Global Risk Perceptions

Q4 2020

DEEP·LEARNING

TACTIX RISK COMMUNICATIONS

Preface

"It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so."

How would you run a product defence campaign if you wanted it to fail? What steps would you take while in charge of defending a controversial technology if you wanted to sabotage the company?

The military uses this structured wargaming technique to assess where our own actions may inadvertently be causing more harm than good.

When it comes to product defence, we suggest the most effective way to run a failed campaign is to ignore the reason people are actually concerned.

We hope that the data and analysis in this report is used to avoid this mistake, and instead run campaigns that mitigate people's real concerns.

Just two examples of trying to mitigate the wrong concerns:

- When defending plastics, start with the incorrect assumption that people oppose plastics because they do not appreciate the benefits of the material. This can lead to a campaign that mistakenly emphasizes its role in hospitals. Because the real reason people are concerned about plastics is an underlying feeling of disgust, a campaign built on plastics in hospitals has a high probability of doing more harm than good.

- When defending certain products with spurious claims that it causes cancer, start with the incorrect assumption that the public's risk perceptions are dominated exclusively by that one issue alone. If we looked below the surface, we may find that the real driver is a feeling of "unknowability" (not the fear that the product is unsafe, but the fear that we cannot even know whether it is safe). Back-and-forth debates about academic studies have a high probability of doing more harm than good.

Paul S Hillier
Co-Lead,
Risk Communications Practice

Proprietary Risk Indices

We measure risk perceptions using a proprietary sentiment analysis algorithm, built specifically to analyze controversial products and technologies.

Our Deep Learning tools analyze patterns in how people engage, analyzing millions of publicly available datapoints. We use those patterns to build a risk index for each of the six key risk drivers of risk perceptions.






Severity	Mobilization	Familial	Dread	Unknowable	Disgust
Concerned that the technology causes severe harm	Calls for a ban, boycott, or political change	Concern on behalf of a family member or loved one	The technology feels inequitable, involuntary, catastrophic, or global	Concern about our inability to observe, detect, or understand the issue	The technology feels revolting or offensive

Armed with this information, brand owners can:

- Understand what is driving the public's risk perceptions towards their specific product
- Benchmark concern across jurisdictions and against other technologies
- Design customized product defence strategies that mitigate the risk drivers specific to their products

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Methodology

Using Deep Learning

With over two decades managing product defence campaigns, we understand what drives people to feel outrage, fear, or uncertainty towards technologies

This study analyzes publicly available data from 1 September 2019 to 31 August 2020 in the following six languages: English, French, Spanish, Italian, German, Portuguese.

If you are interested in learning more and seeing details like historical data, chronological or country-by-country breakdowns, or for another issue to be added to the tracker, reach out to us at paul.hillier@tactix.ca.

Measure Behaviors, not Attitudes

Why do we not poll people like many other risk reports do? Because polling asks people what they think they are concerned about. Problem one: people often do not know what they are concerned about. Problem two: they are unable to answer why they are concerned.

Ultimately, we want to anticipate the public's behaviors. So, it only makes sense to build risk indices based on actions - the comments people post on social media, their mobilization, what they search and what they read. Behaviours drive attitudes, not the other way around. So we measure behaviours.

Agriculture

Key Questions to Mitigate Risk Perceptions

Glyphosate

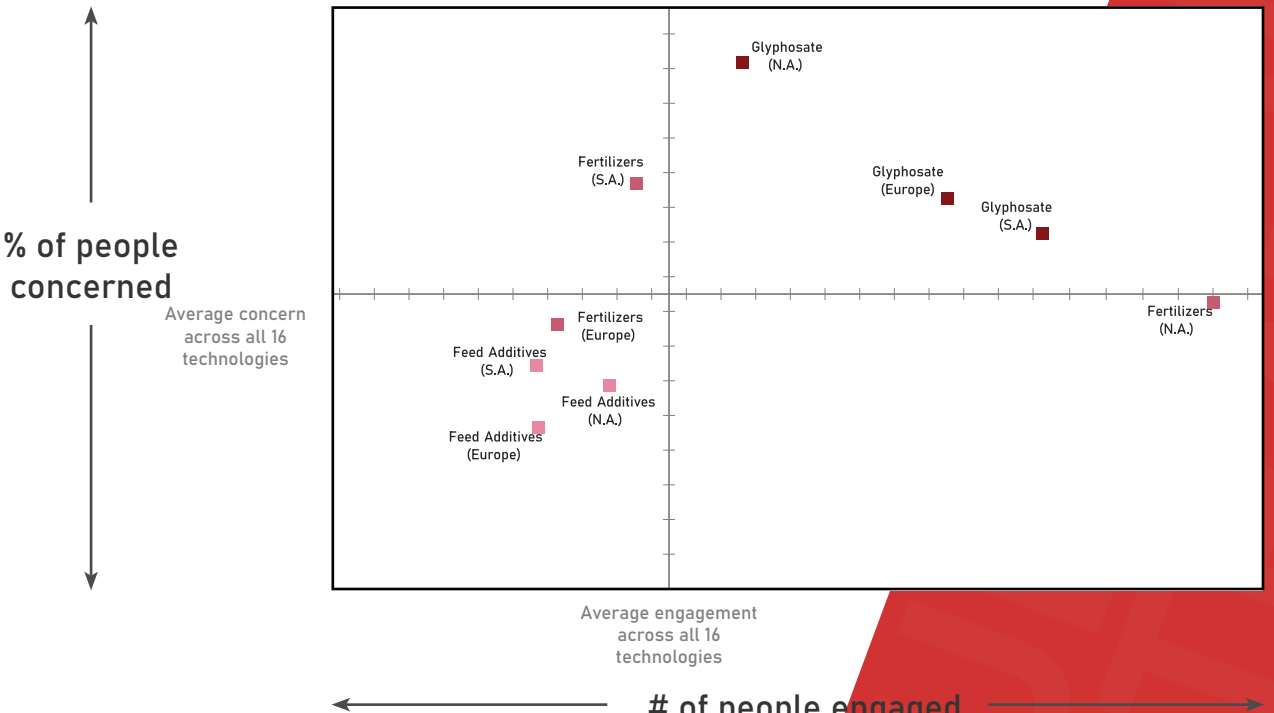
- How can we draw on the support of the pro-science community that exists outside of agriculture?

Feed Additives

- What steps are being taken to leverage the positive affect antibiotics have in helping people?

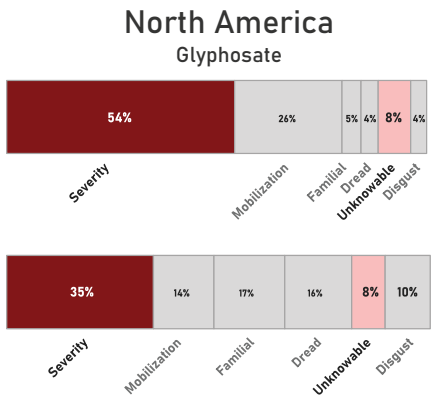
Fertilizers

- Can product defence initiatives further distance fertilizers from crop protection tools in the minds of the general public?

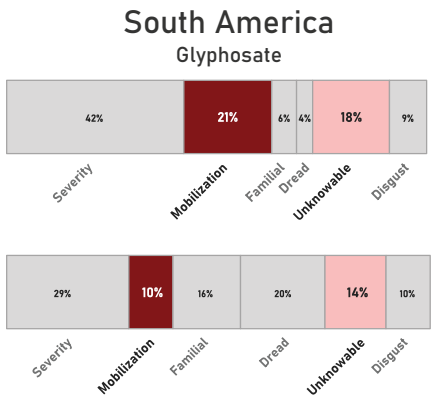


Glyphosate

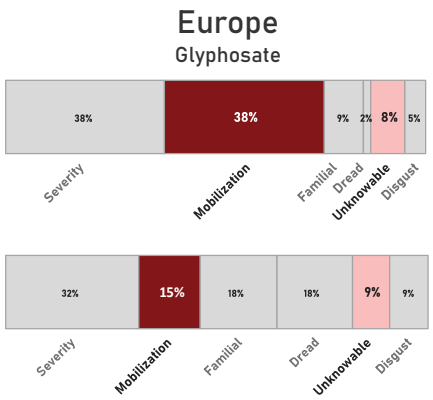
Unsurprisingly, in every jurisdiction risk perceptions of glyphosate are being driven by concern of severe human health effects (severity) and efforts to ban the product (mobilization). Less obvious, however, is why glyphosate continues to generate feelings of being 'unknowable', despite spending five years as a hot button issue. Activists have succeeded in maintaining this feeling of unknowability by continually raising new ways in which people could be exposed to trace amounts without realizing it. The most potent now is finding trace amounts of glyphosate in vaccines, which leverages the powerful anti-vax movement.



Average of all technologies in North America



Average of all technologies in South America



Average of all technologies in Europe

Key Questions:

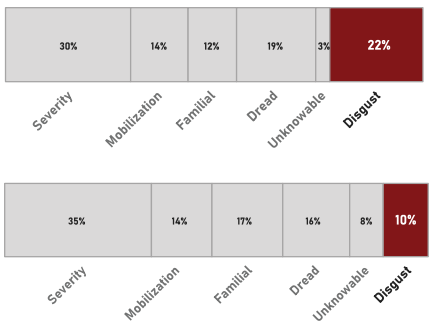
- ENGOs have been more successful at drawing support from the anti-vax movement than industry has been at drawing on the broader pro-science community outside of the agricultural sector (e.g. those who proudly defend products such as vaccines). How can this change?

Feed Additives

Antibiotics generate tremendous positive associations when used to help people, yet almost none of that positive associations exist when they are provided to animals. This widely known discrepancy emerges because the general public does not readily imagine farm animals as becoming sick; however, materializes differently across jurisdictions (global antibiotic resistance is a greater driver of risk perceptions in Europe, whereas in North America perceptions that farm animals receive antibiotics instead of people drives feelings of unfairness). Therefore, while the issue of feed additives generates feelings of disgust in all three jurisdictions, it is not the specific technologies but the second order effects causing the emotional reaction.

North America

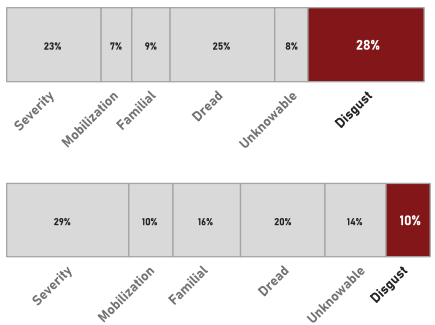
Feed Additives



Average of all technologies in North America

South America

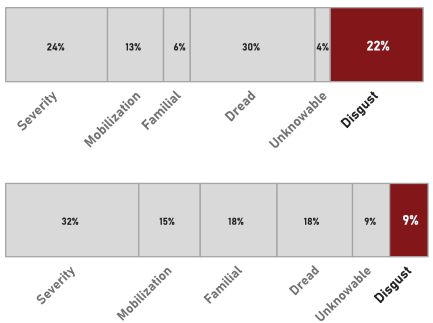
Feed Additives



Average of all technologies in South America

Europe

Feed Additives



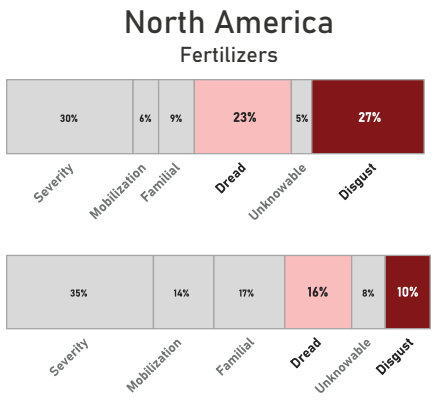
Average of all technologies in Europe

Key Questions:

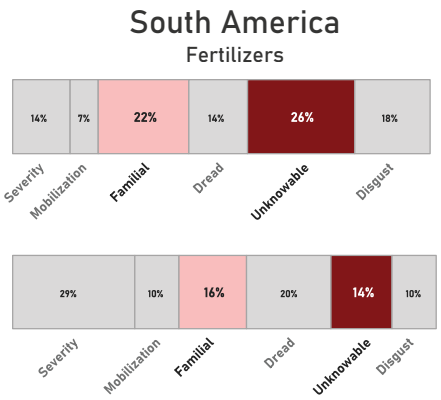
- What can the positive affect associated with antibiotics (in helping people) be effectively leveraged in their use in animals?

Fertilizers

Dread and disgust are the two key drivers in both North America and Europe when it comes to risk perceptions of fertilizers. However, the associations people make vary considerably between these two jurisdictions. In North America, risk perceptions towards fertilizers are primarily shaped by the broader policy issues (most notably climate change, the carbon footprint of fertilizers, and to a lesser extent potential for harm to endangered species). In Europe, by contrast, risk perceptions are inextricably tied to their associations with pesticides (finding people concerned about fertilizers who are not also concerned about pesticides is very difficult in Europe).



Average of all technologies in North America



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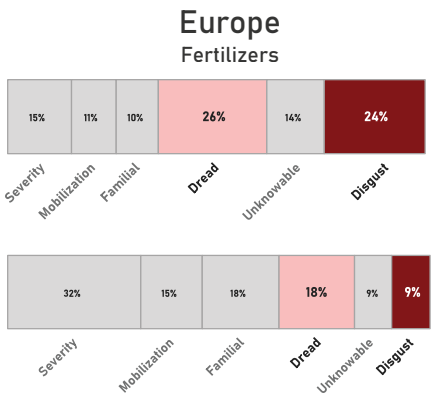


Average of all technologies in Europe

Key Questions:

- In Europe, can product defence initiatives further distance fertilizers from crop protection tools in the minds of the general public?

Food Products

Key Questions to Mitigate Risk Perceptions

GMOs

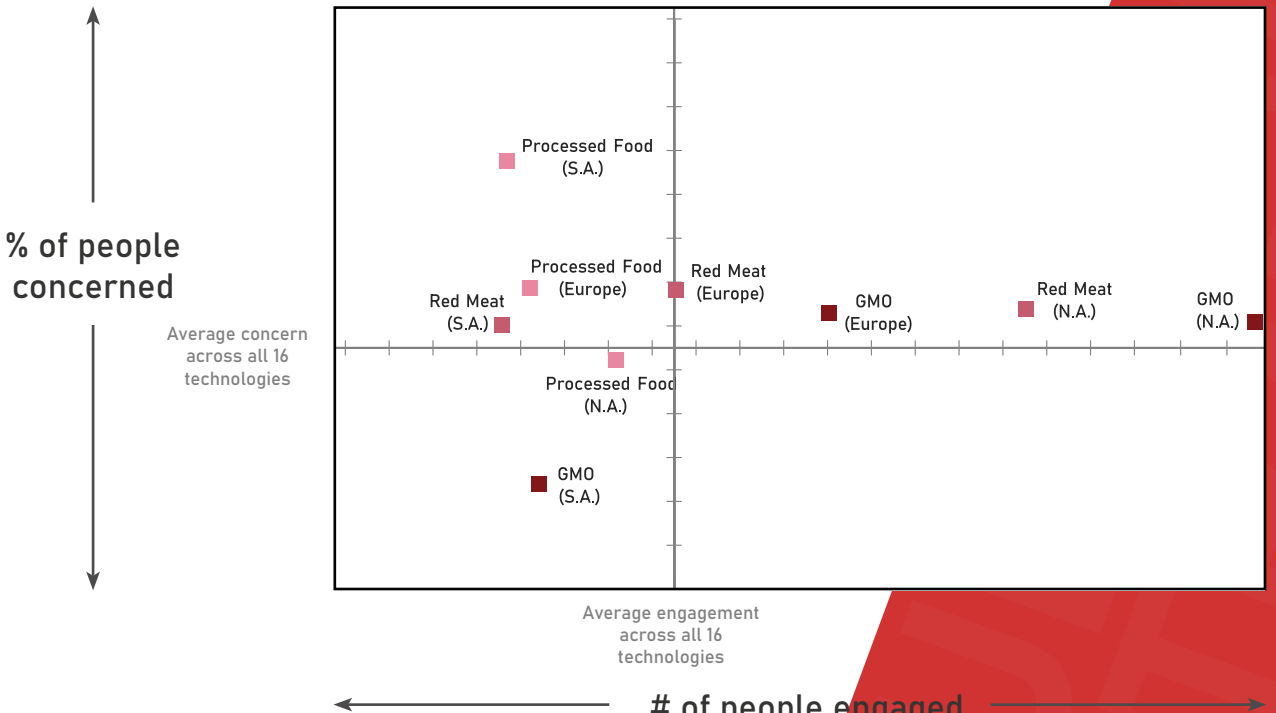
- Are we spending too much time defending against concerns about severe harm or unknowability, and too little time defending against disgust and dread?

Processed Foods

- Do we have a strategy to mitigate feelings of disgust in Europe?

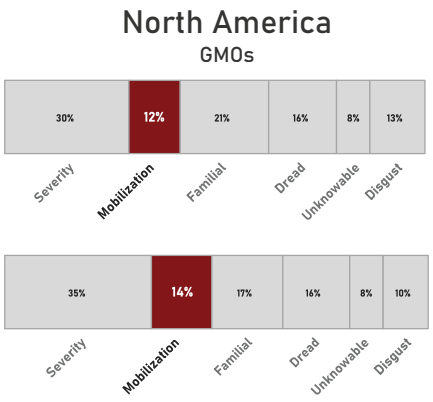
Red Meat

- In Europe, how are we preparing for when activists begin to use the North American playbook?

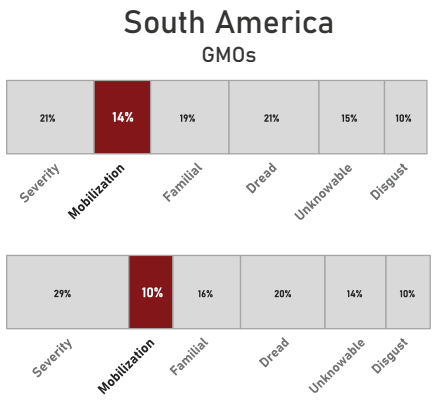


GMOs

Risk perceptions towards GMOs are amongst the most balanced of any that we track. In each jurisdiction, a blend of concerns cover all six risk indices, indicative of the complexity of defending GMOs. In North America, those expressing concern about GMOs tend to lump together a wide variety of controversial topics and perceived 'social ills'. By contrast, in Europe concerns about GMOs tend to be expressed exclusively about GMOs, highly focused in their opposition. The primary reason that mobilization registers so low in Europe is the already restrictive environment – the percentage of people explicitly mobilization to demand further bans is less than those expressing their risk perceptions in different ways.



Average of all technologies in North America



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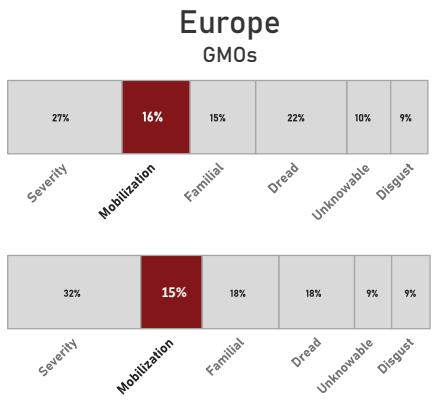


Average of all technologies in Europe

Key Questions:

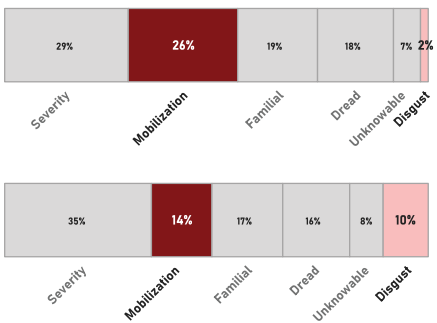
- When defending technologies facing broad concerns, we tend to spend too much time defending against concerns about severe harm or unknowability, and too little time defending against disgust and dread. Do efforts need to be reallocated?

Processed Foods

Reducing risk perception towards processes foods starts with recognizing that the source of concern varies enormously based on geography. In South America, concern emanates from a sense of unfairness (which generates feelings of dread), as processed foods are seen as disproportionately harming lower income families. In Europe, processed foods generate above-average feelings of disgust, which aggravates risk perceptions. In contrast, North Americans on average feel substantially less disgust towards processed foods. Whereas in South America and Europe the most vocal opponents are those actively trying to reduce their intake of processed foods, the most vocal opponents in North America are people who are virtue-signalling that they have already cut them out of their diets.

North America

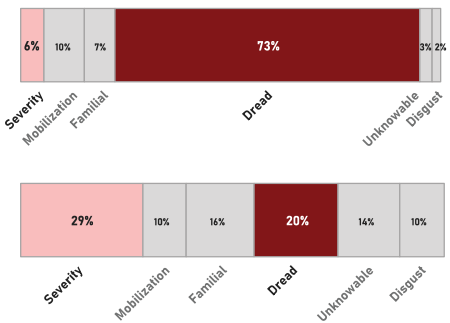
Processed Foods



Average of all technologies in North America

South America

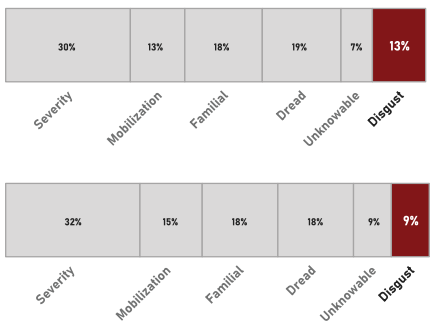
Processed Foods



Average of all technologies in South America

Europe

Processed Foods



Average of all technologies in Europe

Key Questions:

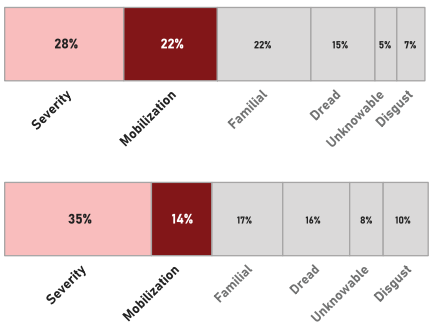
- Do we have a strategy to mitigate feelings of disgust in Europe?
- What needs to be done to better mitigate the feelings of unfairness processed foods generate in South America?

Red Meat

Few products engage as many activist touchpoints as can red meat: from climate change and sustainability to animal rights and human health. Although some differences exist between jurisdictions (e.g. in North America, severe harm to human health is less of a driver than it is in Europe), the most notable difference is in the approach used by environmental activists. In Europe, anti-red meat groups more frequently engage in traditional public affairs with a more moderate tone aiming for incremental improvements. In contrast, their counterparts in North America are more likely to forgo regulatory objectives in lieu of mobilizing around boycotts.

North America

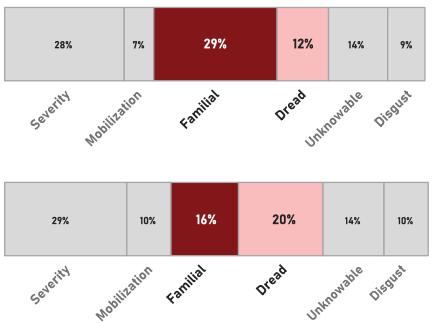
Red Meat



Average of all technologies in North America

South America

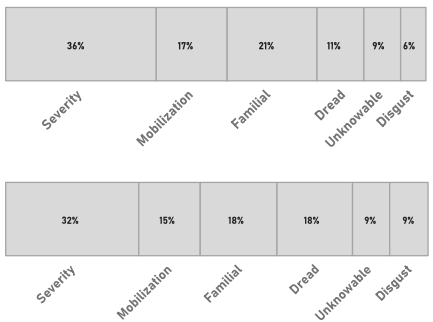
Red Meat



Average of all technologies in South America

Europe

Red Meat



Average of all technologies in Europe

Key Questions:

- In North America, risk perceptions towards red meat are a good barometer for how concerned people are about a wide range of issues. For those who do not operate in this sector, are we keeping a sufficiently close eye on it?
- In Europe, how are we preparing for when activists begin to fully adopt the North American playbook?

Consumer Products

Key Questions to Mitigate Risk Perceptions

PFAS

- How can we create positive affect towards the technology?

Nanoparticles

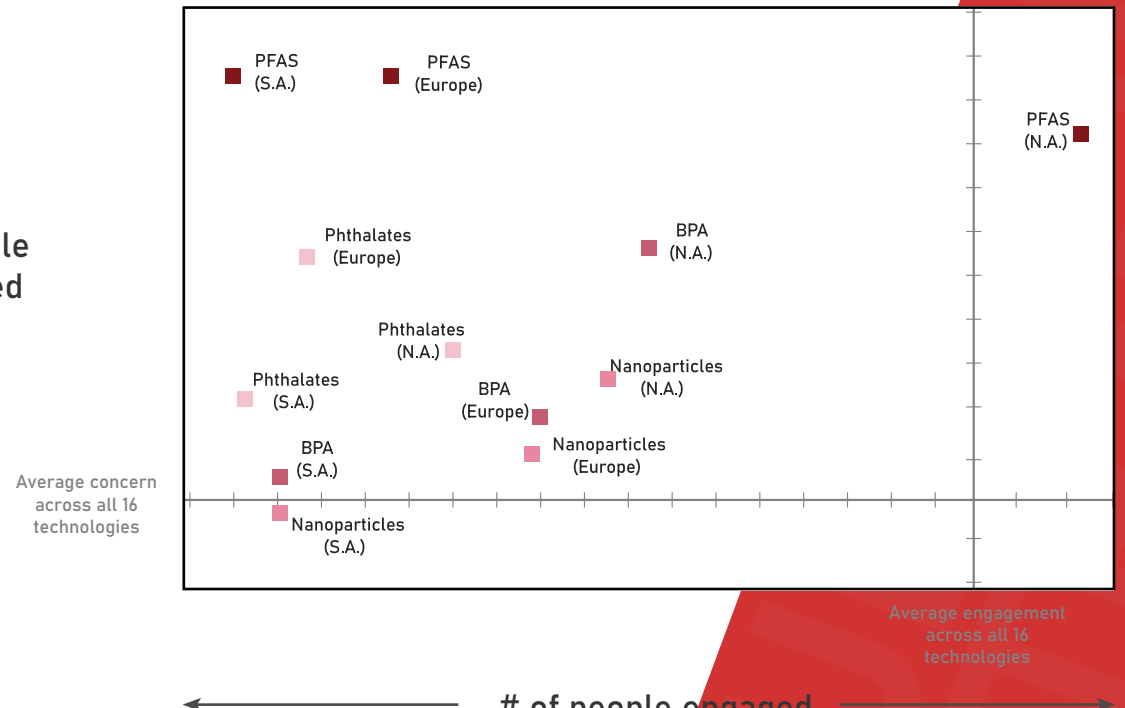
- Are we focussing too heavily on concerns of cancer while ignoring real drivers from the feeling of unknowability?

BPA

- What lessons have been learned that can be applied to defending BPA's alternatives?

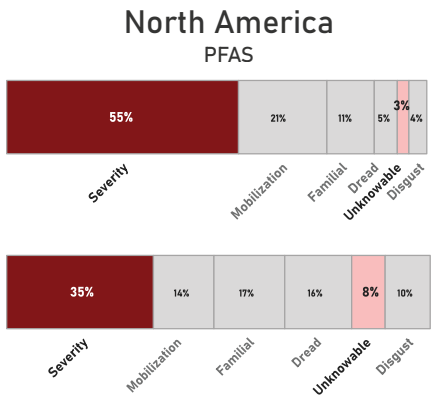
Phthalates

- What leading indicators are in place to detect whether risk factors migrate from one jurisdiction to another?

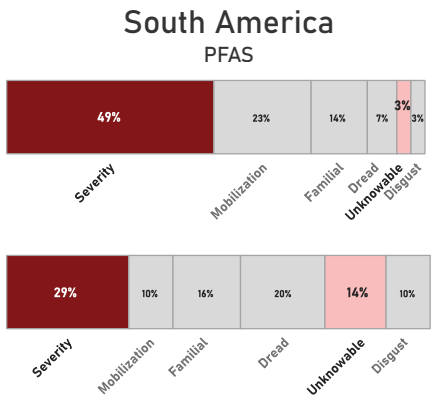


PFAS

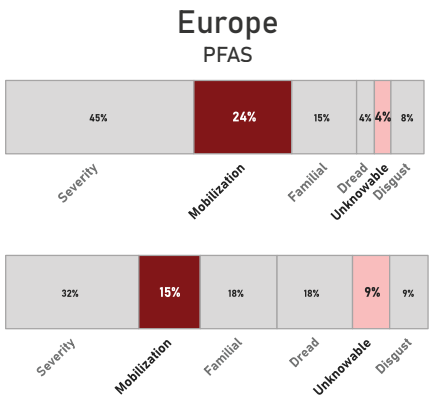
Product defence campaigns have three levers that can be used to maintain a product's market position: put the potential risks in context, promote trust in the regulator, and develop positive affect (benefits story). For PFAS, communicating about risks is unlikely to succeed (having the lowest 'unknowable' score of any controversial product, the public is confident in their opinions that 'we know exactly what it does and it's not good'). Building trust in a regulator would be almost insurmountable (in North America risk perceptions are bypassing the regulator and instead gravitating around ongoing lawsuits, while in Europe the regulator is already moving more quickly than the public). This leaves one lever to mount an effective product defence campaign.



Average of all technologies in North America



Average of all technologies in South America



Average of all technologies in Europe

Key Questions:

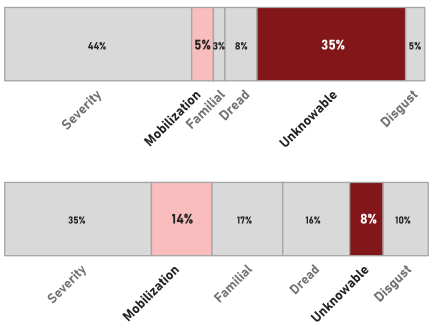
- The public is lacking any appreciation of the benefits and as a result PFAS generates no positive affect. What is being done to turn this around?

Nanoparticles

'Out-of-sight, out-of-mind' is not how risk perceptions work. When the public feels a technology is invisible, risk perceptions are aggravated by feelings of unknowability. The high volume of conversations around severe harm (such as concerns that exposure to specific nanoparticles may cause cancer) captures some of the concern, especially in Europe. But the unknowable feeling of what is lurking unseen right before their eyes is the emotional driver behind the public's risk perceptions.

North America

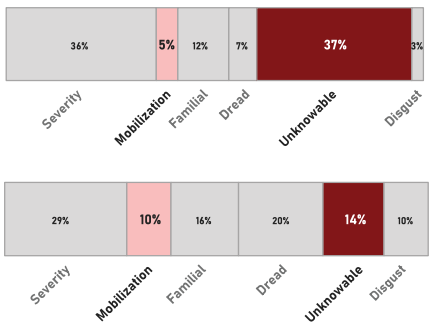
Nanoparticles



Average of all technologies in North America

South America

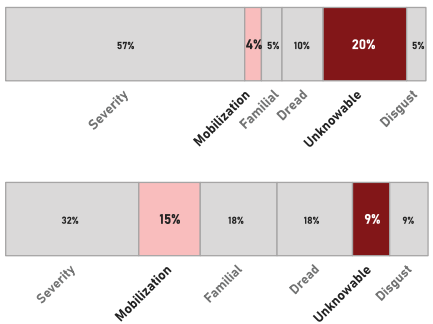
Nanoparticles



Average of all technologies in South America

Europe

Nanoparticles



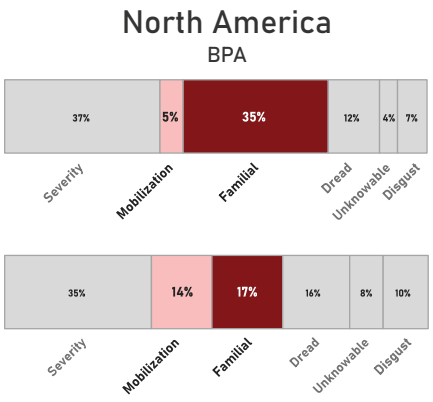
Average of all technologies in Europe

Key Questions:

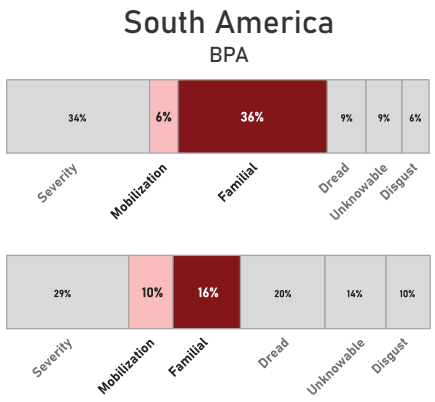
- Are we focussing too heavily on concerns of cancer while ignoring real drivers from the feeling of unknowability?
- Mobilized bans against specific nanoparticles are still relatively low – do we have a robust plan for when this increases?

BPA

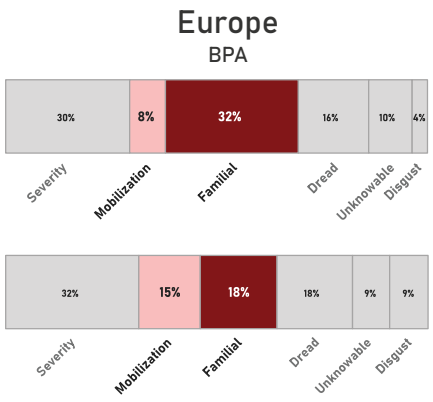
The more things change, the more they stay the same. Unchanged after years of controversy, health and safety of individual family members (familial index) continues to drive risk perceptions towards BPA. In Europe, the conversation revolves more around the perceived negative effects of BPA with specific attention to endocrine disruption whereas in North America the conversation is highly-focused on specific products. Common across all jurisdictions is that mobilized efforts to further restrict BPA are low – the focus instead is on building the case that its replacements are just as dangerous.



Average of all technologies in North America



Average of all technologies in South America



Average of all technologies in Europe

Key Questions:

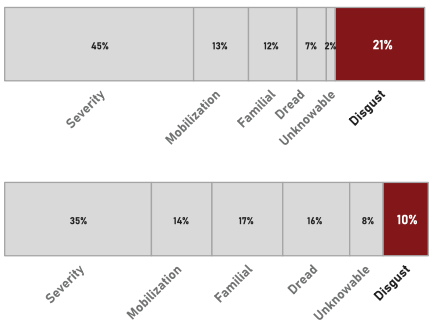
- Mobilization against BPA is low as the population is concerned in the health effects of BPA's replacements. What lessons have been learned that can be applied to defending new alternatives being developed?

Phthalates

The use of phthalates in cosmetics continues to trigger risk perceptions in North America by generating feelings of disgust. In Europe, concern about phthalates is tied less to a specific product, and instead largely driven by feelings of unknowability: recent regulatory decisions have raised questions in the public's mind about whether scientists can know that these products are safe. In none of these jurisdictions is the primary focus on mobilizing to impose further bans – although that could change if sources of risk perceptions migrate from one jurisdiction to another.

North America

Phthalates



Average of all technologies in North America

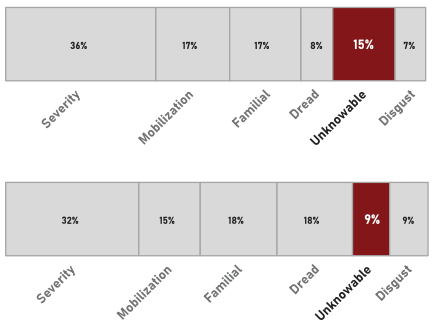
South America

Phthalates

Average of all technologies in South America

Europe

Phthalates



Average of all technologies in Europe

Key Questions:

- Are product defence strategies sufficiently customized to the unique concerns in each region?
- What leading indicators are in place to detect whether risk factors in one jurisdiction will migrate? (e.g. disgust migrating from North America into the European debate)

Environmental

Key Questions to Mitigate Risk Perceptions

Nuclear Energy

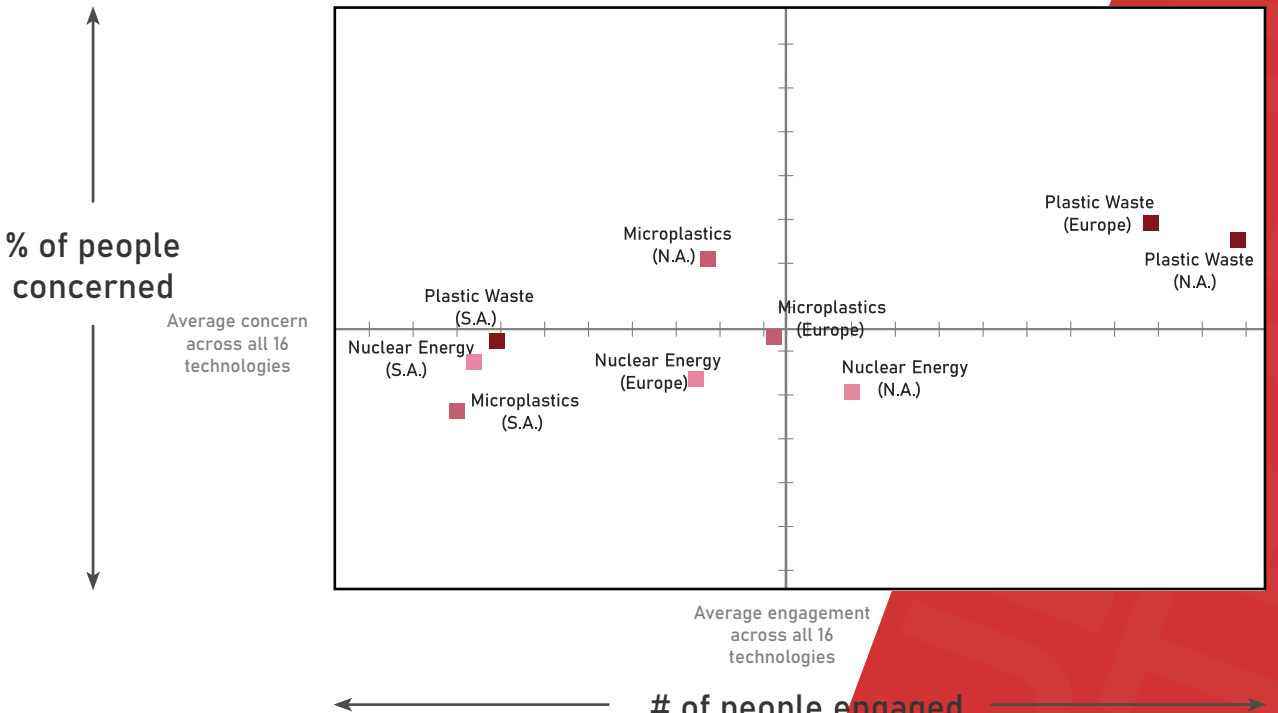
- Can 2050 Climate Change targets better incorporate nuclear in a way that previous plans have not?

Plastic Waste

- Can a campaign address the root issue around plastics' risk perceptions: disgust?

Microplastics

- How can we communicate that scientists and regulators have sufficient understanding to safely regulate microplastics?

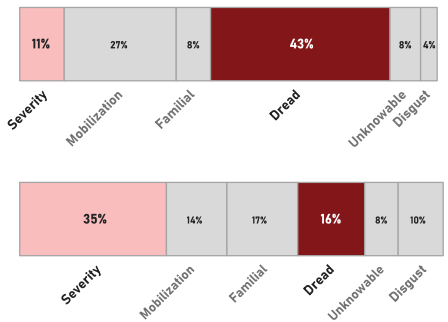


Nuclear Energy

Risk perceptions tend to be caused by concerns of catastrophic outcomes more so than being caused by perceived risks which build slowly over time. Nuclear energy is no exception. Across all jurisdictions, feelings of dread are the result of perceived unpredictability of the technology and our inability to control it (in South America, this also generates feelings of unknowability), which vastly overshadow concerns about perceived long-term health effects. Support from environmental groups for nuclear energy continues to be a major shortfall in this proven technology's product defence.

North America

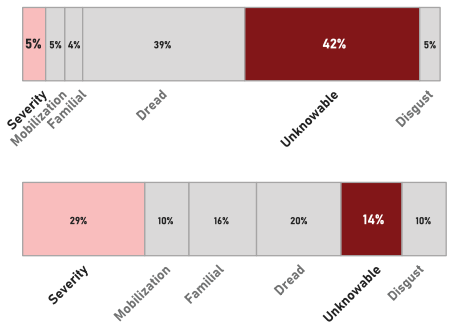
Nuclear Energy



Average of all technologies in North America

South America

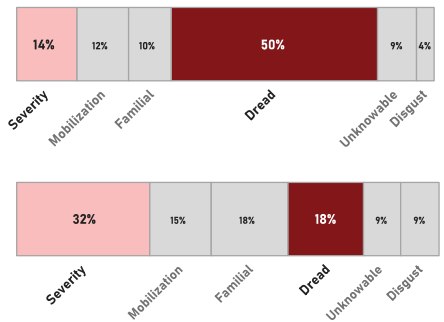
Nuclear Energy



Average of all technologies in South America

Europe

Nuclear Energy



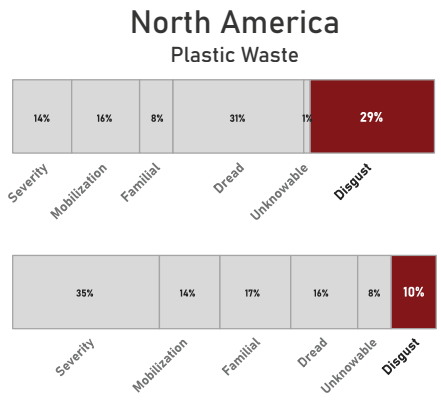
Average of all technologies in Europe

Key Questions:

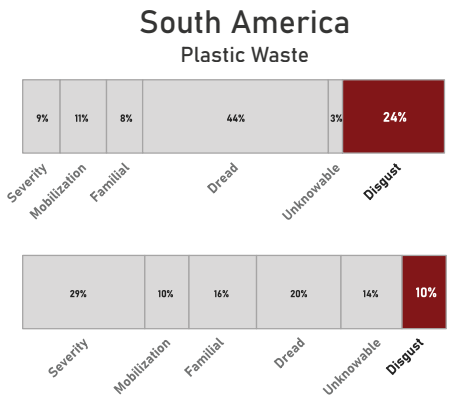
- Despite the strong benefits nuclear energy brings in reducing greenhouse gas emissions, the technology remains divisive amongst environmental groups. As Europe and the rest of the world set 2050 targets, can that change?

Plastic Waste

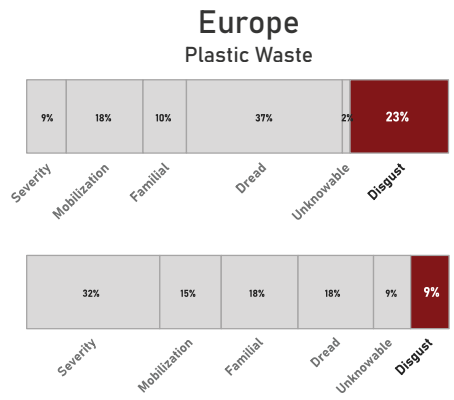
Environmental activists have achieved plastics bans by evoking feelings of disgust. If plastics are to avoid further demonization, it must deal with these skyrocketing levels of disgust. The environmental activist Chris Rose (who helped lead Greenpeace to victory over Shell in the infamous case of Brent Spar) wrote the book on how to win campaigns, advising "Does your campaign include something gross? Something that reaches you in the heart of the guts and makes you feel sick, angry or revolted? If not…try redrafting your plan to include it." That advice has been followed perfectly on plastics.



Average of all technologies in North America



Average of all technologies in South America



Average of all technologies in Europe

Key Questions:

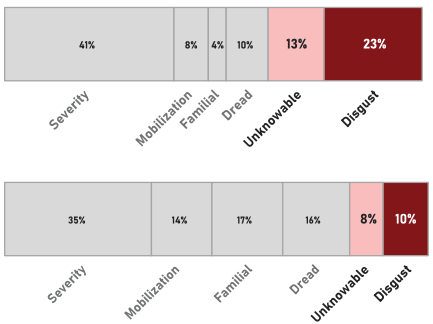
- If risk perceptions towards plastics are being governed by feelings of disgust, then why are campaigns being launched which do not address that core issue? (e.g. the "benefits" in fighting COVID)

Microplastics

Similar to the broader issue of plastic waste, microplastics generate inordinate feelings of disgust, which drives risk perception towards them. However, microplastics have another aggravating factor that plastic waste does not, and that is the feelings of unknowability that they generate. Being incredibly small, the public feels concern about the possibility of what can be swept under the rug and hidden or missed.

North America

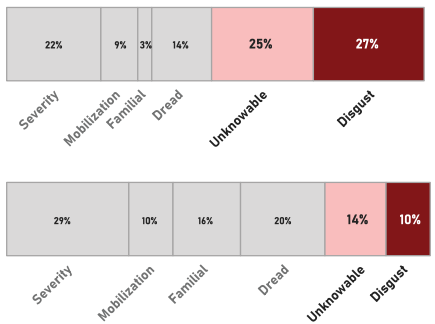
Microplastics



Average of all technologies in North America

South America

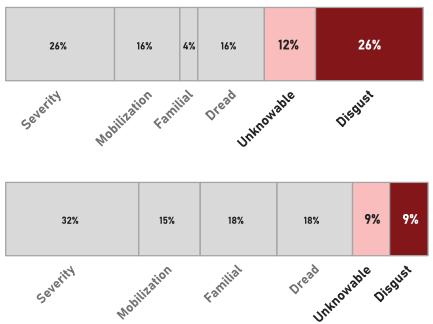
Microplastics



Average of all technologies in South America

Europe

Microplastics



Average of all technologies in Europe

Key Questions:

- How do we communicate that science has effective ways of measuring and monitoring microplastics?
- How do we communicate that regulators know how to regulate microplastics?

Life Sciences

Key Questions to Mitigate Risk Perceptions

CRISPR

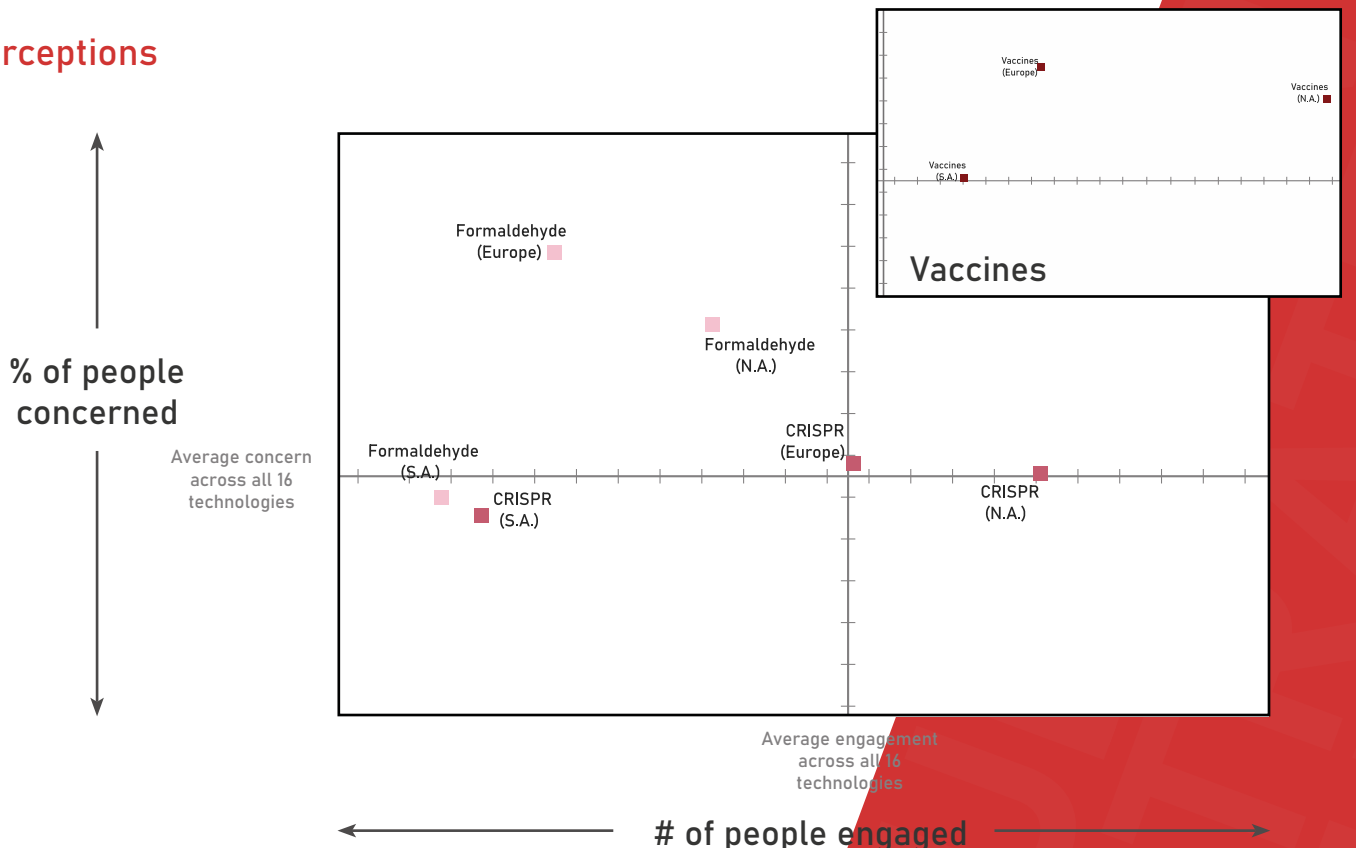
- Is enough being done to avoid the fate of GMOs?

Formaldehyde

- Can we reallocate resources being spent educating the public to address other root concerns they have?

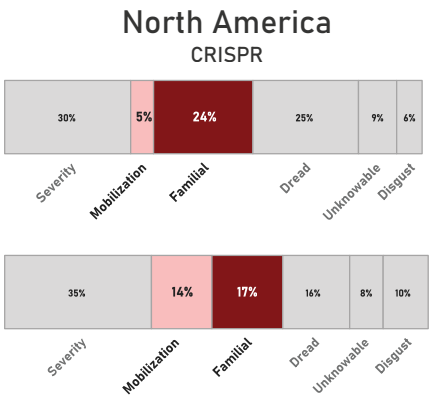
Vaccines

- Risk perceptions towards vaccines are returning – can a campaign launched today stop this slide?

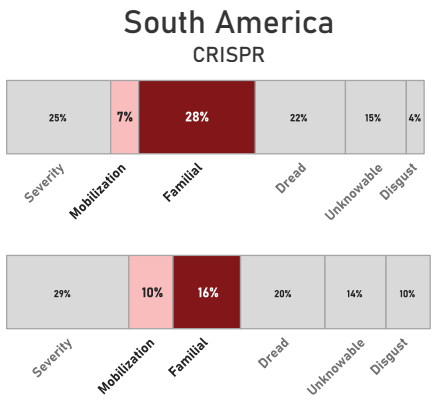


CRISPR

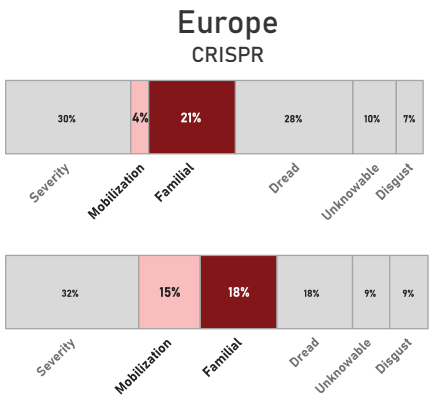
Gene editing technologies such as CRISPR continue to be thought of as full-of-promise, with very small numbers of people mobilization to restrict its use, and only minimal feelings of dread, unknowability, or disgust. However, when CRISPR is incorrectly associated with GMOs, feelings of "unknowability" skyrocket, with individuals highly concerned about unintended effects. Direct comparisons to GMOs are twice as prevalent in Europe as they are in North America, but are growing in both jurisdictions.



Average of all technologies in North America



Average of all technologies in South America



Average of all technologies in Europe

Key Questions:

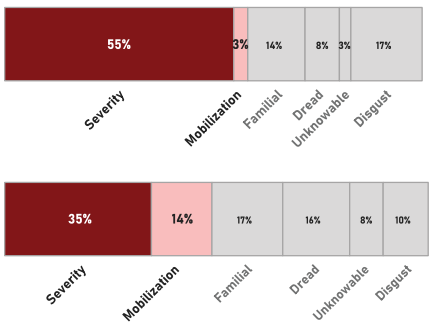
- On its current trajectory, CRISPR will either be defined by its healthcare implications or will be incorrectly equated with GMOs. Is enough being done early-on to maintain the technology's positive affect and avoid the fate of GMOs?

Formaldehyde

In both North and South America, severe harm and disgust are the two key drivers of risk perceptions towards formaldehyde, owing to perceptions that formaldehyde is a dangerous synthetic product. This finding underscores the importance of ongoing efforts to explain formaldehyde's natural role in the body and in the environment. In Europe, primary concern is directed towards one's family, as risks perceptions are being channeled into market-based movements (i.e. seeking out products that do not have formaldehyde), rather than seeking regulatory bans (low mobilization index).

North America

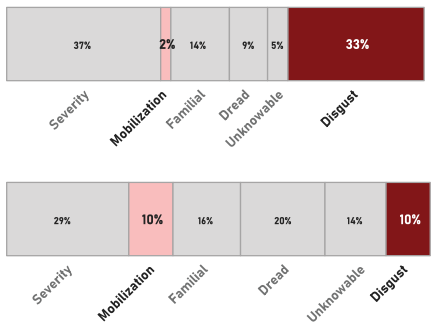
Formaldehvde



Average of all technologies in North America

South America

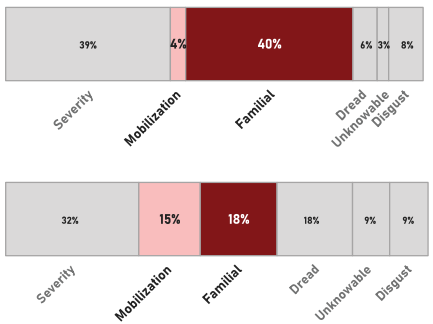
Formaldehvde



Average of all technologies in South America

Europe

Formaldehvde



Average of all technologies in Europe

Key Questions:

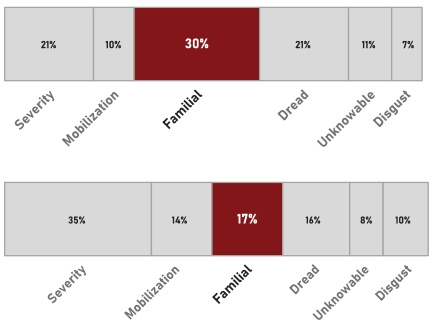
- Because unknowability is not a major driver of risk perceptions, can efforts being spent educating the public on the amount that scientists understand about formaldehyde be better spent addressing other root concerns?
- Formaldehyde currently lacks a benefits story that generates positive affect – what benefit will resonate with the public?

Vaccines

The concerning trend over the past four months has been the increase in risk perception towards vaccines. In March-April when fear towards COVID was at its peak, the prospect of a vaccine was almost-universally welcomed and risk perceptions were at record-lows. Now that the idea of a vaccine draws closer and the immediate fear of COVID has reduced, we are finding greater opposition. Unsurprisingly, the primary driver of risk perceptions is concern for ones immediate family.

North America

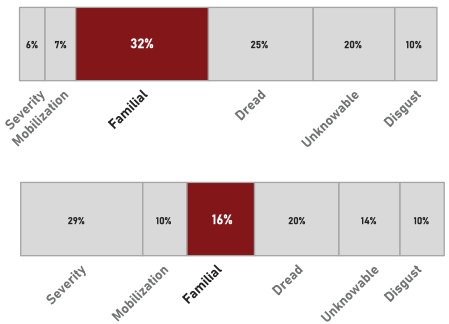
Vaccines



Average of all technologies in North America

South America

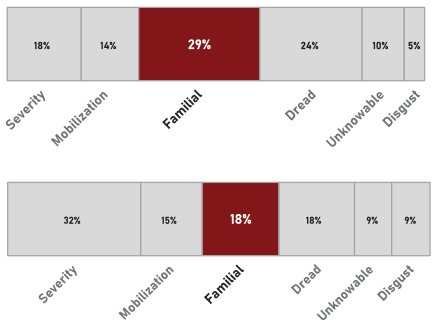
Vaccines



Average of all technologies in South America

Europe

Vaccines



Average of all technologies in Europe

Key Questions:

- Can a campaign be launched wherein people commit to taking a vaccine once one is available?Such a campaign would increase the likelihood that people do get inoculated in the future (by leveraging known principlesof commitment, consistency and social proof). But a campaign would need to begin now before fears about COVID continue to decrease further and fears towards vaccines regain their historical averages.

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GLOBAL RISK COMMUNICATIONS

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