Impact of political communication on our behaviour

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"We're blind to our blindness. We have very little idea of how little we know. We're not designed to know how little we know."

- Daniel Kahneman

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ABSTRACT

ENGLISH

This study aims to assess the importance of communication styles during crises, focusing on the COVID-19 pandemic. An analysis of the behaviour and confidence in Government's management is done in Spain, Finland and the United States of America. For this purpose, a theoretical study has been made in order to understand the three countries and a practical study has been made, involving a survey and an experiment. The survey has been answered by 50 people from each country and the experiment has been made by 30 Spaniards of ages ranging between 20 and 30 years old. The results showed actual differences in people's behaviour depending on the country, the Finns being the ones who are willing to comply more with the rules. Moreover, differences in Spaniards' behaviour have been seen depending on the communication style used by politicians.

CASTELLANO

Este estudio pretende evaluar la importancia de los estilos de comunicación durante las crisis, centrándose en la pandemia del COVID-19. Se analiza el comportamiento y la confianza en la gestión del Gobierno en España, Finlandia y Estados Unidos de América. Para ello, se ha realizado un estudio teórico para conocer los tres países y un estudio práctico, con una encuesta y un experimento. La encuesta ha sido contestada por 50 personas de cada país y el experimento ha sido realizado por 30 españoles de edades comprendidas entre los 20 y los 30 años. Los resultados mostraron diferencias reales en el comportamiento de las personas según el país, siendo los finlandeses los que están más dispuestos a cumplir las normas. Además, se han observado diferencias en el comportamiento de los españoles en función del estilo de comunicación utilizado por los políticos.

CASTELLANO

CATALÀ

Aquest estudi pretén avaluar la importància dels estils de comunicació durant les crisis, centrant-se en la pandèmia del COVID-19. S'analitza el comportament i la confiança en la gestió del Govern a Espanya, Finlàndia i els Estats Units d'Amèrica. Per a això, s'ha realitzat un estudi teòric per a conèixer els tres països i un estudi pràctic, amb una enquesta i un experiment. L'enquesta ha estat contestada per 50 persones de cada país i l'experiment ha estat realitzat per 30 espanyols d'edats compreses entre els 20 i els 30 anys. Els resultats van mostrar diferències reals en el comportament de les persones segons el país, sent els finlandesos els que estan més disposats a complir les normes. A més, s'han observat diferències en el comportament dels espanyols en funció de l'estil de comunicació utilitzat pels polítics.

CATALÀ

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Of all the things that I could study regarding how humans work, what interests me more is understanding how people take decisions. Moreover, at a company level it is also what I find more fascinating and I also think that it is very important for relations inside and outside enterprises. By making this research I would like to contribute to the understanding of a lot of behaviours and anticipate or avoid some actions.

Furthermore, the extraordinary situation that we are living, the COVID-19 pandemic, has made me interested in political communication, as we are constantly seeing politicians on TV making press conferences and explaining new measures. This way, I got more into communication not at a business level, but at a social level.

I started to think about this topic after doing two internships in the marketing department of two different start-ups. I was curious about knowing how companies influence our decisions by using different communication techniques and styles. So, I think it will be interesting to know how they take advantage of our non-rational behaviours in order to plan marketing campaigns.

The challenges that a company faces when communicating are very similar to those that politicians face in these situations, even though we do not realise it. So, I wanted to relate the communication topic to the present COVID-19 crisis and political communication as well as trying to assess which communication style is more efficient in times of crisis, when governments need citizens to collaborate with them.

In this case, an individual issue which is the communication and the individual behaviour of citizens, has turned to a collective one. For countries to face the crisis and beat the virus, governments needed people to act as a team to achieve collective success. Therefore, I would like to know why in some countries people follow the rules imposed by governments more and COVID-19 cases are lower, while in some others, governments act in a way that does not encourage people to cooperate. The outcome of the study should give us an idea on how things must be said if we want to achieve a certain result. So, the results will be useful in several fields.

On one hand, the study could be extrapolated to other situations. It can be useful for companies in order to see how people act depending on how things are explained to them, on how situations are introduced. Companies could take advantage of it in their marketing campaigns in order to better orientate people's choices, always within an ethical framework.

On the other hand, and most importantly, I think that the analysis will be relevant for governments and international institutions in order to know how to communicate with their citizens in times of crisis.

I will focus on countries which are different at the sociological level. On 2019 Alain Cohn, Michel André Maréchal, David Tannenbaum and Christian Lukas Zünd did a research on civic honesty around the world.[1] Using field experiments, the researchers explored the trade-off between integrity and self-interest in 355 cities across 40 countries. They handed over more than 17.000 missing wallets at public and private institutions containing different sums of money and determined whether or not participants contacted the owners to return the wallets. The results show that Nordic countries had a high reporting rate, both when wallets were full of money and when they were not[1]. On the other hand, countries such as the United States and the United Kingdom had a very different reporting rate depending if the wallet found was full or not, showing that if the amount of money was high enough nearly anyone would hand it over to the police.[1] Finally, in the middle we have countries such as Spain or Russia, where nearly half of the participants reported the finding regardless of the money contained in the wallets.[1]

Another aspect that I took into account in order to choose the countries to study is the Gini coefficient. It is a measure developed in 1912 by the Italian statistician Corrado Gini of the distribution of income over a population.[2] It is sometimes used as a measure of economic inequality, measuring the distribution of income or less generally, the distribution of wealth within a population. The coefficient varies from 0 to 1, with perfect equality represented by 0 and perfect inequality represented by 1. In this case, we find that the European Union is very equalitarian but the countries that outstand are the Nordic ones. However, the United States and Portugal are countries which are in the middle of the equality index.[2]

After analysing these two aspects I decided to choose three countries to study from different ranges of honesty and equality. Although I know that this will lead me to an intrinsic bias, I finally chose the countries based on the ones that were easier for me to access and, based on what I researched about their COVID -19 pandemic management and chose three of them that had different outcomes, in terms of cases and deaths and, also in terms of citizens' satisfaction with the Government. Therefore, I decided to choose Finland to represent Northern Europe as Tecnocampus has an agreement with two Finnish universities: Haaga-Helia University of Applied Sciences and Savonia University of Applied Sciences and because they had an innovative approach in order to handle the crisis. For the case of countries who are in the middle rage in terms of honesty and equality I chose to study Spaniards, as I am from Spain and it will be very easy for me to understand them and to reach more people. Moreover, it is interesting for me to understand how people around me take decisions. In addition, I am strongly aware of the policies taken in the country and how people have reacted to them. Finally, after studying the Gini Index, I wanted to study a country which has a lower honesty level so,

I decided to study the United States. I made this choice because it was easier for me to contact people from there as I have some contacts and because in the United States the COVID-19 management carried out by former President Trump has been very controversial and I aimed to understand how Americans behave in times of crisis.

As an example of the difference between these countries regarding the pandemic, in the case of Finland where the communication of the measures to face the crisis has been more innovative trying to involve all the population, the peak of cases was on the 4th of March with only 758 cases. On the other hand, in Spain, where measures have been more drastic and a lot of people feel that they were not explained the reason for these rules in a proper way, the peak of cases has been on the 30th of October with 25.600 cases. Moreover, the satisfaction of citizens with the measures taken by their own governments has also been very different. Going back to the comparison between Finland and Spain, in the first case 85% of the population approves of their government's performance during the pandemic,[3] whereas in the second case only 54% of Spaniards approve of theirs.[4]

With this study I would like to know what is the opinion of citizens from Finland, Spain and the USA regarding communication techniques used by politicians and which one of them gives the desired results in terms of handling the pandemic.

In this situation, an individual problem, which is the individual behaviour of people has developed into a collective one, which is the behaviour of the whole society in times of pandemic. Governments required individuals to work as a team, for mutual success, in order for countries to cope with the crisis and defeat the virus. I would also like to know why, in some countries, people are more cooperative with the rules enforced by governments, and COVID-19 cases are low, while in some other countries, governments are behaving in a way that does not allow people to comply.[5] The result of the analysis should give us an idea of how to say things if we want to achieve a certain outcome. So, in many fields, the findings would be useful.

The analysis could, on the one hand, be extrapolated to other contexts. For businesses, it can be helpful to see how individuals behave, based on how things are told to them, on how circumstances are presented. Companies may take advantage of it in their marketing strategies, always within an ethical context, to better orientate people's choices.

On the other hand, and most significantly, in order to know how to communicate with their people in times of crisis, I think the study would be applicable to governments and international organizations.

So, this project has relevance, not only on a business level, but also on a political level. This is very important because other crises will be faced by governments in the future, and we should learn from previous experience in order to cope better with them.

Furthermore, after doing two internships in the marketing department of two separate start-ups, I became interested in this subject; the impact of communication on our decisions. I was curious to know how corporations, using different communication strategies and types, affect our decisions.

Moreover, although we do not know it, the difficulties a corporation faces when interacting are very close to those faced by politicians in these circumstances. So, I decided to relate the issue of communication to the current crisis of COVID-19 and political communication, and to try to determine which style of communication is more successful in times of crisis when governments need people to work with them.

In addition, the exceptional situation we are facing, the COVID-19 pandemic, has made me interested in political communication, as we are constantly watching politicians hold press conferences on TV and justify new steps. In this way, not on a business level, but on a social level, I became more interested in communication.

So, with this project I want to relate our behaviour during the pandemic to the communication style that each government has implemented.

2. Theoretical framework

2.1 How do we take decisions?

During the 1970s, Daniel Kahneman started to study the cognitive biases and concluded that people do not take rational decisions, especially when we face risk and uncertainty. In 1979, Daniel Kahneman and Amos Tversky developed their study of how people managed risk and uncertainty and called it Prospect Theory. With this theory they demonstrated that the behaviour of people towards risks regarding gains significantly differ from their behaviour towards risks related to losses (risk-aversion and risk-seeking).

The 1990s was called The Decade of Brain[6] in the USA, in which neuroscience gained high visibility. It was named by the American President George H. W. Bush as part of a broader initiative involving the National Institutes of Health's Library of Congress and the National Institute of Mental Health "to enhance public awareness of the benefits to be derived from brain research".

The interagency effort was carried out through a number of events, including publications and services, aimed at bringing cutting-edge research on the human brain to members

of Congress, their employees and the general public and fostering public discussion on the legal, philosophical, and humanistic effects of these findings.

The American government invested a lot of money in research and various technological developments were carried out in order to understand how the brain works and how humans take decisions. Moreover, neurologists were able to tell why sometimes we have a non-rational behaviour, the structure of the brain and the neural processes that originate this behaviour.

With these advancements, researchers were able to understand how dopamine, the amygdala[7] ([Fig. 15](#)), serotonin ([Fig. 16](#)) and mirror neurons ([Fig. 17](#)) work and affect our behaviour. Firstly, the dopamine ([Fig. 18](#)) is related to the reward system, which is a group of neural structures that are responsible for reward salience and positive emotions, particularly those that include pleasure. Secondly, in the expression of risk-averse behaviour, many brain regions are observed. Among these brain areas is the orbitofrontal cortex ([Fig. 19](#)), which promotes the feeling of regret. Regret is an emotion that greatly affects decision-making and leads people to make choices that bypass the future experience of this emotion. Moreover, researchers started noticing risk averse behaviour by their subjects after repeated experiments. It is a behaviour mirrored in intensified activity within the medial orbitofrontal cortex and the amygdala. Thirdly, mirror neurons are a specific type of neuron that when we perform an action or watch someone else perform that activity, is similarly involved. Mirror neurons have also been shown to play an important role in empathy, our ability to feel the pleasure or discomfort of another and their activity has most recently been shown to predict moral decisions affecting others. Last but not least, serotonin plays an important role in decision making. Specific genes directly control the serotonin transporter protein, allowing individuals likely to display greater activation of the amygdala or not. Higher activation of specific limbic system elements, such as the amygdala, contributes to a greater proclivity to make judgments based on environmental and emotional influences rather than rational elaborations of the proof. This makes people with lower amygdala activation to have a more visceral or emotional decision-making response.

On the other hand, to understand why humans are irrational animals we have to talk about system one and system two,[8] which are the two operating systems of our brains. They were called like this by Daniel Kahneman after his research showed him that we have fast and automatic responses led by our system 1, which represent 98% of our thinking. But also, 2% of our thinking is led by system 2 which is slow and deliberate. Kahneman did not only discover our brain's two operating systems. Nevertheless, the lack of logic in human decision-making is still absent. He explained how the two systems of thought produce different outcomes even when having been provided with the same

inputs. And he showed the influence of the subconscious mind first and foremost, where we all seem to believe we are human beings with rationality. However, Kahneman has shown that we're almost entirely unreasonable.

a. Consumer neuroscience

Consumer neuroscience is known as the application of science to marketing.[9] It involves using brain imaging, scanning, or other brain activity monitoring technologies directly to assess the response of a subject to particular goods, packaging, ads, or other marketing components. In certain cases, the participant does not actively interpret the brain responses measured by these techniques; thus, this knowledge may be more revealing than survey self-reporting, focus groups, etc.

More broadly, the use of neuroscience research in marketing often requires neuromarketing. For example, researchers may find that a specific stimulus triggers a consistent response in the brain of test subjects using fMRI or other techniques, and that this response is associated with the desired behaviour.

Neuromarketing attempts to clarify the logic behind how consumers make purchase decisions and their responses to marketing stimuli in order to apply certain lessons in the marketing field.

Marketers who use this strategy can benefit from more efficient and effective marketing programs and strategies, less product and promotion failures, and ultimately the manipulation of real needs and desires of individuals to fulfil the needs and desires of marketing interests.

Finally, some businesses that want to predict customer behaviour on a wide scale are investing in their own labs, research staff, or academic partnerships.

b. History of consumer neuroscience

Consumer neuroscience is a newly emerging disciplinary marketing area. Similar instruments and methodologies are also borrowed from other disciplines, such as neuroscience and psychology. In 2002, Dutch marketing professor Ale Smidts introduced the term "neuromarketing" but studies in the area can be found since the early 1990s.

In that time, with the intention of selling ads, marketing professor Gerald Zaltman patented the Zaltman metaphor elicitation technique (ZMET). With specially selected sets of pictures that induce a positive emotional response and trigger hidden memories, ZMET explored the human subconscious, stimulating the purchase of metaphors.

On the basis of detected pictures, graphical collages were constructed, which is the basis for advertisements. Among hundreds of major companies, including Coca-Cola, General Motors, Nestle, Procter & Gamble, ZMET quickly gained popularity. Those organizations hired Zaltman and his associates to examine brain scans and monitor customer neural activity. He started using fMRI in 1999 to demonstrate associations between customer brain activity and marketing stimuli. Psychological testing used in marketing tools was improved by Zaltman's marketing research methods.

A research conducted in 2004 that brought attention to neuromarketing was the "Pepsi Challenge",[10] a blind taste test of Coca-Cola and Pepsi. Dr. Carl Marci (USA) founded Innerscope Research in 2006, which focused on research into neuromarketing. Later, in May 2015, Innerscope research was purchased by the Nielsen Company and renamed Nielsen Consumer Neuroscience.

Moreover, Unilever's Consumer Research Exploratory Fund (CREF) has also been publishing papers on the potential of neuromarketing's applications.

c. Consumer neuroscience techniques

The five most used neuromarketing techniques used by marketers are the following:[11]

1. Functional magnetic resonance imaging (fMRI)

In association with enhanced neuronal activity, fMRI senses blood flow in the brain. It is a technique utilized by reading brain activity to get an accurate understanding of the desires and expectations of the user.

2. Electroencephalogram (EEG)

EGG tracks electrical signals from neurons inside the brain to the scalp. It is used by advertisers to enhance advertisement and branding as it shows customers' degree of interaction and recall.

3. Eye tracking

Companies that use eye-tracking technology use photographs and videos that monitor precisely where their subjects focus on. As the name suggests, by monitoring the eyes, this technique is used to get an idea about customer preferences. It does not always require rigorous laboratory research, as it can also be carried out in real-time.

4. Sensory marketing

It occurs in many ways, such as by touch, sound or smell. However, all of them are based on the same idea: assessing the viewer in the presence of sensory stimuli to think of a certain brand.

5. Facial coding

The way it works is very easy: we use our muscles when we are smiling, showing rage or assembling some other form of facial expression. These tiny muscle movements can be reliably calculated by using sensors to detect gestures and feelings we are not even aware that we feel.

d. Ethics of consumer neuroscience

The primary aim of marketing is to match a product with an individual who demonstrates an interest in it. As a result, products are more in line with the customer's requirements. The question now is whether the knowledge given by neuromarketing is ethical. Finally, these revelations uncover details about systems that we aren't aware of. This implies that we have no real influence over them.

On the one hand, neuromarketing gives us a theoretical framework in order to understand decision making, stating that we are not as rational as we like to think, that emotions and cognitive biases push us away from rational decisions. All this knowledge helps to understand how we behave but it's not predicting, by far, how we behave in a specific situation. Furthermore, neuromarketing also tells us that there are a great number of variables that condition our behaviour and that it is impossible to control all of them. Therefore, neuromarketing can't predict what we will do next and its information cannot shape people's behaviour.[12]

Additionally, our decision power should be, on principle, free of manipulation and neuromarketing should be used to better understand us as persons and to keep being critical.

However, sometimes people go too far when using neuromarketing and vulnerable groups such as kids, teens and people with high debt, compulsive buying behaviour and other neurological diseases or pathological disorders should be protected. For example, children and adolescents do not have their neural inhibitory mechanisms mature yet; so, they have a lack of self-control.

To control this, in 2006 a multidisciplinary group of 13 people founded the Neuroethics Society[13] in California. The group included not only neuroscientists, but also psychologists, philosophers, bioethicists and lawyers. The function of the society is to research the social, legal, ethical and political effects of developments in neuroscience. Its mission is to promote and encourage study and debate on the responsible use of brain science advances.

e. Use in political campaigns

There is a significant risk that neuromarketing would be used to influence politicians' campaigns. Politicians would, like goods or merchandise, show themselves in the most favourable way to get voters to like them.

Neuropolitics is the scientific branch of neuroscience that seeks to explain how in the face of ideological and political decision-making problems, the human brain works. In this sense, understanding which problems affect the decisions of people becomes the priority target of this discipline, with the intention of helping to design more successful strategies and tactics for political communication.

A study about neuropolitics was first published by Roger Sperry[14] in 1979 with patients with divided brain who had their corpus-callosum separated and therefore had two brain hemispheres with communication seriously damaged. The investigators independently showed images of political figures to each eye of the patients (and therefore each different brain hemisphere) and told them to give an assessment of "thumbs up" or "thumbs down". Both hemispheres were seen to be able to give the people they were watching a political mindset. For example, a thumbs down was given to Adolf Hitler and Fidel Castro, while Winston Churchill was given a thumbs up, and a thumb in the neutral position was given to Richard Nixon. Every hemisphere tried to transmit clues to the other hemisphere about the identity of the people. This research showed that neurological strategies could inform the understanding of political attitudes among researchers.

Recently, one research[15] looked at brain function and political decision during the US election of 2004. Also, the appearance of political candidates has been studied more recently, and shows more activity in the insula[16] ([Fig. 20](#)). So, if people look at a losing candidate a specific brain area associated with pain activate. Researchers concluded that these negative attributions that voters make play an important role in elections.

However, the truth is that political advertising does work, mostly for people who are in the middle, the ones who are not in the most partisan extremes. The most effective form of political advertising has been shown to be negative a campaign, where some of its appeal is emotional although content is presented as factual information.[16] In this case, truly partisan voters won't be affected, but voters closer to the middle, though, will process the information in at least partially rational manner and may be influenced in one direction or the other.

These negative campaign ads evoke fear, which is the strongest emotional reaction in the brain, which reacts unconsciously to fear. Nevertheless, some politicians refuse to use negative advertising and use neuroscience-based techniques to enhance a positive emotional impact. The emotional response that they evoke by using selected language

and images that represent the candidate as an honest and likable person, boost confidence and support.

Moreover, through the pain frame, all campaign strategists operationalize the science of loss aversion. A pain frame is a statement that is presented to illustrate the avoidance of loss in order to convince loss-averse people. This was very evident during the 2016 USA campaign, when Trump used the "Make America Great Again" slogan and also during the Brexit campaign, when the pro Brexit team used the "Take Back Control" slogan. Trump used this expression to recover a loss, which was the greatness lost during Obama's mandates. Furthermore, in the Brexit case the control of UK's own destiny is what had to be taken back. The pain frame of missing something is used in both slogans. Finally, another neuromarketing technique used in politics communication is the use of bright colours for the promoted candidate, while the opponent's picture or ides is in black and white.[17] The sharp contrast of colour will invoke the emotions of viewers and make them remember those images longer. Voices may be subtly changed in TV advertisements to either support a candidate or ridicule an opponent. Neuroscience research will make such negative responses more powerful and provide even more effects.

2.2. Cognitive biases

a. What are cognitive biases?

A systemic pattern of deviation from the norm of rationality is referred to as a cognitive bias in judgment. Individuals establish their own "subjective reality" based on their perception of the input. A person's behaviour will be dictated by their construction of reality, not by objective input. Cognitive biases may also contribute to perception distortion, mistaken judgment, illogical interpretation, or what is known as irrationality.

Despite the fact that "irrationality" and "deviation from the standard" may seem to be rare, they are actually very normal. These prejudices allow a person to discover commonalities and shortcuts that make the world and different life situations easier to live with and handle.

Cognitive biases can contribute to more successful actions in some cases. Furthermore, facilitating cognitive biases, such as heuristics, allows for faster judgments, which can be helpful when speed is more important than accuracy. Other cognitive result from a lack of sufficient mental mechanisms, the effect of the person's constitution and biological state, or simply a diminished capacity for information processing.

A continuously expanding list of cognitive biases has been developed over the last six decades of research in cognitive science, social psychology, and behavioural economics

on human cognition and decision-making. Cognitive prejudices, according to Daniel Kahneman and Amos Tversky (1996), have effective functional implications in fields such as clinical judgment, entrepreneurship, finance, and management.

b. Examples of cognitive biases

Biases can be distinguished on a number of dimensions, but some examples of cognitive biases[18] include:

- Framing effect: Depending on how the information is presented, drawing varying conclusions from the same information.
- Keinshorm effect: Predisposition to contradict the thoughts or formulations judged by another person that you do not sympathize with.
- Bandwagon effect: A person's propensity to acquire a certain style, behaviour or attitude because everyone else is doing it.
- Confirmation bias: Tendency to search, interpret, favour, and remember data in a manner that reinforces or endorses one's previous beliefs or values.
- Bias blind spot: Tendency to recognize the influence of biases on others' judgment, while not seeing the impact of biases on one's own judgment.
- False consensus effect: It causes people to see their own decisions and assessments of actions as comparatively normal and acceptable to current circumstances.
- Political bias: Slanting and modifying data to make it a political candidate or position look more appealing to voters.
- Partisan bias: Exists in the press when reporters serve and establish a certain political party's leaning.
- Authority bias: Tendency to attribute high reliability to and be more influenced by the opinion of an authority figure.

Biases arise in a political setting when people are able or unable to consider a point of view that is politically opposed. Such prejudices in people may have origins in the characteristics and thought styles of each person, and it is not clear if people are more biased depending on their specific positions along the political spectrum.

Political bias goes beyond the simple presentation and analysis of points of view that favour a particular political leader or party, and instead extends to regular readings and interactions among individuals. The prevalence of political bias has a long-term effect on voter conduct and, as a result, election results.

In the concept of framing, is how political bias mainly occurs. Framing is the social creation of a positive or negative image of political or social movements. Political bias in this sense is the interpretation of facts by political officials and parties to illustrate an issue and propose solutions that support their own political status. This makes their personal status and their policies look more favourable as the planned course of action. The framing effect looks at circumstances in which only choices are given to individuals within two frames, one negatively presented and the other positively. The framing effect is becoming particularly common in opinion polling designed to persuade particular organizations to be commissioned to survey. This bias can be greatly reduced if accurate, credible and adequate information is given. In addition, framing explores the role of slanting in political campaigns and its possible effects on the distribution of political power where there is political bias. Through identifying framing as a ubiquitous analysis instrument for tying together different facets of fact and presenting an interpretation of perspectives that may or may not be entirely correct.

2.3 How governments communicated through the COVID-19 crisis

a. Finland

We always talk about how northern European countries perform better than their homologues from the south. Again, this time we have to say that the clear winner in the COVID-19 pandemic response race has been Finland. The Baltic country has 90% less coronavirus deaths per capita than their neighbours of Sweden[19], who this time did not manage the situation well. Moreover, Finland's economy did not suffer a lot due to the fact that they did close the country rapidly but it was not a complete lockdown. This allowed them to open for the summer and reactivate the economy.

One fact that helped Finland be prepared for the crisis is the Winter War[19] (1939-40) against the Soviet Union, which thought them how to act during national emergencies. Moreover, its constitution emphasises that one of the highest responsibilities of the government is the protection of life and health. The country has a law[19], explicitly mentioning pandemics only used during the Second World War, when their stockpiles of medical and protective equipment were abundant compared to the rest of the continent. This preparedness of the country had both a practical and psychological effect among the population.

In fact, Finnish people tend to come together in times of crisis and the population really changed their way of behaviour when measures were implemented to stop COVID-19 evolution. Epidemiologists say that citizens reduced by 75% their social contacts during the pandemic.[20]

In terms of political communication, the centre-left government of the Prime Minister, Sanna Marin, who being born in 1985 is a millennial herself, was able to use an innovative political communication style and reach not only the adult population, but also teenagers and kids. Moreover, the Prime Minister and four cabinet officers gave public press conferences which were clear, concise and unemotional; but with an undertone of warmth, and answered open questions from journalists each week. The message given was very simple: "stay at home, if at all possible". In addition, citizens over 70 years old were asked not to meet other people and working remotely was encouraged.

Besides, bloggers, rappers and writers were contacted in order to inform those people who were not reached by traditional media such as TV, radio or newspapers.[21] The government argued that social influencers are as useful as mainstream media when information has to be fast, clear and accurate, as they reach as many people as newspapers and commercial radio channels. The project was an initiative of the Finnish government, Mediapool (part of the National Emergency Supply Agency) and PING Helsinki. This last organization is the one in charge of editing the government's announcements so they fit in social media and sends them to 1500 influencers, who are allowed to use scripts and images as they please. Likewise, a list of does and don'ts in social media during the COVID-19 crisis was published in order to ensure data reliability. It included some recommendations such as stop and think before you share anything, review content critically, distinguish a fact from an opinion and never share false information.

So, the Finnish government not only had the preparation and the innovative ideas to fight the Coronavirus, but they also had the predisposition of citizens to not only follow the rules but also auto-impose restrictions on themselves.

b. Spain

On the other hand, the case of Spain has been different. The communication strategy used by the government has been very criticized by everyone, especially by the media and journalists' associations. More than 400 journalists sent a letter to the Spanish government asking for a videoconference system which grants a more transparent flow of information.[22] Previously, the government used regular visits by government officials and the technical committee in charge of overseeing the health emergency to communicate about the pandemic. Since the Secretary of State for Communication filtered the questions posed by the media, this method drew a lot of flak.

In contrast to other European authorities, during the first three weeks of the lockdown, none of the member of government agreed to answer questions that came directly by journalists. The answer of the government was that the formula used was simple and

efficient, due to the fact that too many questions were asked. This way, they stated to guarantee the right of participation and information. However, after a lot of pressure from the media, from the 6th April onwards the Secretary of State for Communication agreed to hold press conferences with journalists by videoconference allowing them to reformulate questions.[22]

Moreover, the government's way of communicating the evolution of the crisis has been overprotective and did not prepare the population for the most negative scenario. This fact has influenced perceptions of credibility and trust in public authorities, which, in turn, negatively influences citizens' assessments of the government.[22]

Another problem that Spain faced has been the lack of coordination, not only among the administration levels, but also between experts and decision-makers. For example, there was a lack of reliable and homogeneous data between the central government and the autonomous communities (regions).

On the contrary, although the government's action plan has not been the best, the citizens' behaviour has. The positive effect on diminishing the number of cases of the strict degree of compliance with the quarantine and the use of masks is undeniable. The Spanish public has shown remarkable discipline and civic responsibility, complemented by a solid-State performance, starting from the declaration of the lockdown on 14th March.

Moreover, the Spanish population supported the Government's actions. Up to 97.3% of citizens viewed the measures taken in April as necessary and 91% of them said that they were having a good experience during lockdown.[23] In addition, when de-escalation started it was very controversial due to its complexity and gradualness but, in the end, 69% of people approved of it.[23] However, on the one hand, in April 2021 another poll was made by Real Instituto Elcano about Spaniards who failed the Government when talking about the management of the pandemic; they gave it 4,8 out of 10. On the other hand, Europeans viewed Spain's management as more successful, giving 5,9 to the government, only behind Germany with a 6,5.[24] Nevertheless, the report points out that this score is "not very representative" since it hides a great internal dispersion of the evaluations and is explained by the decrease in the self-esteem of Spaniards produced by the current economic crisis which makes them value themselves below what they are valued outside, which already happened in the period of the previous crisis, in 2008.

So, in the case of Spain, although the government's actions were not approved by the media and associations, and opposite opinions were stated by the administrations and epidemiologists, the citizens' behaviour made the implementation of strict and non-popular measures have a high success rate, even though, at some point, they were not satisfied with Government's performance.

c. The United States of America

An administration that has been really criticised by its management of the COVID-19 pandemic has been the American, with former President Donald Trump leading it.

First, there was a communication problem between the central administration and the Federal States, which led to a misinformation of a number of cases around the country. Not only communication errors reflect the weakness of governmental processes, which dramatically damages public faith in the government, but also greatly raises public fear and uncertainty about the health risk of COVID-19.[25]

Moreover, tensions between the president's office and top federal health advisors were reported when discussing how to evaluate and respond to the pandemic. The uncooperative and poorly coordinated government communication and response resulted in political wars between federal and state government leaders. The role that the government had to play during the pandemic was as a unifying and motivating force. However, these conflicts are main factors that often cause social unrest and intensified social hostilities between supporters of various political orientations.[25]

On the other hand, opinion polling has shown that less than half of Americans[25] rely on information provided by Trump regarding the pandemic, as opposed to local and state government officials, the Centers of Disease Control and Prevention and National Institute of Allergy and Infectious Diseases director Dr. Anthony Fauci.

Needless to say, President Trump has been optimistic in public through the pandemic, even when his administration's public health officials were not so optimistic. In addition, Trump has continuously stated falsehoods regarding the pandemic, using exaggerations when talking about the measures taken by his government and the private sector.

In addition, not only has the President resisted admitting errors in his management of the pandemic, but he also blamed many others, such as Democrats, media, state governors and China (*Keinshorm effect*).

As result, President Trump was a source of information on the COVID-19 issue for only 28% of Americans, who used state or local officials to obtain reliable information.[25] Also, 51% of Americans approved of Trump's management of the crisis in March, while in July only 38% did so.[25]

The U.S. case shows how risky it is to have elected officials who do not understand the significance of the crisis, refuse to obey the advice of experts, and deceive the public. Even with a strong public health bureaucracy, President Trump's leadership has made the issue more prominent and as already described, has deliberately deceived the public, breaking the need for accountability and truth, one of the cornerstones of effective public health.[26]

To summarize, President Trump has misled the public about the magnitude of the pandemic. He has provided untested medical advice and played partisan politics with governors who are trying to cope with the crisis. Worse still, these activities have spread throughout the world, with some governors even imitating the president's misleading communications.

2.4 Conclusions of the theoretical framework

This is a very novel topic, as the COVID-19 pandemic is the first one of this century that affects the world as a whole. This means that it does not affect just a few countries, but the seven continents. So, little studies have been made in relation to the topic and a lot of gaps have been found in the literature. This project wants to assess the relation of political communication with people's behaviour in times of crisis, a subject that has been scarcely studied.

The countries chosen for the project have been previously analysed in order to have various cultures and beliefs to make the study more diverse and trustworthy. The differences in countries are not only in the inhabitants' culture, but also in the government's actions during the pandemic.

On the one hand, Finland closed the country earlier than other European countries, but did not implement a total lockdown, allowing the economy to survive. Furthermore, not only does the Finnish society tend to band together in difficult circumstances, but the President was able to reach out to the entire public while announcing new initiatives. Sanna Marin collaborated with influencers in order to target youngsters who are unlikely to use traditional media such as radio, television, or newspapers.

The United States, on the other hand, is the polar opposite of Finland. Because of his fake news and misinformation, Donald Trump, the previous President, had a tense relationship with medical authorities. People discovered that they did not trust the government or the clear norms that were presented to them. However, President Joe Biden vaccination campaign is working well and, in May 2021, according to the Centers for Disease Control and Prevention, 246 million vaccine doses have been administered, with 56% of the adult population receiving at least one dose and 40% receiving the two doses needed for immunity.[27]

Finally, in Spain, the government has been accused of being overprotective of the population and has been heavily chastised for the way it communicated the new measures to the public; they failed to persuade people to understand the reasons for the measures, particularly among young adults and teenagers. Despite a lack of cooperation between regional administrations and the national government during the early months of the pandemic, citizens were satisfied with the government's response to the disaster.

However, after a year, individuals got fed up with not comprehending the rules and began to complain about the government's conduct.

Also, in order to assess the difference in behaviour, cognitive biases must be studied. In regards to this, I decided to go for the framing effect, as it says that we are influenced by how the same situation is communicated to us. For example, if you take two alimentary products and one says 10% fat and the other one 90% fat free, the framing effect will make us choose the second product, as it seems to be healthier.

When politicians use biases for their own benefits, we can talk about neuropolitics. It is the study of the connections between prejudice and politics, and it is employed by many politicians during campaigns and during their terms in office. We, on the other hand, are often oblivious of them. For example, government can say: "we increased military spending in renewed commitment to veterans", or they can say: "amid record levels of debt, military spending balloons yet again". Depending on how the idea is presented to us, we will draw different conclusions. We may have a positive opinion about the fact of the increased military spending in the same situation but a negative one in the second, when debt is introduced in the sentence.

In light of the above, the relationship between these factors, culture, cognitive biases and political communication, is what I think that will drive our behaviour. With this project I want to assess whether this correlation, in general, happens or not in the countries studied.

3. Objectives

The aim of this project is to study our decisions in regards to the communications that politicians choose to make, analysing the different types of channels, such as the person who communicates it and the actual channel, and also the type of communication, whether it is more formal, innovative or neutral.

Also, in order to have a specific environment of the topic I focus on how governments have communicated the COVID-19 crisis to their citizens and how these communication differences have affected their behaviour and, in turn, the outcomes of each country. People's behaviour cannot be only affected by their culture but also by how things are transmitted to them and how they are explained, meaning that us, humans, are not rational animals.

By studying this, I am able to know what could have been done better for future crisis that governments will face or other pandemics that are still to come. Moreover, I am be able to determine if when we are given rules, we act in a different way depending on several variables: how things are said, by who, the culture we have, etc.

In addition, biases have been used in order to analyse their effects on people's minds and behaviour and to assess if they were used by politicians during the pandemic. The biases help us understand the differences in behaviour and assess how things should be communicated in order to have better outcomes during a crisis. By having different communication styles transmitted to people we can assess which one is more trustworthy for them.

4. Hypotheses

The gap of my study is the political communication as a response to the pandemic. I would like to know if we are influenced by biases when taking decisions, (H_1) meaning that we are not rational, as Daniel Kahneman and Amos Tversky (1996) state. Also, if there are differences in people's behaviour depending on the country they live in, taking into account that the countries chosen have made a significant different approach to the management of the actual pandemic (H_2, H_3, H_4). So, if the Gini index and the honesty index are good indicators in order to assess how societies would behave in times of crisis. Also, as Finns trusted more their government during the management of the pandemic than Spaniards and Americans, it is another aspect to take into account when stating if they will comply or not with recommendations provided by the Government when controlling the crisis.

Taking all these into account, the hypotheses that are going to be tested are the following:

- H_1: More than 50% of the people take non-rational decisions when following norms during a crisis.
- H_2: More than 50% of Finnish people will comply with recommendations during a crisis.
- H_3: Less than 50% of Spaniards will comply with recommendations during a crisis.
- H_4: Less than 50% of Americans will comply with recommendations during a crisis.

5. Methodology

In order to test the hypotheses proposed, I passed a survey ([Fig. 21](#)) and also made an experiment ([Fig. 23](#)). The reason that a survey has been chosen to analyse the differences between the three countries is that, with it, I was able to reach more people and ask them all the questions that I needed to, later on draw some conclusions. On the other hand, the experiment allowed me to control better the answers and to have transparent results.

In Finland and the United States, the importance of the survey is higher than in Spain, due to the fact that in Spain is where the experiment has been made in order to corroborate and compare the answers given in the survey. So, hypothesis 1 has been tested with the experiment and hypotheses 2, 3 and 4 by means of the survey. The four of them had been tested using a one-way ANOVA, as I will explain later on. So, the null hypothesis (H_0) is that there is actually a relation between the means of the answers given, that they are equal and the H_1 is that there is a difference between the means and, therefore between the answers given by the different countries, in the case of the survey and among the different communication techniques, in the case of the experiment.

Hence, after concluding both studies, I was able to assess on the one hand, if depending on the country people's behaviour differs when receiving norms or recommendations in times of crisis. And, on the other hand, I was able to study, taking into account the bias generated by using a small population, if Spanish people behave differently depending on the communication style used.

5.1 Survey

A survey to analyse the communication style of politicians during the pandemic, has enabled me to reach more people, not only from Spain, but also from the United States and Finland, the countries that I am going to study. Moreover, it is a tool used very frequently in social and behavioural sciences and is also used in descriptive researches. It has been sent to people from Finland, Spain and the USA in order to check if people with different cultures and beliefs react differently to opposite communication styles. From it, I extract information regarding their preferences on this topic and if their way of behaviour changes depending on how things are communicated to them.

The survey, which can be seen in the annex of the project, has nine questions regarding people's behaviour in front of some imaginary situations or events. Moreover, it has one question with two sub questions and three questions with ten sub questions more. For example, respondents are asked about some communication models used by

governments and what would be their reactions in front of these different approaches. The answers are measured with the Likert scale (Fig. 1), which means it has five response categories that represent an interval level of measurement.

Figure 1: Likert Scale. [28]

| Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

Source: SimplyPsychology.

My aim was to get, at least, 50 answers from each country in order to be able to see some differences in behaviour. Although I know that it is a small population to study and that, in turn, some biases will be generated, I see it impossible for me to reach more people from Finland or the United States, so I wanted to be realistic with my capacities. In the end, I was able to have 56 answers from Spain, 55 from Finland and 61 from the United States.

5.2 Experiment

On the other hand, I made an experiment that allowed me to control better the variables and, in turn, gave me more reliable results. It has been made on 30 Spanish people and used the framing effect as cognitive bias. People's ages were from 20 to 30 years; this way it has been easier to assess, with the small population I had, if there was a difference in behaviour depending on the communication style used for a group of people. I divided people into two subgroups of 15 people each and I asked them to answer, first, a small questionnaire (Fig. 22) in order to assess their confidence with the central Government of Spain and their own Autonomous Communities' Governments; Catalonia, Madrid or Andalusia. Later, I presented them the same situations communicated in completely different ways. With this tool I was able to assess if this framing effect affects our behaviour. The way I used this bias is by giving each group neutral information, which was common in both groups, and the same situation presented in a more emotional way, which was different in each group (Fig. 2). With these differences I wanted to study if we are affected by how facts are presented to us regarding decision making in terms of behaviour.

Figure 2: Methodology of the experiment.
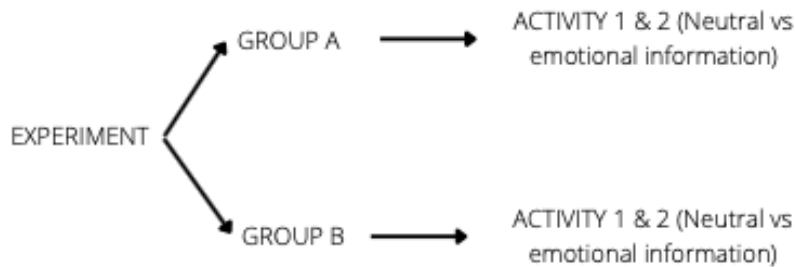
In order to get the experiment done I gathered people via Zoom or in-person and I made a small presentation of the topic and an explanation of the methodology of the experiment and a little questionnaire regarding confidence with the Government, which took no more than 3 minutes. Then, I gave the experiment sheet to the participants and the time needed to read the information provided or watch the videos, depending on the case, and 1 minute to answer the questions.

In light of the above, and in order to make it clearer, you can find attached here the questions that participants of Group A have faced:

- Activity 1: From 1 to 10 which is the probability that you trust the following information?
    - o https://www.rtve.es/noticias/20200313/pedro-sanchez-declara-estado-alarma-nacional/2009974.shtml
    - o https://www.youtube.com/watch?v=yQCzbJLNM8U (until 1:05 minute)
- Activity 2: From 1 to 10 which is the probability that you comply with the following indications?
    - o Text message:
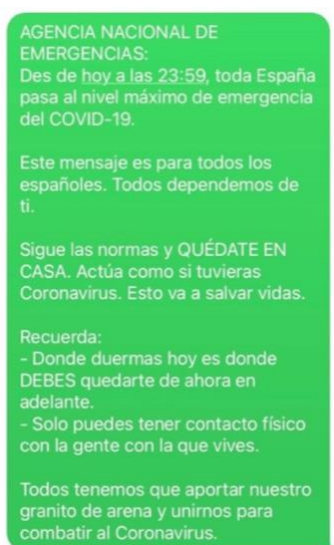
    - o https://www.youtube.com/watch?v=zKeSKaYI4gc (until 1:05 minute)

Finally, in the case of the Group B, the questions were stated in the following way:

- Activity 1: From 1 to 10 which is the probability that you trust the following information?
    - https://twitter.com/salutcat/status/1344295260604805123
    - https://www.youtube.com/watch?v=yQCzbJLNM8U (until minute 1:05)
- Activity 2: From 1 to 10 which is the probability that you comply with the following indications?
    - https://www.lamoncloa.gob.es/presidente/actividades/Paginas/2020/130320-sanchez-declaracio.aspx
    - https://www.youtube.com/watch?v=zKeSKaYI4gc (until minute 1:05)

5.3 Statistical analysis

On the one hand, in order to analyse both the results of the survey and the experiment I calculated the median (value that is found in the middle of the set of variables that are ordered from lower to higher), the mode (most repeated variable in the data set) and the mean (average). With these tools I was able to calculate the average of the answers and make predictions as the most common answers from different groups are known. Also, I calculated the variance and the standard deviation (Fig.3) in order to know how different each individual response is from the average of all responses.

Figure 3: Variance and Standard Deviation formulas.[29]

$$\text{variance} = \sigma^2 = \frac{\sum (x_r - \mu)^2}{n}$$

$$\text{standard deviation} \quad \sigma = \sqrt{\frac{\sum (x_r - \mu)^2}{n}}$$

$$\mu = \text{mean}$$

Source: Towards data science.

On the other hand, I chose to make a one-way ANOVA test in order to study both the results of the survey and the experiment, as I wanted to know the relationship between a dependent and an independent variable. This calculation compares the means between the groups we are interested in and determines whether any of those means are statistically significantly different from each other. Especially, it tests the null hypothesis: $H_0: \mu_1 = \mu_2 = \mu_3$. Where μ is the group mean and there are three groups, which represent the three countries studied, in the case of the survey (Finland, USA and

Spain) and the three types of communication style (neutral, formal and informal), in the case of the experiment. So, the dependent variable was the answer given (numerical variable) by each respondent and the independent one (categorical variable) was the country they live in (survey) or the communication style (experiment). In order to interpret the results, I compared the p-value obtained when the calculation is performed with the significance level (α) set when doing the statistical analysis, which is 0,05, indicating a 5% of risk of concluding that a difference exists when there is no actual difference. Regarding the results of the test, on the one hand, if the p-value obtained for the ANOVA test was smaller or equal to alpha, I concluded that the differences between the means were statistically significant and, therefore, I rejected the null hypothesis because the three means are not equal. On the other hand, if the p-value was bigger than alpha, it meant that the differences between the means were not statistically significant and I did not have the necessary evidence to reject the null hypothesis.

Moreover, a boxplot graph (Fig.4) has been performed which allowed me to investigate the distributional characteristics of the answers given in both the survey and the experiment. Boxplots are used to show overall response trends for a population. They're a good way to see the spectrum and other features of a wide group's responses. In order to perform a boxplot, first, the scores are sorted. The organized scores are then divided into four equal-sized classes. Which means, each party receives 25% of the total scores. The lines that separate the groups are the quartiles, and the groups are known as quartile groups.

Figure 4: Boxplot.[30]
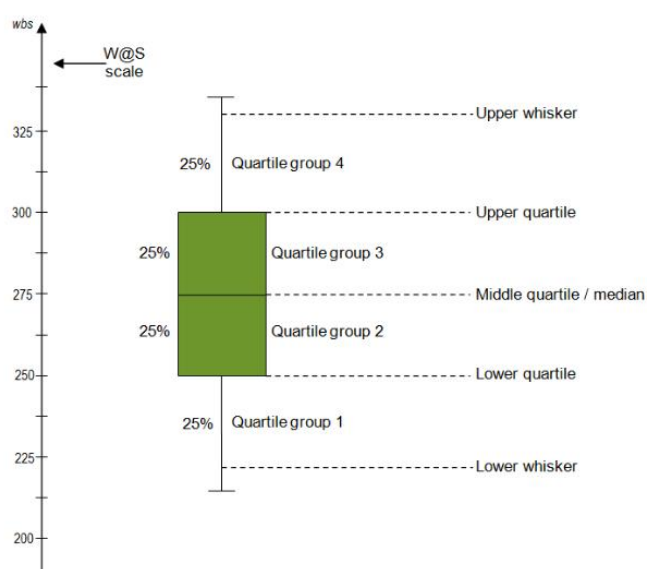
Source: Wellbeing@schools.

After analysing all these statistical data obtained from the results given in both the survey and the experiment, I was able to take conclusions about how people from different countries would behave in times of crisis regarding the survey and, in terms of the experiment, I tried to state if different communication techniques and channels have an effect on how young Spaniards would trust the information provided.

6. Results

I am going to test if we can accept or not the null hypothesis that says that the means are equal by analysing the ANOVAS, which will tell us if there is a significant difference between the means of the answers of the three different countries, in the case of the survey, and between the different communication styles, in the case of the experiment.

In the body of the document all the ANOVA tables can be found. However, in order to save space and make it easier to read, boxplots are in the annex where the reader can go and come back to the text by using the hyperlinks.

6.1 Survey results

When studying the results of the survey I wanted to test the following hypotheses, regarding the compliance of recommendations during a crisis from people from Finland, Spain and the United States:

- H_2: More than 50% of Finnish people will comply with recommendations during a crisis.
- H_3: Less than 50% of Spaniards will comply with recommendations during a crisis.
- H_4: Less than 50% of Americans will comply with recommendations during a crisis.

As already mentioned before, the survey has been answered by 56 Spaniards, 55 Finnish and 61 Americans. Moreover, the scale used is the Likert one, which is from 1 to 5, 1 being the less probable and 5 the most. We would say that if the mean of the answers is bigger than 3 people are more willing to comply with the norms or recommendations indicated by different channels.

a. Introductory question: crossing when the light is red with a police officer vs when there is no police officer

First of all, an introductory question talking about the probability of crossing the street when the traffic light is red when there is no one controlling the traffic versus when there is a police officer controlling was asked. The results showed that when a police officer was, indeed, controlling the traffic, the mean of the probability of crossing the street was of 2,2 in both Spain and Finland and 2,1 in the USA (Fig. 5). As the p-value obtained in the ANOVA is bigger than the significance level that is set at 0,05, we can say that the three means are the same, we do not have enough evidence to reject the null hypothesis that says that the three means of the countries are the same. So, there is not a significant different between countries in this case, people from all the countries have more or less the same probability of crossing the street when the light is red and a police officer is controlling the traffic (Fig. 24).

Figure 5: ANOVA table when the light is red and there is a police officer controlling the traffic.

```
> AnovaModel.5 <- aov(Probability ~ Country, data=enquesta_anova)

> summary(AnovaModel.5)
             Df Sum Sq Mean Sq F value Pr(>F)
Country       2    0.6  0.3153    0.12  0.887
Residuals   169  442.8  2.6202

> with(enquesta_anova, numSummary(Probability, groups=Country, statistics=c("mean", "sd")))
            mean        sd data:n
Finland 2.218182 1.685350     55
Spain   2.196429 1.611545     56
USA     2.081967 1.563064     61
```

On the other hand, when analysing the mean of the probability of people crossing when the light is red and there is no police officer controlling the traffic is of 4,4 in the case of Finland, 3 in the case of Spain and 4,03 in the case of the United States (Fig. 6). Moreover, the p-value obtained when doing the ANOVA is smaller than 0,05 and, in this case, we have enough evidence to reject the null hypothesis, so the means of the three countries are significantly different, especially in the case of Spain.

However, when looking at the boxplot (Fig. 25) we can see that in Finland and the USA there are several outliers that stated that their probability of crossing when the light is red even though there is no one controlling the traffic is very small and in Spain people homogeneously answered in the middle range (from 2 to 4), as the standard deviation is lower than in the other two countries (Fig 6).

In this case, unlike in the case where there is a police officer controlling, the behaviour of people when facing this situation differs from country to country, being Spain the one where people would more probably wait for the light to turn green to be able to cross.

Figure 6: ANOVA table when the light is red and there is no one controlling the traffic.

```
> AnovaModel.6 <- aov(Probability ~ Country, data=Enquesta_anova)

> summary(AnovaModel.6)
            Df Sum Sq Mean Sq F value     Pr(>F)
Country      2  57.75  28.876   19.61 0.000000022 ***
Residuals  169 248.92   1.473
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

> with(Enquesta_anova, numSummary(Probability, groups=Country, statistics=c("mean", "sd")))
            mean        sd data:n
Finland 4.381818 1.0799676     55
Spain   3.000000 0.9723449     56
USA     4.032787 1.4940684     61
```

b. Obligations vs recommendations

Regarding whether we make recommendations to people or we oblige them to do something when a crisis arrives, we can see statistical differences in the countries' answers. On the one hand, when obliging people to, for example, wear a mask or stay at home, the three countries had a mean bigger than 4, being 4,5 in the case of Finland and 4,2 in the case of Spain and the USA. So, here we can say that Finnish people tend to comply more with norms or obligations than people from Spain or the United States. However, as the p-value is bigger than 0,05 (Fig. 7) we can say that the three means are statistically the same, there is not a significant difference between them, people comply more or less the same with obligations regardless the country they are from. Nevertheless, as in Spain and the United States the standard deviation is bigger than in Finland, we see that in these two countries there have been more answers that differ from the mean.

Moreover, we can see in the boxplot (Fig. 26) that there are a lot of outliers in both Spain and Finland and, in the USA, there is just one, which means that there is actually a significant amount of people in the other two countries that would not follow the rules imposed by the Government during the COVID-19 pandemic.

Figure 7: ANOVA table obligations.

```
> AnovaModel.9 <- aov(Probability ~ Country, data=Enquesta_anova)

> summary(AnovaModel.9)
            Df Sum Sq Mean Sq F value Pr(>F)
Country      2   2.65  1.3259   1.897  0.153
Residuals  169 118.10  0.6988

> with(Enquesta_anova, numSummary(Probability, groups=Country, statistics=c("mean", "sd")))
            mean        sd data:n
Finland 4.476364 0.7021036     55
Spain   4.205357 0.9223329     56
USA     4.214754 0.8631022     61
```

On the other hand, when talking about recommendations, the probability of following them is smaller than in the case of the same obligations in the three countries. In Finland, where the probability of following the norms was bigger, (4,47) in this case the mean is of 4,05, in Spain is 3,7 and in the USA 3,8. As the p-value is bigger than 0,05, we can say that the means are quite similar, however we can still see a distinction between Finland and the other two countries, saying that Finnish people are more inclined to follow, not only obligations, but also recommendations during a crisis than Spaniards or Americans (Fig. 8). Also, we still see that the standard deviation in the USA but especially in Spain, is bigger than in Finland (0,67), so the difference between the means is bigger in those countries, meaning that there are some answers that actually differ from the mean.

Thanks to the boxplot (Fig. 27) we can see that the lowest probability of 1,5 has been answered by Spaniards and in the Finnish case the lowest probability is of 2. So, we can see that in these countries there is actually people that will, nearly for sure, not follow any recommendation given during a crisis.

Figure 8: ANOVA table recommendations.

```
> AnovaModel.7 <- aov(Probability ~ Country, data=Enquesta_anova)

> summary(AnovaModel.7)
             Df Sum Sq Mean Sq F value Pr(>F)
Country       2   3.26  1.6294    2.63  0.075 .
Residuals   169 104.69  0.6195
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

> with(Enquesta_anova, numSummary(Probability, groups=Country, statistics=c("mean", "sd")))
            mean        sd data:n
Finland 4.040000 0.6712619     55
Spain   3.701786 0.9395339     56
USA     3.822951 0.7281011     61
```

c. Channel: person you trust vs person you do not trust

Also, I analysed if there is a difference in the means of the probability of following the norms regarding the channel, if they come from a person you trust or a person you do not trust and if they are transmitted through a conventional or a non-conventional channel.

In the case of the norms being said by a person your trust, such as a politician from your political party or your favourite journalist, people from the three countries studied are more inclined to follow the norms than if they are transmitted by a person that you do not trust, such as the opposite party leader. So, the probability, as a mean doing something said by someone you trust is, in Finland, 3,55, in Spain, 3,3 and in the USA 3,4 (Fig. 9). On the other hand, in the case of not trusting the people, the mean lowers to 3,2 in

Finland, 3,1 in Spain and 3 in the USA (Fig.10). The p-value in both cases is bigger than 0,05, so we cannot see a significance difference between the means of the countries. However, what we can say is that in the three cases we can see that the probability of following the norms goes down, at least 0,2 points and, in the case of Finland, 1,3 points, if we hear the rules from a person we trust or not.

If we talk about the standard deviations in both cases, we can see that it is close to 1, being bigger when analysing the results obtained when asking people about a person they do not trust. In the Spanish case we can see that there is not a big difference, but in the USA and Finland the difference is quite big, meaning that there are actually more differences between the answers and the mean obtained.

Regarding both boxplots (Fig. 28 and 29), we can see a huge variety of answers in both cases, meaning that there are people in the three countries studied that would for sure follow the norms and others that would surely not.

Figure 9: ANOVA table person you do trust.

```
> AnovaModel.10 <- aov(Probability ~ Country, data=Enquesta_anova)

> summary(AnovaModel.10)
             Df Sum Sq Mean Sq F value Pr(>F)
Country       2   2.08  1.0393   1.079  0.342
Residuals   169 162.76  0.9631

> with(Enquesta_anova, numSummary(Probability, groups=Country, statistics=c("mean", "sd")))
            mean        sd data:n
Finland 3.547727 0.9426528     55
Spain   3.274554 1.1025331     56
USA     3.424180 0.8936345     61
```

Figure 10: ANOVA table person you do not trust.

```
> AnovaModel.11 <- aov(Probability ~ Country, data=Enquesta_anova)

> summary(AnovaModel.11)
             Df Sum Sq Mean Sq F value Pr(>F)
Country       2   1.02  0.5124   0.372   0.69
Residuals   169 232.77  1.3773

> with(Enquesta_anova, numSummary(Probability, groups=Country, statistics=c("mean", "sd")))
            mean       sd data:n
Finland 3.163636 1.130612     55
Spain   3.062500 1.171877     56
USA     2.975410 1.212526     61
```

d. Channel: Conventional vs non-conventional

Finally, as mentioned before, I wanted to check the difference in people's behaviour if the rules came from a conventional channel, such as TV, radio or newspaper, or from a non-conventional one, such as social media or podcasts. In this case, I saw that the means of the three countries dropped nearly one point if the information is provided through a non-conventional channel compared with a conventional one. For instance, the Finnish mean is ~~of~~ 4,15 in the case of a conventional channel and 3,06 in the case of a non-conventional one. In Spain, the same happens, the mean drops from 3,81 to 2,97 in the case of a non-traditional channel. In the United States, it goes from 4,1 in the case of a traditional channel to a 3,05 for a non-conventional channel (Fig. 11 and 12). Moreover, again, we can see that in the case of a conventional channel the standard deviation is quite bigger in Spain and the USA than in Finland (0,78). However, in the case of a non-conventional channel, the three standard deviations are quite big and similar, the Finnish still being one of the lowest (1,14). This means that values are actually spread across a huge range of answers.

However, regarding both boxplots (Fig. 30), we can see that outliers can only be found in the case of the traditional channel, as the majority of people have answered very high probability of complying the norms, and a few in both Finland and the United States have gone out from the norm answering low probability. As said before, in the case of the non-conventional channel, values are spread across a big range in the three countries (Fig. 31).

Figure 11: ANOVA table conventional channel.

```
> AnovaModel.12 <- aov(Probability ~ Country, data=Enquesta_anova)

> summary(AnovaModel.12)
            Df Sum Sq Mean Sq F value Pr(>F)
Country      2   3.44   1.720   1.851   0.16
Residuals  169 157.01   0.929

> with(Enquesta_anova, numSummary(Probability, groups=Country, statistics=c("mean", "sd")))
            mean        sd data:n
Finland 4.145455 0.7842355     55
Spain   3.816964 1.1672531     56
USA     4.086066 0.9024103     61
```

Figure 12: ANOVA table non-conventional channel.

```
> AnovaModel.13 <- aov(Probability ~ Country, data=Enquesta_anova)

> summary(AnovaModel.13)
            Df Sum Sq Mean Sq F value Pr(>F)
Country      2   0.27  0.1346   0.091  0.913
Residuals  169 250.60  1.4829

> with(Enquesta_anova, numSummary(Probability, groups=Country, statistics=c("mean", "sd")))
            mean       sd data:n
Finland 3.060606 1.144122     55
Spain   2.973214 1.215546     56
USA     3.054645 1.282258     61
```

6.2 Experiment results

In the case of the experiment, the hypothesis that wants to be tested is the following:

- H$_1$: More than 50% of the people take non-rational decisions when following norms during a crisis.

As already mentioned before, the experiment has been carried out on 30 Spaniards from 20 to 30 years old divided in two groups of 15 each. Moreover, the scale used in this case is from 1 to 10, 1 being less trustworthy and 10 most trustworthy. We would say that if the mean of the answers is bigger than 6, the information is, in general, trustworthy. The results are divided in three groups, neutral, meaning the news on TV, innovation, meaning the information transmitted through non-conventional channels and Sanchez, meaning press conferences from the President Pedro Sanchez.

a. Questionnaire: Confidence on the Government's actions

First of all, participants from both groups had to answer some questions regarding the trust that they had on the Spanish Government management of the pandemic, as well as the one done by their Autonomous Community, which were Catalonia, Andalusia and Madrid (Fig. 32).

In this case, the mean of the answers regarding the Spanish Government is 5,4 and the mean regarding the management done by the Autonomous Community is 5,55. So, we can see that although the confidence in the regional governments is, in general, a little bit bigger, we cannot say that people trust them, because it is near the failure, which would be lower than 5 out of 10. Therefore, what we can see before starting to analyse properly the experiment's results is that, in general, the participants trust in both the central Government and the regional one is very small.

b. Group 1

The first group, as we can see in the ANOVA table (Fig. 13), trusts most of the information provided by the President of the country, Pedro Sanchez, with a mean of 6,2 out of 10. The other two options, both with low confidence levels, are innovation, which was a text message sent by the National Emergencies Agency, has a confidence level of 4,7 and the neutral information, provided by the public news gets a 2,6. Moreover, as the p-value is smaller than alpha (0,05) we have enough evidence to reject the null hypothesis that says that the three means are equal, so we can say that there is a significant difference between the means of the answers regarding the communication technique. Moreover, if we look at the standard deviation, we can see that it is comparably bigger in the case of innovative communication style and the formal one (Sánchez) than in the neutral (TV news), which means that the values differ more from the mean.

In the boxplot ([Fig. 33](#)), we can observe that in the case of the information being provided by President Sanchez and by a text message there are actually people who rate t with a high level of confidence. However, in the case of the news on TV, the vast majority of the participants answered a low level of confidence.

Figure 13: ANOVA table group 1.

```
> AnovaModel.3 <- aov(Confidence ~ Source, data=G1_BO_ANOVA)

> summary(AnovaModel.3)
            Df Sum Sq Mean Sq F value   Pr(>F)
Source       2  99.81   49.91   13.51 0.0000295 ***
Residuals   42 155.17    3.69
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

> with(G1_BO_ANOVA, numSummary(Confidence, groups=Source, statistics=c("mean", "sd")))
                mean       sd data:n
Innovation 4.666667 2.193063     15
Neutral    2.566667 1.399830     15
Sanchez    6.200000 2.077086     15
```

c. Group 2

Regarding the second group, however, the innovative way of communicating the norms receives a very good punctuation in terms of confidence. In this case, the channel used were two famous influencers, called Devermut, explaining a talk that they had with a doctor in Hospital del Mar (Barcelona). The mean level of confidence for them is 7, contrasting with 3,5 of the TV news (neutral) and the 6,1 of President Sanchez, who is actually closer to them in terms of confidence given to people from 20 to 30 years old (Fig. 14). As, again, the p-value is smaller than 0,05, we have to reject the null hypothesis and state that not all the three means are equal and, therefore, we can observe differences in the trust level depending on the communication channel and technique.

Moreover, we can see, analysing the standard deviation set at 2,3, that the answers given in the case of the innovative communication style are the ones that differ the most from the mean, so there are people who trust them a lot but there are also people that do not trust them so much, either. In the other two cases, the formal one and the neutral, the standard deviation is also quite big, meaning that values are spread across a huge range of answers.

When taking a look at the boxplot (Fig. 34), we can observe an outlier in the case of the neutral information, which points it up to a 9 in the level of confidence, so we can say that there are actually people who do trust the news that is communicated via TV.

Figure 14: ANOVA table group 2.

```
> AnovaModel.4 <- aov(Confidence ~ Source, data=g2_anova)

> summary(AnovaModel.4)
            Df Sum Sq Mean Sq F value   Pr(>F)
Source       2  96.53   48.27   10.41 0.000212 ***
Residuals   42 194.67    4.63
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

> with(g2_anova, numSummary(Confidence, groups=Source, statistics=c("mean", "sd")))
              mean        sd data:n
Innovation 7.000000 2.299068     15
Neutral    3.533333 1.959106     15
Sanchez    6.066667 2.186539     15
```

7. Discussion

In light of the above and regarding the four hypotheses stated in the project I can reject H_3 and H_4 and accept H_2, in the case of the ones tested with the survey and also accept, the H_1, in the case of the ones tested by means of the experiment.

Firstly, and talking about H_1: More than 50% of the people take non-rational decisions when following norms during a crisis, which was, in fact and, as said previously, tested by the experiment, I can say that it can be accepted regarding the experiment done. In this case, both groups have shown to react and trust in different ways information provided by different people. Differences can be observed the most when presenting, in one group, the information in either a formal or a neutral way and, in the other group, between the innovative method and the neutral one. So, it can be said that the neutral communication technique makes no impact on young people if the outcome wanted is for people to trust the information provided. Moreover, regardless of the fact that the participants did not trust the management carried out by the Government during the pandemic, they did, in fact, trust President Pedro Sánchez when communicating new measures to the general public. Finally, in this case, participants, in general, trusted the innovative communication technique, the influencers being the one that provided most

confidence to the participants who posted a video on Instagram, a social media platform used by most youngsters. These results may have been obtained because of the fact that young people do not watch the news on TV, but they use social media to be informed of what is actually happening in the world. In fact, a recent study[36] showed that 54% claim they get news from social media sites like Instagram, Facebook, and Twitter at least a few days a week. Teens who watch videos from celebrities or social media personalities rather than news sources are more likely to learn about current affairs, according to 60 percent of those who use YouTube for news consumption.

Secondly, regarding H$_2$: More than 50% of Finnish people will comply with recommendations during a crisis, I can say that it is, for my study, true. Finnish people do, in general, say that they will comply with recommendations during a crisis, being the ones with the highest mean (4,04) and the lowest standard deviation (0,67). This means, that the general public in Finland will comply with recommendations during a crisis, whether they are obligations or not. This may be explained by the Honesty Index commented in the introduction, where people from the northern countries reported a higher honesty rate, meaning that they are more willing to follow the norms. Moreover, in 2018 Finns were who trusted news the most[37], being the ones who have more confidence in the country's conventional news media outlets.

Thirdly, H$_3$: Less than 50% of Spaniards will comply with recommendations during a crisis and H$_4$: Less than 50% of Americans will comply with recommendations during a crisis, have been proven to be, for my study, false, so I can reject them. In these cases, people from both countries have said they would comply with recommendations during a crisis, such as the COVID-19 pandemic. If we analyse the fees put during the lockdown in Spain, we see that 1.362.423 fines were imposed since 14th February 2020[38] so, this number could make us think that Spaniards would not comply with recommendations nor norms. Also, what needs to be taken into account is that this number is, in fact, higher if we talk about people who, at some point, did not follow the norms but were never caught. However, Spaniards answered in the survey to comply with norms, meaning that we have a non-rational behaviour, as we do not actually end up doing what we said we would do. In the case of the USA, a study showed that only 59% of the people always wear the mask and 14% said that they never wear it[39]. So, this data could also lead us think that they are not inclined to follow rules or recommendations during crises. However, Americans answered in the survey to actually comply with recommendations. These differences can come from the bias of using a small sample for the survey.

When studying the results of the other questions proposed in the questionnaire, I can observe that, in general, Finnish people tend to be more obedient regardless of the person, channel or method used to communicate the information compared with people

from Spain or the United States. This can be due to the fact that about half of Finns believe that the law should not be violated, even though it contradicts one's own values or beliefs.[40]

On the one hand, in the case of obligations, although people from the three countries have said to comply with them, the Finns are the ones that have the highest mean and lowest standard deviation, meaning that there is not so much difference in the answers given by the other participants from that country. In the USA, however, there have been participants who answered a very low probability of following the norms which can be justified with the fact that only 27% of Americans believed that former President Trump provided accurate information. Nevertheless, with Biden this number has grown to 58%, who actually think that the information that the President provides is true.[41] On the other hand, when information is provided by someone with whom you trust, people from the three countries say that they trust the information given and tend to comply with the rules in the same proportion. However, when the information comes from a person who is on the other side of the ideological spectrum from you, participants in general say that they comply less with the information provided, as it has been proven that people from the opposite ideology do not tend to trust the Government[42], meaning that it is difficult, in general, for us to trust someone who does not have the same ideology as us. Finally, if the channel used to provide the information is analyzed, what can be observed is that in Spain there is a big range of answers in both traditional and non-traditional channels. A study showed that Spain is one of the European countries where media has been trusted the least during the pandemic. Initially, only during the first week of the lockdown, the media concentrated on objective reporting and was largely supportive of government policies.[43] Then, the old polarized impulses kicked in once more, which led to people not trusting the information provided because it was different depending on where it was coming from.

8. Conclusions

In conclusion, what can be extracted from this project is that the communication style does make a difference in people's perception regarding the confidence that the information transmits to them. It has been proven that for young Spaniards neither the central Government nor the Autonomous Communities have managed the pandemic properly. Moreover, it has also been shown that there are actually differences in people's behavior depending on the country they live in. These differences are not only because of the management carried out by the different Governments, but there are also cultural differences. The Government of Finland have managed to gather the whole population together to face the pandemic, but Americans have been deceived by their own

President, who did not understand the significance of the crisis and refused to obey the advice of experts. Spaniards, also, had a low trustiness in the media and Government, which may have influenced their behaviour. So, what can be seen is that in Finland, where the Government reached the whole population, people tend to comply more with the rules and/or recommendations and in the USA and Spain, where confidence in the leaders of the country was lower, citizens tend to follow the norms and/or recommendations less. This shows that Governments should involve the whole population when managing a crisis and be as accurate as possible when providing the information.

Finally, weakness regarding the study that could have affected the measurements should also be mentioned. Due to the low sample size, I cannot make categorical statements, but they would in any case show a possible tendency to corroborate or not the hypotheses. The population number was low due to the difficulties when reaching people from different countries and aiming to increase level of responses and participation. One of the reasons that influenced this was the crisis of the coronavirus since it affected the mobility to be able to distribute the survey and experiment physically and therefore to obtain more results. All these limitations can lead to biases and mistakes when asserting some conclusions. So, for future investigations I would suggest to repeat this project but with a bigger sample in both the experiment and the survey in order to have more reliable results and being able to affirm certain results and conclusions.

Also in future investigations, it might be possible to use different variables in which other key determinants may define the possibility of people behaving in a non-rational way. Moreover, other crisis besides pandemics could be studied. For example, economic or social crisis in national level could lead us to understand better some cultures and societies in particular and may be more useful for governments at a national level when facing future crisis. Moreover, other variables, such as the situation and location where information is transmitted could be incorporated to future studies. This way, companies could be able to assess when and where is the better time and place to communicate some key topics. Finally, the study could be done comparing other countries who are not only from occidental societies, but from Africa, Asia or South America in order to see bigger differences. Therefore, in order to continue evolving and creating more confidence among society in a national level, but also when talking about companies, it is necessary to keep raising the awareness regarding this type of studies.

9. Recommendations

After analyzing all the results some recommendations for future crises and pandemics can be extracted. Firstly, press conferences involving the whole population should be held by governments in order to make people aware of the latest news. Also, if the political leaders explain the reason behind all the measures imposed, inhabitants will tend to comply more with them, as they will see the benefits of following the norms.

Moreover, other innovative communication techniques, such as using social media platforms and influencers can be tried out in order to reach young people who are not used to traditional media.

Furthermore, a sense of community must be promoted as it has been proven to be the only way that people who are not affected or less affected by the crisis will follow the rules to benefit society as a whole.

In light of the above, a lot of things have to be changed in the way political communication is, in general, used nowadays. Biases shall be avoided and trustful information should be provided to citizens. Also, confidence and proximity are very valuable among the population in the sense that inhabitants see their politicians as someone they can rely on in tough times.

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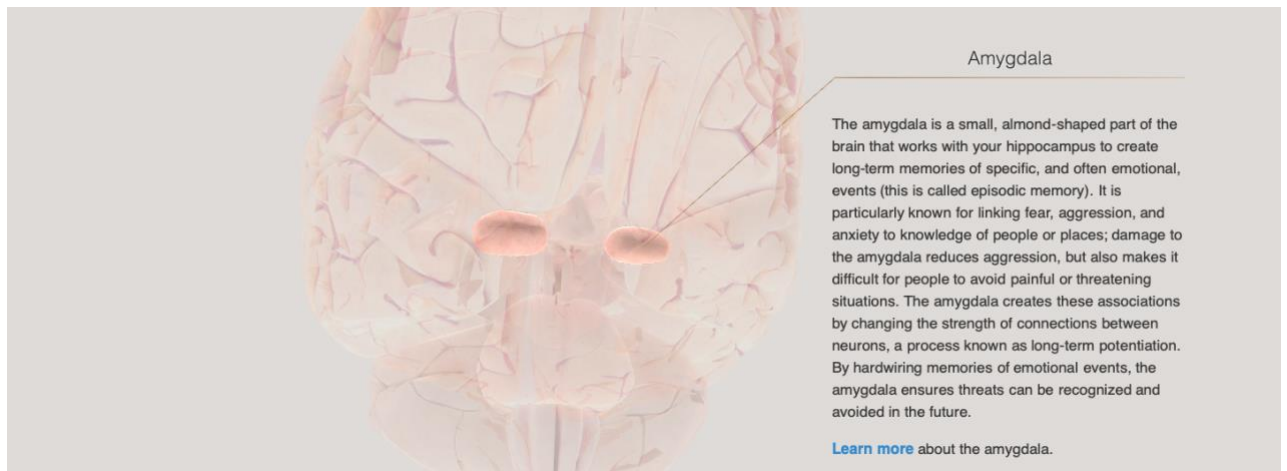28. *Likert Scale Definition, Examples and Analysis | Simply Psychology*. (n.d.). https://www.simplypsychology.org/likert-scale.html

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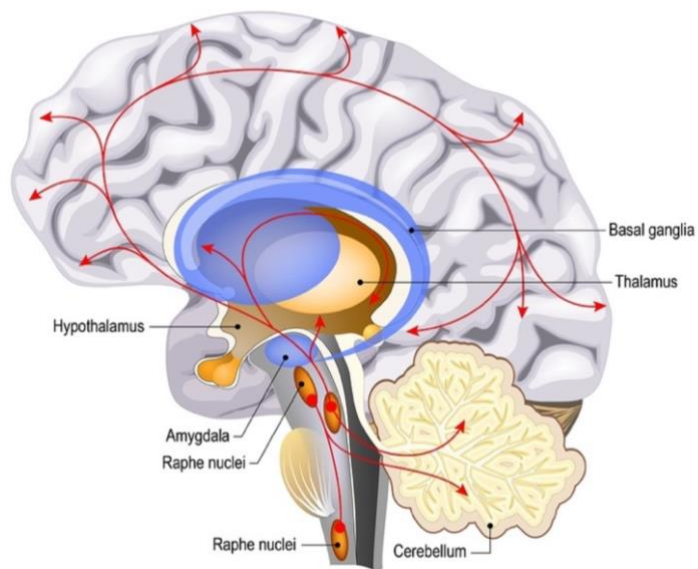43. *As Europe Confronts Coronavirus, the Media Faces a Trust Test - Nieman Foundation*. (n.d.). https://nieman.harvard.edu/articles/a-trust-test-for-the-media-in-europe/

11. Annex

Figure 15. Structure of the amygdala.[31]

Amygdala

The amygdala is a small, almond-shaped part of the brain that works with your hippocampus to create long-term memories of specific, and often emotional, events (this is called episodic memory). It is particularly known for linking fear, aggression, and anxiety to knowledge of people or places; damage to the amygdala reduces aggression, but also makes it difficult for people to avoid painful or threatening situations. The amygdala creates these associations by changing the strength of connections between neurons, a process known as long-term potentiation. By hardwiring memories of emotional events, the amygdala ensures threats can be recognized and avoided in the future.

Learn more about the amygdala.

Source: BrainFacts.

Figure 16. Serotonin pathway.[32]

Source: John P. Thomas.

Figure 17. Mirror neurons system.[33]
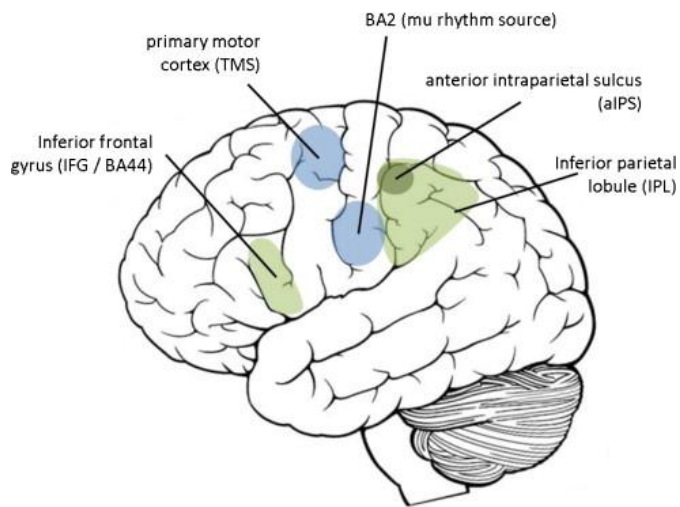
Source: Antonia F. de C. Hamilton.

Figure 18. Dopamine pathway.[34]
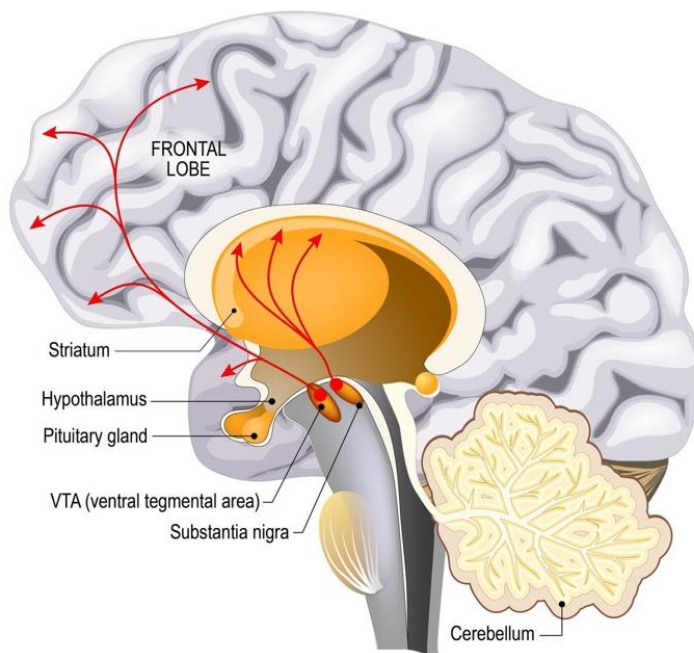
Source: Ramon Velazquez Ph.D.

Figure 19. Orbitofrontal cortex.[31]
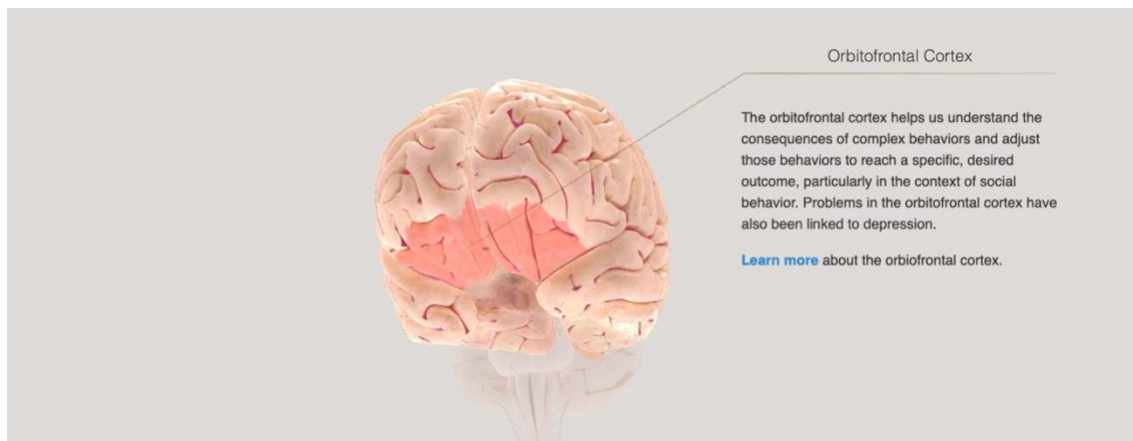
Source: BrainFacts.

Figure 20. Brain's coronal region.[6]
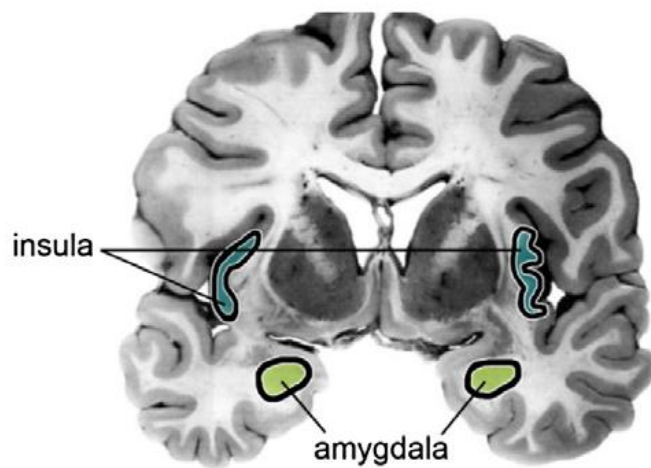
Source: Edward G. Jones, Lorne M. Mendell.

Figure 21. Survey questions.

1. Age
   a. Less than 16
   b. 16-25
   c. 26-35
   d. 36-45
   e. 46-55
   f. 56-65
   g. More than 65

2. Gender
    a. Masculine
    b. Feminine
    c. Non-binary
    d. Others
    e. Prefer not to answer
3. Country you live in
    a. Spain
    b. USA
    c. Finland
4. Studies completed
    a. High school
    b. Higher education
    c. Bachelor
    d. PhD

Imagine that you are waiting to cross a street and the traffic light is red but there are no cars. From 1 to 10 (being 1 the less probable and 10 the most), which is the probability that you cross in the following situations:

1. There is no one controlling the traffic.
2. The traffic light is not working and there is a police officer controlling the traffic.

From 1 to 5 (being 1 the less probable and 5 the most) which is the probability that you comply with the following RECOMMENDATIONS:

1. Wear a mask covering your nose and mouth at all times.
2. Stay at home whenever it is possible.
3. Do not go out from your city if possible.
4. Do not meet with people who do not live with you.
5. Do not talk in the public transport.
6. Do not smoke in the street or terraces.
7. Do not travel abroad.
8. Do not meet with more than 4 people at a time.
9. Curfew from 10 pm to 6 am.
10. Take a COVID test before visiting elderly people.

Now, imagine that they are not recommendations, they are NORMS and thus, OBLIGATIONS. From 1 to 5 (being 1 the less probable and 5 the most) which is the probability that you comply with the same statements:

1. Wear a mask covering your nose and mouth at all times.
2. Stay at home whenever it is possible.
3. Do not go out from your city if possible.
4. Do not meet with people who do not live with you.
5. Do not talk in the public transport.
6. Do not smoke in the street or terraces.
7. Do not travel abroad.
8. Do not meet with more than 4 people.
9. Curfew from 10 pm to 6 am.
10. Take a COVID test before visiting elderly people.

Rate from 1 to 5 (being 1 the less probable and 5 the most) the probability that you obey the following indications from the government but that you received the information from the following people:

1. Your favourite actor or actress says that you have to wear a mask covering your nose and mouth at all times.
2. A politician from the opposite party says that you have to stay at home whenever it is possible.
3. A friend tells you not to go out from your city if possible.
4. A relative tells you not to meet with people who do not live with you.
5. Your favourite journalist says that you cannot speak in the public transport.
6. A politician from your party tells you not to smoke in the street or terraces.
7. A celebrity that has the same ideology as you do tell you not to travel abroad.
8. A newspaper from a different ideology than yours writes that you cannot meet with more than 4 people.
9. Your favourite influencer tells you to follow the curfew and stay at home from 10 pm to 6 am.
10. Your parents tell you to take a COVID test before visiting an elderly person.

Rate from 1 to 5 (being 1 the less probable and 5 the most) the probability that you obey the following indications from the government but that you received the information from the following channels:

1. You hear on the radio that you have to wear a mask covering your nose and mouth at all times.
2. You hear on TV that you must stay at home whenever possible.
3. You read on the physical newspaper that you cannot go out from your city, if possible.
4. You read on Twitter that you cannot meet with people who do not live with you.
5. You read on an online magazine that you cannot speak in the public transport.
6. You read on Facebook that you cannot smoke in the street or terraces.
7. You hear on a podcast that you cannot travel abroad.
8. You read on Instagram that you cannot meet with more than 4 people.
9. You read on a scientific magazine that you have to follow the curfew and stay at home from 10 pm to 6 am.
10. You see an ad on social media saying that you have to take a COVID test before visiting an elderly person.

Figure 22. Experiment's questionnaire.

1. Name and surname
2. Age
3. Where do you live?
    a. Catalonia
    b. Madrid
    c. Andalusia
4. What level of confidence the Spanish Government gave you in March 2020, when the pandemic began?
5. What level of confidence did the Spanish Government give you last summer 2020?
6. What level of confidence do you have in the management of the pandemic by your Autonomous Community?

Experiment.

Group A:

- Activity 1: From 1 to 10 which is the probability that you trust the following information?
    o https://www.rtve.es/noticias/20200313/pedro-sanchez-declara-estado-alarma-nacional/2009974.shtml
    o https://www.youtube.com/watch?v=yQCzbJLNM8U (until 1:05 minute)

- Activity 2: From 1 to 10 which is the probability that you comply with the following indications?
   o Text message:

AGENCIA NACIONAL DE EMERGENCIAS:
Des de hoy a las 23:59, toda España pasa al nivel máximo de emergencia del COVID-19.

Este mensaje es para todos los españoles. Todos dependemos de ti.

Sigue las normas y QUÉDATE EN CASA. Actúa como si tuvieras Coronavirus. Esto va a salvar vidas.

Recuerda:
- Donde duermas hoy es donde DEBES quedarte de ahora en adelante.
- Solo puedes tener contacto físico con la gente con la que vives.

Todos tenemos que aportar nuestro granito de arena y unirnos para combatir al Coronavirus.

    o https://www.youtube.com/watch?v=zKeSKaYI4gc (until 1:05 minute)

Group B:

- Activity 1: From 1 to 10 which is the probability that you trust the following information?
    o https://twitter.com/salutcat/status/1344295260604805123
    o https://www.youtube.com/watch?v=yQCzbJLNM8U (until minute 1:05)

- Activity 2: From 1 to 10 which is the probability that you comply with the following indications?
    o https://www.lamoncloa.gob.es/presidente/actividades/Paginas/2020/130320-sanchez-declaracio.aspx
    o https://www.youtube.com/watch?v=zKeSKaYI4gc (until minute 1:05)

Figure 24. Boxplot when the traffic light is red and there is a police officer controlling the traffic.
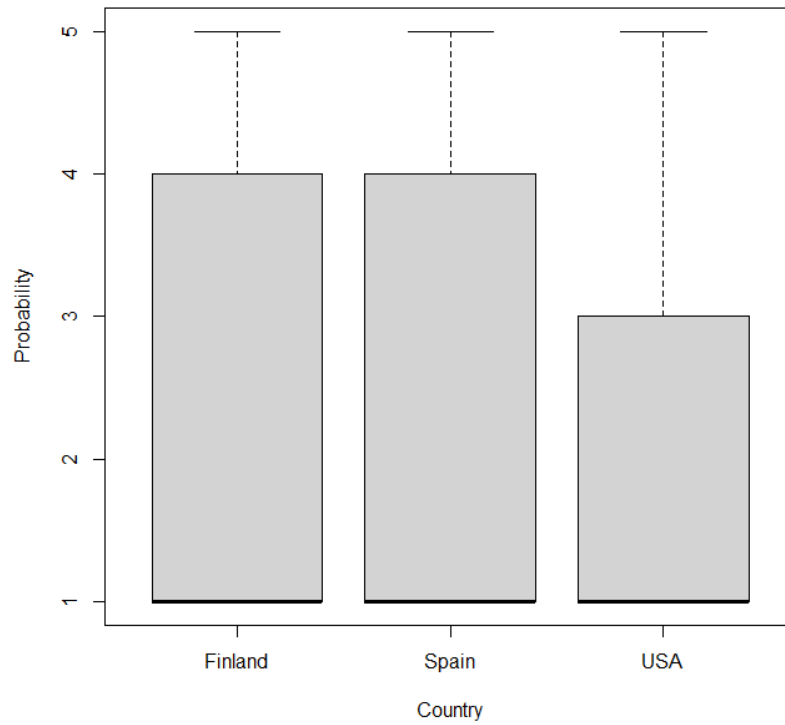
Figure 25. Boxplot when the traffic light is red and there is no one controlling the traffic.
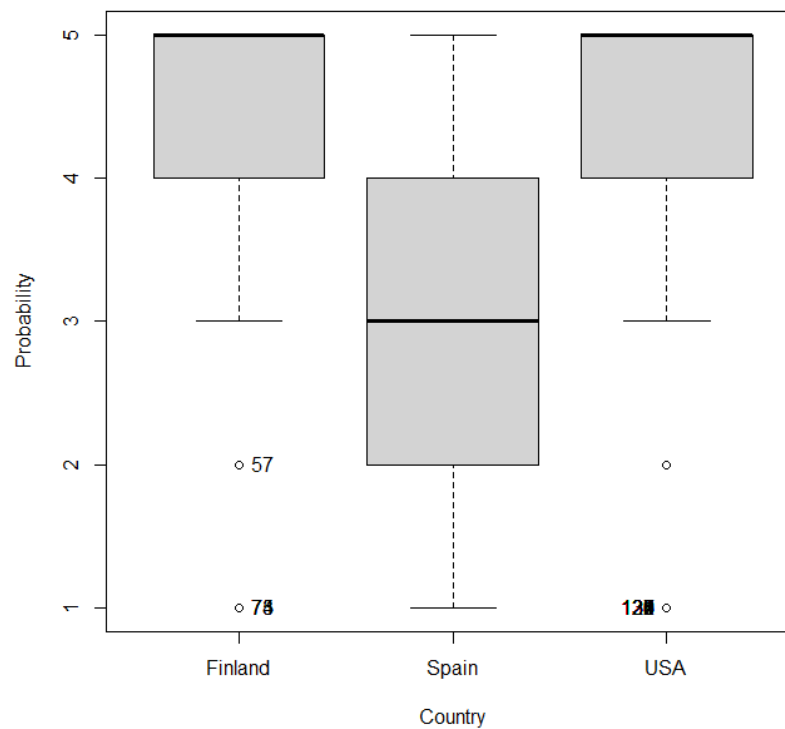
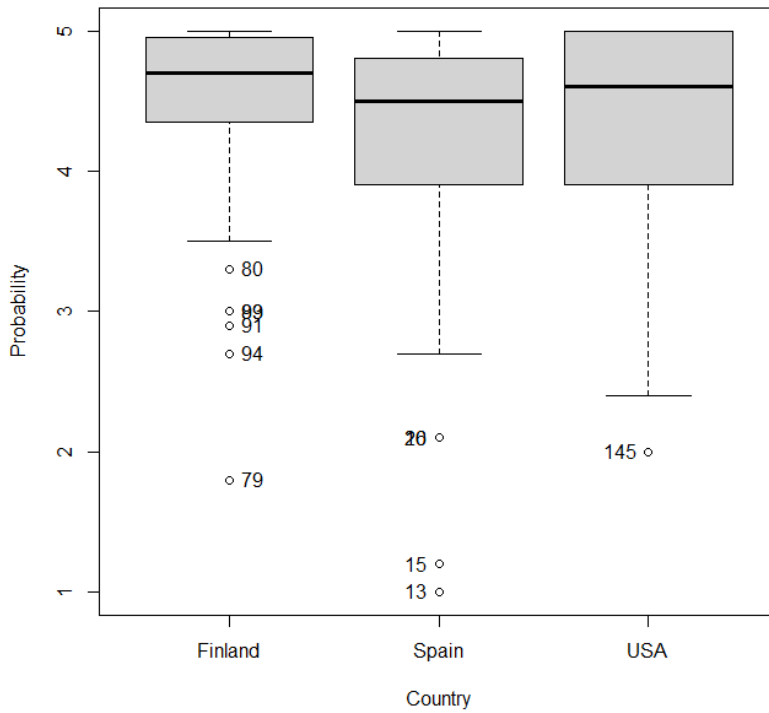Figure 26. Boxplot obligations.

Figure 27. Boxplot recommendations.
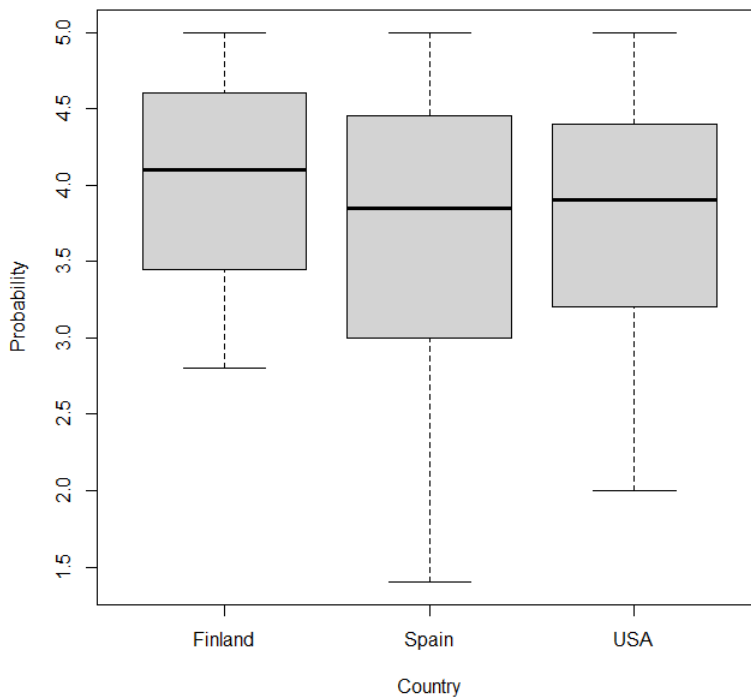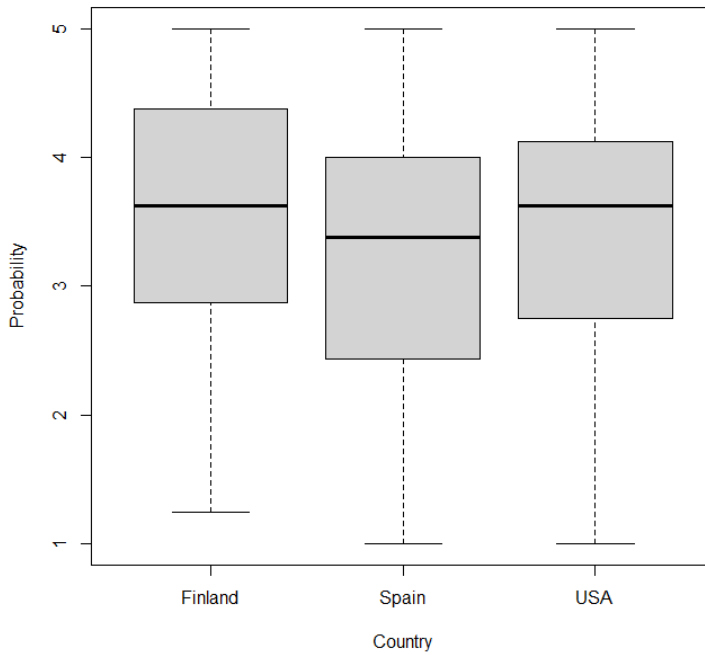
Figure 28. Boxplot person you do trust.
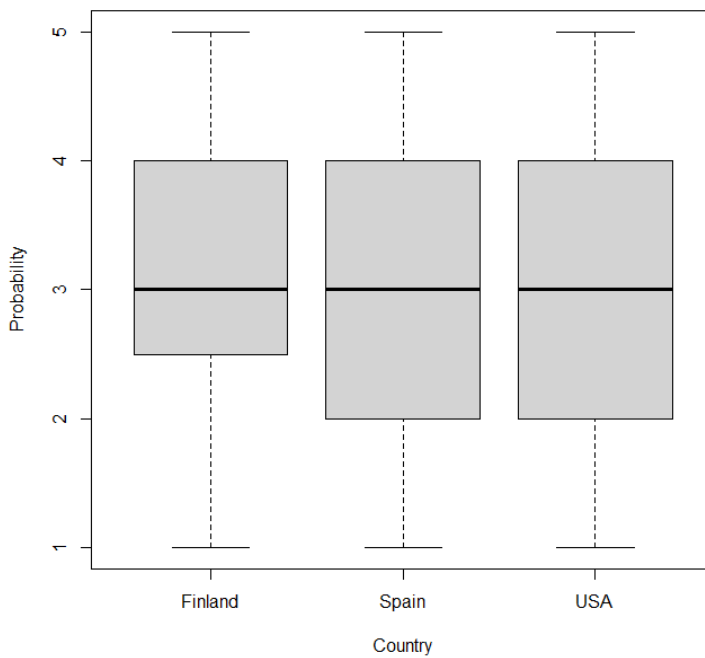

Figure 29. Boxplot person you do not trust.
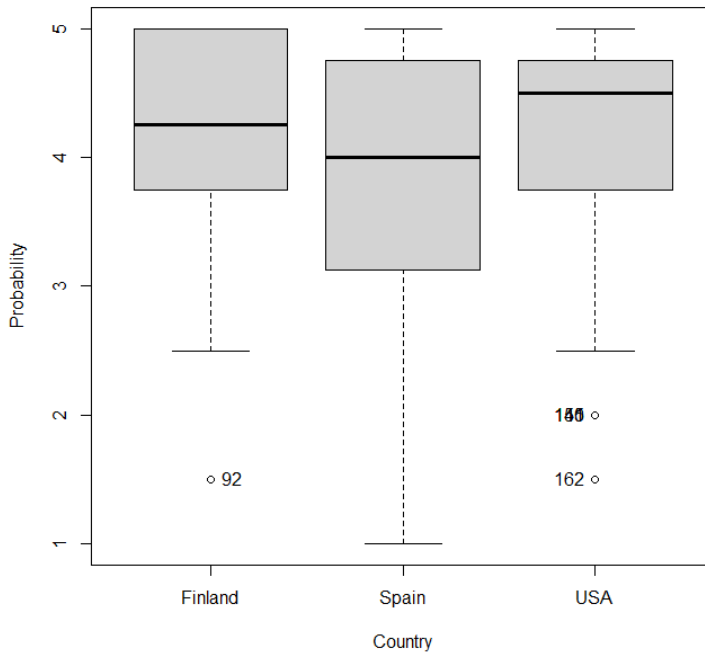
Figure 30. Boxplot conventional channel.
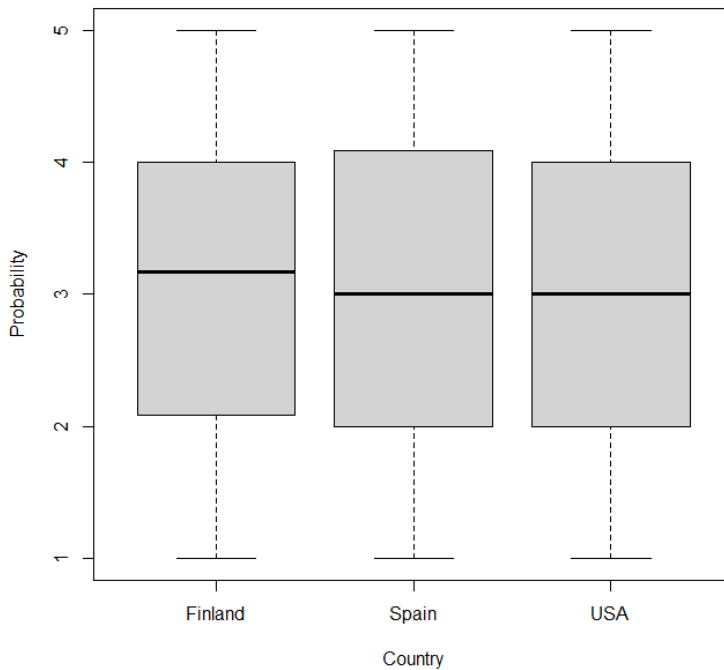

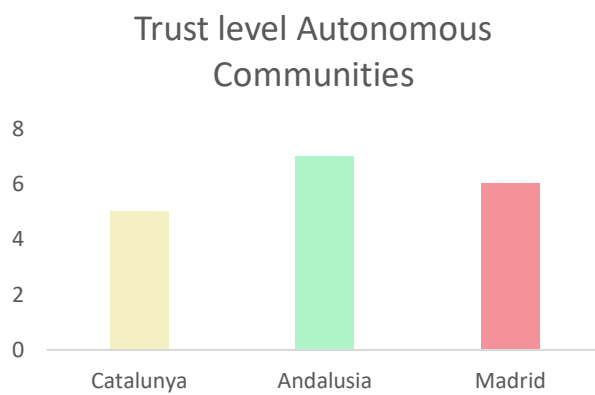Figure 31. Boxplot non-conventional channel.

Figure 32. Questionnaire's results.

Trust level March 2020

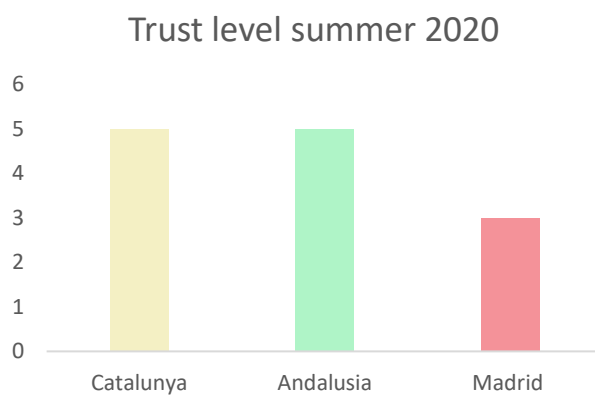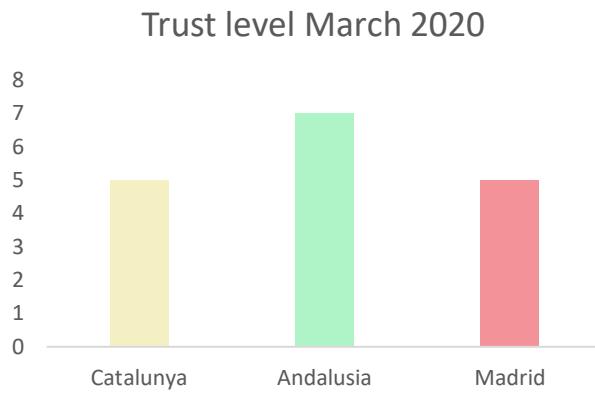## Trust level summer 2020
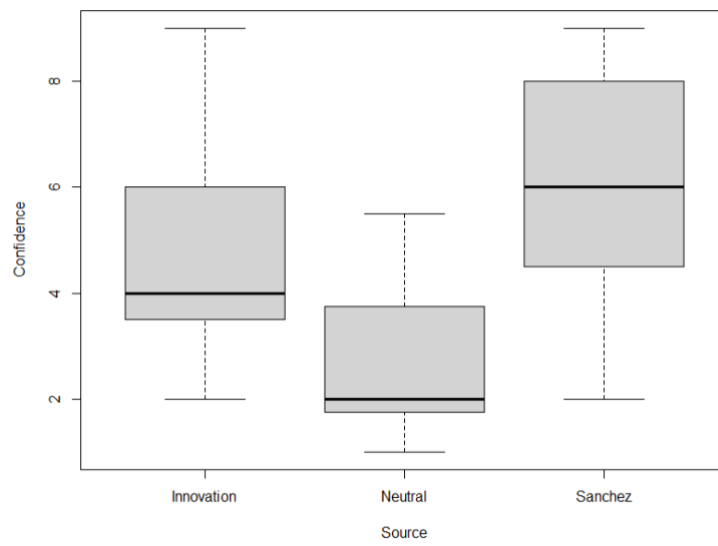

Trust level Autonomous Communities

Figure 33. Boxplot group 1.

Figure 34. Boxplot group 2.