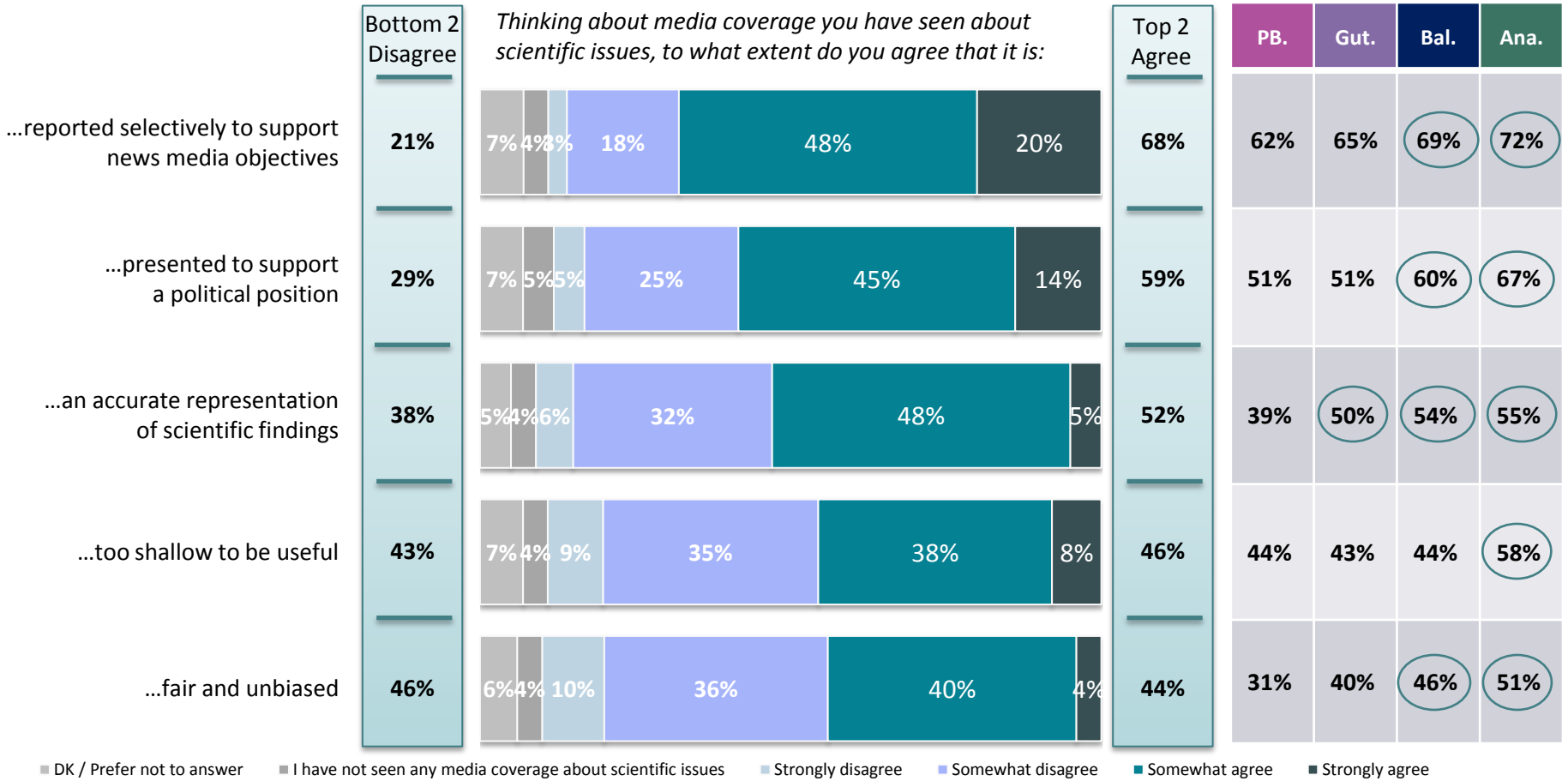
	PB.	Gut.	Bal.	Ana.
… can change when new research is available	89%	93%	96%	94%
… can always be challenged	92%	89%	88%	81%
… are objective facts	76%	71%	82%	87%
… can be used to support any position	81%	81%	74%	71%
… are a matter of opinion	69%	61%	37%	38%

Significantly higher

Q5. To what extent do you agree or disagree that ***scientific findings***… Base, total sample (n=1,514)

MEDIA COVERAGE OF SCIENTIFIC ISSUES

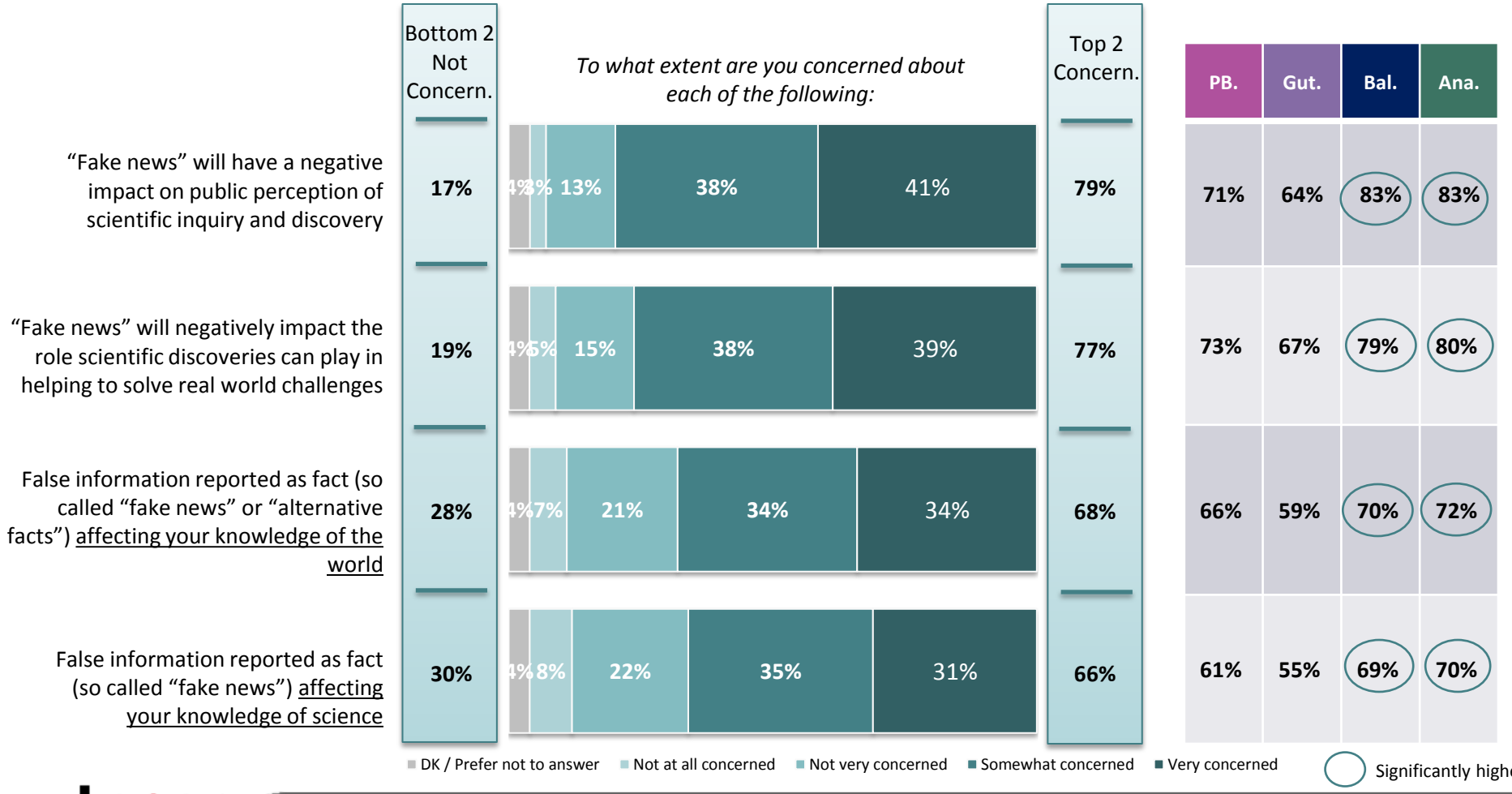
Looking at media coverage of scientific issues, there is a noticeable level of skepticism around accurate representation of results (38% disagree the media does this) and selectively choosing results to support certain objectives (68% agree media does this). Those who are more likely to use a combination of facts and intuition or purely facts are more likely to feel this skepticism than those who rely solely on gut feeling. One in twenty (4%) don't recall seeing any media coverage about scientific issues.



Q6. Thinking about media coverage you have seen about scientific issues, to what extent do you agree that it is: Base: total sample (n=1,514)

CONCERN OVER FALSE OR 'FAKE' NEWS

A strong majority of Canadians show concern over "fake news", most notably that it will have a negative impact on how scientific inquiry and discovery is perceived in the media. Analytical decision-makers are much more likely to show this concern over their intuitive counterpart.



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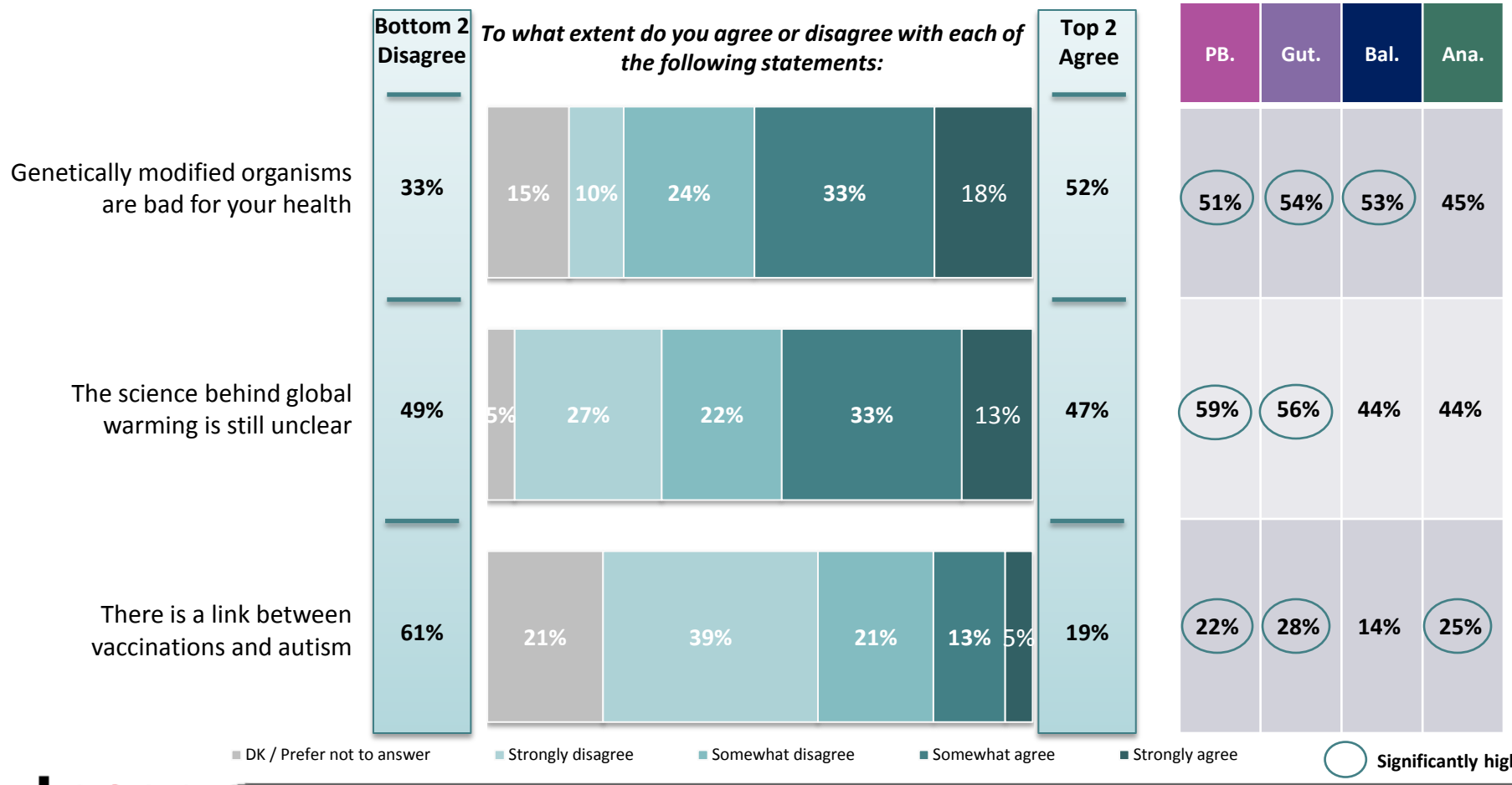
Q7. To what extent are you concerned about each of the following: Base: total sample (n=1,514)

BELIEF IN CONTROVERSIAL THEORIES

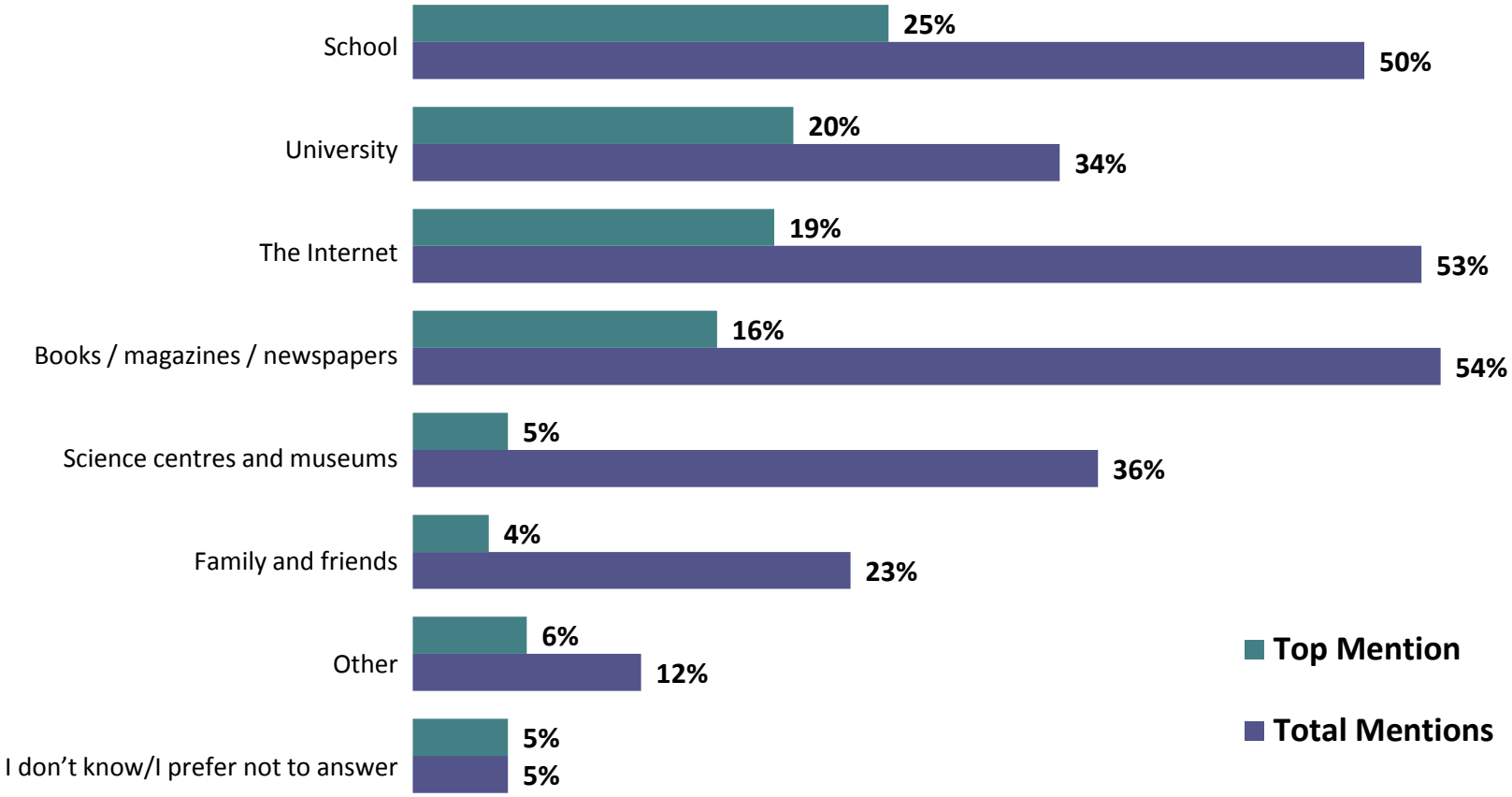
Roughly half of Canadians show some belief in controversial theories like global warming being unclear (47% agree) and GMOs being unhealthy (52% agree), while a similar proportion either believe in the link between vaccinations and autism (19% agree) or don't know if there is a link (21%). More intuitive decision-makers show a higher likelihood of agreeing with this controversial theories. A majority (59%) of women believe GMOs are unhealthy (vs. 44% of men), while belief in vaccinations linking to autism is highest among millennials (24%).



Q8. To what extent do you agree or disagree with each of the following statements: Base: total sample (n=1,514)

SOURCES OF SCIENCE KNOWLEDGE AND INFORMATION

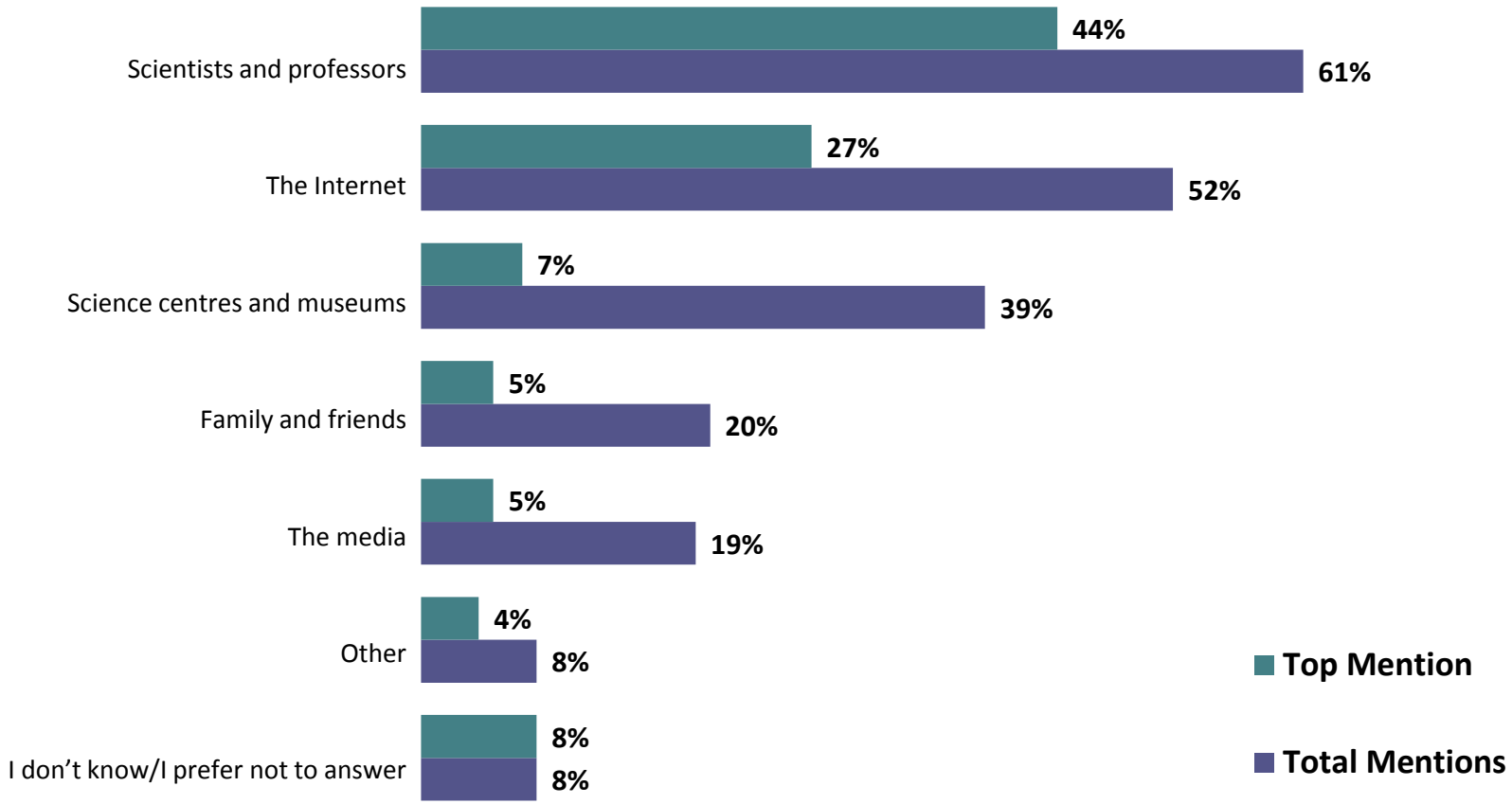
Canadians identify that most of their scientific knowledge comes from sources they trust (like educational institutions and traditional media). Science centers and museums, however, is not top of mind. Educational facilities are most chosen by both analytical (university – 35%) and intuitive thinkers (school – 28%) but net closely on all other sources.



Q9. Would you say your knowledge of science comes mostly from…? Any others? Base: total sample (n=1,514)

CONFIRMATION SOURCES OF SCIENTIFIC FINDINGS

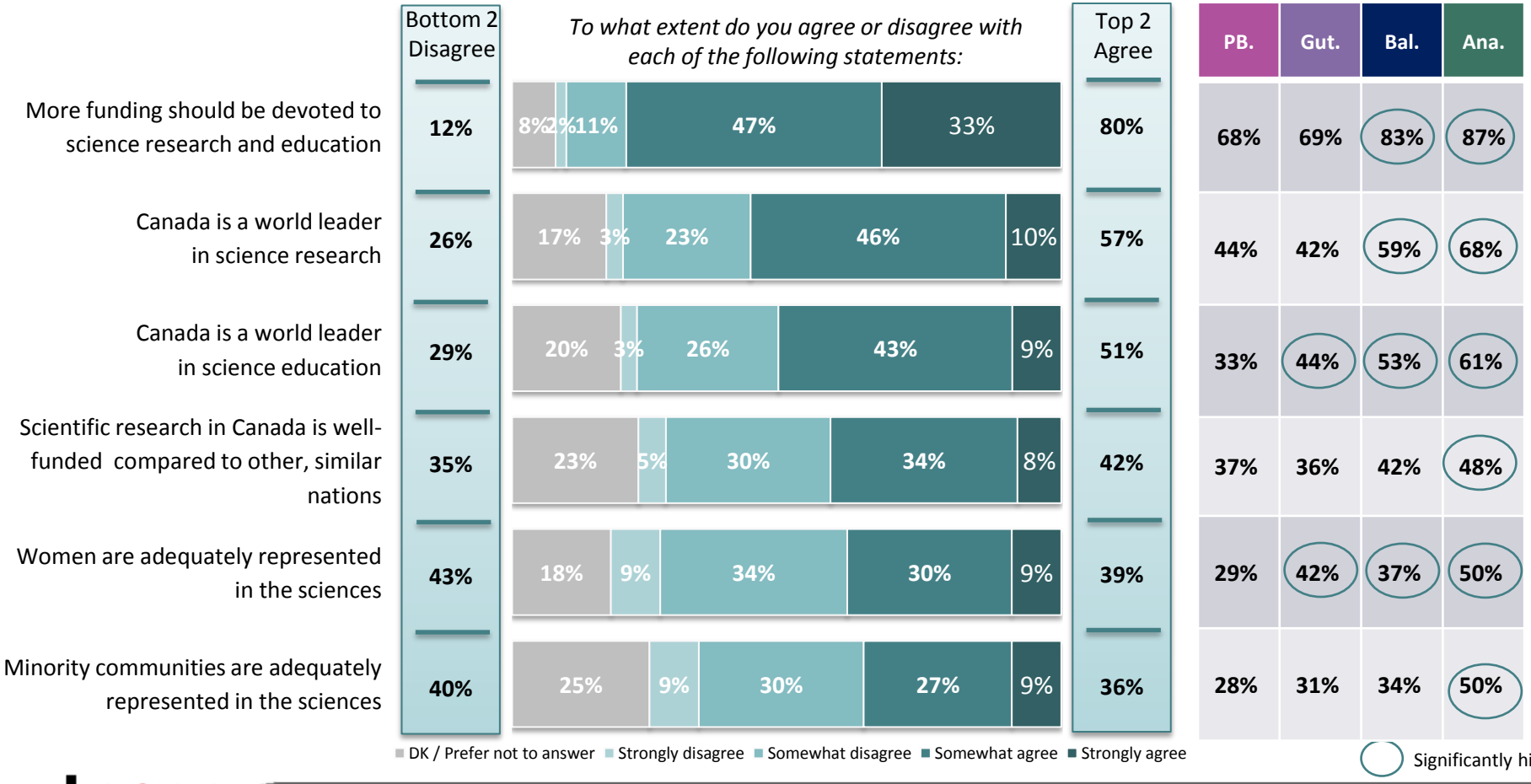
Canadians are almost as likely to rely on the Internet (52%) in some capacity to confirm scientific accuracies as they are to rely on scientists and professors (61%), although Canadians are more likely to see the latter as a definitive source (44%).



Q10. To confirm the accuracy of scientific findings, you rely on…? Any others? Base,:total sample (n=1,514)

REPRESENTATION IN THE SCIENCES

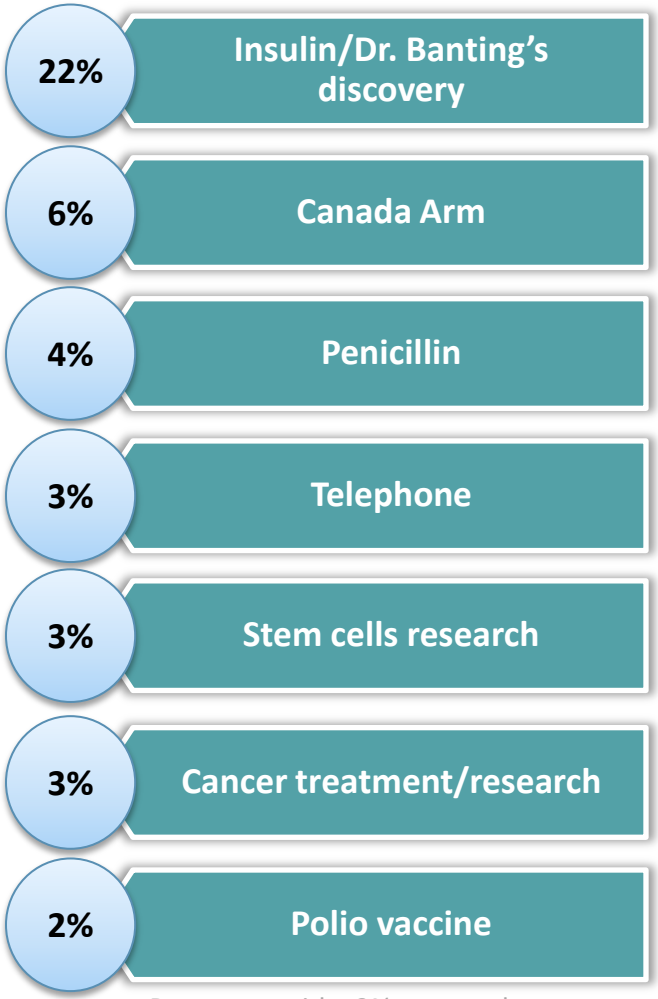
While there is a lack of overall consensus that Canada is scientific, most (80% agree) believe that this area deserves more funding. There are also perceptions that the field is not adequately represented by women or minority communities. Women (35%) are less likely to believe that they are represented adequetly in the sciences compared to men (44%) and are also less likely to believe that Canada is a world leader in science research (52% vs. 62% of men). Analytical decision-makers are much more likely to see this inequality.



Q11. To what extent do you agree or disagree with each of the following statements: Base, total sample (n=1,514)

CANADIAN SCIENTIFIC ACHIEVEMENTS

To the best of your knowledge, what are some of the breakthroughs in science discovered by a Canadian?



Responses with <2% are not shown

Among those that Canada, only the discovery of insulin by Dr. Banting (22%) was acknowledged by a noticeable portion of the population.

Looking specifically at Dr. Banting's insulin discovery, the older Canadians are and the more educated they are leads to higher identification of this discovery, while the more intuitive Canadians are with their decision-making, the less likely they are to know of this discovery.

Overall, three in five (60%) Canadians were not able to provide an answer when asked to identify significant scientific breakthroughs coming from Canada.

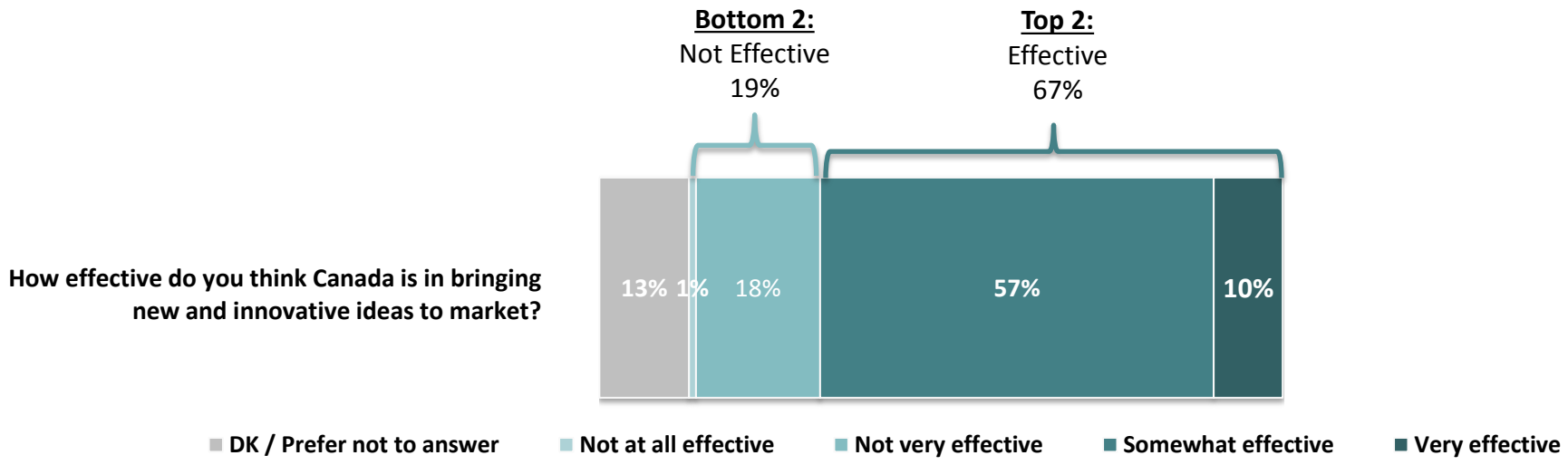
Most likely to not know accomplishments

Millennials (74%)
Intuitive Decision-Makers
(72% Personal Beliefs/70% Gut Feeling)
Quebecers (69%)

Q12. To the best of your knowledge, what are some of the breakthroughs in science discovered by a Canadian? Base, total sample (n=1,514)

NEW AND INNOVATIVE IDEAS FROM CANADA

Most Canadians fall into a "soft middle" (57% somewhat agree/18% somewhat disagree) that Canada creates innovative ideas, while just one in ten (10%) strongly believe this notion. The more analytical Canadians are with their decision-making, the higher the likelihood they believe that Canada is effective in this manner.



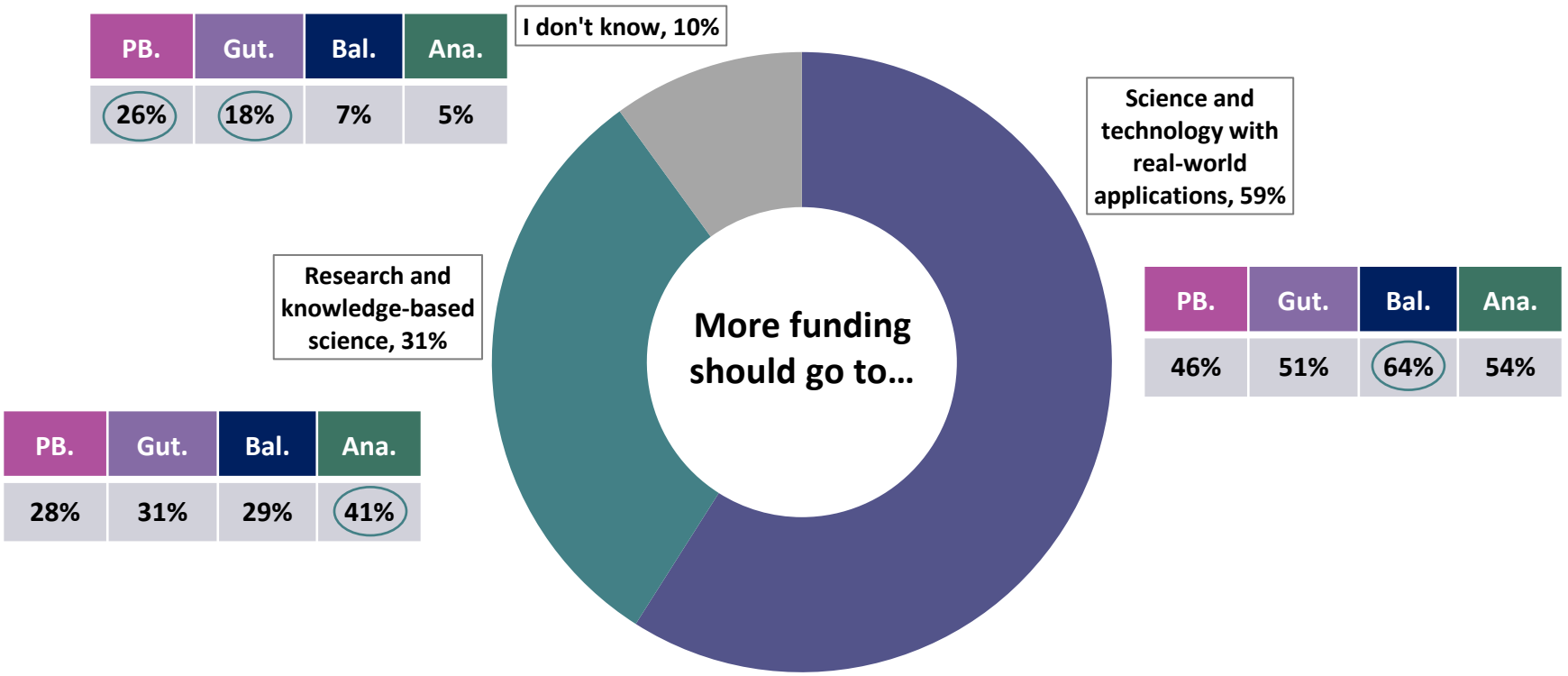
PERSONAL BELIEF	GUT FEELING	BALANCED	ANALYTICAL
64%	59%	68%	73%

Significantly higher

Q13. How effective do you think Canada is in bringing new and innovative ideas to market? Base: total sample (n=1.514)

FUNDING ALLOCATION FOR THE SCIENCES

Canadians are twice as likely to believe that scientific funding allocation should be directed towards real-world applications (59%) compared to research and knowledge-building (31%) endeavours. Balanced decision-makers (64%) most want funding to go towards these real-world pursuits, while analytical thinkers (41%) are more likely to be interested in funding research. Intuitive decision-makers are more likely than others to not have an opinion either way.



Significantly higher

Q14. If you had to choose, should more funding be invested in: Base, total sample (n=1,514)

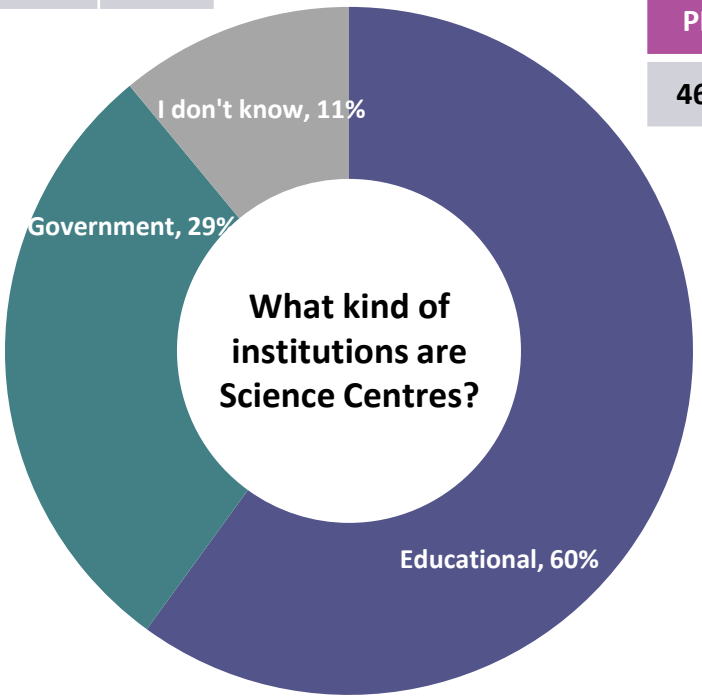
SCIENCE CENTRES ARE...INSTUTITIONS

Canadians are more than twice as likely to see Science Centres as educational institutions (60%) compared to governmental (29%) ones. Balanced decision-makers (66%) most see these centres as educational institutions, while the more intuitive Canadians become in their decision-making, the more they are likely to not know (20% - personal beliefs) which institution science centres best embody.

PB.	Gut.	Bal.	Ana.
20%	10%	10%	7%

PB.	Gut.	Bal.	Ana.
46%	50%	66%	57%

PB.	Gut.	Bal.	Ana.
34%	40%	24%	36%



Significantly higher

Q15. Would you say that Science Centres are government or educational institutions? Base: total sample (n=1,514)

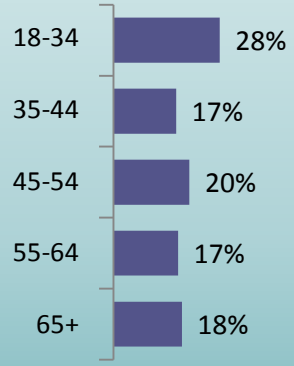
DEMOGRAPHICS

Gender

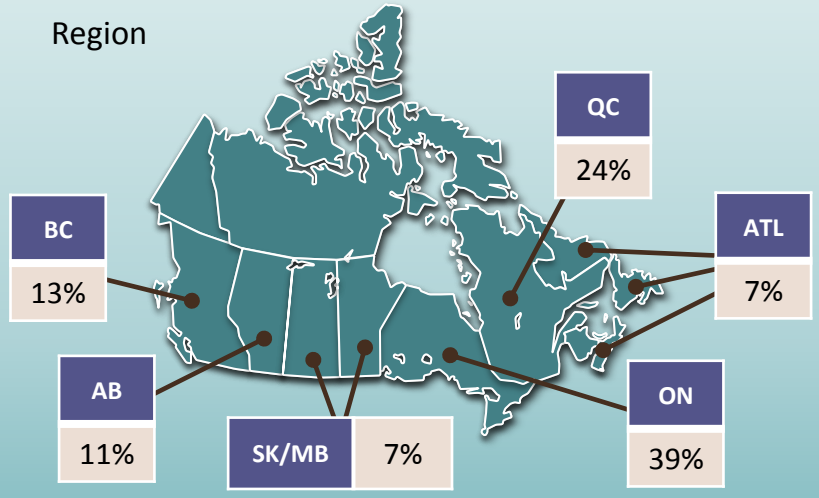
Women 52%

Men 48%

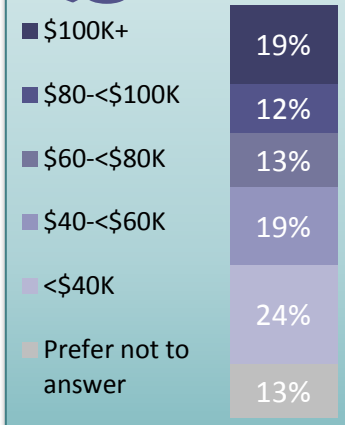
Age



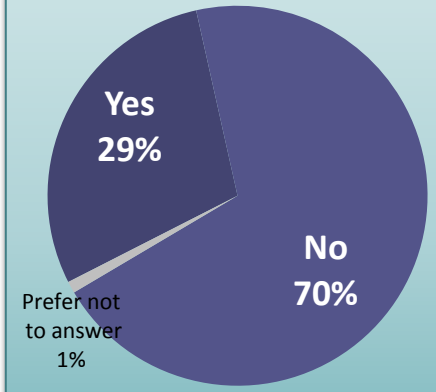
Region



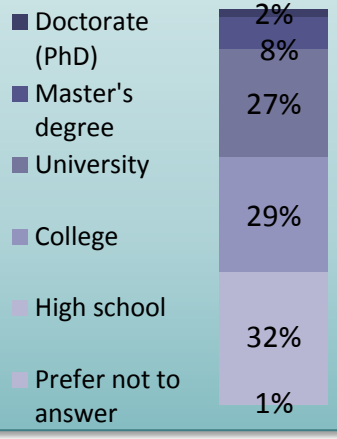
Household income



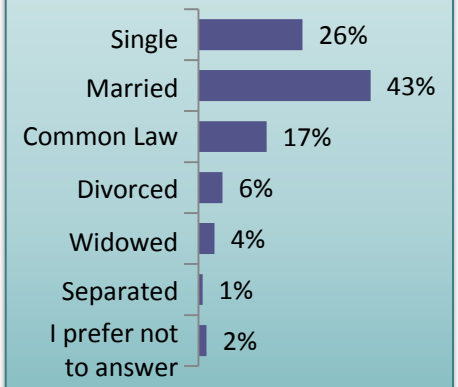
Households with children <18



Education



Marital Status



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