

## **AUTOMATIC TRANSLATION. ORIGINAL TRANSCRIPTION OF THE FOCUS GROUP IN SPANISH**

----- STARTS THE FOCUS GROUP -----

**Moderator1:**

Well, first of all, thank you very much and we tell you that this discussion is quite simple but basically we are going to show you a series of images and we are going to ask you a series of questions about those images and well, as we say, there is no right or wrong answer, we just want you to answer about what you are seeing so we will start with the first of the images if you wish

**Moderator1:**

the following we are going to tell you that the context of these images is with respect to the situation of COVID in what is Spain is worth then nothing in this first image we wanted you to comment a little because you observe what data you can extract from this image

**\* IMAGE 1 \***

**GFDOC\_06:**

Well, this is a graph of apparently, well, I am sure that it is about the incidence cases. It is not known where the data are from, if they are worldwide or if they are from Spain or if they are from some area of Spain. We do not know if it is from Andalusia or Castilla-Leon, if a village if it is nothing. Well it seems to be that they must be worldwide cases because of the number of daily cases that there are, of course. I don't think you are from any, it is probably worldwide but it doesn't make it clear. Then it is clear when they start in March, it must be a European area or not, or at least when they started to record the data, then there is a decrease from April, there is a decrease until July, then in July they start to rise and now they are the data for November and they end in November, it seems that this is going to change now according to the news I have, nothing else.

**GFDOC\_05:**

I also continued pointing out what GFDOC\_06 has said. In fact, the country and the place are not indicated, which, well, I do not know if it is the topic of conversation, but it is indeed a relevant fact that is not indicated, we do not have the source either, we do not have.... well, we do have a scale. However, I do believe that this is the case in Spain because of that number, more or less, what I have been following from the news, those figures more or less match the figures of daily cases in Spain. In addition, the steep rises and falls are what we would consider the second wave from the summer onwards, which has those sawtooths with very strong falls at the weekend when no data have been reported in Spain and that strong rise, a sort of fall at the end of September and rise, more or less those data more or less match the total figures for Spain, but nevertheless I think that what GFDOC\_06 pointed out, that lack of source of contextualization title, I think it is very very relevant.

**GFDOC\_03:**

Well, the information I am missing on the Y-axis, if they are new cases per day, if they are absolute cases per how many inhabitants. From the numbers it must be absolute cases but a little bit of information in that respect would be good. And then about the peaks on weekends we think because we know how they have been giving the data but also a clarification in this sense would have been important and that's all there is to it.

**GFDOC\_04:**

if the same or between the months, then differentiate the four weeks of each month and then we could see more clearly that peak downwards of what we suspect are weekends but that from the data that have been given to us in the news, in the media, is what is reflected.

GFD0C\_03:

And then another thing is new diary cases, are you counting PCR or are you counting another type of diagnosis?

GFD0C\_01:

little more to add. Very well observed GFD0C\_05 about the weekends, those peaks, those teeth, it is true that also coincides within each month the four peaks normally and it looks like it obviously looks like Spain for everything, for how the cases are recorded is that rise in March and the rise through September, at the end of August, everything looks like that but it is true that we lack a lot of information in the graph, so we have to make speculations here, but it coincides, it is true that because of the cases registered we obviously do not know what this is linked to and how they are reviewing these cases, there is no information in the graph. We also do not know where it has come from, from which sources, from which media, there is a lack of information, we can figure it out from what we already know now but there is a lack of information.

**Moderator1:**

**well, if you want to highlight some more of this**

**Well the next question so you have already highlighted some of those aspects but just in case you have any more, what positive or negative aspects could you highlight from this image you are seeing?**

GFD0C\_06:

well the negative is that it does not give much information there is no explanation from the person who has made the graph, we need more data.

The positive thing is that we can see the evolution of the data along a chronological axis over a certain period of time, but if we take this out of context as we are seeing it, analyzing it is rather a criticism, because I suppose we would have to have something else, who has put this, what reference we have, how can we contrast that this information is indeed the... well, what are they based on, for example, if they are confirmed cases, if they are cases... I don't know, it seems to me that we cannot reach any conclusion simply with this graph.

GFD0C\_01:

I think that the most positive thing, within all the negative aspects that we have highlighted, the most positive thing is that we can see the temporal evolution, the evolution of these contagions at a longitudinal level. This seems to me to be a good thing because many of us are not aware today that this second wave is being more serious than the first one, as some media tell us, but people are more relaxed. Again, public opinion is much calmer or somehow we are already stressed from being informed and we have passed, we think that March was much more serious and here we see that in this second wave there are more contagions, at least registered daily. It may also be that there are more tests, I do not know, we are not going to go into health issues, but this graph helps us to see this evolution, to see the whole year in a reduced way. If they contextualize us, then it is ideal for that, on the other hand, because we lack all the information that we are already indicating.

GFD0C\_05:

what GFD0C\_01 says is quite relevant because it is true that in many media right now what you usually find is this second wave only, from summer June July August, at some point what you see is this second

wave to see if the wave is over, if the peak is over, but it is true that this context with the first wave does not always appear.

In that sense the graph does provide a certain usefulness. And then it is also true and that is a good thing, it is not that it is a good thing, it has to be done, what would be remarkable would be the failure of those who did not do it, but well, as often happens, I think it can be highlighted that the time periods as well as the numbers of new cases follow the same scale. We did not find that, for example, the months from May to July that would have been reduced because you say well as there are almost no cases let's make it smaller and eliminate these months with that kind of symbol that is made when the graph is cut, or with the number of cases, you say well well when it is below 5000 is less so we cut it and only show on the graph when they are peaks.

I insist it is not a particularly positive element because in the end it is how it has to be done, but well, at least it is not a failure as it often happens, so it is also good to point it out, I think not.

GFDOC\_03:

I'm thinking, because everybody is saying that it's important that we're looking at the whole picture from the beginning to the end, but if that's the purpose of the graph then I should have put, I say, what is represented by the line as a bar graph and then a moving average on top, because what happens now that we get to November and you say "ah well the pandemic is over because I have a line going down" and in reality is that this is probably a weekend so maybe a moving average would have presented the reality in a way that is closer to what it is.

GFDOC\_04:

Yes, what they have said, that the positive thing is that it is very visual and that it reflects what the whole pandemic has been and not, for example, the last wave... so it is a global graph that has not been divided into first or second wave, which is supposed to reflect the data that have been registered from the moment we started until now. But it is true that that dip in November I do not really know what it is but I certainly believe that it is not a weekend or anything because after the December long weekend everything has been going up, so it is not... that peak at the bottom in November is not real.

GFDOC\_06:

I wanted to contribute a piece of information here. Obviously we are missing the speech of the person who has made the graph because we will have to give him the opportunity to defend himself, but for example, the evolution of the first part of the pandemic and the second part of the pandemic is also related to the fact that the first wave, we already know a little bit about how things have been, well, how things have been happening. In the first wave it was something that caught the health professionals, the health system, by surprise, and here after July the truth is that they were already prepared, the health system was prepared and really here, while in the first part, from March to April, no tests were carried out, so what was recorded in the incidence was what arrived at the hospitals and what the different institutions sent to the statistics institute, to the Ministry of Health. Whereas here, from July onwards, tests began to be carried out, so obviously the number of cases that perhaps were not infected, did not reach the hospitals, they did not know they had suffered from COVID, and nevertheless - because well, I am talking about COVID but perhaps it is not something we are making assessments of values based on what we think but we do not know exactly whether it is COVID either, I think it is the COVID - but the huge increase from July to November is also the number of cases that may have occurred in the population that is not hospitalized, right? That is what I wanted to contribute

**Moderator1:**

**Something else you would like to complete regarding this image**

**Well, if you want to move on to the next one, it will be the same dynamic image and we are going to ask you the same question you see in this image, what data can you draw from it and what conclusions can you draw from it?**

**\*IMAGE 2 \***

GFDOC\_06:

well, I think it is the same, it is really the same, what happens is that it has a different design.

GFDOC\_05:

bar chart now and the line before. It is true that aesthetically it can change the appreciation but the data are the same and beyond that aesthetic or visual impression that can impact you in one way or another, the data as I said are the same and the informative value I also think is very similar.

GFDOC\_04:

If it seems that if we were to zoom in, there would be a bar like a bar per day of the month, because it is like, well at least it seems to me, that they change the shade of blue, some are lighter than others, I don't know, so maybe if we zoom in to the graph we could even talk about a table per day, a bar.

GFDOC\_02:

I am sorry that I have entered late, therefore. What I am looking at now is a histogram that is giving me information about the frequency of the cases represented, and the other graph, in the end what a line graph can show me is a trend; although the visual information at first sight may be the same, I think the information that can be extracted from one and the other is different.

GFDOC\_01:

especially if we were to detail and go into detail obviously at this scale, it is what I was talking about before, at this scale I think it is more convenient to put the line because obviously you are not going to go into detail and the lines are more useful to see that temporal evolution. At the longitudinal level it is the evolution that is what we are left with, a histogram of this type if I understand that when there are fewer cases that you can look at each bar, even to be able to see the cases of each of the days or each of the bars, then I understand that it is interesting. In this case, at this scale, I thought the line was convenient because we lacked a lot of other information, of course.

**Moderator1:**

**I would highlight is something else, at the level of that of conclusions that can be reached.**

**Okay, so let's ask the same question, which is again, what positive or negative aspects would you highlight from this graph?**

GFDOC\_03:

I think that here you can, because when you see the bar you can always color it with two colors and here maybe you could have added the information of how many PCRs or how many tests are being done and then whatever is positive you color it and maybe that way you can compare March and October or the first and second wave.

Since we have bars you can add more information and all the doubts that were arising, more or less test, would have been solved if you put the information, two for one so to speak.

GFDOC\_05:

That information that GFDOC\_03 has said seems to me to be very true. I don't think I have seen any graph like that in the whole pandemic and it is true that it would have been very useful, I think, because

you would have had very high bars and out of all these PCRs the ones that have been positive are such and in that way it is true that you would have that percentage of well, if you have more than 5 or 10 percent, I don't know how many, the epidemic is more or less under control. It's true look that would have been very useful probably and I've never seen it. That about what GFDOC\_03 said that I thought was very accurate.

On positive and negative aspects I don't see a major change with respect to the previous one. I like the previous one better but I think it is a question of aesthetics or even what GFDOC\_01 said about the longitudinal evolution, maybe you see it a little better, maybe a little clearer, but I don't see a very significant difference between one and the other.

GFDOC\_02:

Well, what I don't see here is that, I don't like the word trend because here I don't think the term trend can be used, but what I see here is the date of daily data publication. On weekends it is very noticeable that there is no publication and then when the first days of the week arrive is when the number of published data starts to pick up. So it is clearer what happens on the days when there is no data publication, which I understand are weekends, for example.

GFDOC\_01:

I am going to emphasize this suggestion. I do not know if we are here to make suggestions but it has appeared to me that it is true that this could be highlighted, as GFDOC\_05 has also said. These figures that are always suggested by the WHO on the European Union, if they exceed 300 or 500 cases per 100,000 inhabitants or such, then all this could be highlighted. 000 inhabitants or so on, so all this could be highlighted in those bars of the days or if the average is exceeded or use the quartiles or look, from such a quartile suddenly there are so many, so let's put it in red as "beware" that all year we have been like that; And so maybe we can even see the seriousness of how many cases there are, of course, all this is linked to what we are talking about, to the tests that have been done or not, but obviously we can be talking about more seriousness but in reality there are not so many infected but more tests are done, but well, at a statistical level, the figures that are counted could be used. Maybe we could put bars in green, other bars in red that would alarm us, it would be good and maybe even put those lines above, those things, guides also that the temporary before totals or the average how it evolves, use other types of strategies as well.

GFDOC\_04:

I also think that, as GFDOC\_03 has said about the colors, well, on the same day you could also mark in one color the hospitalized, others who have tested positive by direct contact, others who have tested positive by presenting symptoms, but of course that would be in another color. That is probably too much accuracy for a graph. But otherwise, I think that it is similar to what we have said in the previous graph.

GFDOC\_02:

I can tell you that the type of graphs you are talking about with the number of hospitalized patients, the number of those who are critical or not, all the evolution, these types of graphs are handled by the ministry and they are very complete. Okay, it is true that when they start to handle this type of graphs they have to divide them up because there comes a time when there is so much information that the accumulation of information in trying to see a graph that has a kind of globality in the end you do not see anything and then you have to separate the graphs according to, for example, hospitalized patients; within hospitalized patients, a person in an ICU with tubes is not the same as a person in the area they call dirty, where they are with COVID, from those who are still waiting to be discharged.

So all this is reflected in the graphs and when you start to have all the data there comes a time when a graph that you want to show a lot of information because you think it is going to give you all the global

information, suddenly you see that you see nothing, so in the end you tend to simplify. But the ideas that you are providing are there because I know them, I work with them, they have them, so they are super detailed. Nothing but that.

GFD0C\_05:

It would be interesting in the study that we are totally assuming that at all times we are talking about new cases of COVID because more or less we are all familiar with this graph and we see new cases and we think only of that; but it would be very good if Moderator1 would suddenly bring out this really is the number of cases of I don't know, of anything. As a study of agenda setting for example it would be very interesting but I say it as a comment as a joke because I understand that, I am almost convinced like everyone, that this is indeed the COVID and I think it is impossible to abstract from the subject and if it is true you are right.

GFD0C\_02:

It could very well be an influence of holiday travel in a clearing where just those vacation periods are different from ours and the incidence is more towards Christmas or winter.

GFD0C\_05:

because we really don't have, we're assuming like everything else that this is 2020 because it fits us but it's true that it could be from any year of anything.

GFD0C\_02:

yes yes yes yes yes absolutely true

GFD0C\_05:

I hope they will now give us a lesson in that not everything is COVID.

GFD0C\_06:

I find the thesis very interesting because when they made the proposal to me I said "oh oh oh how interesting the subject of information is, because what you have just said... that we have brought to the fore that right now could be anything, it could be how to do something other than, this is totally out of context. The graph is to me, personally, it seems to me that it is more didactic in the sense that whatever it is representing seems to me to be very simple to interpret, it does not look like 2 peaks, but effectively what I have been saying all along is that we have not given the opportunity to the person who has built the graph to say what he is representing. And anyway what we have been saying about introducing more data in the graph is what GFD0C\_02 says, which is that the more information you introduce the more blurry it looks what you want to convey so well, let's see if someone tells us something more

GFD0C\_03:

I one thing GFD0C\_06, you say we have to give the person who made the graph a chance to explain but that's the case the person should have put enough so that we don't have to go and ask them hey this is what it is

GFD0C\_06:

I personally am of the opinion that a picture is not worth a thousand words, a thousand words are worth more than a picture so in that sense I believe that data are never aseptic, there is always a bias of information that is transmitted even if you want to be very scientific, there are things that can not be represented in a graph and that the speech is very important, but it is an opinion that I have. That is to say, a graph does not really represent anything out of context, that is to say, behind a graph there

is an intention, there is an objective, there is something that you want to express with it. A graphic thus decontextualized does not mean anything, it means what we are saying, an interpretation, we are interpreting something according to our knowledge of our concerns of our values of our environment, that is my opinion. Well, and I believe that this also has to do with what we are analyzing here.

GFDOC\_05:

Yes, in fact, I find it very interesting because I think you have given a little bit of the key between the differentiation between data and information, well, and then knowledge that we are now ignoring. What we have here are data, data on new daily cases of what we assume to be infections by the COVID virus, but the information would have to provide us with a context. I understand that if this were to be published in the media it would effectively appear as a date, we would know that this is 2020, we would have to know which country, the source of these data, if it is the ministry, if it is all that, so that we could consider it as information. So far we are talking about data that we are interpreting as we can because we do not have the context that would turn it into information and I believe that this is the differentiation along the line that GFDOC\_06 was leading us to, I think.

**Moderator1:**

**I don't know if you have any other aspect to highlight from this image if you want we can move on to the next one and well, to change the same dynamic, we are not showing you this image now and again you can tell us what data you observe and what conclusions you can draw, etcetera.**

**\* IMAGE 3 \***

GFDOC\_06:

This seems to be a representation of a geographic map, it seems to be a geographic map, I do not recognize it, and it seems to be a representation of the area by the number of cases or incidence. They are expressed on the one hand, there are the numbers by the area to which it refers that does not explain I do not know what is 18 19 20 is not explained, I do not know, that is not explained in the text and then the incidence with another with the color and little else.

GFDOC\_04:

and then in the legend of the colors it puts a date that I think is August 15, 2020 but I'm not sure and then the legend of what each number is good and what is that map that is because I also did not identify what region well I do not know cities I do not know I do not know what reflects that map

GFDOC\_03:

And the incidence of what, every how much less than 150 every how many inhabitants, if we are talking about inhabitants, that the best thing is something else

GFDOC\_02:

Indeed, there is a lack of information because it is not known what the accumulated incidence is. It does transmit that there are a number of areas that have more incidence than others, due to the color gradation and the issue is that when someone has already seen it at some point, the head automatically identifies it. In my case, I do identify this and if I have not made a mistake, it is Madrid-health areas and it is an image taken from those that were there with the issue of the incidences to isolate the health areas, but obviously there is a lack of information because, well, your head comes back to say this image I bring it from somewhere else and then I automatically capture it, but you have to isolate it from what my head brings me because it could be this or it could be anything else, or maybe instead of the incidences it could be, incidence less than 150 because we could even, it would not be but for example for contamination, because it does not indicate that this is the number of inhabitants or anything like

that. So that's a good example of when you decontextualize on the one hand that there is a lack of information and on the other hand as you see it is the side that you have seen it in other places automatically your head associates it.

GFDOC\_05:

We are really interpreting everything because we are more or less familiar with it, I think that most of us here are probably all considered, moderately informed, probably above average, and we have identified quite quickly the curves of new cases; we more or less assume that it could be Madrid because we more or less know the shape of most countries or regions of Spain and we know that it does not coincide with any, that it could be Madrid because on those dates we more or less know that in the south it was where there were more incidences. Well, we are interpreting everything based on previous information, therefore if this information were given to us from new, which I understand is how it happens when a media provides you with information, which is usually new, it is usually new, we would have to interpret it differently, or not differently, but as we are constantly pointing out, they would have to have provided us with much more context. So, what city is this, what is this incidence about, in what period of time, we are interpreting all this based on information that we already know partly because we are also oversaturated with this information but of course in a real context when it is a media that informs you about something that until now maybe you do not know about, then all this context is essential.

GFDOC\_01:

nothing the difference from seeing total frequencies as we saw before to see the cumulative incidence by regions, by neighborhoods, we do not know what they are, by areas, it is possible that it is Madrid, yes, because of what GFDOC\_02 pointed out. We are also used to see these districts and nothing, in this case, so what I was suggesting before is that here we start to see colors to see the severity in a localized way, geolocated, of the most serious areas or where there is a higher accumulated incidence and well, I understand where more urgent or more special measures should be taken and nothing else is different.

The only thing that, exactly, because we again lack, I understand that it is part of the study, we have neither title nor source nor absolutely nothing, nor do we know. well we are deducing, we are constantly speculating, but we understand that for the background we have this year, we have not talked about anything else, what GFDOC\_05 also talked about, it would be very curious to make a study of agenda setting of how contaminated we all are with this topic; or framing, as we only think about this and how we think about this, that we have been educated all year long, there is nothing else.

**Moderator1:**

**I do not know if you want to highlight anything else if you have not already commented on some negative aspects I do not know if you want to comment on any positive aspects that you have seen or if there are none**

GFDOC\_05:

On a positive level, the numbers, which here does not appear a legend, but maybe those numbers imply that somewhere in this graph there would surely be a list that would put 1 is the region Madrid de los Austrias, 2 is the retirement, 3 is the Royal Palace, I do not know the neighborhoods of Madrid, I do not know, something like that is not that really maybe if it is a success because there are areas, especially those in the center that are smaller and that maybe put the name would have been problematic. I do believe that the numbers may be used for that, if the numbers had another logic, then I would withdraw what I said, but if they were for that, maybe it would be a good idea because especially in those numbers or in those cases of the center, it is relatively complicated to include the whole name of a



neighborhood or of a sanitary area or whatever, to highlight something. Because it is true that most of the things to highlight are negative, as we have already said.

GFD0C\_06:

Well, there is one positive thing, I think that at least the issue of colors is quite clarifying. It is known which is where there is the highest incidence, so at least for the people who have to make decisions about it, it seems to me that it is a positive thing, at least for the people who have to make decisions about it.

GFD0C\_05:

yes, and then, as in the previous case, the color scale also has the same ranges, going from 150 to 150, which could be that they would say well less than 150, then from 150 to 500, then from 500 to 550. As I said before, this should not be considered a success because it is simply the appropriate way to represent a graph, but well, as it does not always happen, it is good to highlight it, I think so.

**\* IMPROVED GRAPHICS START \***

**Moderator1:**

**I don't know if you have any more comments on this image, so let's move on to the next one if you like.**

**well in this case we have this new image and again you can see now in this graph**

**\* IMAGE 4 \* // It is the improved image 1.**

GFD0C\_04:

two parts, two colors, in the purple part you have the legend, which is appreciated, because, of course, imagine that they only put half purple, that is, until May purple and from May onwards blue, you have already interpreted it, so here it is appreciated that at least the explanation of the color comes out.

GFD0C\_01:

Here the most important thing is what we were speculating in the first graph, where those data also came from. We thought we knew that it was from COVID, from daily COVID infections, but we did not know what they were registered with or where those data came from, and here it explains that in that first wave, also perhaps because of what we had been pointing out, that fewer tests were done or were less widespread and so on, because here they explain to us that probable cases were also included and from a certain date onwards they stopped including probables, Well, here they explain that they were also including probable cases and after a certain date they stopped including probable cases because it is understood that the tests were more widespread, they started to do more tests, and only the cases confirmed with PCR and with the ELISA test, the analytical test, arrived, and this is when these data started to be, I understand, more reliable. So we see these two waves, but no longer waves, but above all this change when testing began to be done in a more extended way, more massively to the population. And well, those probable cases may indicate us a little more the real cases that could have occurred in that first wave, but well, that is what we were talking about before, when we did not have these data, it is true that it is true that much less cases were registered even with the probable cases, there are less infected because well, because obviously the tests that were being performed at that time had nothing to do with those that are being performed now.

GFD0C\_03:

I think this one is confirming that the previous graph was wrong, it was mixing potatoes and tomatoes and now they are still mixing but at least they tell you. So this graph is better than the first one

GFDOC\_01:

Apart also, it is true that it has nothing to do with the visualization, and we are here talking about the health crisis and so on, to talk about the fact that of course the tests that were being included, even rapid antigen tests and those probables, I understand that the probables are those of the rapid test and so on, but we all know today that they were very unreliable, that is, that not even in that first wave, well we have some estimated data, but there was a jumble of data of people who could have, are really infected, false negatives, false positives, people with pharyngitis, with pneumonia with other types of things, and many others without symptoms that were not being registered, well, that is the first wave and then, it is true that from the moment we start to register what we understand to be more confirmed, more reliable with PCR or ELISA, more reliable with PCR or ELISA, we understand that this blue band starts to be a little more serious, more serious, the registration of the crisis in this country, although we know that it depends a little on the region, but we understand this change, it is good to mark it, to count on this information.

GFDOC\_04:

We can also see that the change to see what tests are taken into account coincides with the de-escalation that until May 10 we were in confinement and from May 11 the phases began and then from then on we can talk about the fact that they started to do more PCR tests. Well, you could have been at home on April 3rd and had fever, but since you did not go out, you could have spent your fever at home and then it turned out that it was COVID. But now you really do go out, you work, you have a fever and obviously you go for a PCR test.

GFDOC\_02:

From the graph I am struck by the last data, you do not know why the line at the end falls so abruptly, which also gives the feeling that the falls are days when no data are reported because I understand that it is about the publication of daily data. I am struck by that drop that I do not know if it should be represented like that because the feeling it gives is that there is a trend, then it goes up a little bit, then it goes down and suddenly it drops sharply, because there is no data I understand that it is like that, but I do not know if it should be seen because the feeling it gives is that the last day that data is available it drops, as that is a little strange or it is just a little bit striking in sense and now because that does not happen there is no more.

GFDOC\_01:

It seems very strange to me because we are talking about days, of course, although if we were talking about weeks or months or annual, each longitudinal annual strip would be from 2000 to 2020. I understand that there are times when we do not have data, we only have data for half a year or for the first two months, being a week we only have data for one day, it is normal that they go down because we do not have all the data, but for one day the whole day is recorded, it is very strange to have, that only the data for the first hour of the morning has been recorded? it cannot be. That's why it seems very strange to me, I don't understand this plummeting drop.

**Moderator1:**

**I don't know if you want to highlight any other positive or negative aspect of this image.**

**Well, let's move on to the next part, now the question we are going to ask you is that if you had to illustrate a news item about these data, in this case this situation concerning COVID, which version or versions or neither of the two would you choose to illustrate it?**

**\* CHOOSE ONE OF THE TWO GRAPHS**

GFD0C\_01:

Well, it confirms that it is COVID, so that is the first thing and well, if we have to choose something, obviously the second one, which gives us more information and we know what we are really seeing in each of the two, we know what is included, the data that is included in each of the graphs up to what time of the period and from what time data is started to be collected only from these two PCR and ELISA tests because that is when they started to be done on a more massive scale and started to reach the population. I do believe that we are still lacking other important data, but obviously I think that the second one.

GFD0C\_05:

I would also go for the second one but I would like to highlight something that I think GFD0C\_02 commented, I am not sure if it was GFD0C\_02, because I do not always have all the faces on the screen we have all six, but I think it was GFD0C\_02 who said that in the ministry they have extremely complex graphs with a lot of information, information about information, percentage of this of that of the other of the other and that those graphs you can't transmit to the general public either because they are not going to understand them and in the end what they are going to see is a hodgepodge of lines figures data that they are not going to that they are not going to understand and that in the end they are going to completely ignore in this case the addition of information I think simple enough. However, more information is not always more useful because there may come a time when it is excessive. However, in this case, if we only have these two options, I would also opt for the one that is more complete because we do not reach that level of saturation, but I do want to put on record what was said before because it is true that adding information just because it is more information and more complete is not necessarily going to make understanding clearer or better.

GFD0C\_01:

I believe that this is going to be indicated by the media or if it is something internal institutional or if it is something more of a dissemination, that is going to tell us which graph to use, obviously, as always, but here we are not talking about stacked bar graphs with a lot of different data that it is going to cost around here, it would only be expected if the public, the reader, really knows what ELISA is, the PCR test and what a rapid test is. I believe that it depends on the dates prior to these dates in November-December I believe that almost all Spaniards have heard of this and know what a PCR is and what an ELISA test is, I believe that everyone could understand this, that is, it would be understandable.

GFD0C\_03:

I think you have to say that the objectives as it is there but if you accompany it with a speech you have to be careful what people are going to read. what do we want to pass the message that the second wave is worse? because the second wave is including all confirmed cases and test but in the first wave there are probable cases as you can read that the first wave is starting the data when in fact it all depends on the number of tests that are being done. So it depends on the information you want to pass on to the general public you will have to put one thing or the other. so if you want to say that the second one is worse either one of the two the truth will work and in fact maybe even the one below you can tell people that the second one is worse because the first one is maybe inflating the data but maybe the first wave was worse because we don't have the, completely, we don't know there are people that I don't know in case of a test. So it all depends on what you want the public to read that lets scare people to stay at home because it all depends on what information you want what you don't give and why like at the beginning when you gave us the first graph we didn't have the information and we were already starting to have doubts but not everybody is asking those questions I just wanted to say that.

GFD0C\_02:

I agree because this depends on where you include it or how the context is where it is embedded within a text, which is what GFDOC\_06 said before, i.e. it also agrees that a picture is not always worth a thousand words. Well, it depends on where it is then, and here the only thing we want to refer to is how the data were collected without taking into account the importance of each of the waves, because it simply reflects that more data were collected from the moment when more tests could be performed, more PCRs could be performed, more could be seen how it was going without INGs and so on, so that's the way to go. And if obviously what you want is to scare by saying hey look there is more the tip of the iceberg now than what comes out is still a little bit higher and bigger outside the surface, it can also scare depending on what you want to use it for, the second one gives some more information but it doesn't give at best everything that might be necessary to treat the graph individually because it is necessary that this is embedded in some kind of explanation or text content.

GFDOC\_06:

I think that almost all of us have the same opinion that it depends on where this graph is going to be published, it is not the same to publish it in a medical journal of epidemiology than to put it in a press or in a sensationalist media, the objective of which is to scare people, that is, I think that the information of a decontextualized graph of the media can be interpreted as we are interpreting it, but we are also making many value judgments and we are not exactly objective and we are not only trying to provide data but we are already putting a lot of discourse on our part.

GFDOC\_01:

I wanted to add that obviously the interpretation of these or what we are seeing are only daily data recorded with contagions. if what you want to know and also express the public to whom this graph is addressed is to see what is the severity of each of the waves or temporarily obviously should include other data such as mortality.

Obviously, which are the cases of admissions to the ICU, which are recovered, other types of data that some graphs have given, but there we run the risk of stacking things and of people understanding them, and in this regard I would like to comment that before the summer, in that first wave, I had to debate and discuss with some people, even within the family, because they did not understand this type of graphs that stacked on the one hand the infected that in some graphs were active infections, or active patients, which are obviously what they did not understand, or active patients, which are obviously what they did not understand that in some cases the contagions are contagious for 10 to 15 to 20 days and then they stop being contagious and how they recovered. I have actually explained to some people that they are lying to us because there are going to be more recovered patients than infected patients. Because obviously the infected are a time and the recovered are cumulative, having more and more. Here we enter into the danger of really seeing this but obviously if what we want is being said in many regions obviously I do not want to indicate Madrid, but in certain regions where less tests are done obviously less daily contagions are recorded and we know that the safe thing that does not stop registering are admissions to ICU, intensive care and so on. So, well know that they could be supplemented with these data if what we really want is severity

**Moderator1:**

**Well, I don't know if you want to comment on anything else, let's move on to the next image, which has also been a little bit the same dynamic as this one.**

**\*IMAGE 5\* // It is the improved image 2.**

**Moderator1:**

**well as you can see you have this new image with a slight change and again comment that highlights the positive aspects that you can take out of this image**

GFDOC\_04:

what we have been talking about, that the drop on weekends is no longer a speculation but is told to us in the legend, which was clarified as of July 4.

GFDOC\_02:

yes yes yes, so now at least we don't have to keep looking around to see that it is clear that at the weekend there is less communication and that this is the decision making that at some point will lead to

while at the beginning it is that an incidence mannarino weekend that we were all more clueless and crazier than I hope is that at least makes it a little clearer and also tells you above that is to say with that already explained

GFDOC\_03:

I have to say that even so despite the explanation it says that weekends are updated on Monday as if to say weekends are done wrong and on Monday there is a peak why but it is not very clear to me why it goes on and on giving data weekends but they are not correct at all and then it has its peak which by the way the peaks are usually bigger on Friday than on Monday which I would always expect it to be a peak if Monday is accumulating weekend stuff I would expect it to be a peak but I would always expect it to be a peak on Friday it is the day of the week. I would always expect a peak if Monday is accumulating things from the weekend I would expect the peak but the peak is always on Friday, it is the day before the weekend, that is to say that it is a little bit yes but it can also be because it is the end of the week.

GFDOC\_04:

In my experience, there are people who have done a PCR on Friday and have not been called by the tracers until Monday and there are others who have already called directly on Saturday and then there are situations where you get the result the next day and others where you have to wait three days; then I think it is a bit of laboratory, work, tracer, that on weekends there is less staff, but I think that infections occur both on weekends and on weekdays.

GFDOC\_05:

at the end surely something relatively useful is to make a point in all really this would be a point to include in any type of information after all but well in these graphs that is the case we are dealing with also, a vision as in the rear view mirrors the objects in the mirror are closer than you think; well here the same thing, this information must be taken into account that there may be processing errors, the time at which the test is done, not everyone is tested, so the actual cases are greater than the data we have because there is insufficient test not everyone is tested.

I don't know, a warning not in the sense that it is necessary to evaluate it, there is this information but not all the information that is there is sufficient to understand it.

in this case it would be useful what several people have already mentioned, it is that speech that complements the image where you can explain in a few words that if here we have registered 20,000 cases surely there are more because not everyone has the option or the interest or whatever or the ability to take a test in all cases, therefore that speech that complements the graph is also useful as a warning, as an aid to interpretation.

GFDOC\_03:

For me the fear is that this discourse is sometimes absent, you see the media and they show you a graphic and they skip half of the information when they have to say these clarifications, because if you put it in the form of a legend at least it is there and if the announcer forgets to say it, it is there.

but many times, especially now because we understand the subject, you realize how they are giving the information, and about other subjects that maybe we understand less, you believe things and maybe we can no longer believe them.

GFDOC\_05:

of course, and if in the end this is valid for I believe that for all types of information, both visual and textual, in the end we have to make a selection, honest or not, it is up to each media and each professional, but it is true that something is always or almost always needed.

GFDOC\_06:

Well, you know that I work in a hospital library and so the truth is that we are used to being told, to waiting for news that gives us a clear message of what to do, like a yes-no answer and what is happening is that in these circumstances in which we live there are no absolute truths because science does not have an answer to what is happening so we are doing what the expert epidemiologists, virologists, geneticists are telling us but they still do not know. So I have the impression that they would like to give a clear answer on what to do but they are doing it and sometimes they do not know. For example, now with the mutation issue, the mutation has not yet been sequenced and nothing is known yet, so we are not waiting for a graph to give us the solution of what we have to do and maybe that is why we do not see that there is a clear situation of what the graphs say or what the media say because scientists are always very cautious when they give the answer to the questions that the citizens who are laymen in the matter want to receive a clear order of what we have to do and right now the only thing they are telling us is what we have to do. right now the only thing they are clearly telling us is that we should stay at home and not get infected because there is none either, they can only give us a graph like the one we are seeing now of the evolution of the cases so that we are aware that this is serious but we cannot say absolutely everything in a graph or in the media because what we are really waiting for is for them to tell us that the vaccine will solve everything and now they are not saying that the vaccine will not be the solution to everything. So a little bit in relation to the COVID issue and all the information they are giving us that sometimes we have the feeling that one says one thing, others say something else but then when you go to the scientific journals, to talk to the experts, they never talk about completely clear things about what is going on because we are studying.

The vaccine took very little time for what it takes to get a vaccine and it's all against the clock, I don't know if I was a little out of rhythm but

GFDOC\_02:

I wanted to comment on one thing, but following what you have said, I wanted to comment on something else. For example, I could use this graph as it is, for example, to accuse an organization, a community, to say, let's see what happens on weekends when you don't have the material resources or the human resources to report the data, for example; Or the other way around, well, let's see this graph what it shows is that it seems that on weekends there are fewer cases but it is not because the incidence is lower or because the pandemic problem is lower but simply because it is an organizational issue in which fewer cases are reported on weekends. That is to say that even one graph could be used as an explanatory method, with the context, and the other one could be used to add fuel to the fire and there to attack X in the sense that we are not providing either human or material resources or to explain "look, I have neither human nor material resources", that is to say, that this same graph can be used for different objectives.

and then in relation to what you say GFDOC\_06, well, let's see, not even they themselves, the other day I was running a debate between X who is the one in colorado and there was an epidemic not any X and between them with the issue of aerosols is that they did not agree and they will never give you anything definitive yes or no because they do not even really know and why they have to assemble teams not only of epidemiologists and virologists and health environments but they have to assemble

teams with people from other areas such as physics or knowledge of aerosol water in this sense is that we have all been caught quite lost because we are going to catch the whole scientific and non-scientific community quite lost because they were not giving the importance to what should be given the importance to research and many other aspects because well it was just that tipping point.

**Moderator1:**

**Well, thank you for sharing your thoughts and if you want to move on to the last of the images we have left and well, they are now from before and well, before this, we are going to ask the same question that you have already commented a little but again we ask the same question: if you had to illustrate a news item, which of the two versions of this graph would you choose?**

**\* CHOOSE ONE OF THE TWO GRAPHS \* CHOOSE ONE OF THE TWO GRAPHS \* CHOOSE ONE OF THE TWO GRAPHS \* CHOOSE ONE OF THE TWO GRAPHS**

GFD0C\_03:

I liked the explanation of GFD0C\_02 the second one in plan to put the weekends the peaks are explained by the weekends and then if it is used for what it is used but I liked the way they read something he said

GFD0C\_01:

and of course I understand that we are really talking about an informative media news, I understand that there is no reason to hide anything if there is something that does not fit with the people what I was talking about with people close to me before that there are times when people think that they are being deceived and it is because of this kind of things that exist there are strange peaks that suddenly go down and up and they do not understand why they are being deceived through the internet today. I think that there is no reason to hide anything I think that we have to give it is true that without external information but this is something simple I think that everyone can understand everyone will interpret as they want obviously the news to be as rigorous and objective as possible these data but everyone can interpret as they want to obviously the news to be as rigorous and objective as possible but I think that everyone can interpret the news as they wish, obviously the news can be interpreted as rigorously and objectively as possible, but everyone can interpret it as they wish, what is clear is that there is some data collected daily, this does not only circulate with that data collected daily and on weekends the data goes down, it is not collected or it is not collected as much on Mondays there is a peak of increase precisely because that data is accumulated, so people should know that there is no reason to get used to other types of ideas. I understand that we have to choose the second one for this very reason not to hide so that people don't have any strange ideas about what happens in those peaks, why is it happening there, well, we have to know what happens with the administration, these things happen, I'm going to take away everyone's interpretation of what is bad, what is good or technological, what is normal, nothing happens.

GFD0C\_03:

in fact, it is right to say that it is because there is no work on weekends because if you are not in that information there are no people to collect the data, someone can tell you that I am going to party on weekends because people do not get infected on weekends, so you have to say that it is because there is no data because they are not collecting it.

**Moderator1:**

**I don't know if you have any further comments regarding this image or this comparison**

GFD0C\_06:

I would also put there in the case of putting it in some media for example on television I would put the source of who has made the graph, if the ministry if you are an autonomous community of a source has been an interview of epidemiology that is I think you should give the person who consults the graph who has made that graph because I think a reference that adds value to the information that is there

**Moderator1:**

**well, if you want we can now move on to the last of the images that we wanted to show you and in this case the same as you can see what conclusions you can draw from this image, the image itself is the two graphs.**

**\* IMAGE 6 \* // It is the improved image 3.**

GFDOC\_05:

Of course we are seeing a correlation, aren't we? the neighborhoods or areas with the highest incidence are those with the lowest average income. It is important to point out that the classic warning of correlation does not imply causation, but it is likely that there is a strong relationship. Evidently, in the neighborhoods, in neighborhoods 8 or 9, those large neighborhoods that I understand to be, I do not know the moral or places like that, if everyone lives in their own large house with a garden you do not need to have contact with other people, the incidence of the virus may be lower than in an apartment in Vallecas where a lot of people, also with, I do not know, if less resources or less access to health care, live in a large apartment a lot of people. Evidently, if there is this correlation, there may be a causal factor for what we know, I insist on what we know from what we have been seeing in the past weeks or months. However, it is true that the intentionality that the media may have, which has also been mentioned before, in this case we could want, in this case I think it is clear that if that connection between both graphs is true, but it could not be and it could be another case in which we want to connect incidence with the color of the cars for example and they say ah well no, look there is a connection or there is a correlation and in that case it would have nothing to do with it and it would be pure chance or it would be due to other things. I insist that in this case if there is a correlation, in this case they seem to me to be two graphs that are better understood together and that one information complements the other and that it is not that in 13 or 17 or 12 they are more irresponsible but that maybe this economic factor is also influencing but well that in other cases it might not be and that this also has to be taken into account when it comes to see what they are trying to tell us.

GFDOC\_01:

it is true that this land says but obviously using this comparison for this correlation is completely biased, it is intentional, it has been used all these months, and I believe that this same correlation could be made with other variables, let us say much more serious, much more really related to the contagion or not, the lethality of the virus or not, than the income itself, and this obviously does depend on the editorial line, on the intentionality, on many other things.

It is something purely political and that I understand that these two graphs I do not see it serious to compare these two graphs because it could be compared could be correlated with other things such as family composition the composition of the household. If in a household there are two people or in a household there are 15, if the use of the subway, in which neighborhoods in districts the subway is used more, in which district it is used less, what you do, the educational level, the jobs...

GFDOC\_05:

GFDOC\_01 but this is very much influenced by the average income, that is to say, if you have a very high average income you do not use the subway as much, surely, or if more people live at home if you have a lower income, so that you can get out now to summarize it, let's say if it is useful, it is not the only one but if it is useful it is not.



GFDOC\_01:

GFDOC\_05 but I think that this interpretation is your interpretation and I think that it is not what is useful for us to know what is contagious, what is contagious to me is not not not having money, what is contagious to me is using the subway, and what interests people is not having to make this interpretation because then we are entering into what we have entered lately, which is to criminalize immigrants or poor neighborhoods for the simple fact of being poor. I believe that the correct data would be to give sector services or where the subway is used more without knowing if those people are poor or if they do not use the subway more, because obviously they are more infected; or they live in apartments where they are overcrowded. If we use that interpretation you do it, but public opinion does not always do it and I think it is not coherent, it is not a variable, income is not a variable.

GFDOC\_05:

it's not the income per se, obviously it's not how much money you have but what it translates into, that's what it effectively says or about the metro in education, but I don't think it's possible to introduce, of course there are so many, the use of public transport, the type of work you do, the number of people per family unit, the size of the apartment, all those factors, you have to make 27 graphs, so you have to make 27 graphs.

GFDOC\_01:

I don't think that one is enough, so we do one with the family composition or one with the use of the subway where the subway is most used, which is very simple. In red the districts where you take the lines where you use the subway more, and another one how I live in the family, and I think that is more sanitary, in sanitary terms I think they give me more information to know where I can get infected more or not. We talked about the aerosols, that the simple rent, that of using the rent, seems to me to be biased and intentional, it seems very intentional to me.

GFDOC\_06:

I believe that in this dialogue that is taking place between GFDOC\_05 and GFDOC\_01 I think it is a clear example of data interpretation, that is, who would choose one data, who would choose another.

I personally think that income is a fundamental variable because, even if it is not, if you have five hundred euros a month you cannot live in sector 8 and in sector 8 is where people probably do not need, as GFDOC\_05 says, to take the subway and have everything in their house and do not have a house with more favorable conditions. In other words, I believe that income is a determining factor of the level of health of the person and science says that depending on your income your living conditions and your quality of life is one way or another and this is indeed interpretable but I think it is very well brought in.

GFDOC\_02:

I just wanted to add one thing that I obviously agree with GFDOC\_01 and GFDOC\_05. On the one hand, because I agree with the interpretation you have made this time I think because you were looking at it, but of course here for example, if I look at the area as well as well, it is not the same if there was another graph or if this graph was put instead of income with population density, maybe it would help more because obviously, for example, zone 7 is an area that is centered, that has a high income level but, for example, its contagion index... You know, I mean, what happens with zone 7? Well, maybe it is an office area or an area where people do not live, it is an area where people go to work, so let's see what happens with that. So it is true that I believe that the rent makes a bias at the level of interpretation and that other factors would be missing for commuting, communication, such as the subway issue, the aerosols, and well, as many people said, that I live in an area with a very high incidence but I go to work

to an area where there is not such a high incidence. So that also has an influence, so this is something to talk about for hours and it is very interesting.

GFD0C\_01:

I don't want to but it will only come back to the same thing, I think that we work on this and we know how it works and I understand that the interpretation made by both GFD0C\_06 and GFD0C\_05 is positive and I think we all do it and obviously these terms are linked to income with these types of issues, but public opinion does not make this interpretation and public opinion is also contaminated by other speeches that we are hearing that this minimum income also entails more parties, in a rhythm of life, I think that only leaving the income that can be criminalized and other interpretations can be made, I think that this is something that I am not interested in at a health level, at a health level I am interested in knowing that if I take the subway more than if I work in the service sector and I am serving drinks I can get more contagious and that is what interests me, but at the income level I think that public opinion at a health level does not interest us.

GFD0C\_05:

This last sentence is the only one with which I do not agree, I think it is interesting because I believe that it is a factor, as GFD0C\_06 points out. For example, it is useful to explain not per se, not because of the fact of having more or less money, but because of the implications of the use of public transport, your job, etcetera. However, and here I agree, your criticism of this graph is not because of the information it provides, but because of the possible use that can be made of it, the fact that one might say "well, that's the poor, it's the immigrants" or whatever. Indeed, I fully agree with that and that is a risk, let us say associated, that this chart may have. Now then, the debate we are opening is another one, that of the information we provide, the one we consider more useful or the one that may have certain effects and there, well, that is one of the key discussions of journalism as always, what information I have to provide, the one I have access to or the one that is really useful for a certain type of population, whatever it may be. It is true that the best thing to do, to inform or to use this graphic may be associated with a criminalization of certain sectors, I agree with you on that, and I also agree that we should try to avoid that criminalization in any way possible. However, I still think that the graph provides you with information and maybe it makes us think, well, maybe what we have to do is not to confirm zones 13 or 12 but to try to achieve a more adequate redistribution of income in the future. But of course, that would be a longer term reading, a reading that we can perhaps make in this group of people, I insist, surely more educated than the average, and I understand what you were saying, that a large part of the public opinion will see the graph and will say to the poor or the immigrants or whoever they are, "look what they are doing". I understand your concern, let's say, but well, I do not share it in the sense that from a journalistic perspective I do believe that beyond the effects, you also have to take into account that you have to convey information even if it is not always going to be understood. Perhaps here, then, this discourse that has been highlighted so much before would be very good to put "this does not mean this, however, but that this translates into the use of public transport, etc."

GFD0C\_01:

Obviously we are talking to everyone as a posteriori and now I can talk about it knowing what these graphs have been used for, so I say that it is not convenient now a priori it could seem positive but I stress again that if this relationship is made, other variables must be included, it must be clarified what it translates into because if not in the speech an article explaining why not only stay with the income because it is not what we are talking about, it is not the income and income redistribution. This has been used to avoid taking other measures that are really necessary, that is, it has been used to confine certain neighborhoods, not to increase the frequency of public transportation, not to improve working conditions, that is, for those things that are really important variables, which is what I am referring to.

What is relevant is working conditions, public transportation, not that the poor get more infected because well, but what is important is because we are going to avoid it by providing more public transportation, whatever it is, so those other variables are the ones that I am missing, which are the really important ones.

**Moderator1:**

**I do not know if you have anything else to contribute to this discussion in fact the next question following the same dynamic is related to precisely this because what image of these two could illustrate for, I mean, would you want to, use to illustrate a news item that of course depends on the content of the news as we have come to comment before but well in this case which of the two or neither of the two or the two you will see more appropriate.**

**\* CHOOSE ONE OF THE TWO GRAPHS \* CHOOSE ONE OF THE TWO GRAPHS \* CHOOSE ONE OF THE TWO GRAPHS \* CHOOSE ONE OF THE TWO GRAPHS**

GFDOC\_04:

I think that what has been said before is that in this case the words are worth a thousand words more than the image because, just as the fact that the second image has given rise to a discussion here, if you take it out of here and it is that you have it, then I think that everything has to be accompanied by salt, they cannot just throw the image at you because, of course, it is my own opinion and that is what counts. I think that everything has to be accompanied by an explanation not only of the income but also of public transportation and everything that you have talked about so I don't know which of the two I would put if the one below but of course accompanied by an explanation.

GFDOC\_02:

is that I still disagree a little bit with the information or not, I think that the graph has to be neutral and if extra information is given it is because it wants to lead people to think something or to draw the conclusions that we are drawing. If we put the graph below you have to decide the income and it implies the difference in income implies also differences in public transportation and things like that because we are thinking that the reader is not going to be able to draw those conclusions. If the reader is able to draw those conclusions you can give them these two graphs without any problem. So that is the problem of putting extra information or not or giving in graphs to people who are not able to draw all the conclusions with the information that is given in the graph.

GFDOC\_05:

but there for example I agree very much with the line that GFDOC\_01 maintained before, which is that it is true that a large part of the readers do not have enough critical capacity to discern not only our graph but in the vast majority I do not know it is not that either they do not have the critical capacity or they do not want to apply it because we see a graph and we go to the simple and in the next graph that ends the newspaper that is long or I have many tweets to look at. So I do think that there is a large number of people who for lack of interest or lack of critical ability or lack of training or for whatever reason are not able to understand both a text and an image as a graphic whatever and there it is necessary that at least it is necessary to take into account we must be aware that many people will not understand it as the graphic itself blogs the graph itself spike explains

yes, of course, that is the question, then what do we do? adding that information is probably the most appropriate thing to do, after all, the role of the journalist is probably also to interpret the data, from one perspective or another, because in the end I think it is inevitable that a person has a certain ideological tendency, we are political animals after all, I think there is nothing negative in that, as long as we are honest and as long as we are capable, that the journalist is not like those people who perhaps do not know how to interpret the image but that he/she has the critical capacity, I insist that this does

not have to be for all people and that this is a paternalistic vision, I do not like to be the defender of this vision, I do not want to call people stupid either, but I do believe that we have to be aware that a large part of the population does not have the capacity to question, to be skeptical, to be critical, to interpret the information in the media and that is the first step to recognize it or to be aware of it. I think that the discussion could be much broader and it would be more difficult to find a more adequate or less adequate path, but I think that we can agree on the lack of critical capacity of a part of the population, which I think is precisely what led GFDOC\_01 to defend, not that the interpretation that is going to be made here is this and it is problematic.

GFDOC\_01:

I go back to the second point because I do understand that the more data, not always but up to a certain limit, the better it will allow us to explain not only the exploratory aspect of the objective but also that certain questions can be inferred here but if this variable is chosen, it should be complemented with others. I am a strong advocate of objectivity to be as rigorous as possible but I repeat if you are not going to interpret if you are not going to give that reading you are not going to get cooked and lucid information I think it is not in a health crisis I think it is not the variable to choose there are two variables that at the health level we are more concerned about the lethality of the virus as it is what we are talking about voltage aerosols more in closed spaces without living more in a house or if you work in a school in a bar or dealing with elderly people with sick people called other groupings well I think that those variables are more important but obviously in reality is multidimensional is very complex and that our public opinion is not in the audience we are not included I do not include myself but only gives me a variable because I stay with that one because I do not go thinking about transportation in the acid in which there are more parks in that I have a bigger house there are many other variables that I do not stay with this one and if the next day I get another news that is a party in Vallecas then I do it like everyone else is not that public opinion is more ignorant is report less is report less is that I do it like everyone else. more ignorant is less report is that we all do it that is why I say careful with objectivity that is if it is explained that it is explained in the most rigorous way possible but given other more important variables not only the income because we can then link care that is that we are in other news also then that coupled with the cognitive framework that we already have of ostia come giving us that in several classes are stating that they are doing parties and so and so now we see this because of course is that the customs of life they have but I do it including me

GFDOC\_02:

I agree with you, that is, I am between the two and it depends on the objective for which you want to communicate if the objective is simply to give a communication of how it is being distributed in some areas or zones within a population, then the first and the second the problem is that I see it as manipulable inside, that is to say that you can give when I say manipulable that manipulates the person who is reading it and that you can give a guideline to a direction that you want, that is to say that you can give when I say manipulable that manipulates the person who is reading it and that you can give him a guideline to a direction that you want. that is reading it and that you can give a guideline to a direction that you want simply with the graph is already generating a debate for us because if you put it in a news item and what you want is to click and generate because with the comparison of the two you are getting it then maybe the objective that is what you want to communicate because depending on that objective would not be the first the second and in any case the second would be the first one. and anyway the second one lacks information it lacks things so that somehow you do not generate preconceived ideas is a bit like what happened with the topic of the novels one of the parks but of the area of the swings that they said and because they made me to the area to the swings because among the children I do not know that not always hand to the children problem of the parents there are form little groups they start and then at the beginning that information was missing and because it was missing we were screaming to God the children should be and yes yes yes but don't get together in the

park no then well sometimes that lack of information then also having preconceived ideas in the form of your own biodiversity that also influences a lot in how you interpret these graphics and these are

**Moderator1:**

**well, I don't know if you want to comment anything else and we are going to launch the last question that in fact is related to all this last thing that you have been commenting now what good is it that from all the images that we have shown you both the first and these second ones that had some slight modifications because if you consider that the use of any of these visualizations could give rise to deception or what you consider as a visualization or a misleading graphic?**

**IMAGE WITH ALL GRAPHS \* IMAGE WITH ALL GRAPHS \* IMAGE WITH ALL GRAPHS \* IMAGE WITH ALL GRAPHS \* IMAGE WITH ALL GRAPHS**

**GFDOC\_02:**

misleading in the sense that it can be interpreted in various ways as to what you consider to be misleading and whether you believe that any of these images could give rise to such deception

**GFDOC\_05:**

I find the term misleading a bit problematic because it is really misleading depending on the use we make of it, we can use any of them to deceive with a spurious objective. A priori, the last one, the one associated with income and incidence could be the most easily manipulated, let's say.

However, the problem with the graphs is not that they are misleading or not. Of these graphs in particular it is not that they are misleading, but rather that they are incomplete when a graph or information is incomplete, those gaps that need to be filled with information have to be filled with the cognitive biases you have or with information that comes from other places or with stereotypes or with clichés or with what or with what you have at hand. So in that sense I don't know if misleading is the term but they can be problematic, I could consider that. However, practically any type of information because of what we were saying before, that in the end everything can be interpreted, everything can be incomplete to a certain extent because it is impossible to transmit the total information, not as you want to transmit it in the five minutes of news on the television news that you have or in the three pages of the newspaper that you have to report on the state of the pandemic in a city or a country is very complex and things have to be left out and that screening of information already implies a potential bias, so there may be room for deception insofar as there is room for it because it is incomplete.

**GFDOC\_06:**

Well, I believe that none of the data actually referred to in the graphs, all the graphs are the real data, they are not data from the Ministry, for example, from the Ministry of Health, because they are data that are reflected according to what the epidemiological system of Spain has been recovering. So, in principle, everyone has interpreted and made use of these data according to the idea they want to convey, so even the graph of Madrid, for example, I did not know if it was from Madrid, well, it does not seem to me that either of them is misleading, because one, for example, that I am not from Madrid, I did not even know that this was Madrid and I, for example, do not know that sector 17 is the poorest, however, if I am reading it and they tell me that in Madrid from where the data is collected and I get that district 17 Vallecas, the truth is that I do not know mother well, then I am getting an idea of how good it is, how curious that it is where there is the highest incidence of poverty. It is curious that it is where there is a higher incidence of cases in the south, which is where people with less income live, it seems to me that it is good that I am also an indicator, that is not to say that I do not believe that any of the graphs are actually misleading.

Because in reality, what we have found so controversial about the income index issue, in reality we do not have to have any bias with that, that is to say, there are people that most of the people who live in the sector where there is more incidence are the people who have less income, that in reality is an objective data as well.

GFDOC\_05:

always a little careful with that of the many objectives because just before I was reading a thread on Twitter about information that spoke of with vaccination that a person apparently fell one of the volunteers who were participating in the vaccine was struck by lightning and that was served in a news of Telecinco. This information well it is real in principle it seems that it is true is a true fact now I do not know if it is irrelevant or even for some conspiracy the vaccine attracts lightning according to some people say is that the vaccine attracts lightning. Or another nurse I know who fainted when she was pricked that apparently is that she always fainted when she was given an injection of course the information is real but it is true that it can lead to then an association of the vaccine because you faint and then you fall on top of lightning and I do not go one of course come on. With this information it is clear that who would get vaccinated then we must also be careful with nexuses, which again is the criticism made by GFDOC\_01 of placing these two graphs together when we make an association we must be careful with the potential interpretations in principle no information that is real seems to me per se problematic, the problem is then the interpretation or the interests or the intentionality that is behind it.

GFDOC\_04:

if it is a little bit as you want to interpret it because in the graphs of, for example, the weekends you can get someone who tells you that on weekends I am safer because there are less contagions and in truth it is not so but as you want to interpret it.

GFDOC\_01:

It all comes down to what we were talking about before and that is that obviously data journalism seems to be the most objective, the most rigorous, but we all know that in the end everything is subject to manipulation, everything can be manipulated, everything is intentional in the end.

And what we are obviously talking about all the variables of the multidimensional in the sociological and health reality in this case is that we have to choose, we have to choose, we have to summarize, we have to reduce this reality to the audience and we have to choose and that is why he emphasized the fact that in this case we have chosen this because sometimes the objective is so close to the interpretation that we have to know very well what we choose to give information we choose to give to the audience. If we only choose to give information about immigrants in aid of immigrants with crime but we do not give other variables, then we create it with that. If in this case we only want to give this information it seems to me very intentional if it is only objective if it is misleading not at all but it seems to me very reduced, it seems to me to only give data of contagions and income it seems to me intentional because there are infinite variables and to choose only and exclusively and precisely that in a health crisis because that is what I was going before well because the income I do not know is the most important thing in a health crisis I think there is an intentionality behind that is the only thing I believe.

**Moderator1:**

**so if you want to add something more on this topic about disappointments or not**

GFDOC\_06:

nothing very interesting Moderator1, you can tell us later

**Moderator1:**

if you want we will end this really thank you very much well as you have been able to see we are seeing how it affects the inclusion of context or lack of context in this type of visual tools that we have at hand and really thank you very much because it has been very interesting all the reflections you have shared and above all very useful.

----- ENDS THE FOCUS GROUP -----