



# **Learnings from Behavioural Science Risk Perception and Vaccine Confidence**

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# Presenter Disclosure



**Presentation by:** Dr. Takuro Ishikawa  
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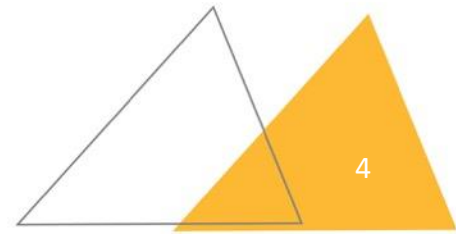
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# Territorial Acknowledgement

We, the BC BIG team, acknowledge the ancestral connection to specific territories of Indigenous Peoples in B.C.


We respect the importance of the diverse cultures, languages and practices attached to each of those territories for thousands of years.

# Understanding Behavioural Insights

**JUST FOOD**

AT **JUST FOOD**, WE'RE JUST FOOD.  
**NO PACKAGING**  
AND NO FUNNY INGREDIENTS YOU CAN'T PRONOUNCE.

**MADE WITH INGREDIENTS YOU CAN PRONOUNCE.**  
**UNLESS YOUR MOUTH IS FULL.**



LEARN MORE ▶

LEARN MORE ▶

LEARN MORE ▶

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# Understanding Behavioural Insights

*If it's difficult to pronounce, it must be risky*

*Song and Schwartz (2009)*

*World Bank Collection (2013), Creative Commons License, Attribution-NonCommercial-NoDerivs 2.0 Generic*



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# Understanding the Behavioural Insights Approach



## System 1: Thinking Fast

Automatic, intuitive, emotional, relying on instincts and mental shortcuts, effortless



## System 2: Thinking Slow

Rational, relying on logic, analytic, effortful, self-aware, evaluative/reflective

We often **assume that people are operating in System 2** all the time (absorbing all information, carefully weighing options, producing an optimal decision)

**System 1 is actually responsible for a lot of day-to-day choices**, in health and for parenting.

This introduces **predictable mental short-cuts** (>100 biases and heuristics), which **present opportunities** to design better policies and programs.



# Risk Perception and Vaccine Confidence

- System 1: Unfamiliar, new, less known, difficult to understand.\*
- Unclear benefits, unequitable, delayed effects.\*

CORONAVIRUS

## What is mRNA? How [pharmaceutical companies] tapped new tech to make coronavirus vaccines \*\*

If the experimental coronavirus vaccines win approval from the Food and Drug Administration, they will be the first-ever authorized vaccines that use mRNA.



\* Slovic (1987), Fischhoff *et al.* (1984), Lowenstein *et al.* (2001), Skagerlund *et al.* (2020)

\*\* Denise Chow, NBC News, Nov. 17, 2020



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# Risk Perception and Vaccine Confidence

*If it's morally  
objectionable,  
it must be risky*

*Thomas, Stanford, and Sarnecka (2016)*



# Risk Perception and Vaccine Confidence



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## Pharmaceutical Companies Reaping Immoral Profits From COVID Vaccines Yet Paying Low Tax Rates

September 14, 2021

*Moderna, BioNTech and Pfizer cashing in thanks to taxpayer investments, monopolies, and low taxes while leaving millions unprotected*

Moderna, BioNTech, and Pfizer are reaping astronomical and unconscionable profits due to their monopolies of mRNA COVID vaccines — upwards of 69 per cent profit margins in the case of Moderna and BioNTech — while Moderna and Pfizer are also paying little in taxes, campaigners from the People's Vaccine Alliance said today.



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# Risk Attitudes and Vaccine Hesitancy

**Omission bias:** preferring harm caused by inaction over equal or lesser harm caused by action

*Ritov and Baron (1990)*

# Risk Attitudes and Vaccine Hesitancy

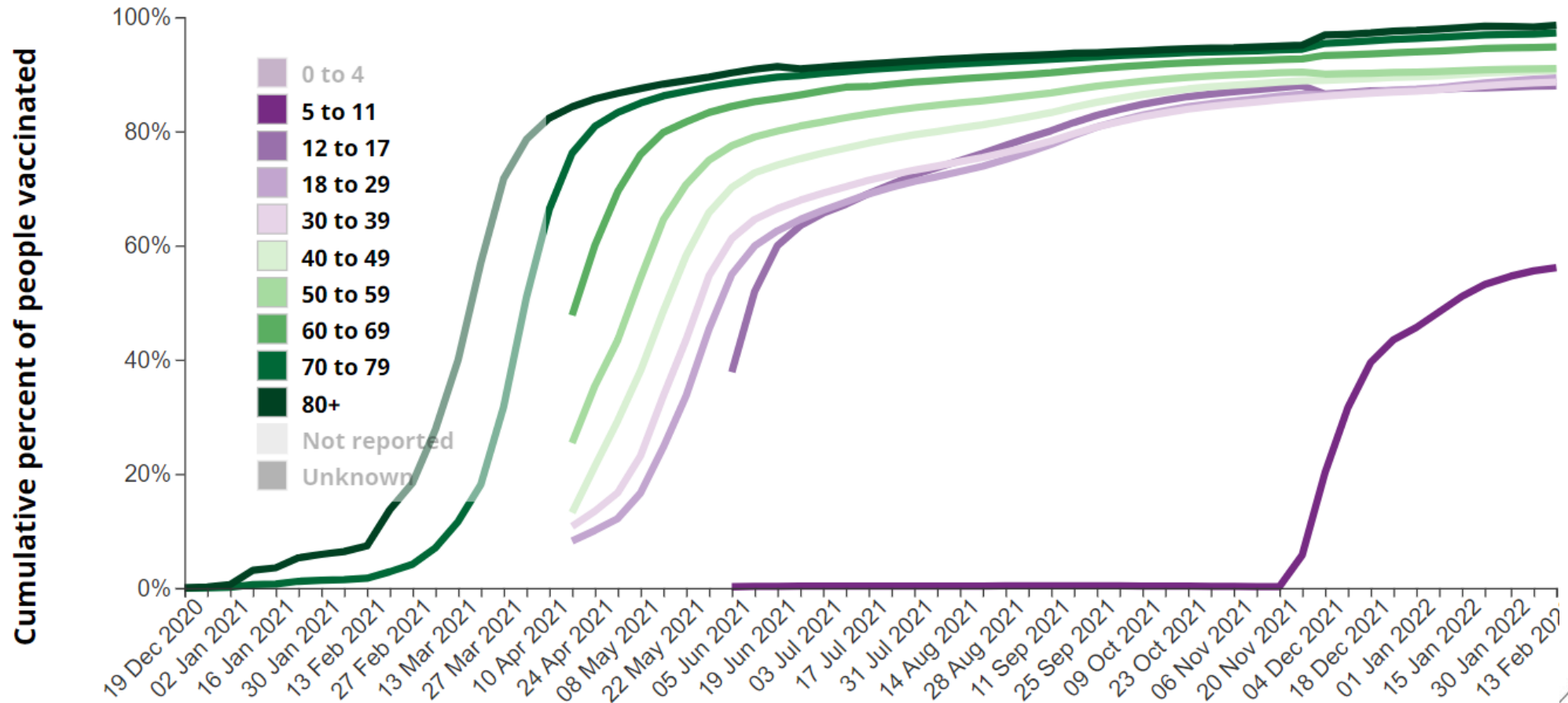
This photograph illustrates the main feature of how parents make decisions about their children's health:

- More risk averse when it comes to their children (Dore et al. 2014; Creighton et al. 2015; Ishikawa et al. 2022)
- Insensitive to degrees of risk (Dore et al. 2014)
- Social norms (Dore et al. 2014; Creighton et al. 2015)



# Risk Attitudes and Vaccine Hesitancy

Cumulative percent of people who have received at least one dose of a COVID-19 Vaccine in Canada, by age group



# Learnings from Behavioural Insights

- Conflicts between experts and lay people regarding acceptability of a technology (e.g., vaccines) are often about differences in risk perception, not about differences in what risk is acceptable. (Slovic & Weber 2002)
- Perceived risk of vaccines may be shaped by factors unrelated to the science or evidence (fluency, fairness).
- LIMITATIONS: Any intervention based on these general principles of risk perception and risk preferences must be tested (e.g., randomized control trials).



**Thank You**

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