Polarized Reactions Towards COVID-19: 
A Behavioral Analysis

Where to strike a balance between fear and optimism?

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COVID-19 is a complex and multifaced crisis, particularly when looking at it from a behavioral science lens. The complexity persists against the backdrop that individuals, regardless of their origin, are responding to the crisis in a polarized manner; differences cannot be clustered per country, region, religion or ethnicity. Regardless of the unity this crisis may have brought, still there seems to be a polarization when it comes to how individuals are reacting and responding; hence behaving. This article discusses COVID-19 pandemic from a public policy perspective, specifically how it can influence measurements imposed and policies that progressively lead to opening the economy and return to normalcy. When looking at countries’ response plans, no matter how different the approach is, they share a common assumption: people will adhere to the public health regulations and measurements. In other words, it will all come down to how people behave towards those government measurements and policies.

Behavioral Science field taught us that there is an intention-action gap in human behavior. Humans can behave in a predictably “irrational” way and their decisions and judgments are often influenced by cognitive heuristics and biases\(^1\). In some cases, those biases lead to faster and improved decisions, however, in a lot of circumstances, they leave individuals with errors in judgments and irrational behaviors. For example, when individuals perceive people around them (in the neighborhood) not exerting physical distancing, they tend to follow the social norm and behave in a way that contradicts their initial belief. This is due to the social herding effect, social pressure, and appetite to feel social belonging.

In this article, we suggest first a “Behavioral Reaction Spectrum” that explains how people are polarized in the way they react to the pandemic. Secondly, we look at the root cause of these opposite reactions, by arguing that the polarization is caused by different interpretation of information and clues in people’s mind; leading to different interplay of biases and heuristics. These underlying behavioral biases are analyzed to explain how and why people are behaving the way they are. Thirdly, the report argues that despite the paradox in the reactions, they do share an individualistic approach when reacting to the pandemic, which does not help in combatting the crisis. The nature and risks of the virus require collectivism and cooperation. Finally, the report discusses the implications of this analysis and the polarization on the government response plans and policies geared to enforce compliance.

Behavioral Reaction Spectrum: from Underreactors to Overreactors

Since the outbreak of the COVID-19 pandemic, people's reactions have translated into different behaviors. This paper refers to polarization falling into two categories of a spectrum of behaviors - either positive, optimistic, and overconfident (underreactors); or negative and pessimistic (overreactors). We argue that during this COVID-19 pandemic (this also covers the period before the WHO declared it officially a pandemic), there is a Behavioral Reaction Spectrum that clusters people's reactions and behaviors during the crisis.

On one extreme, some people are overly optimistic, framing the virus as “just a flu”, overemphasizing the low mortality rate (making the low-probability very salient), labeling news as “fake news”, believing in conspiracy theories, among other reactions. Such individuals will be less likely to change their behavior and adopt the public health guidelines by WHO and the government. Since the start of the COVID-19 outbreak in late 2019, the common response was denial of the illness and overconfidence that this was just another news story that will soon fade away. This is mainly due to the desire of people to maintain their current state (status quo) when faced with difficulty. They experience a defense mechanism to any novel risk. As soon as the measures are relaxed, they are most likely to revert back to their normal lives. We call this group “Underreactors”.

On the opposite side of the spectrum lays another group of individuals who are experiencing completely opposite line of thoughts, emotions, and attitudes. This segment tends to be risk avert, experiences negative reactions and defensive responses to threat and fear. They experience high level of emotional and psychological emotions such as stress, anxiety and fear. They are more likely to be pessimistic, assume worst-case-scenario, and mostly affected by fake news and misinformation. This leads them to take different decisions and behave in a very cautious manner that strictly follow the public health warnings. We call this group “Overreactors”.

From Polarized Reactions to Polarized Biases and Heuristics

Whether being an “Underreactor” or “Overreactor”, those behaviors are caused by interpretation of cues, information, and experiences. This leads us to look at the underlying behavioral cognitive biases and heuristics that people are experiencing. To define this, cognitive bias is a systematic error in judgment that people experience when processing and interpreting information. It leads to deviation from norm and rationality in judgment. Whereas a heuristic is a mental shortcut that leads cognitive bias. Taking into account that people respond to the same stimulus in different ways, they are susceptible to different cognitive biases and heuristics.

Optimism Bias: “It is just a flu after all!”

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3 This paper does not systematically cover all biases and heuristics that individuals experience during the pandemic. This is an illustration of few biases that influence overreactors and underreactors.
One of the most prevalent cognitive biases during this pandemic is optimism bias. This bias makes people believe that bad events are less likely to happen to them compared to others. Despite the fact that optimism is essential to avoid negative psychological emotions and state, this bias, however, could lead people to perceive the COVID-19 virus as “just a flu” and hence reduce the willingness to adopt strict measures (such as physical distancing, wearing masks, avoid social gatherings, among others).

**Normalcy Bias versus Worst-case Scenario Bias**

Another predominant set of biases during this crisis are the normalcy and worst-case scenario biases. The normalcy bias leads people to minimize the threats and their warnings, as they underestimate the probability of a disaster happening. As much as they want to maximize their pleasurable time, they are less likely to act when faced with threat warnings, expecting that things will eventually continue to be normal.

Whereas, the worst-case scenario bias is when individuals experience overreaction towards threat warnings and exaggerate the likelihood of negative consequences. Overreactors are more likely to experience worst-case scenario bias compared to underreactors who tend to have normalcy bias.

**Confirmation Bias and Law of small numbers**

The law of small numbers refers to the incorrect belief that small numbers represent the population. This particularly manifests with underreactors and optimistic people that tend to overestimate the probability of finding a vaccine or cure for the COVID-19 virus. Based on that, individuals experience another bias known as confirmation bias. This bias explains how tendency to research, interpret and favor information that confirms one’s beliefs and perceptions. Therefore, when looking at small numbers in the death rate, and small size experiments being conducted to find a vaccine, they experience a positive effect and confirm their own beliefs that it is just a flu and normal life will be back soon. These thoughts and beliefs lead to a positive attitude, and hence a less likelihood of following policies and measurements. This also applies to the “conspiracy theories”, that confirm what underreactor and optimistic people believe in.

Overreactors also experience confirmation bias, when they see information that confirm their own negative and pessimistic thoughts. This can result in greater susceptibility to fake news and can eventually translate to receiving more feeds that induce fear, anxiety, and pessimistic thoughts.

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**Status Quo Bias**

Another pitfall in judgment during the COVID-19 pandemic is the Status Quo bias\(^8\). It involves considering the current status as optimal and unwillingness to change it. People are less likely to cancel a planned activity or alter their hygiene practices. They require “nudge” or choice architecture to modify and induce behavioral change in the right direction.

**Polarized Reactions to Covid-19: What can we learn from Behavioral Insights?**

Although a lot of analysis have labelled this pandemic as a collective problem since it revealed how connected people are beyond borders. In fact, what this crisis demonstrates, is that COVID-19 is another “collective-action problem” facing humankind such as climate change, other public health issues. This is true because it requires collectivism and cooperation, as one’s actions and decisions highly impact others and increases the risk of others getting infected. The literature highlights various factors that influence the collectivist behaviors towards the public good; however, in the case of COVID-19, public trust is extremely relevant; meaning that both underreaction and overreaction may result from lack of public trust in the government and its policies. This is manifested in neglecting messages and public health warnings.

Both extremes on the Behavioral Reaction Spectrum reveal very self-centered attitudes. Despite the completely polarized way people are reacting and behaving, still, people are being individualistic with their over-optimism as well as with their exaggerated fear and threat responses. For example, if overreactors cough in public places and this act does not pose any risk on them, are they more likely to take the needed precautions? Further research needs to be conducted to understand how they are likely to behave under circumstances that pose more risk on others rather than themselves. Another example is underreactors, who are less likely to abide by various measurements of physical distancing, health practices and quarantine requirements. For instance, when the WHO said that there is no need to wear mask unless one is infected, underreactors refrained from using them and still don’t even after the WHO and governments emphasized the importance of doing so.

Therefore, the analysis points out that in both cases, behaviors are less likely to be aligned to what the government is aiming for. When public health warnings are all directed towards protecting one’s life and the lives of others, it is very intriguing to draw such findings. The main objective of behavioral interventions by governments should be to instill collective action and community engagement and cooperation; where the safety and wellbeing of others is as important as the wellbeing of an individual. And if such change is hard to maintain and sustain, then governments should be cautious in the communication tools and strategies to strike a balance between fear and optimism. This is where the role of behavioral insights stems and is of critical importance. It includes both the knowledge of what drives behaviors as well as tools on how to encourage the right behavioral change\(^9\).

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9 Behavioral evidence has taken big momentum during this crisis, and this is translated in the newly established Technical Advisory Group for Behavioral Insights and Science by WHO. This group will provide advice for the development of a roadmap for WHO to include behavioral evidence in its health policies and programmes.
problems, like COVID-19, incorporate a behavioral component, where behavioral science can shed the light upon decision-making processes and their underlying cognitive biases. It also provides policymakers with tools to mitigate the effect of these and other biases on public policy and its implementation. More research needs to be done to understand the differences among different countries/ regions/ or communities, and how this polarization is manifested and what are the triggers or factors that lead to different reactions (e.g. trust, reciprocity, social networks, civic and community engagement, and individualism/ collectivism characteristics, etc.).

**Implications on Public Policy and Government Decisions**

When compliance is key, this analysis has noteworthy implications on what governments’ post-lockdown strategies and operational plans to restart the economy. That by itself complicates the targeted response and communication strategies devised by governments and communities. However, it is important to carefully strike the balance so that the right behaviors and most importantly attitudes are in line with expectations. After all, countries now depend more than ever on people’s adoption of the right social behaviors in preparation for the restart.

From there stems the critical role of behavioral insights, as it acknowledges that people do not have infinite rationality, and unlimited cognitive abilities. Therefore, their decisions are not based on complete analysis of cost and benefits and do not consider all available information rationally. Therefore, their judgements are prone to errors. Hence, behavioral insights have great potential for providing valuable perspective to better understand and explain the reactions to COVID-19 and ultimately behaviorally inform public policies.

Another takeaway is that policies and government regulations must be tailored to the context, culture, and characteristics of different communities, and translated out of their scientific context. Policies taken out purely from scientific context, with no consideration to the previously mentioned factors, failed to inspire the desired responses when communicated to the public. Thus, results from scientific labs and medical experiments need to be refined and behaviorally informed to ensure the right interpretation and compliance of citizens. Therefore, public policies and guidelines need to articulate the meaning and intention behind those regulations. Making the potential consequences of one’s risky behaviors more salient, simpler, and easier to understand by the general public.

To conclude, successfully mobilizing collective action continues to be a difficult and complicated task for policymakers. Persistent lack of concerted actions by individuals leads to a failure to reap the benefits of public goods. In fact, most plans share common assumptions regarding how people will actually behave and to what extent they will comply with the guidelines, safety protocols and procedures. Essentially, this is determined by how individual people will behave and act vis-à-vis simple behaviors and actions that are usually performed in a very automatic, fast, and intuitive ways. Moreover, the problem is how to get

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the “underreactors” to behave in a more socially responsible and reciprocal way and be socially responsible. Concurrently, another problem is how to get the “overreactors” and emotionally drained individuals to keep taking the same level of precautions and measurements even when there is no risk of being infected; while simultaneously, ensuring that they are not negatively affecting their mental health and well-being. At the end, inducing fear and threat could have more detrimental consequences on individual’s wellbeing, productivity and emotional state; and as such, is not a constructive way for governments to encourage the right behavior. “Where is the line between reasonable precaution and panic”? …Where to strike the balance? and how to induce an attitude of trust, reciprocity, and social responsibility that promotes collective action? are the main takeaways.