Social perception of Forecasters in the Context of COVID-19

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Abstract

People are cognitively biased to perceive others' actions as their personality traits while ignoring the situational explanations of those actions ("fundamental attribution error"). A forecast outcome is therefore subject to be attributed to forecaster's character. This study aimed to explore how the forecast valence (positive vs. negative) effects such character inferences. For this, participants were assigned one of the two conditions which they were asked to read a negative or a positive forecast scenario about the current pandemic situation (COVID-19). Perceived desires and morality of the forecaster were compared for positive and negative scenarios. Reading a negative prediction about the crisis caused people to think the forecaster wants the outcomes of the prediction more than a positive prediction caused. A positive forecast unexpectedly caused lower moral attributions than a negative one. The effect of valence partially moderated by individual factors. While participants' own opinion about the future of the crisis moderated both effects on desire inference and morality, their political ideology only moderated the effect on moral judgments. As an exploratory part of the study, perceived self-interest and perceived political ideology of the forecaster were also assessed. This study contributes to the advice-giving and social perception literature by investigating the direct effects of prediction valence while offering social insights for the ongoing pandemic research.

Keywords: Covid-19, pandemic, forecast, desire inference, social perception, fundamental attribution error, moral judgment

Data-driven guidance on future events is a common instrument people use to make their everyday decisions easier, such as weather predictions and economic forecasts. Following the theories of fundamental attribution error and lay dispositionism that suggest people make character inferences about others based on a single behavior (Ross, 1977), Stavrova (2019) found that people make inferences about a forecaster's political, economic or social preferences based on their forecasts. The literature of advice-giving has further shown that forecasters might be well aware of their social perceptions, and try to avoid making pessimistic forecasts to create better impressions (Hadar & Fischer, 2008; Manis et al., 1974; Stavrova & Evans, 2019). Yet, it is still unknown that if the valence of forecast (i.e. whether it is negative or positive) would directly cause more positive or more negative inferences about the forecaster's character traits. For instance, does a more pessimistic forecast cause people to think forecaster wants the negative outcome? And do people attribute more positive moral character traits to a more optimistic forecaster?

Previous advice-giving studies were usually limited to the organizational or political settings since normally most of the advice-giving is mainly concerned with these settings (Bonaccio & Dalal, 2006). The context of a pandemic offers a good opportunity to investigate general public perception about forecasters since it is already of great concern for whole society. Furthermore, in her literature review study, Kunda (1990) suggested that people evaluate controversial messages more carefully when they are involved with the content. In this context, it is well assured that all the participants would be involved with the given forecast messages. Therefore, we believe the current crisis caused by the COVID-19 (coronavirus) pandemic provides a proper setting to study perceptions of forecasters.

Moreover, as emphasized by the World Health Organization (WHO), understanding the perceptions of the risk communicators at the moment is of great importance for critical economic or even life-changing decisions (World Health Organization, 2020). Hence, in

order to contribute to the growing literature of advice-giving (Bonaccio & Dalal, 2006) as well as the recent social psychological literature of the COVID-19 pandemic (Rosenfeld et al., 2020), this study illustrates an investigation of social perception of forecasters in the context of the current COVID-19 pandemic.

Social Inference

A large body of literature has shown that people infer others' traits; such as the preferences, values or identity based on behavior (Nisbett & Ross, 1991). This finding dates back to the well-known experimental study by Jones and Harris (1967), which revealed that when people are asked to evaluate personal attitudes of an essay writer, they ignored the external constraints (i.e., choice, context) and interpreted the content of the essay as the general attitude of the writer. Similarly, in another study, experimenters first asked a group of students to volunteer in exchange for money and asked another group to evaluate the future volunteering possibilities of students from the first group. Interestingly, the judges in the second group ignored the fact of monetary motivations and made assumptions about others' future behavior only based on the previous choice; if they volunteered or not in the first phase (Nisbett et al., 1973). Ross (1977) later named this dispositional bias as "fundamental attribution error" and "lay dispositionism"; summarizing that people make inferences about the personal traits merely based on the behavior, while ignoring the situational factors (Nisbett & Ross, 1991, p. 358). The boundaries of this interesting finding have been widely investigated in the literature; such as the strength and the quality of the essay (Miller & Rorer, 1982). In a similar vein, Stavrova (2019) found in her study that the desire inferences of a forecaster are stronger when the outcome is ambiguous in terms of desirability (e.g., political election), and weaker when it is more generally a desirable or undesirable outcome (inequality, terrorism, etc.).

Desire Inferences

Similar to the character attributes derived from a fundamental attribution error, people also make desire inferences about the forecaster based on the forecast (Stavrova, 2019). This is related to phenomena called "desirability bias" or "wishful thinking" suggesting that when people make a prediction about a desirable future event, they tend to be overoptimistic, even when they do not have any control over the outcome (i.e. chance games) (Krizan & Windschitl, 2009; Weinstein, 1980). There are some specific cases that people, instead, prefer to be pessimistic about a desirable event and lower their expectations – for example, to avoid disappointment (van Dijk et al., 2003) or to avoid anxiety in risky situations (Norem & Cantor, 1986). However, evidence for these situations do not change the general tendency of people to desire for the best possible outcome for themselves regarding an uncertain event concerning their own future; hence, most of these times people see a more positive event to be more likely to occur (Krizan & Windschitl, 2009).

Another line of research has shown that people tend to think others as cognitively biased, rather than thinking themselves as biased (Pronin et al., 2004). This causation might lead people to evaluate others' preferences in a biased way; such as the assumption when a person makes a prediction, he or she desires the outcome for unknown underlying motivations. Connecting these two major findings, study of Stavrova (2019) illustrated that people perceive forecasters as having the desirability bias when making a forecast. For instance, when participants read a positive forecast on a new law, they think the forecaster wants the law to enter into force (Stavrova, 2019). Our hypothesis concerning the attribution error on desires is also based on this main idea, testing the connection between predictions and desire inferences.

The Effect of Valence

In most of the real-life cases, professional advice-givers are the people who make predictions determining the economic, health or political decisions. Research has shown that these advisors can be aware of their perception (Stavrova & Evans, 2019) to a point that they would avoid giving a pessimistic advice (Hadar & Fischer, 2008). It is known that people dislike others who give out bad news (Manis et al., 1974), and advisors may want to avoid giving out bad news to prevent themselves from being disliked ("kill the messenger effect", "MUM effect") (Tesser & Rosen, 1975). Particularly in the context of a health crisis, this "kill the messenger effect" can create a serious dilemma for the forecasters, as their prediction concerns a matter of life for the perceivers. For instance, a forecaster might want to be optimistic in order to be liked or prevent panic and try to avoid making pessimistic forecasts. But this kind of non-transparent forecasting might backfire with serious results on forecaster's credibility. As a matter of fact, World Health Organization's outbreak communication guidelines highlights the reluctance of delivering bad news and the fear of being blamed as serious barriers for the transparency and the public trust (World Health Organization, 2005).

Overall, previous research illustrated the significant difference between a positive and a negative advice on the perception of an advisor. Hence, in this study, our main aim is to investigate the effect of the valence of the prediction (positive vs. negative) on the perception of forecasters.

Moral Character Judgment

People tend to make inferences about others' morality because they want to understand if those others are harmful or helpful to themselves. Hence, the moral character is a prominent factor when forming impressions in important social relationships (Goodwin et al., 2014). According to the social intuitionist model of Haidt (2001), people make moral

judgments unconsciously and make post facto reasonings for their own judgments. In other words, people have the general tendency to make a moral judgment about someone else in an intuitive manner and try to find a conscious reasoning for this judgment afterwards (Haidt, 2001). This intuitive way of making inferences about other's morality also causes a fundamental attribution error. For instance, people morally blame others because of a single harmful behaviour, even the harm was unintentional (Alicke, 1992; Inbar et al., 2012). Hence, we ask if a negative forecast of a crisis would cause people to make worse morality inferences of the forecaster; such as being morally wrong or bad to make such a forecast.

Furthermore, we expect that when a judge thinks that the forecaster desires the outcome, this might affect the morality inferences of the forecaster. It is known that, when people make morality inferences based on a harmful behavior, if they think that actors have a meta desire for the action (i.e. desire to harm) they evaluate the actor as more blameworthy (Pizarro et al., 2003). Even in the situations where the actor does not harm directly or intentionally, people might morally blame others based on the inferred "wicked desires"; that is if the people somehow benefits from a harmful situation (e.g. a bet on a catastrophe) (Inbar et al., 2012). Therefore, even though a forecast is not an intentional harmful behavior in its nature when judges see it as a desire of a forecaster, they may also evaluate it as a part of moral character.

Perceived Self-Interest

It has been widely discussed in social inference literature that one common tendency of people is perceiving others as biased by self-interested concerns when making judgments (see for a short review, Pronin et al., 2004). As an exploratory part of this study, we investigated the possibility of the forecaster to be perceived as financially benefiting from the crisis, depending on the valence of the forecast. We expect that a more negative forecast will cause people to think forecaster is benefiting from the situation. Due to the fundamental

attribution error, we expect that a negative forecast would lead participants to think the forecaster wants the negative outcome. However, the negative outcomes in this context are expected to be clearly undesirable for everyone. Therefore, if people think that the forecaster wants a negative outcome, they may also be skeptical about the forecaster's self-interested motivations. One such motivation can be financially benefiting from the crisis, such as having stock shares of a company that produce masks or vaccines. Furthermore, based on the aforementioned findings of Inbar et al. (2012) (i.e. people who benefits from an uncontrolled situation can get morally blamed), we also explored another hypothesis: if participants think that the forecaster benefits from the crisis, they will make more negative moral inferences.

Perceived Political Ideology

As another exploratory part of this study, we aimed to find out if people make political inferences according to the prediction of a forecaster. Brady and Sniderman (1985) suggested that people tend to attribute political attitudes and desires on major issues even without knowing too much about politics, as a result of an intellectual shortcut which they called; "likability heuristic". For example, liberal people assume someone as a conservative when they readily dislike him or her (Brady & Sniderman, 1985). In our study, we will explore if people make similar political attributions, without any prior knowledge, assuming that people will make a position of liking or disliking a forecaster depending on the forecast valence. We expect that the perceived morality of the forecaster would moderate the relationship between valence and the perceived political ideology. People may attribute a political ideology derived by a negative (or positive) forecast because they think the forecaster is morally wrong or bad by making this forecast.

Individual Factors as Moderators

People can be egocentric and tend to think that their beliefs are common beliefs; which is known as "false consensus effect" (Ross et al., 1977). Therefore, if someone

contradicts with their own beliefs, they may judge those others as biased or less moral (Griffin & Ross, 1991). Moreover, research suggests that people show negative reactions to communicators who deliver information that contradicts with their own opinions (Manis et al., 1974). If participants receive contradictory information with their own beliefs, in order to avoid cognitive dissonance (Kunda, 1990), they may prefer to think the forecaster as morally wrong, biased with his own desires, or biased with other self-interested motivations (Pronin et al., 2004). Hence, we expect that participant's own beliefs that the events will get better or not might influence the valence effect on social perceptions in a way that any contradicting opinion would cause worse moral attributions. Specifically, if they believe that the situation will get better while the forecaster tells a negative prediction, they would attribute lower morality to the forecaster. Similarly, if they do not believe that the situation will get better soon, they will see the forecaster as more morally wrong or bad because he makes a positive prediction.

In a similar vein, we believe the political ideology of the participants might also be a moderator for the valence and moral judgments relationship. Graham, Haidt and Nosek (2009) found that conservatives and liberals generally differ in terms of their moral concerns. In political contexts, it has been found that people's political positions significantly affect their judgments of others (Iyengar et al., 2019) or the media messages (Vallone et al., 1985). Furthermore, in their recent study to predict compliance with COVID-19 guidelines, Plohl and Musil (2020) found political conservatism as an indirect factor through trust in science. These findings hint that people might perceive COVID-19 policies differently according to their political ideologies. Hence, investigating the possible differences derived from political ideology on the perceptions of forecasters is also important in this context.

COVID-19 and Social Psychology

The COVID-19 pandemic has affected millions of people worldwide since the end of 2019 and has significantly altered their lifestyle. Because the transmissibility of the disease depends on the social behaviors, research in social psychological aspects of this pandemic has lately become of critical interest. (Plohl & Musil, 2020; Rosenfeld et al., 2020). To scale down the human-to-human transmission, authorities have been trying to apply social distancing rules such as closing certain crowded places, limiting public transport, or even country lockdowns. However, these restrictions have to be carefully communicated with transparent reasons such as the daily reports and forecasts, in order to prevent any public backlash that would cause the situation to get worse.

Unfortunately, the forecasts of the pandemic cannot be very accurate due to the novel nature of the virus. Hence, the spokespersons of the COVID-19 pandemic, whose responsibility to give crucial information includes forecasts and guidelines, face a critical trust problem in their communication (Khosravi, 2020; Plohl & Musil, 2020; World Health Organization, 2020). The unknown nature of the crisis puts the forecasters into a dilemma: if they make a pessimistic forecasts, they may have to deal with being disliked or perceived as less moral (Gawronski & Walther, 2008); but if they try to be more optimistic, this may cause a serious distrust, especially if the situation gets worse. Despite the wide focus on trust-related psychological factors in this current context, there is still little known about the perceptions of the crisis communicators. Hence, this study is expected to provide important insights about the possible inferential biases in the perception of the COVID-19 forecasters.

Current Study

The main aim of this study is to examine whether people make inferences about forecasters' desires and moral character based on the forecasters' positive vs. negative predictions in the COVID-19 pandemic context. More specifically, we expect to see an effect

of forecast valence on desire inferences, such that reading a more positive forecast scenario will lead participants to think that forecaster desires the crisis and its consequences (health, economic, social etc.) to end. On the contrary, when they read a more negative forecast, they will think that forecaster will be less desiring for the crisis and its consequences to end. Similarly, we expect moral character judgments to be more positive when a forecast is more optimistic. Hence, we hypothesize that the valence of the forecast will affect the moral judgments; such that a negative forecaster will be inferred as less moral than a positive forecaster. Furthermore, we expect that the effect of valence on moral judgments will be mediated by desire inferences.

As the exploratory part of the study, we have two hypotheses for the perceptions about forecasters. One is to find out if people make inferences about self-interested motivations depending on the valence of the forecast. We expect to see a more negative forecast would cause people to think in a greater extent that the forecaster has a financial benefit from the crisis. Secondly, we will look of the valence effects on the perceived political ideology of the forecaster, moderated by the moral character. Moreover, we will look at the possible moderation effects of individual factors; that are the own opinion and the political ideology, on the main dependent variables of desire inferences and moral judgments.

Method

Participants and Procedure

The study had a between-subject design with two experimental conditions including a positive versus negative forecasting scenario. Sampling was based on a power analysis with G*Power software. Based on the current literature, we aimed to detect a small to medium effect size ($d = 0.40$) with a two-tailed t-test ($\alpha = 0.5$) and a priori power of 80%, we aimed to reach at least 100 individuals per cell. Considering the possible exclusions, we aimed for a minimum total sample size of 250 participants. 271 participants from the U.S. completed the

survey on 18 May 2020, using the online platform "prolific.co", in which 17 did not finish the survey and 10 failed the attention check question (see below); resulting in a final sample size of 244 respondents (M_{age} = 31.7, SD_{age} = 11.08, 44.26% male; 54.09 female). RStudio software was used for the statistical analyses.

Participants were randomly assigned to two conditions for the study. For the first group (n = 127) the scenario included only the positive predictions, whereas for the second (n = 117) group these were negative forecasts. They first read one of the two hypothetical scenarios as follows: "Robin Smith is a political consultant and forecaster. Robin Smith expects that the spreading of COVID-19 will be completely (won't be) under control very (any time) soon: the number of infections will be rapidly declining (continue to rise exponentially) in the coming months, the lockdown and other measures will (won't) be relaxed, schools and businesses will (won't) reopen, and the economy will recover pretty quickly (won't recover for decades to come)".

These scenarios followed by the questionnaire for three dependent variables, namely; desire inferences, moral judgments, and perceived self-interest, which were randomly ordered. This randomization did not have any significant effect on three dependent variables or did not have a significant correlation with the experimental condition, hence will not be taking into account in main analyses (p > .05). The desire inferences were assessed by a self-constructed scale with five items, asking participants if the forecaster wants the situation to become better in all five aspects included in the scenario (e.g., "How much does Robin Smith want the number of infections to decline?", or "How much does Robin Smith want the economy to recover quickly?") (Cronbach's α = .87). For this, a 9-point scale was used with endpoints labelled as 1 = "Not at all" and 9 = "Very much".

For the moral judgments about forecaster, we used a three-item scale. Within the scale, participants were first asked: "How morally right or wrong was it for Robin Smith to

predict that the spreading of COVID-19 will be completely under control very soon (*won't be under control any time soon*)?" (1 = "Very morally wrong", 9 = "Very morally right"). In the second and third questions of the scale, we asked if participants think the forecaster has good moral standards (1 = "Not at all", 9 = "Completely"), and if they think that he is mainly a good or a bad person (1 = "Mainly a bad person", 9 = "Mainly a good person") (Cronbach's $\alpha = .90$).

For perceived self-interest measurement, participants answered the question; "How likely is it that Robin Smith is benefiting financially from the COVID-19 crisis?" (1= "Extremely unlikely", 7= "Extremely likely"). Participants' own opinion about the future of the crisis was measured by a question which was adjusted for two conditions, asking that "To what extent do you agree with Robin Smith's forecast that the spreading of COVID-19 will be completely under control very soon (vs. *won't be under control any time soon*)?" (1 = "Strongly disagree", 9 = "Strongly agree"). To create a single opinion variable, the negatively worded question was reverse coded and added to the positive variable, such that a higher value would indicate a more optimistic opinion about the pandemic ($M = 3.57$, $SD = 2.21$). This opinion variable was then mean centered for the followed analyses. Finally, the perceived political ideology of the forecaster was measured by a direct question "What political ideology do you think Robin Smith holds?" with a 9-point scale (1 = "Extremely liberal", 9 = "Extremely conservative").

In order to be sure about the perceptions on the forecast valence, we applied a manipulation check by asking; "How negative do you think Robin Smith's forecast is?" (1 = "Very negative", 9 = "Very positive"). The questionnaire was then followed by an attention check, in which participants were asked to choose the best description of the prediction they read from two statements: "Robin Smith expects that the spreading of COVID-19… (first option: …will be completely under control very soon, second option: …won't be under

control any time soon)". Finally, for demographics; participants were asked for their gender, age, and political ideology (1 = "Extremely Liberal, 9 = "Extremely Conservative; $M = 3.59$, $SD = 1.95$).

Results

Manipulation Check

The manipulation check showed that the perceived negativity of the forecast was indeed lower for the negative condition ($M = 3.38$, $SD = 1.92$) than it was in the positive condition ($M = 6.33$, $SD = 2.17$), $t (241.49) = -11.24$, $p < .001$. The difference in the means of two conditions indicated a large effect size ($d = 1.44$, 95% CI [1.12, 1.75]). Furthermore, two group means were separately compared to the scale midpoint (5) and both significantly differed, $t (126) = 6.88$, and $t (116) = -9.12$, both $ps < .001$. Hence, the manipulation check assured that people do not perceive an optimistic forecast as negative and vice versa.

For the following analyses, means and standard deviations of the dependent variables with group comparisons are shown in Table 1.

Table 1. *Means and Standard Deviations of the Dependent Variables with Group Comparisons*

	Positive Forecast (n = 127)		Negative Forecast (n =117)			
	M	*SD*	*M*	*SD*	*t*	*p*
Desire Inferences	7.59	1.38	5.48	1.77	-10.33	< .001
Moral Judgments	4.63	1.54	6.07	1.66	6.99	< .001
Perceived Self Interest	3.94	1.69	3.54	1.55	-1.96	.051
Perceived Political Ideology	6.44	1.73	4.13	1.76	10.33	< .001

Desire Inferences

As predicted in the first hypothesis, participants thought that the forecaster who made a more positive forecast about the crisis development has a stronger desire for the crisis and its consequences to end ($M = 7.59$, $SD = 1.38$) than the forecaster who made a more negative forecast about the crisis ($M = 5.48$, $SD = 1.77$), $t (242) = -10.33$, $p < .001$ ($d = 1.34$, 95% CI [1.04, 1.64]). In other words; people made desire inferences according to the valence of the

forecast: a more positive forecast caused people to think the forecaster wants more positive outcomes, whereas a negative forecaster was inferred as less willing for the positive developments.

Moral Judgments

Participants judged the forecaster's moral character as more negative when they read the positive forecast scenario ($M = 4.46$, $SD = 1.54$) compared to the negative forecast scenario ($M = 6.07$, $SD = 1.66$), $t (236.44) = 6.99$, $p < .001$ ($d = -0.9$, 95% CI [-1.18, -0.62]). The direction of the effect of valence on moral judgments was opposite to our expectations in the second hypothesis: a negative forecaster seemed as more moral than a positive forecaster. Since the two effects were in opposite directions, investigating a mediation effect of desire inferences on the effect of valence on moral judgments became meaningless. Hence, we did not test the third hypothesis.

Perceived Self-Interest

Contrary to our expectations, results showed that people do not think the forecaster benefits from the crisis based on the valence of the forecast ($M_{positive} = 3.94$, $SD = 1.69$; $M_{negative} = 3.54$, $SD = 1.55$), $t (242) = -1.96$, $p > .05$ ($d = 0.25$). Interestingly, however, we found that people attribute lower moral characteristics to the forecaster when they think the forecaster benefits from the situation, $r = -.25$, $p < .001$.

Perceived Political Ideology

The two groups significantly differed in terms of perceiving the political ideology of the forecaster, $t (239.78) = -10.32$, p $< .001$ ($d = 1.33$, 95% CI [1.02, 1.63]). The positive group thought the forecaster as more conservative ($M = 6.44$, $SD = 1.73$) than the negative group ($M = 4.13$, $SD = 1.76$). As expected, this difference was significantly moderated by moral judgments of the forecaster, however explaining only %2.3 of the total variance, $F (3, 240) = 45.28$, $p < .001$, $\Delta R_2 = .023$) (Table 2). The simple effects analysis showed that the

lower the perceived morality of a forecaster, the bigger difference between a negative and a positive forecast caused a forecaster to be seen as more conservative (Figure 1, Table3).

Table 2. *Perceived Political Ideology Predicted by Moral Judgments and Valence*

	b	*S.E.*	*t*	*p*
Valence	1.98	0.24	8.36	$< .001$
Moral Judgment	-0.04	0.09	-0.44	.66
*Moral * Valence*	-0.40	0.14	-2.95	$< .001$

Note. All continuous variables were mean-centered.
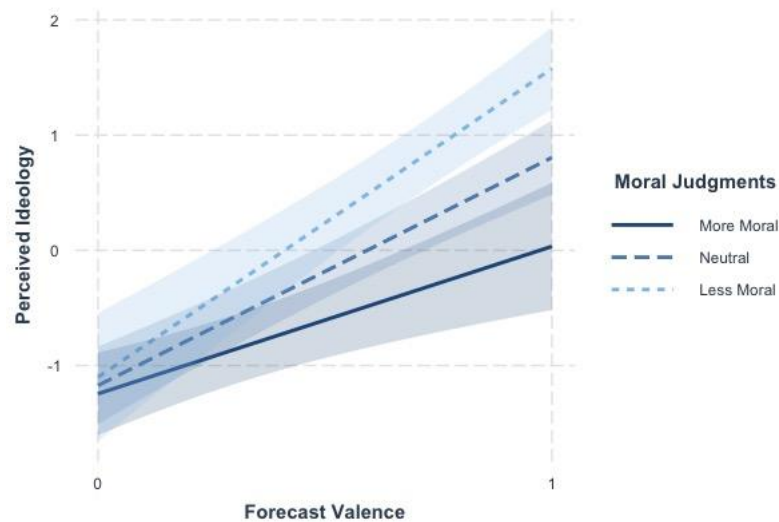
Figure 1. Simple effects for moral judgments
Note. 0 = negative forecast, 1 = positive forecast, higher scores indicate perception for a more conservative forecaster in perceived political ideology

Table 3. *Simple Effects for Moral Judgments on Perceived Political Ideology*

Moral Judgments	*b*	*S.E.*	*t*	*p*
More Moral	1.28	0.33	3.83	$< .001$
Neutral	1.98	0.24	8.36	$< .001$
Less Moral	2.68	0.34	7.98	$< .001$

Moderation Effects of Participants' Own Opinion About the Crisis

In a hierarchical multiple regression analysis, we found that participants' opinion about the future of the pandemic strongly moderates the effect of forecast valence on moral judgments ($b = 0.82$, $t (240) = 10.73$, $p < .001$) (Table 4). This moderation explains an additional 27% variance for the model of valence effects on moral judgments, $F (1, 240) = 115.23$, $p < .001$, $\Delta R_2 = .27$. The simple effects were, therefore, explored by testing the

conditional effects of forecast valence at three levels of opinion, one standard deviation

below the mean, at the mean, and one standard deviation above the mean, corresponding to a

relatively more pessimistic, neutral, or optimistic opinion, respectively. As shown in Table 5,

the valence of the forecast significantly affected the moral judgments when the participants

are more pessimistic, but not when they are optimistic about the crisis. As expected,

participants who were more pessimistic about the crisis, thought a positive forecaster less

moral than a negative forecaster. This also applies to close-to-average values of the scale,

where participants do not have a strong opinion about the future; they still attribute lower

moral characteristics to a positive forecaster than a negative forecaster. However, for

participants who believe that the situation will get better; the simple effect was weak: they

did not judge a positive or a negative forecaster differently in terms of morality (Figure 2).

Table 4. *Moral Judgments Predicted by Valence and Opinion*

	b	S.E.	t	p
Valence	-1.44	0.17	-8.53	< .001
Opinion	-0.44	0.06	-7.87	< .001
*Opinion * Valence*	0.82	0.08	10.73	< .001

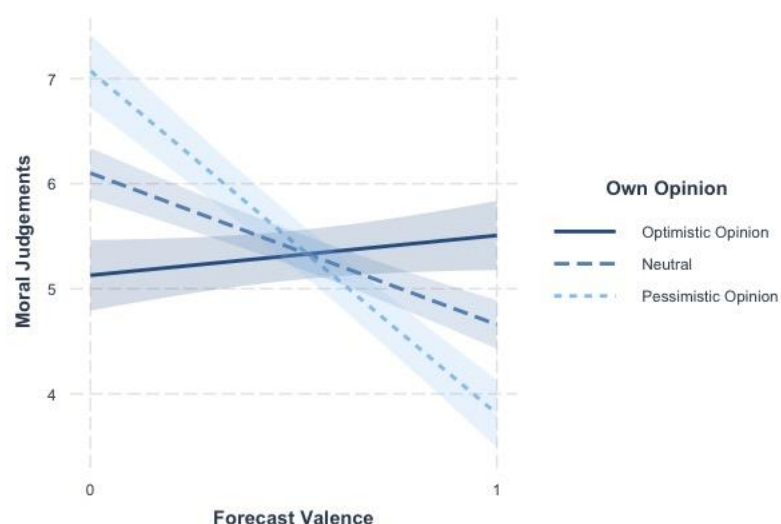*Note.* All continuous variables were mean-centered.

Figure 2. *Moderation with Opinion on Moral Judgments*
Note. 0 = negative forecast, 1 = positive forecast, higher moral judgment scores indicate a better
moral character inference.

Table 5. *Simple Effects of Opinion on Moral Judgments*

Opinion	b	S.E.	t	p
Pessimist	-3.26	0.24	-13.60	< .001
Neutral	-1.44	0.17	-8.53	< .001
Optimist	0.38	0.24	1.59	0.11

Participants own opinion about the pandemic also moderated the effect of valence on desire inferences ($b = 0.23$, t (240) = 2.60, $p = .01$), however, this moderation effect was not so strong and only explained 1.8% additional variance, F (1, 240) = 6.734, $p = .01$, $\Delta R_2 = .018$ (Table 6). This moderation effect was significant for all three levels of the opinion variable explained above, however stronger for more optimistic opinions. Indicating that; the more participants believe the situation will get better, the more they think a positive forecaster desires a better future than they think a negative forecaster would do (Table 7). For neutral and pessimistic participants, this trend is similar but only less affective; they see a positive forecaster as more willing for a positive future (Figure 3).

Table 6. *Desire Inferences Predicted by Valence and Opinion*

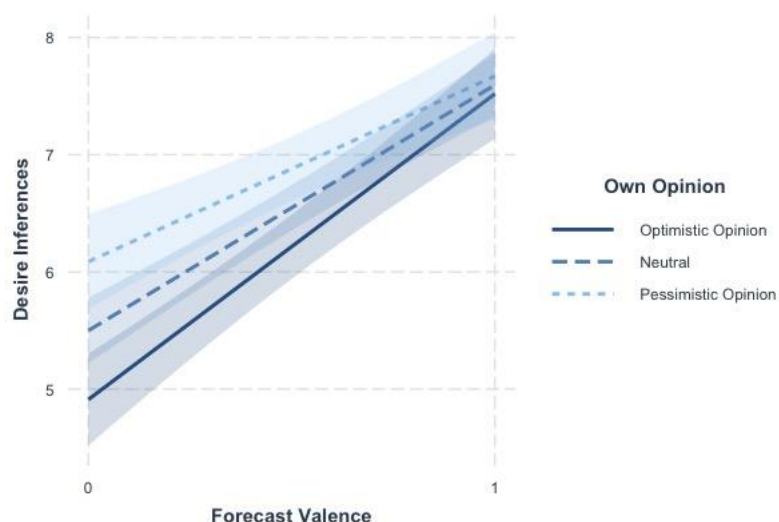|	b	S.E.	t	p
Valence	2.09	0.20	10.64	< .001
Opinion	-0.27	0.07	-4.09	< .001
Opinion * Valence	0.23	0.09	2.60	.01

Note. All continuous variables were mean centered.

Figure 3. *Moderation with Opinion on Desire Inferences*
Note. 0 = negative forecast, 1 = positive forecast; higher desire inference scores indicate more positive desires

Table 7. *Simple Effects of Opinion on Desire Inferences*

Opinion	b	S.E.	t	p
Pessimist	1.58	0.28	5.67	< .001
Neutral	2.09	0.20	10.64	< .001
Optimist	2.61	0.28	9.37	< .001

Moderation Effects of Participants' Political Ideology

Similar to the participants' own opinion, their political ideology also moderated the effect of valence on moral judgements in a positive direction ($b = 0.52$, $t (240) = 5 .21$, $p <$ .001) while explaining an additional variance of 8%, $F(1, 240) = 27.173$, $p < .001$, $\Delta R_2 = .08$ (Table 8). Again, we investigated the simple effects in three levels; one SD below the mean, at the mean, and one SD above the mean. We named these levels as "Liberal", "Neutral", and "Conservative", respectively (Table 9). For liberal participants, a positive forecaster perceived less moral than a negative forecaster ($b = -2.45$, $t (240) = -8.91$, $p < .001$) and this was also true for politically neutral participants ($b = -1.44$, $t (240) = -7.39$, $p < .001$). However, the simple effect of the conservative part of the scale was not significant ($p > .05$) (Table 8). Hence, the results showed that level of lower morality judgments caused by a positive forecast differs between conservatives and liberals: being more liberal caused morality of forecaster to be more influenced by valence of the forecast (Figure 4).

The effect of valence on desirability judgement, however, was not moderated by political ideology of the participants ($b = 0.03$, $t(242) = 0.30$, $p > .05$).

Table 8. *Moral Judgements Predicted by Valence and Political Ideology*

	b	S.E.	t	p
Valence	-1.44	0.19	-7.39	< .001
Political Ideology	-0.20	0.07	-2.81	0.01
Political Ideology * Valence	0.52	0.10	5.21	< .001

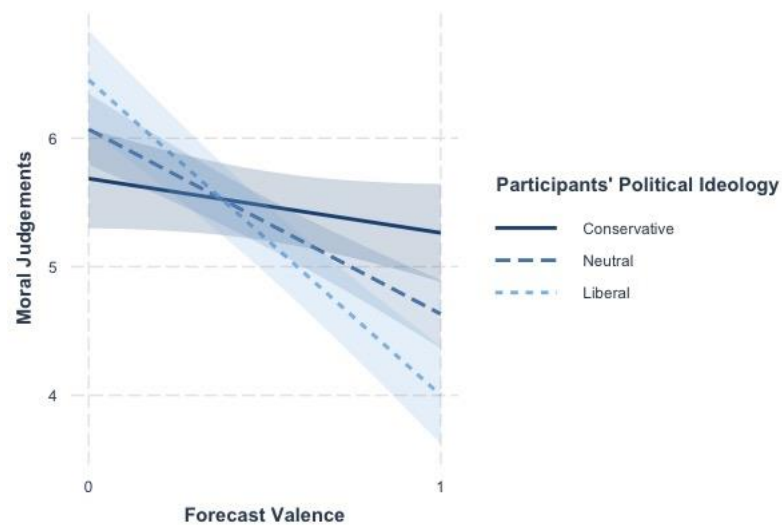*Note.* All continuous variables were mean centered.

Figure 4. *Moderation with Political Ideology on Moral Judgements*
Note. 0 = negative forecast, 1 = positive forecast, higher moral judgement scores indicate a better moral character inference.

Table 9. *Simple Effects of Political Ideology on Moral Judgements*

Political Ideology	b	S.E.	t	p
Liberal	-2.45	0.28	-8.91	< .001
Neutral	-1.44	0.19	-7.39	< .001
Conservative	-0.42	0.28	-1.53	.13

Discussion

This study set out with the aim of assessing the social perception of forecasters; focusing on the effects of the prediction valence (negative vs. positive). Results of the two main hypotheses revealed that people make inferences about forecasters' preferences and morality based on the forecast. Further analyses showed that participants' own opinion and political ideology are both significant moderators for valence effect on moral judgments.

Whereas on desire inferences, only own opinion variable was found as a significant moderator.

The analyses concerning our first hypothesis resulted in a large positive effect of the forecast valence on desire inferences. People thought a positive forecaster wants the pandemic and it's social and economic consequences to end more than a negative forecaster does. This result matches those observed in earlier studies regarding fundamental attribution error and lay dispositionism theories (Nisbett & Ross, 1991). However, it was somewhat contrary to that of Stavrova (2019) who found that when an event is clearly desirable or undesirable (i.e. earthquake), the inferences of preference were weaker than they would be in a situation that has more ambiguous desirability (i.e. political elections). The salience of the situational factors was also discussed in earlier studies as an important element for the inferential biases (Miller & Rorer, 1982; Taylor & Fiske, 1978).

In our context, it was clear that outcomes of the forecast scenarios had salient desirability; a positive outcome would be the most desirable for everyone as the prediction was concerning serious life matters. Nevertheless, there was still a significant mean difference between negative and positive conditions corresponding to a large effect size. One possible explanation for the difference between our study and the literature can be related to the suggestion of Kunda (1990) regarding the involvement of the participants with the experimented topic. Even though Stavrova (2019) also provided some scenarios regarding personal life scenarios (friend having cancer, neighbors moving out etc.) the actual involvement of the participants with these scenarios was uncertain. On the contrary, it was probably easier to perceive the scenarios in the current study as a real-life forecast for the participants. Yet, design differences make it difficult to conclude on such reasoning and a future investigation is therefore still needed on the effects of desirability salience. One boundary for the desire inferences we found that the moderation of participants' own opinion

about the crisis; such that when participants thought the situation will not get better soon, their attributions for desires were somewhat weaker. However, the weak statistical significance and a low percentage of explained variance of this moderator point out a further investigation is needed on this finding.

One surprising finding of this study was that the effect of forecast valence on moral character judgments was in the opposite direction with our expectations; a positive forecast was associated with lower morality of a forecaster. We would expect a negative forecaster to be seen as less moral because people are generally more likely to dislike or distrust others who give negative news regarding their lives (Manis et al., 1974). Furthermore, we expected to see that when people think the negative forecaster wants the negative outcome, they would morally blame him with desiring a harmful outcome (Inbar et al., 2012; Pizarro et al., 2003). Yet, results showed a different approach to explain moral judgments is needed.

The negative effect of valence on moral judgments was partly explained by individual factors: participants' own opinion about the outcome event and their own political ideology. In general, more pessimistic and more liberal participants perceived a positive forecaster less moral than a negative forecaster in a greater degree than more optimistic and conservative participants. It is plausible that the liberals made stronger moral attributions than conservatives; as it is known that liberals usually dislike the dependency of authorities (Graham et al., 2009), they may judge more harshly someone who is predicting an event that will affect their lives crucially. However, a note of caution is due here before making any statistical interpretation since our sample was over representative for the liberals. Hence, future work is required to establish the validity of this moderation effect.

The moderation of own opinion shows that when people encounter a contradictory prediction with themselves, they attribute this to the dispositional factors, rather than the situational ones. It is important to bear in mind that in the current pandemic situation, most

people are exposed to predictions about the crisis almost every day. Even though those predictions are most of the time including a high level of uncertainty, constantly hearing about bad news such as increasing number of infections might cause people to think the situation will not get better soon. Since people tend to think their own view as common and rational ("false consensus effect"), instead of evaluating a contradictory information as a fact, they might choose to attribute dispositions of being biased or wrong to those who propose an opposed opinion (Griffin & Ross, 1991; Pronin et al., 2004). In our study, participants ignored the data-driven nature of a forecast and attributed the dissonance creating information to forecaster's moral character. Hence, when a forecaster contradicted with their own opinion, they thought him as less moral.

The lower moral character attributions were also associated with perceived self-interest. As shown in the study of Inbar et al. (2012), ones who have a benefit from a harmful situation is being morally blamed, regardless of if they have any control of the situation. Corresponding to this finding, in our study, participants who thought the forecaster is financially benefiting from the crisis perceived him less moral. This association might also be illustrating that people see underlying financial motivations as a reasoning for their low morality perception. In other words, this may be a post facto reasoning (Haidt, 2001) for explaining participants' own judgments; such that they might search for an explanation for their lower moral judgments. Nevertheless, this association should be interpreted with caution since our study was limited to evaluate any causal relationship in this regard. In fact, there was no significant difference related to question order; whether when participants first asked about the moral judgments or perceived self-interest. In future investigations, it might be a better approach to conduct a within-subject design to assess this association.

Another interesting exploratory finding was that participants perceived a positive forecaster as more conservative than a negative forecaster. One reason of this relationship

might be related to the discussion above for the own opinion variable. Since most of our participants were liberals, this result may also be the consequence of a false consensus effect or seeing a contradictory opinion as it is likely to be presented by an outgroup person (Brady & Sniderman, 1985). However, we also found that moral judgments were moderating the effect of valence on perceived political ideology. Especially when participants attributed lower morality to the forecaster, they see a positive forecaster as more conservative. When people evaluate a positive forecast as less likely, they first thought the forecaster who makes a positive forecast less moral and while they were doing so, they also perceived him as more conservative.

Overall, the findings of the study contribute to the advice-giving literature by means of investigating the direct effects of prediction valence. The study offers an easy-to-involve setting in its experimental design, unlike the majority of the studies in the current literature which are designed in organizational settings (see for example, Bonaccio & Dalal, 2006). Furthermore, results are contributing to the growing literature of social perception of forecasters, as well as the recent focus on the social aspects of COVID-19 pandemic research.

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