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# Conspiracy mentality differently shapes interpersonal trust when money or digital privacy is at stake

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#### ABSTRACT

To believe in conspiracy theories is to suspect that (powerful) others are plotting behind one's back. Conspiracy beliefs might be therefore an issue of (dis)trust. In this study, we sought to explore whether this association is modulated by the way trust is operationalised and by the specific target to whom trust is directed. In doing so, we used two proxies of trust: (i) money investment within a hypothetical version of the trust game and (ii) the likelihood of disclosing a personal digital information (i.e. password). Then we presented participants with a set of trustees representing different social categories and having different degrees of closeness to the participants. Our results showed that when trust was expressed as money investment, higher levels of conspiracy mentality were associated to less trust towards powerful categories, such as ingroup politicians, scientists, public organisations, pharmaceutical and textile CEOs. Conversely, when trust was expressed as the likelihood of disclosing one's own password, this association was observed only when the trustee was an ingroup politician. Here, we demonstrated that the negative association between conspiracy mentality and trust is not a uniform phenomenon, rather is subject to the expression of trust and to its specific targets.

#### ARTICLE HISTORY

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#### **KEYWORDS**

Conspiracy mentality; interpersonal trust; digital security; monetary investment; political intergroup bias

#### Introduction

Over the last decade, conspiracy theories increasingly captured scholarly and societal interest, which has been boosted by the COVID-19 pandemic. Indeed, conspiracy theories tend to flourish in times of crises, also exacerbated by people's epistemic, existential and social motives (Douglas et al., 2019), personality traits, cognitive styles, cultural factors and worldviews (Adam-Troian et al., 2021; Gjoneska, 2021; Lantian et al., 2020; van Prooijen & Jostmann, 2013).

# **Conspiracy Theories and Interpersonal Trust**

The association between conspiracy beliefs —traditionally regarded as explanations of (natural, historical and social) events through the lens of secret plots that are contrived by a small, but pivotal group of people (Keeley, 1999), and trust —defined as 'a willingness to expose vulnerability to a trustee based on positive expectations that it will not be misused for harmful purposes' (Gioneska et al., 2019a)— has been extensively investigated in psychological research. The evidence suggests that people who tend to endorse conspiratorial narratives seem to display lower levels of agreeableness (Lantian et al., 2020) and tend to be more distrustful of others, especially when they represent the system (Abalakina-paap et al., 1999; Lantian et al., 2020) or governmental institutions, such as politicians, experts and police officers (Imhoff & Lamberty, 2018; Jovančević & Milićević, 2020; Karić & Međedović, 2021; Mari et al., 2021; Milošević Đorđević et al., 2021; Pummerer et al., 2021). In essence, believing in conspiracy theories involves the suspicion that (powerful) individuals or groups are plotting behind one's back, making conspiracy beliefs a matter of (dis)trust.

Conspiracy theories, regarded as attempts to suspect and question some aspects of reality (Nera & Schöpfer, 2022), might impose damaging consequences, including prejudiced and negative attitudes, harmful behavioural intentions (for a review Jolley et al., 2020), but also actual (in)actions that can harm 2020a, 2020), refusal to vaccinate (Freeman et al., 2020; Milošević Đorđević et al., 2021), willingness to engage in vandalism and violence (Jolley & Paterson, 2020), or even incitement to extremism (Bartlett & Miller, 2010). In doing so, conspiracy theories threaten to undermine the collective efforts to cope effectively with complex and dramatic events (Douglas et al., 2019), decreasing the levels of institutional and interpersonal trust.

#### The present research

The present work aims to provide insights on the nature of the relationship between the endorsement of conspiracy beliefs and interpersonal trust. Specifically, we investigated whether different operationalisations of trust mirror the pattern observed in the aforementioned studies. Earlier research mostly relies on measures of generalised trust, whereby participants are directly asked to rate their trust towards a specific target or institution (Imhoff & Lamberty, 2018; Jovančević & Milićević, 2020; Karić & Međedović, 2021; Krouwel et al., 2017; Miller et al., 2016; Pummerer et al., 2021), or more indirectly, asked to rate their perceived benevolence of others (Imhoff & Lamberty, 2018), and whether they seemed trustworthy based on facial appearance (Frenken & Imhoff, 2022). However, trust can be expressed in different ways, that can refer to specific behaviours or behavioural intentions. To the best of our knowledge, only one study has recently investigated trust through a behavioural proxy (Meuer & Imhoff, 2021). The authors measured trust by means of a trust game where participants played the role of the trustors, and found that, by adopting a more cautious approach when investing their money, those with higher levels of endorsement of conspiracy beliefs were less trustful.

Here, we operationalised trust by means of a hypothetical behavioural proxy pertaining to two different spheres: money investment and digital privacy. In addition, we used a set of targets representative of different social categories and with different degree of closeness to the participants as potential trustees, namely: politics, science, industry, family. Because of the implausibility of playing with such trustees in a real game, both our measures of trust referred to entirely hypothetical scenarios, where we asked participants to imagine the presented situations as realistically as possible and to respond thinking what they would really do in those situations.

We evaluated beliefs in conspiracy theories with the Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013), which investigates a general propensity towards conspiracy beliefs, rather than concrete beliefs in specific conspiracy theories. Although highly correlated and often used interchangeably, conspiracy mentality seems to capture a more stable, less malleable and less content-dependent measure than that provided by the presentation of specific conspiracy theories.

# **Hypotheses**

Hypothesis 1: In accordance with past research, we expected that higher conspiracy mentality would be associated with lower trust expressed as smaller investments of money in the money-based trust scenario, and a lower likelihood of disclosing the password in the privacy-based trust scenario.

Hypothesis 2: More specifically, we expected that this relationship would be particularly pronounced when the trustee represented an institutional and financial power, as such forms of power are more central for conspiratorial narratives.

#### Materials and methods

The present study was conducted within the framework of the EU COST Action on 'Comparative Analysis of Conspiracy Theories' (COMPACT Action), which has gathered scholars from many different disciplines and European countries with the aim to investigate conspiracy theories from a variety of perspectives (for more information about COMPACT Action please visit https://conspiracytheories.eu/).

To date, the primary study, involving research teams from 26 countries and 100.000 + participants, revealed that conspiracy mentality is pronounced at both ends of the political spectrum, but stronger on the right end (Imhoff et al., 2022b). Furthermore, accompanying studies expanded this investigation by exploring this association with different cultural values like masculinism and individualism (Adam-Troian et al., 2021) as well as corruption levels (Alper & Imhoff, 2022).

# Participants and procedure

We tested 621 (452 females) Italian participants by convenience sampling and snowball recruitment in the period between October 2017 and January 2018. Of the total sample, 556, that is, the 75.2%, ( $M_{age}$  = 29.8,  $SD_{age}$  = ±10.1, ranging from 18 to 76 years old) answered to all the items. The majority of the respondents were based in Northern-Italy (63.1%), while the remaining were from Center-Italy (26.3%) as well as Southern-Italy and the islands (10.6%). Thirty-five percent of the respondents had a high school diploma, 32.4% a bachelor's degree, 25.9% a master's degree, 5% a doctoral degree, and 1.6% had an education level lower than high school diploma.

On a scale ranging from 1 to 9, where 1 = 'extremely left-wing' and 9 = 'extremely right-wing' (M<sub>Political Orientation</sub>= 4.10, SD<sub>Political Orientation</sub> = ±1.67), 60.3% of the sample leaned towards the political Left (i.e. values from 1 to 4), 21% placed themselves in the middle of the scale (i.e. value 5), and 18.7% leaned towards the political Right (i.e. values from 6 to 9).

Participants received the direct link to the online survey platform (Qualtrics, Provo, UT), where they read and provided their informed consent. Then, they proceeded to fill their demographic information and to complete the questionnaire. The whole procedure took approximately 15 minutes.

#### Measures

A detailed description of the constructs investigated and the measures used is provided below.

Conspiracy mentality (Cronbanch's  $\alpha = .80$ ): in order to measure individual differences in conspiracy mentality we used the Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013), in which participants are asked to rate the truthfulness of a list of five statements on a 11-point scale, ranging from 0 (0% certain) to 10 (100% certain). An example item reads as follows: 'I think that many very important things happen in the world, which the public is never informed about' (the complete list of the items is available in the Appendix). The CMQ score was computed as a mean of the values assigned on each of the five items, with higher scores signifying higher general propensity to believe in conspiracy theories (see Table 1 for the descriptive statistics).

Trust: we assessed participants' trust towards 8 different targets, including a member of their family (henceforth Family member), a politician with aligned political ideology (Ingroup Politician), a politician from the opposing political ideology (Outgroup Politician), a public organisation (Organisation), a renowned scientist (Scientist), a CEO of a pharmaceutical company (Pharmaceutical CEO), a CEO of a textile company (Textile CEO), and an unfamiliar person (Stranger). These targets were all hypothetical and general representatives of their category, apart from the Public Organisation which was indicated as a whole rather than a specific person. These categories varied in their levels of closeness with the participants (e.g. a family member or an ingroup politician) and represented different social spheres (e.g. politics, science, family etc.). When choosing the representatives of the economic sphere we opted for one belonging to a sector relevant not only for the economy, but also salient for conspiratorial narratives (Pharmaceutical CEO; Lamberty & Imhoff, 2018), and one still economically relevant but not associated to conspiracy theories (Textile CEO).

Moreover, trust was assessed via two different scenarios: a money-based trust scenario and a privacy-based trust scenario.

Money-based trust scenario (Cronbanch's  $\alpha = .81$ ): we presented participants with a hypothetical version of the trust game (Berg et al., 1995), a well-studied and reliable experimental paradigm from behavioural economics consistently used in social, experimental and clinical psychology (Brülhart & Usunier, 2012; Gjoneska et al., 2019; Krueger, 2009; Panasiti et al., 2020). Participants (in the role of the trustors) were presented with a virtual endowment of 100 euros and asked to indicate how much they would be willing to offer to a target (in the role of the trustee) on a 0 to 100 Visual Analogic Scale (VAS). If the participants decided to invest the money, they knew that the hypothetical offer would be tripled and

**Table 1.** Descriptive statistics -with means and standard deviations- and correlations of trust responses in the money-based trust scenario, privacy-based trust Scenario averaged and towards the different targets, and conspiracy mentality.

	Mean	SD	Gender	Age	Political orientation	Education	Money- family	Money- Ingroup politician	Money- Outgroup politician	Money- Organisation	Money- Scientist	Money- Pharmaceutical CEO
Gender												
Age	30.32	10.32	14**									
Political Orientation	4.13	1.68	05	05								
Education			.03	.45**	19**							
Money-Family	75.70	26.77	02	05	.02	02						
Money-Ingroup Politician	24.53	24.17	07	14**	16**	.01	.25**					
Money-Outgroup Politician	7.08	15.40	03	.01	04	.07	.14**	.39**				
Money-Organisation	23.49	23.96	.04	18**	16**	.00	.24**	.52**	.36**			
Money-Scientist	48.20	28.72	09*	02	07	.02	.31**	.49**	.28**	.46**		
Money-Pharmaceutical CEO	21.07	23.81	03	17**	.03	05	.13**	.41**	.42**	.38**	.46**	
Money-Textile CEO	22.25	22.60	03	07	.05	06	.20**	.47**	.45**	.39**	.45**	.66**
Money-Stranger	14.96	17.59	.06	01	19**	.02	.23**	.35**	.37**	.42**	.26**	.26**
Password-Family	90.26	21.34	03	06	03	01	.28**	.06	03	.07	.09*	.06
Password-Ingroup Politician	34.97	36.51	11*	05	18**	.00	.08	.36**	.20**	.25**	.26**	.24**
Password-Outgroup Politician	25.38	34.24	10*	02	06	01	.08*	.23**	.32**	.23**	.18**	.25**
Password-Organisation	33.53	36.19	06	08	16**	.06	.14**	.27**	.24**	.30**	.24**	.27**
Password-Scientist	48.05	38.09	10*	05	19**	.00	.09*	.24**	.16**	.20**	.35**	.23**
Password-Pharmaceutical CEO	32.84	36.20	10*	06	10*	.02	.07	.26**	.22**	.21**	.24**	.35**
Password-Textile	33.13	36.19	12**	03	07	.00	.09*	.25**	.26**	.22**	.24**	.29**
Password-Stranger	27.91	33.94	05	.03	11**	.03	.09*	.19**	.22**	.17**	.16**	.19**
Money-Index	29.66	15.27	04	13**	08	01	.53**	.71**	.49**	.67**	.77**	.66**
Password-Index	40.76	29.23	12**	07	13**	.02	.14**	.27**	.19**	.23**	.28**	.26**
Conspiracy Mentality	6.81	1.81	.17**	02	.21**	12**	.02	19**	03	<b>16**</b>	20**	11**

Table 1. Continued.

	Money- Textile CEO	Money- Stranger	Password- Family	Password- Ingroup Politician	Password- Outgroup Politician	Password- Organisation	Password- Scientist	Password- Pharmaceutical CEO	Password- Textile	Password- Stranger	Money- Index	Password- Index
Gender												
Age												
Political Orientation												
Education												
Money-Family												
Money-Ingroup												
Politician												
Money-Outgroup												
Politician												
Money-												
Organisation												
Money-Scientist												
Money-												
Pharmaceutical												
CEO												
Money-Textile CEO												
Money-Stranger	.37**											
Password-Family	.04	.06										
	.04	.28**	.20**									
Password-Ingroup Politician	.27^^	.28^^	.20^^									
Password-Outgroup Politician	.28**	.29**	.17**	.82**								
Password-	.24**	.30**	.20**	.79**	.77**							
Organisation												
Password-Scientist	.22**	.22**	.23**	.81**	.68**	.72**						
Password-	.28**	.24**	.20**	.84**	.82**	.79**	.78**					
Pharmaceutical CEO	.20		0		.02		0					
Password-Textile	.35**	.28**	.21**	.85**	.85**	.78**	.78**	.91**				
Password-Stranger	.19**	.36**	.20**	.73**	.76**	.71**	.68**	.72**	.76**			
Money-Index	.71**	.54**	.15**	.34**	.30**	.35**	.39**	.33**	.34**	.27**		
Password-Index	.26**	.28**	.35**	.90**	.83**	.85**	.89**	.89**	.90**	.81**	.36**	
Conspiracy Mentality	08	03	04	13**	08	10*	13**	11**	11**	05	14**	11**

Spearman correlations; N = 556; \*\*p < .01; \*p < .05 (two-tail).

the trustee could decide whether to return half of the money (i.e. reciprocate the trust) or keep it all for themselves (i.e. not reciprocate the trust). For each target, the virtual endowment was renewed.

For a better insight of the experimental paradigm, we here present a more detailed description of the classic Trust Game and an example of how it works: the trustor might choose to invest 10 euros of the total amount (i.e. 100 hypothetical euros), in which case the 10 euros are instantly tripled and become 30 euros. Next, it is trustee's turn to decide whether to behave in a trustworthy or untrustworthy manner. If the trustee decides to reciprocate the trust, the tripled amount is equally divided between the trustor and the trustee. In such scenario, both the trustor and the trustee will earn 15 euros, signifying that they both benefit when they decide to trust each other. On the other hand, if the trustee decides to behave in an untrustworthy manner, they keep the entire amount of 30 euros for themselves, while the trustor loses the 10 euros that they initially invested.

It should be noted however, that our game version was based on a hypothetical scenario (rather than a real game), so participants were instructed to choose whether to behave in a trustworthy or untrustworthy manner without receiving any feedback regarding the trustees' behaviour (see Table 1 for the descriptive statistics about the Moneybased trust scenario).

*Privacy-based trust scenario* (Cronbanch's  $\alpha = .95$ ): we asked participants to imagine themselves in an emergency situation where they need to grant access to their electronic devices (e.g. phone or computer) by revealing their password. Then we asked them to indicate the likelihood of disclosing this information to another person on a range from a minimum of 0 (0% possible) to a maximum of 100 (100% possible). In doing so, we aimed at capturing a relevant aspect of trust in the digital age, where the privacy and security of personal information is a growing concern (see, for example, the new Data Protection General Regulation, GDPR n. 2016/679, of the EU regulation), and represents a recurring theme in the conspiratorial narratives circling the social media (Samory & Mitra, 2018) (see Table 1 for the descriptive statistics about the Privacy-based trust scenario).

Finally, since past research observed how conspiracy mentality is more prevalent among older, less educated and right-wing (or extremist) men (Claassen & Ensley, 2016; Freeman & Bentall, 2017; Gjoneska et al., 2019; Miller et al., 2016; van Prooijen, 2017), we collected participants' age, gender, education and political orientation.

# Data handling and analysis

Data analyses were not pre-registered but can be easily reproduced by using the materials provided at the link in the data availability section. To test the main hypothesis (i.e. the relationship between conspiracy mentality and trust towards the different targets), we conducted two separate multilevel regression analyses. Multilevel models (or mixed models) are generalisation of regression model that employ specification of random effects parameters, and can be used to overcome some issues that arise when using classical analysis of variance (ANOVA). In general, the specification of a random effect can capture the stochastic variability in the data that derives from different sources, for instance from different participants (Singmann & Kellen, 2019). Multilevel models allow the intercept and the slope to vary and not to remain fixed, acknowledging that participants are different from one another either in their 'baseline' level and in the way they respond to an experimental manipulation. In doing so, these models allow also to overcome the data dependency issue arisen by participants' multiple responses (Singmann & Kellen, 2019).

In one regression model, we considered the amount of money invested in each target (i.e. Money investment) as a dependent continuous variable. As for the fixed effects, we inserted in the model the Conspiracy Mentality score as a continuous predictor, the Target (Family member, Ingroup Politician, Outgroup Politician, Organisation, Scientist, Pharmaceutical CEO, Textile CEO, Stranger) as a categorical predictor, and their interaction. In the other regression model, the likelihood to share the personal password (i.e. Password allowance) was used as the continuous dependent variable. As for the fixed effects we inserted in the model the Conspiracy Mentality score as a continuous predictor, the Target (Family member, Ingroup Politician, Outgroup Politician, Organisation, Scientist, Pharmaceutical CEO, Textile CEO, Stranger) as a categorical predictor, and their interaction. It is worth noting that, although deriving from an ordinal Likert scale, the Conspiracy Mentality Score could be treated as continuous with no major flaws because the response scale had more than 5 categories and it was computed as the average of multiple items.

We built both models with the maximal random structure allowed by our data (Barr et al., 2013), which, due to convergence issues and consequent unreliability of parameters estimates given by more complex models, was set with only the random intercept over participants.

To evaluate the predictive validity of the model we calculated both marginal and conditional  $R^2$ , with the former referring to the variance explained only by the fixed effects, and the latter to the variance explained by the whole model (Nakagawa & Schielzeth, 2013).

Before conducting the main analysis, we correlated each dependent measure with four control variables, i.e. participants' Age, Gender, Education and Political Ideology. We then averaged participants' amount of invested money (i.e. Money index) and the likelihood of disclosing the password (i.e. Password index) across all eight targets, and run Spearman's rank-order correlations for non-parametric tests (see Table 1). The analysis revealed that Money index was negatively associated only with Age (r = -.13, p < .01), with older people less inclined to invest their money. Conversely, Trust index negatively correlated with Gender (r = -.12, p < .01) and Political Ideology (r = -.13, p < .01), with (leaning to the) right-wing males less inclined to give their password. Thus, to rule out their possible confounding effects we added these control variables as fixed effects to the models (Tabachnick & Fidell, 2007).

All continuous predictors were centred to give more stable models and interpretable results.

For the statistical analysis we used IBM SPSS Statistics (Version 22) and R (Version 4.0.2) softwares. Specifically, we used IBM SPSS Statistics to run the correlations, and the R packages Ime4 (Version 1.1-23) to run the multilevel mixed linear regression analyses (Pinheiro & Bates, 2000), car (Version 3.0-10) to obtain the statistical significance of the fixed effects, emmeans (Version 1.1.5-1) and interactions (Version 1.1.3) to perform simple slopes analysis as for post-hoc comparisons. For visual representation of the effects we used the R packages *applot2* (Version 3.3.2) and *ageffects* (Version 1.0.2).



# **Results**

# Conspiracy mentality in the money-based trust scenario

As indicated, we conducted a multilevel regression analysis whereby *Money investment* was set as a continuous dependent variable, while the categorical predictor Target (Family, Ingroup Politician, Outgroup Politician, Organisation, Scientist, Pharmaceutical CEO, Textile CEO, Stranger), the continuous predictor Conspiracy Mentality (i.e. the average CMQ score), and their respective interactions, along with the control variable of Age were set as fixed effects.

The model  $(R_{\text{marginal}}^2 = .45, R_{\text{conditional}}^2 = .64)$  did not show a main effect of Conspiracy Mentality  $(\chi^2(1) = 0.7614, p < .38)$ , but a significant main effect of Target  $(\chi^2(7) = 5370.29,$ p < .001), which was qualified by a significant Target\*Conspiracy Mentality interaction  $(\chi^2(7) = 39.15, p < .001).$ 

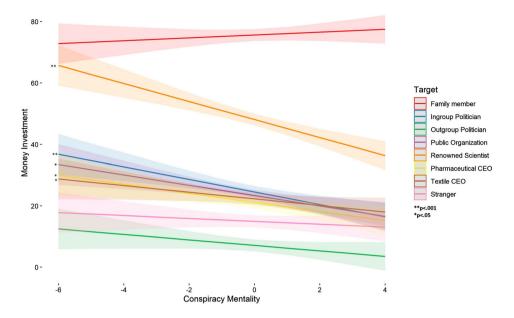
Simple slopes analysis (see Table 2) revealed that higher levels of conspiracy mentality were associated with lower trust, expressed in lower money investment towards an Ingroup Politician (B = -2.04, SE = .054, t(2424) = -3.79, 95% CI [-3.09, -0.98], p <.001), an Organisation (B = -1.68, SE =.054, t(2424) = -3.13, 95% CI [-2.74, -0.63], p = .002), a Scientist (B = -2.93, SE = .054, t(2424) = -5.47, 95% CI [-3.99, -1.88], p < .001), a Pharmaceutical CEO (B = -1.48, SE = .054, t(2424) = -2.75, 95% CI [-2.53, -2.75], p = .006), and a Textile CEO (B = -1.08, SE = .054, t(2424) = -2.01, 95% CI [-2.13, -0.02], p = .04). This relationship was not significant for a Family member, an Outgroup Politician and a Stranger, arguably due to a ceiling effect for the former and floor effects for the latter targets (all Bs < -0.90, all ps > .09) (see Figure 1).

Then, we compared the significant slopes to test whether this association was stronger for some targets compared to others. We found that the only significant difference was between a Scientist and a Textile CEO, with the conspiracy mentality having a bigger impact on the former compared to the latter (B = -1.86, SE = 0.62, t(3878) = -3.02, 95%CI [-3.08, -0.64], p = .01).

Table 2. Simple slopes analysis of trust responses for money-based trust scenario and privacy-based trust scenario.

	В	SE	t	df	LCI	UCI	р
Money-Family	-0.47	0.54	-0.87	2424.00	-0.58	1.52	.38
Money-Ingroup Politician	-2.04	0.54	-3.79	2424.00	-3.09	-0.98	<.001**
Money-Outgroup Politician	-0.90	0.54	-1.66	2424.00	-1.95	0.15	.09
Money-Organisation	-1.68	0.54	-3.13	2424.00	-2.74	-0.63	0.002**
Money-Scientist	-2.93	0.54	-5.47	2424.00	-3.99	-1.88	<.001**
Money-Pharmaceutical CEO	-1.48	0.54	-2.75	2424.00	-2.53	-2.75	.006**
Money-Textile CEO	-1.08	0.54	-2.01	2424.00	-2.13	-0.02	.04*
Money-Stranger	-0.47	0.54	-0.87	2424.00	-1.52	0.58	.38
Password-Family	0.53	0.82	0.65	1018.00	-1.07	2.13	.52
Password-Ingroup Politician	-2.10	0.82	-2.57	1018.00	-3.70	-0.50	0.01*
Password-Outgroup Politician	-1.07	0.82	-1.32	1018.00	-2.67	0.53	.19
Password-Organisation	-1.22	0.82	-1.49	1018.00	-2.82	0.38	.14
Password-Scientist	-1.46	0.82	-1.79	1018.00	-3.06	0.14	.07
Password-Pharmaceutical CEO	-1.17	0.82	-1.43	1018.00	-2.77	0.43	0.15
Password-Textile	-1.04	0.82	-1.27	1018.00	-2.64	0.56	.20
Password-Stranger	-1.13	0.82	-1.39	1018.00	-2.73	0.47	.16

Simple slopes analysis; \*p < .05; \*\*p < .001.



**Figure 1.** Predicted values of money investment plotted as a function of the Target\*Conspiracy Mentality interaction. On the *x*-axis the index of conspiracy mentality centred to the mean. On the *y*-axis the amount of money invested for each target from 0 to 100 euros.

# Conspiracy mentality in the privacy-based trust scenario

We then repeated a multilevel regression analysis whereby *Password allowance* was set as the dependent variable, while the categorical predictor *Target* (Family, Political Ingroup, Political Outgroup, Organisation, Scientist, Pharmaceutical CEO, Textile CEO, Stranger), the continuous predictor *Conspiracy Mentality*, and their respective interactions, along with the control variables *Gender* and *Political Ideology* were set as fixed effects.

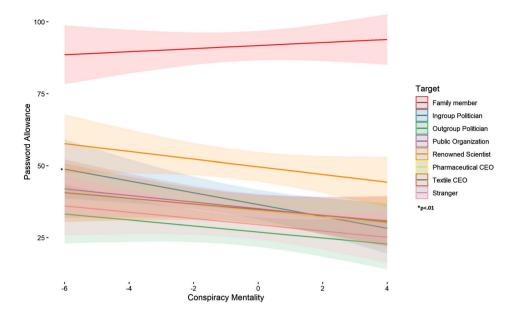
The model ( $R_{\text{marginal}}^2 = .26$ ,  $R_{\text{conditional}}^2 = .76$ ) did not show a main effect of Conspiracy Mentality ( $\chi^2(1) = 0.2822$ , p < .59) but a significant main effect of *Target* ( $\chi^2(7) = 4554.56$ , p < .001), which was qualified by a significant *Target\*Conspiracy Mentality* interaction ( $\chi^2(7) = 17.49$ , p = .01).

Simple slopes analysis (see Table 2) revealed that higher levels of conspiracy mentality were associated with lower trust only towards an Ingroup Politician (B = -2.10, SE = 0.82, t(1018) = -2.57, 95% CI [-3.70, -0.50], p = .01)., while no effect was observed for the other targets (all Bs < -1.46, all ps > .07) (see Figure 2).

Since we found only one significant slope, we did not perform any comparative analysis between the slopes.

### **Discussion**

A substantial body of evidence has already highlighted the relationship between conspiracy mentality and a lack of trust in others. However, this relationship is not as straightforward, rather it depends on several contextual elements, such as the role and the characteristics of the trustee. Our findings confirmed the fact that being conspiratorial does not necessarily imply being distrustful of everyone and everything, rather of those



**Figure 2.** Predicted values of password allowance likelihood plotted in function of the Target\*Conspiracy Mentality interaction. On the *x*-axis the index of conspiracy mentality centred to the mean. On the *y*-axis the likelihood of giving the password to each target from 0% to 100%.

who hold the power and represent the system (Jovančević & Milićević, 2020; Karić & Međedović, 2021; Mari et al., 2022; Pummerer et al., 2021). Power is indeed a fundamental element in conspiracy beliefs: on the one hand, only those who hold the —objective or perceived—power are capable to enact malicious intents (Imhoff & Lamberty, 2020b). On the other hand, feelings of powerlessness are associated with the endorsement of conspiracy beliefs (Abalakina-paap et al., 1999; Imhoff & Lamberty, 2020b; Imhoff & Bruder, 2014). In fact, those who lack control and agency might find comfort in conspiratorial narratives as a way to cope with the existential threats posed by powerful groups (Douglas et al., 2019). However, our results also showed that this pattern seems to change according to the way trust is manifested. In line with past research, we found that when trust was expressed as an investment of money, higher levels of conspiracy mentality were associated with lower trust towards those trustees that represented some sort of power (i.e. political as represented by the ingroup politician, economic as represented by the pharmaceutical and textile CEOs, and epistemic as represented by the scientist). Conversely, no linear association was found for almost every trustee when trust was expressed as the likelihood of disclosing the password of one's one electronic devices.

Thus, our results suggest that, when trust is expressed as money investment, the relationship between trust and conspiracy mentality follows the path traced by the perception of power. Differently, trust expressed as a likelihood of disclosing a personal digital information seems to capture a new pattern that puts everyone in the same group, including those more and those less inclined towards a conspiracy mentality. One possible explanation for this difference might be related to the importance that people assign to the two proxies of trust. In recent years, concerns for one's own digital privacy have been growing (Stuart et al., 2019), and information is gaining value

in the so called 'information society', where immaterial goods prevail over the material ones characterising the industrial age. Thus, it is not surprising that concerns for personal information might involve everyone, regardless their level of conspiracy mentality. In this regard, it would be tempting to talk of some sort of ceiling (or floor) effect, but the great variation in participants' responses across targets (ranging from > 90% likelihood of disclosing the password to a family member, to 25 and 27% for an outgroup politician and a stranger, respectively) suggests that their trust depends indeed on the social entity to which is expressed, while their level of conspiracy mentality does not represent a factor that determines the relationship and explains this variation.

Crucially, as observed in most research on conspiracy beliefs (e.g. Imhoff et al., 2022a), our findings show the importance of the political viewpoint. However, in the present study, this is not expressed through participants' political orientation, rather through the congruence between their ideological view and those of the trustees. In fact, in both scenarios a higher level of conspiracy mentality was associated with increased distrust towards ingroup politician, while that was not the case for the outgroup politician, where the distrust was transversally present. It seems that the political outgroup, as any other outgroups, elicits a threat to one's own worldview which is translated in dislike and distrust (Brandt & Crawford, 2020; Schepisi et al., 2019). This would follow past research outlining how people tend to think that the political opponents are more involved in malicious acts than their political representatives (Claassen & Ensley, 2016). On the contrary, people with higher levels of conspiracy mentality might be distrustful even of their own political representatives, possibly because they see them as part of the system holding the power, who nevertheless deviated from the norm, and are thus perceived as closer to the outgroup. Interestingly, although it seems plausible to think that a generalised distrust towards the political system would lead to political 'apathy' and inaction, it has been observed that conspiracy mentality (Imhoff et al., 2021) or exposure to conspiracies (Gkinopoulos & Mari, 2023) might actually increase political engagement, at least in the form of illegal and nonnormative means.

Finally, a direct comparison in the money-based trust scenario showed that the negative association between conspiracy mentality and trust was not equally strong among the targets, rather it was significantly stronger when the trustee was a renowned scientist with respect to a textile CEO. A possible explanation for this result might rely on the different status and power attributed to the two targets. The textile CEO might have been perceived as less powerful because they represent an economic sector that is not so relevant as other sectors (e.g. pharmacy or finance), thus, decreasing their importance. Additionally, the textile sector is not a common target of conspiratorial narratives. Conversely, the scientist represents a type of power, the epistemic one, which, in particular circumstances, might match the institutional power and direct important societal decision. A clear example of this comes from the pandemic situation, in which -at least in Italypolitical and economic decisions have been oriented by the technical-scientific committee.

#### **Limitations**

Although representing a promising step towards a more reliable and robust measure of trust, we are mindful that our experimental procedure might have elicited the so called 'hypothetical bias', a persistent problem in behavioural psychology and economics for which participants intentions might differ confronted to their actual behaviour (Murphy & Stevens, 2004). However, as suggested and successfully implemented in past research (e.g. Zürn & Topolinski, 2017), we specifically instructed our participants to imagine themselves in that situation and respond as if they were making a decision with real consequences.

We also need to point out that the emergency situation which was utilised in our Privacy-based trust scenario contained no particular details and did not pertain to any concrete situation. Thus, we cannot rule out that more specific emergency contexts might lead to partially different results. In a similar fashion, we neither can confirm that participants still responded consistently, albeit imagining different cases of emergency. Having said that, we believe that only the magnitude and not the direction of our results might be affected by these issues, making them sufficiently reliable and trustworthy. Nonetheless, future studies might aim at a higher ecological validity by presenting feedbacks with real money at stake (Meuer & Imhoff, 2021), or simulate an emergency situation where participants are actually asked to provide their password.

Another limitation of the present study relates to the cross-sectional nature of its design, which prevent us from exploring the causal link between trust and conspiracy mentality, although there are evidence suggesting that the former might predict the latter (Pummerer et al., 2021).

Finally, although the presented results remained significant when controlling for the main demographic variables, we would like to outline that we recruited a convenience sample (mostly consisting of young, left-wing and well-educated females) that is not representative of the entire population in general, and representative of the conspiracy theory believers in particular. Future research might deal with these limitations to secure a more integral and comprehensive perspective of the explored phenomenon.

#### Conclusions

In our study, we demonstrate that higher levels of conspiracy mentality are associated with lower levels of trust towards a powerful trustee, only though when trust is expressed as investments of money, but not when it is expressed as a likelihood of disclosing a personal information such as one's own password. In essence, the relationship between interpersonal trust and conspiracy mentality seems more complex than previously thought, with different contextual and individual factors at play. Acknowledging this might help researchers and policy makers to develop and implement new strategies aimed at facing the societal consequences of conspiracy theories.

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#### **Authors contribution**

Michael Schepisi, Giuseppina Porciello, Maria Serena Panasiti and Silvia Mari contributed to the study conception and design. Material preparation and data collection were performed by Michael Schepisi, Giuseppina Porciello, Maria Serena Panasiti and Silvia Mari. Analyses were performed by Michael Schepisi, Giuseppina Porciello and Maria Serena Panasiti. Michael Schepisi, Giuseppina Porciello, Maria Serena Panasiti and Biljana Gjoneska interpreted the results. The first draft of the manuscript was written by Michael Schepisi. Giuseppina Porciello, Maria Serena Panasiti, Silvia Mari, Biljana Gjoneska and Roland Imhoff revised previous versions of the manuscript. All authors read and approved the final manuscript.

# **Ethics approval**

As part of a large international project, the present study falls under a cluster of ethics approvals of studies on conspiracy theories, secured by one of the leading institutions in the project. The present research was conducted in accordance with the 1964 Declaration of Helsinki.

#### Consent

Participants completed the survey on voluntary basis and give their informed consent to participate in the study.

# Data availability statement

Dataset and script for the analyses of the present study are available in Mendeley repository at this link: https://data.mendeley.com/datasets/fxn3zwd4vp/1.

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# **Appendix**

# The Conspiracy Mentality Questionnaire (Bruder et al., 2013)

- (1) I think that many very important things happen in the world, which the public is never informed
- (2) I think that politicians usually do not tell us the true motives for their decisions.
- (3) I think that government agencies closely monitor all citizens.
- (4) I think that events which superficially seem to lack a connection are often the result of secret activities.
- (5) I think that there are secret organisations that greatly influence political decisions.

# Instructions for the money-based trust scenario

You are given 100 euros and the possibility to invest part of it in another person or keep the entire amount for yourself. The invested part will be tripled by the experimenter (e.g. if you decide to invest 20 euros on the other person, that person will obtain 60 euros). At that point, the other person can decide, to be fair, whether to give back half of the tripled amount that they obtained thanks to your initial investment (drawing from the example above, the person would give back 30 euros and would keep the other 30 euros for themselves) or keep the entire amount for themselves.

We ask you to imagine how you would make this choice towards different people. For each choice, you will have to tell us how much money you would invest in the other person on a range from a minimum of 0 and a maximum of 100 euros.

We ask you to imagine this hypothetical situation as if it was real (thinking to what you would actually do if you were in that situation).

How much of the 100 euros would you invest on [targets]:

VAS ranging from 0 to 100 euros.

## Instructions for the Privacy-based trust scenario

If you were in an emergency where someone should grant access to your phone/email/computer, what would it be the likelihood of giving your password to another person on a range from a minimum of 0 = 0% possible to a maximum of 100 = 100% possible.

We ask you to imagine this hypothetical situation as if it was real (thinking to what you would actually do if you were in that situation).

Indicate the likelihood of giving your password to [targets]:

VAS ranging from 0 to 100 likelihood.