

COVID-19  
Canada



THE END OF THE WORLD  
AS WE KNOW IT?

## RESEARCH REPORT N° 9

PERCEPTION OF RESTRICTED FREEDOM DURING THE  
COVID-19 PANDEMIC AND ITS INFLUENCE ON ADHERENCE TO  
GOVERNMENT MEASURES AND VACCINATION INTENTION: A  
MATTER OF DISTINCT INDIVIDUAL AND POLITICAL PROFILES?

THIS RESEARCH REPORT IS INTENDED FOR  
POLICY MAKERS AND THE GENERAL PUBLIC

THE PROJECT IS FINANCED BY THE CANADIAN  
INSTITUTES OF HEALTH RESEARCH (CIHR)

## Abstract

The measures taken by government leaders to limit the spread of COVID-19 have not been unanimously adhered to by the Canadian population. These measures have led some individuals to voice a threat to their personal freedom, also known as psychological reactance. Our results show that 21.4% of the participants experienced a low level of psychological reactance (low reactance group), 63.4% have a moderate level of psychological reactance (moderate reactance group), and 15.2% have a high level of psychological reactance (high reactance group). Members of the high reactance group differ from people in the other groups in their level of vitality, perceived control over their lives, political identity, level of trust in the Canadian Prime Minister, and their evaluation of the coherence and clarity of health measures. Finally, members of the high reactance group adhere less to government mandated health measures and have less intention of getting vaccinated compared to individuals in groups with lower levels of reactance.

### Definitions and measures of key concepts

Concepts	Definitions	Examples of survey questions
Psychological reactance	A motivational force that emerges when individuals perceive that their freedom might be threatened. This may cause individuals to engage in oppositional behaviors.	The measures implemented to fight against COVID-19 restrict my freedom.  1= Totally disagree 10 = Totally agree
Vitality	Subjective level of feeling alive and energetic.	I feel alive and vital.  1= Totally disagree 10 = Totally agree
Political identity	The position of an individual on the left-right political scale.	Regarding politics, people often speak of the “left” and “right”. Where would you place yourself on the following scale?  1 = Strongly left wing 10 = Strongly right wing



<b>Trust in government</b>	The level to which a person feels that the statements and decisions made by the federal and provincial Prime Minister are reliable.	How much do you trust each of the following actors to address the COVID-19 crisis? - Prime Minister Justin Trudeau - Provincial prime minister  1 = Not at all trusted 10 = Totally trusted
<b>Perception of control</b>	The level of control an individual believes they have over their life.	I feel in control of my life.  1= Totally disagree 10 = Totally agree
<b>Coherence of government measures</b>	The extent to which people view different COVID-19 provincial and federal public health measures as compatible and not conflicting with each other.	The various governmental measures complement each other.  1 = Totally disagree 10 = Totally agree
<b>Clarity of government measures</b>	Level of perception that the measures are well defined and explained.	In general, I have a clear understanding of the various measures established by Canada's public health agency.  1 = Totally disagree 10 = Totally agree
<b>Adherence to government measures</b>	The extent to which an individual follows a governmental measure against the spread of COVID-19.	Currently, how often do you do the following? - Maintain a distance of at least two meters (about two arm's lengths) from others when I am not at home.  1 = Never 10 = Always
<b>Vaccination intention</b>	The intention to be vaccinated against COVID-19.	I will get the vaccine shot for COVID-19 as soon as it is available.  1 = Totally disagree 10 = Totally agree

## Research questions

When the government implemented measures to limit the spread of COVID-19, the reactions of Canadians were varied. While some individuals easily complied with the new measures, others showed resistance. While the latter individuals appear to represent a small proportion of the population, they may have a significant impact on the growth of COVID-19 cases in the country. During the numerous protests against government measures, the notion of threat to freedom, also known as psychological reactance, was voiced by protesters. This led us to formulate questions tackling the following issues:

Are there different subgroups in the population that differ in their initial level of psychological reactance and does that level evolve over the first nine months of the COVID-19 pandemic (i.e., trajectory of psychological reactance)? Do these groups of individuals differ with respect to individual and political factors? Finally, is the level of psychological reactance measurably associated with adherence to health measures and vaccination intention?

## Hypotheses






1. The trajectories of experienced psychological reactance will not be the same for all individuals. Specifically, the sample will be composed of distinct groups based on their initial degree of psychological reactance and its evolution. In addition, we expect a decrease in reactance in the population over time (i.e., from April 2020 to December 2020).
2. Individuals belonging to the group with a high trajectory of psychological reactance will differ from those belonging to the lower groups of psychological reactance with respect to individual and political factors. Individual factors represent vitality and perceived control over one's life. Political factors consist of political identity, trust in government, coherence and clarity of government measures against COVID-19.
3. Individuals in the high reactance group will be less adherent to the government measures and less likely to be willing to be vaccinated compared to moderate and low reactance groups.



## Method

The data were extracted from a large survey of a representative sample of the Canadian population who completed a questionnaire eleven times in one year. The data for this research report were collected from the first ten questionnaires (see Table 1). For more methodological information, please refer to the technical report (de la Sablonnière et al., 2020).

**Table 1.** Methodological and demographic information

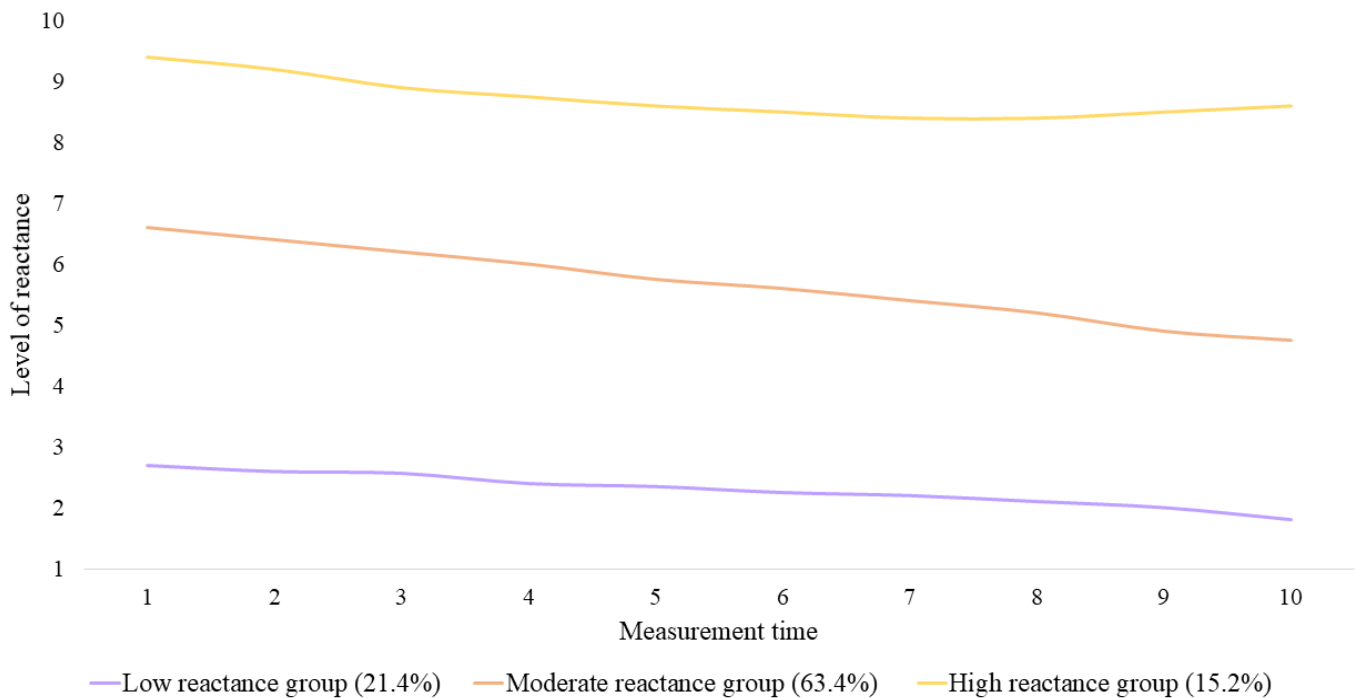
 Measurement time	 Sample size	 % (n) Women	 Mean age (range)	 Survey Dates
1	3617	50.5%	48 (18-92)	6 April - 6 May 2020
2	2282	48.9%	49 (18-86)	21 Avril - 11 May 2020
3	2369	49.2%	49 (18-86)	4 May - 25 May 2020
4	2296	48.5%	49 (18-86)	18 May - 10 June 2020
5	2154	48.7%	49 (18-92)	1 June - 23 June 2020
6	2116	48.8%	49 (18-92)	15 June - 13 July 2020
7	2072	49.1%	50 (18-92)	13 July - 8 August 2020
8	1871	49.4%	50 (18-92)	17 August - 13 September 2020
9	1821	48.4%	52 (18-92)	21 September - 19 October 2020
10	1883	48.4%	50 (18-86)	26 November - 29 December 2020

To identify different groups in terms of their level of psychological reactance, we opted for group trajectory modeling analyses (Nagin, 1999). To test hypotheses 2 and 3, rigorous statistical analyses were conducted to detect any statistically significant differences between these different groups.

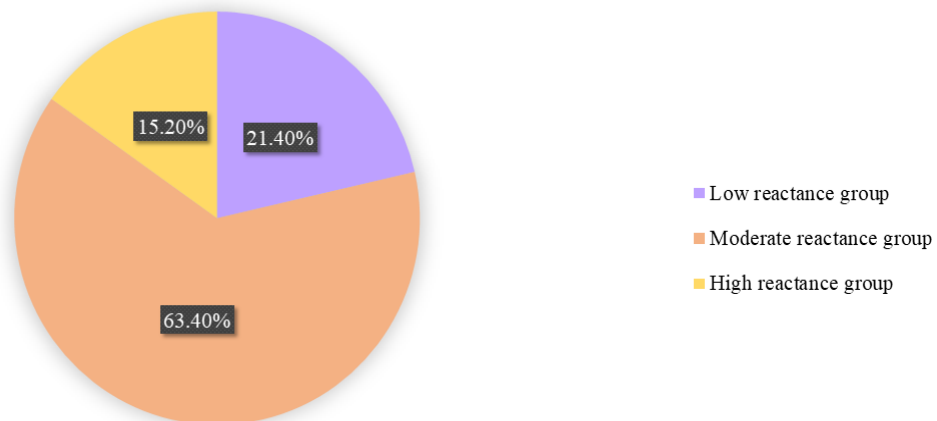
# Results

**Hypothesis 1.** The results indicate that participants can be divided into three different trajectories of psychological reactance: Low (21.4% of the sample), Moderate (63.4% of the sample), and High (15.2% of the sample). Contrary to our hypotheses, trajectories of reactance decrease over time only for the low and moderate reactance groups, whereas this is not the case for the high reactance group. More precisely, Graph 1 shows that for individuals of the low and moderate reactance groups, the trajectories of reactance decrease steadily, while for members of the high reactance group, the level of reactance decreases to become stable at measurement time 6 (starting in June, 2020) to then trend upward starting at measurement time 9, i.e., in September 2020. Graph 2 shows the percentage of participants belonging to each of the three psychological reactance trajectories.

**Graph 1.** Identification of psychological reactance trajectories



**Graph 2.** Distribution of participants in each reactance group



**Hypothesis 2.** Individuals in the high psychological reactance trajectory (high reactance group) differ from those in the moderate and low reactance groups with respect to individual and political factors (see Graph 3 and 4). The differences in individual factors refer to differences in vitality and perceived control. Regarding political factors, a difference between the high and low reactance groups is observed for the perceived coherence and clarity of the measures. In addition, a significant difference between the three groups (low, moderate, and high psychological reactance) was observed in political identity and trust in the federal Prime Minister. In the following section, only statistically significant differences are highlighted. These results need to be interpreted with caution as small differences between groups often reach statistical significance when the sample size is large (this is also true for Hypothesis 3 results).

## **Individual factors**

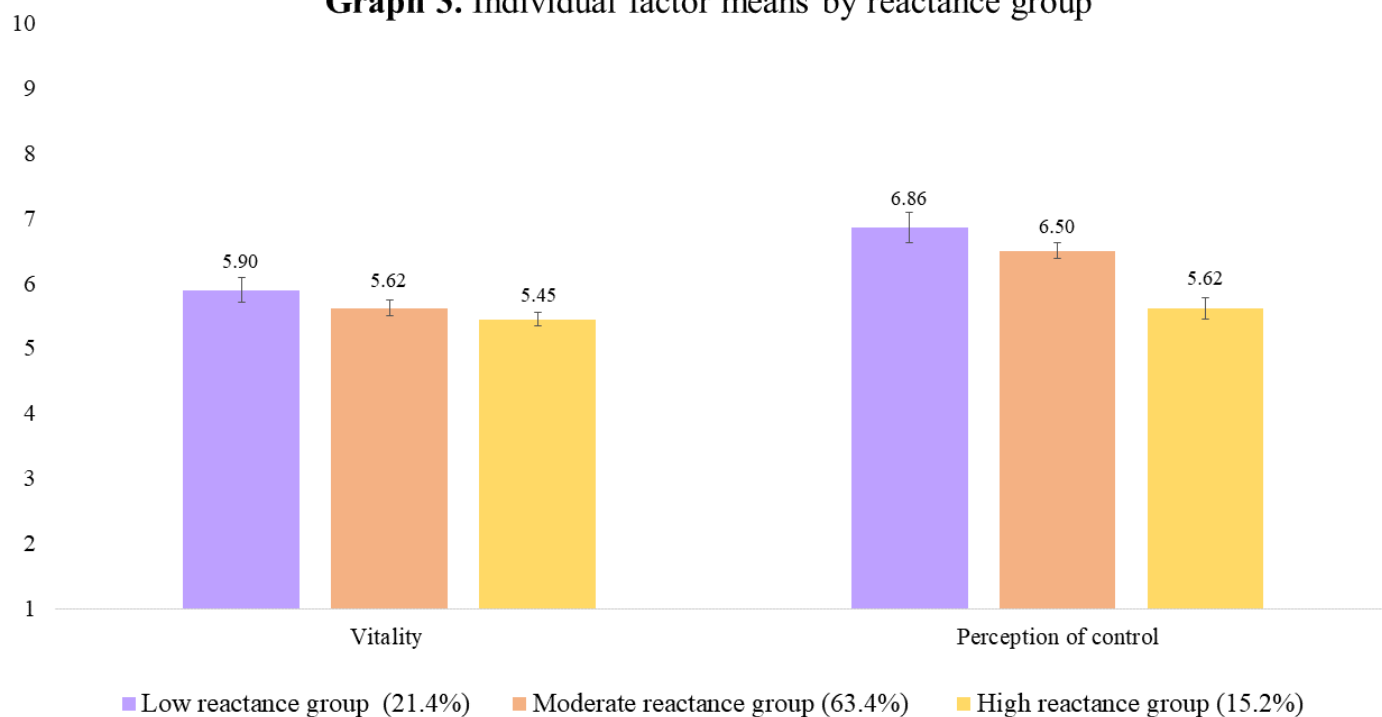
### **Vitality**

- Individuals in the high reactance group (M = 5.45, SD = 2.26) have a lower level of vitality compared to those in the low reactance group (M = 5.90, SD = 2.04).

### **Perception of control**

- People in the high reactance group (M = 5.62, SD = 2.48) report less perceived control over their lives compared to those in the moderate reactance group (M = 6.50, SD = 1.85) and low reactance group (M = 6.86, SD = 2.15).

**Graph 3. Individual factor means by reactance group**



## Political factors

### Political identity

- Individuals in the high reactance group (M = 5.86, SD = 2.14) report being more politically right-wing than those in the moderate reactance group (M = 5.20, SD = 1.79) and the low reactance group (4.76, SD = 2.11).

### Trust in the federal prime minister

- Members of the high reactance group (M = 5.99, SD = 3.19) report lower levels of trust in the Canadian Prime Minister Justin Trudeau compared to members of the moderate reactance group (M = 6.76, SD = 2.47) and of the low reactance group (M = 7.55; SD = 2.35).

### Trust in the provincial prime minister

- Members of the moderate reactance group (M = 7.15, SD = 2.25) have less confidence in their provincial prime minister than members of the low reactance group (M = 7.39, SD = 2.35).

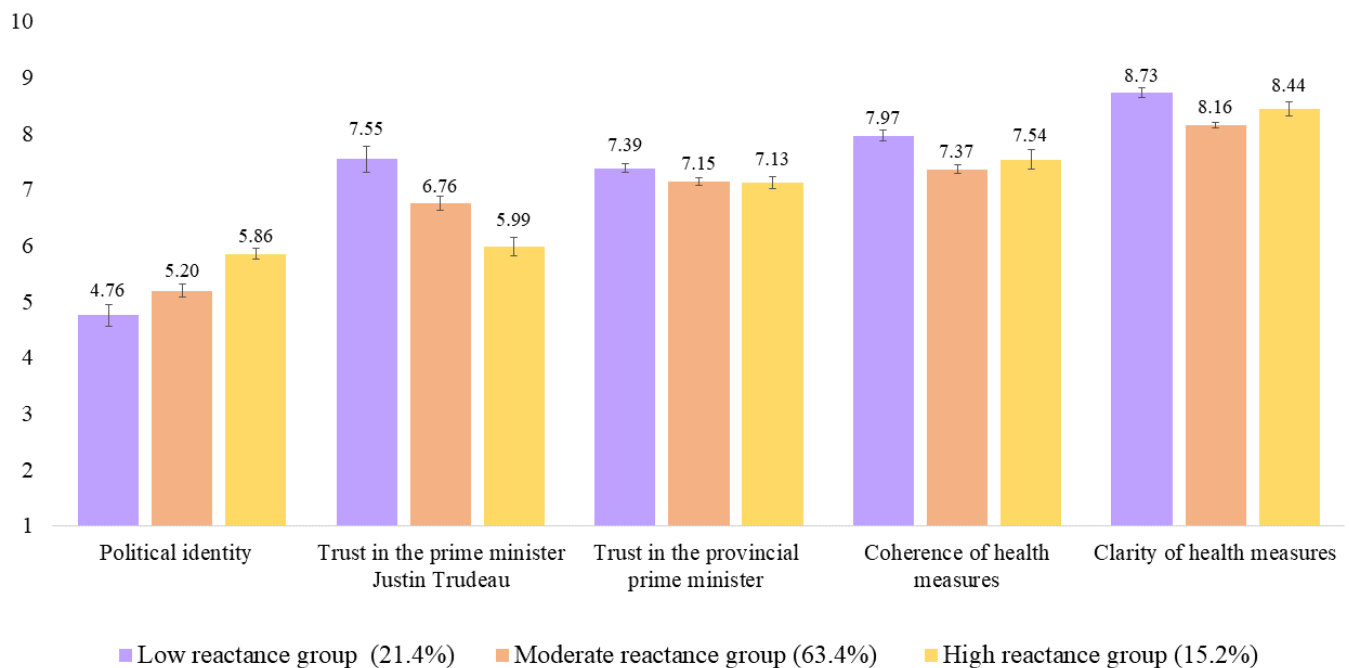
### Coherence of public health measures

- Members of the high reactance group (M = 7.54, SD = 2.01) perceive government measures as less coherent compared to those in the low reactance group (M = 7.97, SD = 1.72).

### Clarity of public health measures

- Individuals in the high reactance group (M = 8.44, SD = 1.72) perceive government measures as less clear compared to those in the low reactance group (M = 8.73, SD = 1.38).

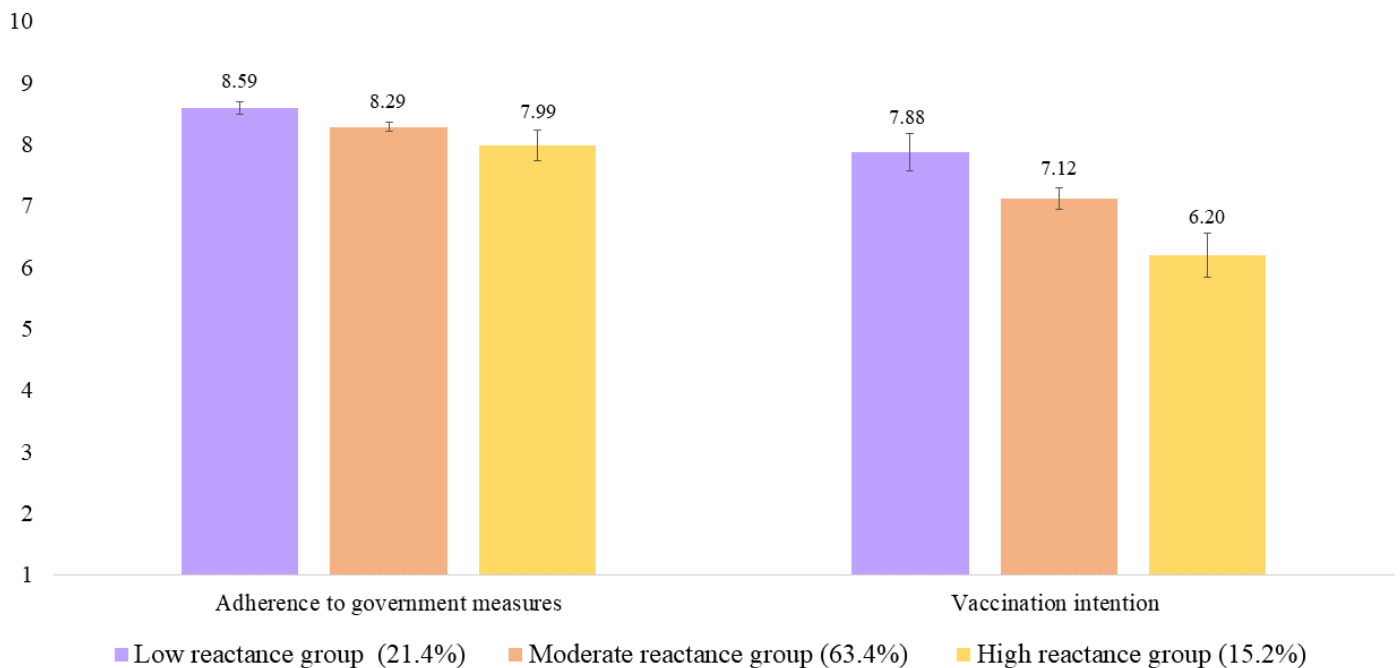
**Graph 4. Political factors means by reactance group**





**Hypothesis 3.** The results suggest a relationship between the level of psychological reactance, adherence to government measures and vaccination intention against COVID-19 (see Graph 5). Indeed, individuals belonging to the high reactance group adhered less to health measures ( $M = 7.99$ ,  $SD = 1.66$ ) when compared to those in the moderate reactance group ( $M = 8.29$ ,  $SD = 1.21$ ) and in the low reactance group ( $M = 8.59$ ,  $SD = 0.99$ ). In addition, individuals in the high reactance group were less likely to intend to be vaccinated ( $M = 6.20$ ,  $SD = 3.77$ ) compared to individuals with moderate reactance ( $M = 7.12$ ,  $SD = 2.92$ ) and those with low reactance ( $M = 7.88$ ,  $SD = 2.84$ ).

**Graph 5.** Means of adherence to government measures and intention to vaccinate by reactance group



## Conclusion

Individuals can be divided into three groups based on their level and evolution of psychological reactance to government measures enacted to limit the spread of COVID-19. In this research report, three groups have been identified. Individuals in the first group have a low level of psychological reactance and this level has decreased over time. In the second group, individuals show a moderate level of reactance that has also decreased over time. Members of the third group report a persistent high level of psychological reactance which stabilized around June 2020. Then their reactance level embarked on a slight increasing trend as of September 2020. Given that governmental measures became more restrictive at that same time of the year, it is therefore possible that members of this group showed a greater sensitivity to these constraining measures compared to the members of the other two groups.

Canadians in the high reactance group differed from those in moderate and low reactance groups on key variables involving individual and political factors. In terms of individual factors, individuals belonging to the high reactance group report having less vitality and less perceived control over their lives. In regard to political factors, those in the high reactance group are more politically right-wing and have less trust in the Canadian Prime Minister compared to the other two lower reactance groups. In addition, individuals in the high reactance group perceive government actions as less coherent and clear compared to those in the lowest reactance group. Finally, psychological reactance was strongly related to adherence to health measures and vaccination intention: Highly reactant individuals, i.e., those in the high reactance group, are less likely to adhere to health measures and have less intention to be vaccinated against COVID-19 compared to the other two groups with lower psychological reactance.

## Implications

When implementing measures related to the spread of COVID-19, politicians could consider the following facts:

- Though most Canadians experienced a steady decrease in their level of reactance over time, a considerable fraction of the population did not show this decrease. Indeed, in the fall of 2020, the degree of threat to freedom from government action increased slightly among the most reactant individuals. Thus, it is likely that the highly reactant group still experienced resistance to potential tightening of government measures. It is therefore important to make additional efforts to ensure that the most reactant individuals are willing to comply with future government measures.
- Individuals that experience more threat to their freedom, i.e. are more reactant, report less adherence to health measures and less intention to get vaccinated. It is important to avoid any coercive approach when implementing governmental measures related to COVID-19, as this could increase the feeling of threat to freedom and thus decrease the acceptance of these measures.
- We find that perceiving low clarity and low coherence of government actions is associated with higher levels of reactance. It is possible that, by increasing the clarity and coherence of government actions, the government could be able to reduce the level of reactance in some individuals.

## Collaborator

Mehdi Abbady

Undergraduate student , Department of psychology  
Université de Montréal

## To cite this research report

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# RESEARCH TEAM

## Principal investigator



**Roxane de la Sablonnière, Ph.D.**

Full professor  
Department of Psychology  
University of Montreal

Director and founder of the Social Change and Identity Laboratory since 2005, Roxane studies the challenges people face when they are exposed to dramatic social change, such as the colonization that affected Canada's Aboriginal peoples or immigration.

## Team members



**Jean-Marc Lina, Ph.D.**

Professor  
Department of Electrical Engineering  
École de technologie supérieure de Montréal

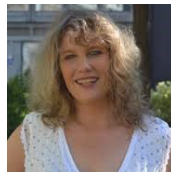
Jean-Marc is the founder and director of the PhysNum laboratory, as well as a researcher at the Center for Advanced Research in Sleep Medicine of the Hôpital du Sacré-Cœur. He studies the dynamics of complex systems including rhythms in social psychology.



**Eric Lacourse, Ph.D.**

Full Professor, Senior methodologist  
Department of Sociology  
University of Montreal

Éric Lacourse is a full professor in the Department of Sociology at the University of Montreal. He is currently responsible for the bi-disciplinary baccalaureate in psychology and sociology and formerly director of the microprogram in social statistics.



**Dietlind Stolle, Ph.D.**

James McGill Professor  
Department of Political Science  
McGill University

Dietlind has directed the Centre for the Study of Democratic Citizenship. She is an expert on trust, social capital, ethnic diversity, attitudinal democratic backsliding and new forms of political participation.



**Donald M. Taylor, Ph.D.**

Professor Emeritus  
Department of Psychology  
McGill University

Author of numerous books on social psychology and a specialist in inter-group relations, Don is particularly interested in the plight of disadvantaged populations, such as indigenous communities.

## Post-doctoral researchers



**Anna Dorfman, Ph.D.**

Post-doctoral researcher  
Department of Psychology  
University of Montreal

A behavioural researcher interested in decision-making processes, Anna focuses on the interactions between emotions, cognitions and behaviours in order to understand how individuals react when faced with difficult social situations.



**Mathieu Pelletier-Dumas, Ph.D.**

Post-doctoral researcher  
Department of Psychology  
University of Montreal

A social psychology researcher in the Social Change and Identity Laboratory, Mathieu is interested in the profound changes that people face (social and personal changes), in identity, and in negative behaviours (discrimination, prejudice, disruptive behaviours in video games).

Partners



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