ORIGINAL ARTICLE

Populist attitudes, anti-technocratic attitudes, and Covid-related conspiracy beliefs across Europe

Ioana-Elena Oana[1] · Abel Bojar[2]

Abstract

This paper focuses on the puzzle of how what could have been initially regarded as a decline in populist support became compatible with widespread conspiracy beliefs during the Covid crisis. Analyzing survey data collected in 16 countries in June–July 2021, we explore how support for Covid conspiracies is embedded in the attitudinal map of individuals and offer three contributions to the literature on conspiracy beliefs and populism. First, we employ an original scale for measuring conspiracy beliefs benchmarked both on a general conspiratorial mindset item and on a non-conspiratorial item. Second, building on the multidimensionality of the concept of populism and its empirical distinction to neighboring anti-technocratic attitudes, we employ a new scale developed and tested by Bertsou and Caramani (2022) that allows us to highlight the differential role that these attitudes play into conspiracy beliefs. Third, we inquire into the role played by previous factors associated with populist attitudes, such as trust and ideology, but also understudied ones such as performance evaluations and (dis)satisfaction with the management of the crisis at the domestic and at the EU level. Our results show that conspiracy, populist, and anti-technocratic attitudes are highly prevalent and related to each other, despite an initial "rally" effect in the beginning of the pandemic. Furthermore, government and EU performance in the crisis matter, net of trust and ideology, playing a moderating role in the populism–conspiracy nexus.

Keywords Covid · Populism · Anti-technocratic attitudes · Conspiracy beliefs · Performance evaluations

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Introduction

For all their electoral breakthroughs over the last decade, the Covid pandemic has initially created an inhospitable environment for populist and radical right forces across the Western world. With a newfound embrace of technocratic policy advice and expertise by large segments of the electorate, governments led by mainstream parties enjoyed widespread popular support, as shown by studies indicating a "rally-around-the-flag" effect in the first waves of the pandemic (Altiparmakis et al. 2021; Bol et al. 2021), coupled with high levels of political support for the EU and cross-national solidarity (Oana et al. 2023). At the same time, populist politicians from Trump to Bolsonaro and Salvini appeared to struggle, and survey data evidenced a steep decline in populist support concomitant with an increase in conspiracy beliefs (YouGov 2020). Arguably, the pandemic has initially thrown sand in the populist wave's gear by distracting public attention from populist politicians' preferred issues, such as immigration, crime, and the EU's alleged encroachment on national sovereignty. At the same time, the pandemic has also created fertile grounds for new conspiracy beliefs, the type of attitudes that populist parties tend to thrive on because they are closely linked to underlying populist attitudes (Oliver and Wood 2014; Castanho-Silva et al. 2017). Building on a vibrant echo chamber of anti-vaccine pundits and their followers, Covid has pushed some longstanding conspiracies, particularly the ones around the risks posed by mass vaccination, to the heart of the mainstream, evidenced by a substantial minority of citizens who refused to get vaccinated (Eurofound 2021).

Our paper seeks to disentangle the puzzle on how what could have been initially regarded as a decline in populist support became compatible with ever louder rejections of science and misinformation related to the Covid pandemic. In other words, we seek to explore how support for Covid conspiracy theories is embedded in the attitudinal map of individuals by examining the link between these and a host of related attitudes and behaviors: populist attitudes, anti-technocratic attitudes, and performance evaluations of governments and the EU. In doing so, we aim to offer three contributions to the literature on conspiracy beliefs, populist attitudes, and anti-technocratic attitudes. First, we employ an original scale for measuring conspiracy beliefs benchmarked both on a general conspiratorial mindset item and on a non-conspiratorial item. Second, building both on the multidimensionality of the concept of populism (Akkerman et al. 2014; Schulz et al. 2018; Castanho-Silva et al. 2017) and on its empirical distinction to neighboring anti-technocratic attitudes, we employ a new scale developed and tested by Bertsou and Caramani (2022) that allows us to highlight the differential role that these attitudes play into conspiracy beliefs. Third, we inquire into the role that previous factors associated with populist attitudes, such as trust in institutions or ideology (Eberl et al. 2021; van Prooijen, 2017), but also understudied ones such as performance evaluations and (dis)satisfaction with the management of the crisis at the domestic and at the EU level play into such conspiracy beliefs. Given the nature of the Covid crisis as an exceptionally expert-driven policy moment, we expect not only populist attitudes, but also anti-technocratic attitudes to be

strongly related to respondents' Covid-related conspiracy beliefs. However, rather than constant, we expect this relation to be moderated by performance evaluations and trust in governments and the EU within the pandemic, as underscored by the rally-round-the-flag crosscutting large segments of the electorate.

We test our claims with an original survey fielded in 16 EU member states at the end of the pandemic's third wave (June–July 2021) within which we rely on novel scales for measuring conspiracy beliefs, populist attitudes, and anti-technocratic attitudes and on items tapping into performance evaluations and trust in governments and the EU. Our results show that, in spite of the paradoxal decline in populist support highlighted above, most Covid conspiracy beliefs are associated to both populist and anti-technocratic attitudes (with the surprising exception of anti-elitist attitudes), and so are government performance evaluations. We also observe a moderation effect of government performance evaluations and EU performance evaluations on the relationship between populist and anti-technocratic attitudes and conspiracy beliefs. This interaction effect is strongest in the case of anti-elitist attitudes indicating that at least some of these attitudes, rather than being stable personality traits influencing conspiracy beliefs, have effects that are conditional on how well governments perform in crises. The rest of the paper is structured as follows. In the next section, we build on the literature on conspiracy beliefs and examine their connection to populist attitudes, anti-technocratic attitudes, and performance evaluations. In the third section, we introduce the survey data used in our analyses. The fourth section presents our main findings, and the last section concludes.

Conspiracy beliefs, populist, and anti-technocratic attitudes during the Covid crisis

Conspiracies are usually defined as narratives or explanations of events that tend to favor some specific patterns assuming that these events are the product of the deliberate actions of a specific group of people with malevolent intent (Byford 2014; Bale 2007; Uscinski and Parent 2014). One important characteristic of such conspiracy theories is that they are unfalsifiable, in that any evidence brought against the narrative is interpreted as another proof of the power of the specific group of people constituting the conspirators (Keeley 1999; Vegetti and Littvay 2021). Another important characteristic of conspiracy theories is that they try to reduce the complexity of a particular event to monistic and intrinsically deterministic explanations (Castanho-Silva et al. 2017), while refusing to contemplate the possibility that these events are the result of "unintended consequences of a multitude of decisions made by shortsighted bounded rational individual actors guided by conflicting purposes" (Mancosu et al. 2017, p. 327).

These characteristics make conspiracy theories especially prevalent during societal crises and stressful events, though even in "normal times" a large plurality, or even a majority of citizens tend to express sympathy for at least one conspiracy theory (Oliver 2016; Bergman 2018). Crisis events, however, have been consistently linked in the literature with an increased belief in conspiracy theories due to the complexity of the event and the feeling of lack of control that these evoke.

Conspiracy theories provide a way of coping with uncertainty and threat by adopting narratives that reduce the complexity of the crisis and offer particular groups to blame for it as scapegoats (Van Prooijen 2017). Moreover, by acting as situational triggers (Radnitz and Underwood 2017), crises have the potential to activate underlying attitudes that make people predisposed toward conspiracy beliefs in the first place, such as partisan-motivated reasoning (Enders and Smallpage 2018; Miller et al. 2016), lack of political efficacy (Enders 2019), authoritarian personality types (Richey 2017), or a more general conspiratorial mindset that many studies in political psychology treat as a stable feature of individuals that make them subscribe to multiple conspiracy theories, even contradictory ones (Bruder et al. 2013; Wood et al. 2012).

Against this backdrop, given to its extent and complexity, the Covid crisis provided fertile ground for a rise in such conspiracy theories and for a substantial group of believers in them, as shown by previous survey research (Sanders 2020; YouGov 2020). The widespread social anxiety triggered by daily mortality headlines coupled with stringent lockdown measures and economic uncertainty came together as a perfect storm for these beliefs to ripple across society, making their way from the fringes to the mainstream. This situation was further exacerbated by what was called a Covid "infodemic" by the World Health Organization, as people were exposed to a larger extent than usual to misinformation, pseudoscientific information, and unverified content pertaining to Covid through social media (Kouzy et al. 2020).

Existing research on Covid conspiracy beliefs has focused on both their individual-level antecedents and their consequences. Previous research on conspiracy beliefs in the context of Covid shows they have discernible *consequences* on citizens` precautionary behavior (Prichard and Christman 2020; Teovanovic et al. 2020) making their study all the more stringent. In terms of their *antecedents*, in addition to the usual suspect of a general conspiratorial mindset (Miller 2020; Uscinski et al. 2020) most of the recent studies stress the role of the low level of information, perceived uncertainty and threat, and lack of trust in authorities or other people. For example, in a systematic research review, van Mulukom et al. (2020) show that low levels of information and trust in authorities, but high perceived uncertainty and threat are consistently linked with Covid conspiracies. Using a survey fielded in Slovakia, Šrol et al. (2021) show that feelings of anxiety and lack of control amidst the pandemic are an important predictor of conspiracy beliefs related to the origin and spread of Covid. Additionally, they also show that such emotions are not only associated with higher endorsement of Covid-specific conspiracy theories, but also with generic conspiracy and pseudoscientific beliefs.

Compared to their psychological determinants, there has been relatively less emphasis on how conspiracy beliefs link up with other political attitudes in the context of the Covid crisis. In this respect, a common antecedent is partisan-motivated reasoning. Miller's study (2020) based on an online survey of American adults clearly shows that Republican sympathizers are more likely to sign up to Covid-related conspiracy theories than Democrats, most probably because of the psychological need to shift blame away from a Republican president's manifest mishandling of the pandemic. Closer to our interest, Eberl et al. (2021), using panel survey data from the Austrian Corona Panel Project, show an overall positive relationship

of populist attitudes—measured on a single scale—and conspiracy beliefs that is independent of political ideology, but that is driven by trust in science and in political institutions. Given that the core attribute underpinning Covid-related conspiracy beliefs is a rejection of official accounts on the pandemic, it is highly plausible that such attitudes go hand in hand with political orientations that share a deep sense of distrust of official accounts of events, as narrated by experts and the elite. Such distrust in the elite lies at the core of a broader package of political orientations that the literature collectively discusses under the label of populist attitudes.

Populism is usually understood as a "thin ideology" that views social reality as a Manichean struggle between a pure and homogenous people and a conniving and corrupt elite that seeks to undermine the expression of popular sovereignty *("la volonte generale")* for its selfish ends (Mudde 2004; Neuner and Wratil 2020). Such populist attitudes have been linked to a common core of antecedents, such as the experience of socioeconomic grievances (Spruyt et al. 2016; Rico and Anduiza 2019), emotional stimuli in the form of anger and fear (Rico et al. 2017), and gender and gender-specific socialization (Spierings and Zaslove 2017).

Importantly, however, not only is populism a multidimensional construct (Akkerman et al. 2014; Castanho-Silva et al. 2020; Hameleers and de Vreese 2020; Wuttke et al. 2020; Hawkins et al. 2018), but it is also highly conceptually and empirically related to neighboring attitudes which might make an equally natural fit with conspiracy beliefs. The most commonly used empirical disaggregation of this fairly complex political orientation is offered by Akkerman et al. (2014) who distinguish between core populist attitudes—focused on people centrism—from two related ideological constructs: pluralism and elitism. Others investigate all these different dimensions as part of a wider populism concept. For example, Castanho-Silva et al. (2018) examine a battery of 145 survey items proposed for ten dimensions to examine populist attitudes. Following exploratory analysis on a cross-national survey sample, they end up proposing three stable constructs considered as definitional parts of populism: people centrism, anti-elitism, and a Manichean view of the world. Schultz et al. (2018) also claim against treating populist attitudes as a unidimensional construct and argue for the use of three distinct dimensions: anti-elitism attitudes, a preference for popular sovereignty, and a belief in the homogeneity and virtuousness of the people. Going further, Bertsou and Caramani (2022) claim that the dissatisfaction with the workings of party-based representative democracy does not result only in core populist attitudes, but also in (anti-) technocratic ones that are empirically distinct, but partially overlap and are related to dimensions of populist attitudes. Apart from the core of populist attitudes focused on people centrism and a Manichean view of the world in line with Akkerman et al. (2014), they propose three additional dimensions of what they call technocratic attitudes: elitism, expertise, and anti-politics.

In line with the proposal of Bertsou and Caramani (2021), we distinguish between core populist attitudes and three related, but empirically differentiated, anti-technocratic attitudes: anti-elitism, anti-expertise, and anti-politics. All items used to capture these four related sets of attitudes have been tested out and applied in a cross-national setting by Bertsou and Caramani (2022), with our factor analysis performed in the next section indicating similar results. Core populist attitudes are identified

based on classic items from Akkerman et al. (2014) and Castanho-Silva et al. (2020) and capture the core features of populism: people centrism and the Manichean view of the world as opposition between "good" and "evil," loading on the same factor and, hence, measured on a single dimension. Anti- or pro-elitist attitudes refer to the support or skepticism toward the political involvement of ordinary people. Anti-expertise attitudes refer to skepticism toward decision-making done by experts, while anti-politics attitudes tap into dissatisfaction with representative politics. All these three sets of anti-technocratic attitudes are measured using items developed in the Bertsou and Caramani (2022) study. We must stress at this point, that, beyond this overview, the goal of discerning between the various conceptualizations of populism is beyond the scope of this paper. We treat these four sets of attitudes here (the core populist ones and the anti-technocratic ones) as neighboring but measured separately by showing that they can be meaningfully distinguished from each other empirically, while leaving the question of their theoretical relationship open for further study.

Taking into account this strain of literature on populist attitudes and anti-technocratic attitudes, we posit that while other crises in the recent past have been more explicitly linked to rise of populist attitudes, such as the euro crisis (Marcos-Marne et al. 2021; Rico and Anduiza 2019), the refugee crisis (Evans and Ivaldi 2021), and even the climate crisis (Huber et al. 2020), the Covid crisis has also activated populist and also anti-technocratic attitudes in spite of an initial rallying effect for mainstream parties. Unlike threats from immigration that lay at the core of the refugee crisis and Brexit, the Covid pandemic did not present a widespread perception of threat to the cultural homogeneity of the people. Also, unlike the deeply unpopular austerity packages the followed in the wake of euro crisis and the Great Recession (Bojar et al. 2021), the policy response to Covid was met with generally high approval, at least until the later stages of the pandemic (Altiparmakis et al. 2021; Bol et al. 2021). Therefore, given the choices that policymakers faced in the wake of the initial Covid shock, it was a hardly tenable accusation that choices were made against the "general will of the people." The policymaking response to the pandemic was a quintessential technocratic moment with scientific experts put in quasi policy-making positions and emergency powers imposed to curtail the room for consultation and deliberation with the people. In line with Brubaker (2021), we contend that while the pandemic has not generated a coherent or large-scale populist response, it might have heightened distrust of expertise and exacerbated antipathy to intrusive government regulation. We thus expect that those who hold such anti-technocratic views were likely to challenge the official accounts of events above and beyond their populist orientations. Since a large part of such challenges were formulated in the form of conspiracy theories and misinformation, we hence expect to not only confirm a link between populist attitudes and conspiracy beliefs that the literature has uncovered previously, but to find an equally strong link between anti-technocratic attitudes and conspiracy beliefs in the context of the pandemic.

H1a Core populist attitudes are positively related to respondents' Covid-related conspiracy beliefs.

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H1b Anti-technocratic attitudes (anti-expertise, anti-politics, and anti-elitism) are positively related to respondents' Covid-related conspiracy beliefs.

However, as argued above, Covid constitutes a special crisis moment because of the stringent lockdown measures that the population had to accept in its wake. In fact, the initial popular response to pandemic was much like the "rally-around-the-flag" phenomenon familiar from the literature on international conflicts and natural disasters (Bol et al. 2021; Reeves 2011; Baker and O'Neal, 2001). The most important characteristic of these rare periods is that a substantial part of the public—including opposition voters, or in our framework, those who hold populist, anti-elitist, anti-expertise, and anti-politics sentiments—approve of government policy. Though by the time our survey was fielded, such unqualified rally gave in to partisan contestation and popular discontent with some of the measures and the vaccination rollout, it is a plausible conjecture that the initial support for government policies crosscut wide segments of the electorate regardless of their underlying populist and anti-technocratic sentiments, partisan orientation, or general feelings of trust. Therefore, going beyond the already shown relationship between populist attitudes and general trust (Eberl et al. 2021), we expect to find variation among those with populist and anti-technocratic views in the degree to which they approve of the pandemic response. More specifically, we expect the performance evaluations to not only lead to lower levels of Covid-related conspiracy beliefs on their own turn, but to also moderate the link between populist and anti-technocratic attitudes and such beliefs. We test this hypothesis in what regards both the performance of national governments and the performance of the EU.

H2a The more positive the performance evaluations of the national governments within the pandemic, the lower the levels of conspiracy beliefs, net of trust in political institutions and populist attitudes.

H2b The more positive the performance evaluations of the EU within the pandemic, the lower the levels of conspiracy beliefs, net of trust in political institutions and populist attitudes.

H2c Performance evaluations of the national governments moderate the relationship between populist attitudes and Covid-related conspiracy beliefs. Positive evaluations diminish this effect, whereas negative evaluations enhance it.

H2d Performance evaluations of the EU moderate the relationship between populist attitudes and Covid-related conspiracy beliefs. Positive evaluations diminish this effect, whereas negative evaluations enhance it.

Data and operationalization

The data for this study were collected as part of an original cross-national survey fielded in 16 EU member states at the end of the pandemic's thirds wave (June–July 2021). The national samples were obtained using a quota design based on gender, age, area of residence, and education and consist of more than 2000 respondents per country, amounting to a total of 34,200 respondents. The timing of the survey, June–July 2021, is also particularly suitable for our research question in several regards. First, the main issue on the agenda of European countries before and during the fielding of our questionnaire was the vaccination rollout. As indicated by the high rates of vaccine hesitancy across Europe (Eurofound 2021), the vaccination issue can be presumed to have provided fertile ground for a host of conspiracy beliefs. Secondly, rather than fielding our survey at the beginning of the pandemic when its consequences and implications might not have been apparent yet, fielding it after more than a year since the start of the pandemic allowed for enough time for conspiracy beliefs to form.

Beyond specific items measuring conspiracy beliefs related to Covid, the survey includes multiple items related to broader attitudes concerning the Covid pandemic, such as policy evaluation targeted at national governments and the EU as well as a host of sociodemographic and political attitudes. This allows for a systematic investigation of the correlates of Covid conspiracy theories and allows us to better place them in the attitudinal and sociodemographic map of individuals in our survey. In terms of sociodemographic factors we include age, gender, and education, while in terms of political attitudes we include political interest, ideological self-placement, trust in government, and performance evaluations of both governments and the EU, all expected to be related to conspiracy beliefs based on the literature listed above. In Table A3.1, we show the descriptive statistics of the items used in the following models. The results presented here are based on OLS regressions with various model specifications in what regards the covariates included, with the results remaining robust to these various specifications.

In the following, we focus on describing and testing the two batteries of questions that form the core of our study: the one measuring conspiracy beliefs, and the one measuring populist attitudes.

Measuring conspiracy beliefs

For measuring conspiracy beliefs during Covid we use an original battery of items that captures specific and presumably popular Covid conspiracy beliefs. Appendix A1 in Supplementary material shows our battery with all items measured on 0–10 scales. Three items in our battery (CONS1, CONS2, and CONS3) capture different conspiracy theories involving different issues and culpable actors: One relates to the national governments hiding important Covid-related information, another relates to the purposeful creation of the virus for personal gains, and a third related to governments and/or pharmaceutical companies covering up the dangers of vaccines. In
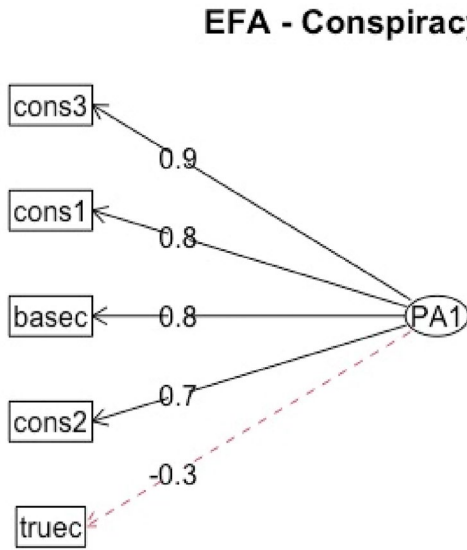
EFA - Conspiracy beliefs

Fig. 1 Exploratory factor analysis for conspiracy attitudes

addition to these items, we have also included two more items as benchmarks for our questions. The literature on conspiracy theories in general suggests that individuals who endorse one conspiracy theory tend to endorse others thus forming a general conspiratorial mindset (Swami et al. 2011). More specifically, research on Covid conspiracies has also been shown to be consistent with this general conspiratorial mindset (Miller 2020; Uscinski et al. 2020). We have, therefore, included an item designed to capture this general conspiracist ideation element that askes about authorities hiding the official version of events irrespective of Covid (item BASE). We will use this benchmark item as an important control in our empirical models. Finally, we have also included a "true" statement in the battery (item TRUE related to vaccination) as a further check on how our battery works and on the consistency of these beliefs. The inclusion of this "true" statement also guards against the risk coming from the similarity of question content and response format that may distract a respondent from giving full attention to what information is being asked.

Figure 1 presents the results of exploratory factor analysis on this battery and shows that, expectedly, the conspiracy-related items together with the baseline item all load highly on the same dimension, whereas the "true" item loads negatively on this same dimension.[1] Given this, but also comparing the model fit of a one-factor

[1] We used principal axis factoring with oblimin rotation using the *psych* package in R. Appendix Fig. A8.1 in Supplementary material shows that there is only one factor with eigenvalues higher than 1. Additionally, the one-factor model presented acceptable model fit statistics (TLI = 0.942 and RMSEA = 0.114). We also run our factor analysis on a two-factor model which presented a lower BIC value (BIC = 844 compared to BIC = 2190), which indicated that the "true" item in the scale can be separated and not included into the aggregation. Appendix Table A8.1 in Supplementary material shows item loadings on this factor.
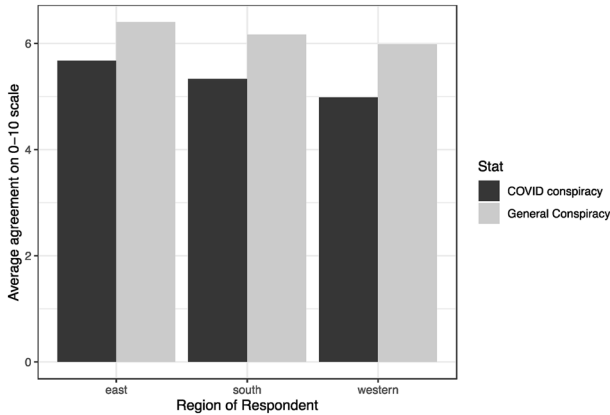
Fig. 2 Average agreement with conspiracy theories across regions

with a two-factor model, the "true" item in the scale is separated and not included into the aggregation. Generally, this supports the aggregation of the different conspiracy items into a single scale, and also confirms expectations in the literature on conspiracy theories of a general conspiratorial mindset driving most conspiracy beliefs. In what follows, as a hard test on our hypotheses, we combine items CONS1, CONS2, and CONS3 into a scale by averaging them and include the baseline item as control variable (but also include it directly in the conspiracy scale as a robustness check in Appendix A7 in Supplementary material with results remaining stable).

Lastly, before proceeding to the results, Fig. 2 presents the distribution of people believing in Covid conspiracies (black bars) and sharing a general conspiratorial mindset (gray bars) across regions in Europe. The figure indicates that believing conspiracy theories of particular or general nature is the norm, rather than the exception across all European regions, as the average respondent across our sample reports these theories more likely to be true than not (averages above 5 on our 0–10 scale). This shows that rather than being a fringe phenomenon, belief in conspiracy theories is widespread at the time we fielded our survey and further underscores the importance of studying its relation to populist attitudes and its implications for political behavior.[2]

Measuring populist attitudes and anti-technocratic attitudes

For measuring core populist attitudes, we include a series of items commonly used in the populism literature starting from the classic Akkerman et al. (2014) populism scale and complementing it by items from the Castanho-Silva et al. (2020) scale. This combination of items has been tested out and applied in Bertsou and

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[2] Appendix A5 in Supplementary material also shows that high prevalence of conspiracy beliefs is not an artifact of our index construction, as averages remain high across the composing items.
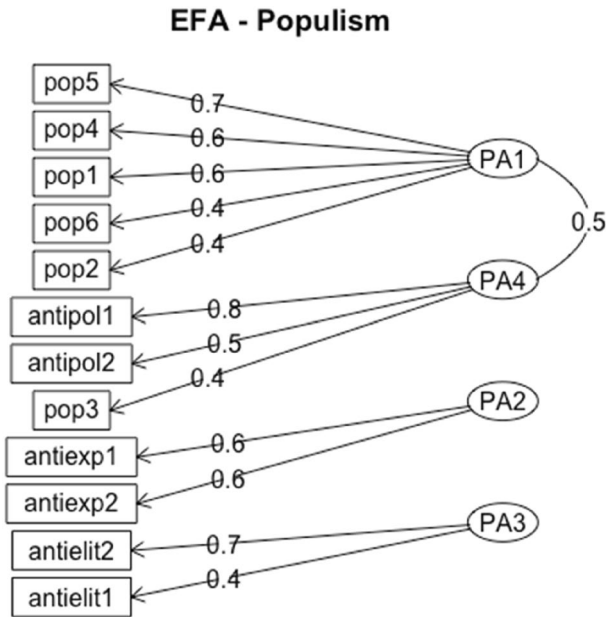
EFA - Populism

Fig. 3 Exploratory factor analysis for populist attitudes

Caramani (2022) in a cross-national setting. The battery has the twofold advantage that it allows us to capture the core features of populism: people centrism and the Manichean view of the world as opposition between "good" and "evil" while also being unidimensional empirically holding on a single factor loading and, therefore, can be easily aggregated into a composite measure of populist attitudes (Bertsou and Caramani 2022).

In addition to the core populist attitudes, in order to measure neighboring anti-technocratic attitudes such as anti-elitism, ani-expertise, and anti-politics, we include an additional battery of items catering specifically to these three concepts. We do so by using the items with the highest factor loadings on these dimensions based on the Bertsou and Caramani (2022) study. We, therefore, include two items that measure anti-elitism and relate to the political involvement of ordinary people,[3] two items that measure preference for expert decision-making (inverted to anti-expertise), and two items that tap into dissatisfaction with representative politics (anti-politics). The entire battery of items included in the survey can be found in Appendix A2 in Supplementary material with all items measured on scales from 0 to 10.

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[3] The scale for the items ELI1 and ELI2 in Appendix A2 in Supplementary material has been inverted to measure anti-elitism.
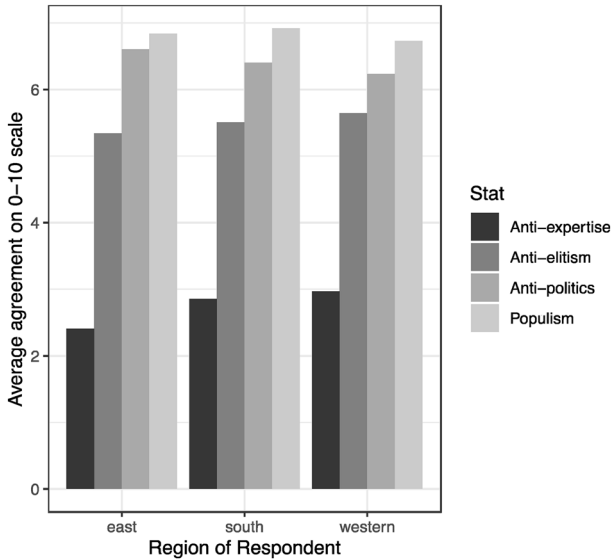
Fig. 4 Average populist and anti-technocratic attitudes across regions

Figure 3 presents the results of exploratory factor analysis on these items and further validates their usage.[4] These results replicate the findings of Bertsou and Caramani (2022) on a different, geographically broader, and larger cross-sectional sample. The items in our battery load into four dimensions with Eigenscores higher than 1. The first dimension, PA1, includes most of the populism items representing the people centrism and Manichean view of the world dimension. The second dimension, PA2, corresponds to the anti-expertise items, while the third, PA3, corresponds to the anti-elitism items. Finally, the last dimension, PA4, includes the anti-politics items, but also the third populism item (POP3) which is voiced in rather anti-political terms. This partial overlap between the populism dimension and anti-politics in the case of POP3 is also found in Bertsou and Caramani (2022) and is expected given that this item implies a critical approach to parties and politicians. Given these results, in what follows we aggregate the items into four different sets of attitudes (core populist attitudes including POP3, anti-politics, anti-elitism, and anti-expertise attitudes) by averaging across the items forming each attitude and loading on the same factor.

We explore the share of respondents holding populist attitudes and anti-technocratic attitudes across regions in Europe in Fig. 4. When it comes to core populist attitudes, we see that on average respondents in our sample scored above 6.5 on our 0 to 10 scale across all European regions. Only marginally lower averages (around 6) were obtained for anti-politics attitudes. By contrast the average score on anti-elitist attitudes was around 5.5, while anti-expertise attitudes are the least

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[4] We used principal axis factoring with oblimin rotation using the *psych* package in R. Appendix Fig. A9.1 in Supplementary material shows that there are four factors with eigenvalues higher than 1, confirming our selection of four factors is optimal. Additionally, the four-factor model presented good model fit statistics (TLI=0.972 and RMSEA=0.036). Appendix Table A9.1 in Supplementary material shows item loadings on all factors.

common in our sample (averages between 2 and 3 on our 0–10 scale). There are some minor cross-regional variations whereas southern European countries appear to be the most populist, western European countries the most anti-elitist, and eastern European countries the most anti-political and pro-expertise, however these cross-regional differences are too minor to warrant further consideration. All in all, this figure indicates that, even if the populist party landscape might be struggling, populist and anti-technocratic attitudes did survive the pandemic.[5]

Results

Table 1 shows the results of three linear models analyzing the impact of populist attitudes, basic sociodemographics, and general political attitudes on the Covid conspiracy beliefs scale, and a fourth, full model. All the independent variables are significant in separate models and remain significant in the full model (model 4), on which we focus on below. Expectedly, we can see that a general conspiratorial mindset is strongly associated with Covid conspiracy beliefs even after controlling for sociodemographics, populist and anti-technocratic attitudes, and other political attitudes. In what regards populist attitudes, we can see that indeed the basic populism scale focused on people centrism and a Manichean view of the world has a positive and statistically significant effect on Covid conspiracy beliefs. A 1-point increase on the populism scale produces, on average, around 0.18 increase in the Covid conspiracy scale (both measured from 0 to 10). Additionally, the anti-technocratic attitudes included in our battery also have significant effects in different directions. This lends support to hypothesis H1a and H1b. Anti-politics attitudes impact positively on conspiracy beliefs, with a 1-point increase producing a 0.13 increase in the conspiracy scale. Anti-expertise is positively associated with conspiracy beliefs with a small effect size after the inclusion of other control variables in model 4. However, surprisingly, anti-elitism is negatively associated with Covid conspiracy beliefs. This last result is counterintuitive, as one would expect that a critical attitude toward the elites would feed into the acceptance of Covid-related conspiracy beliefs.[6] We further explore this counterintuitive effect below when testing H2c and H2d.

The basic sociodemographics and general political attitudes included are all significantly associated with conspiracy beliefs. Older, male, highly educated, and more politically interested people are less likely to hold Covid conspiracy beliefs. The results also support previous findings in the literature relating trust in government negatively with conspiracy beliefs (Eberl et al. 2021). Additionally, ideology has a strong effect, as respondents placing themselves on the right of the ideology

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[5] Appendix A4 in Supplementary material also shows that high prevalence of populist attitudes and anti-technocratic attitudes is not an artifact of our index construction, as averages remain high across the composing items.

[6] Furthermore, this negative effect is robust to various model specification and to disaggregation of the anti-elitism index. In Appendix A8 in Supplementary material, we explore bivariate relations between anti-elitism and conspiracy beliefs, relations by European region, but also relations between each item composing the anti-elitism index. The result remains significantly negative in all models.

Table 1 Predicting Covid conspiracy beliefs

	DV: Covid conspiracy beliefs			
	(1)	(2)	(3)	(4)
Core Populism	**0.148*** (0.012)**			**0.177*** (0.013)**
Anti-elitism	**− 0.106*** (0.008)**			**− 0.122*** (0.009)**
Anti-expertise	**0.133*** (0.009)**			**0.094*** (0.010)**
Anti-politics	**0.171*** (0.010)**			**0.132*** (0.010)**
Base consp.	**0.620*** (0.007)**			**0.587*** (0.008)**
Trust gov			**− 0.170*** (0.011)**	**− 0.015* (0.009)**
Gov. perf			**− 0.126*** (0.013)**	**− 0.058*** (0.009)**
EU perf			**0.007 (0.012)**	**− 0.018** (0.009)**
Ideology right			1.476*** (0.073)	0.571*** (0.054)
Ideology center			0.771*** (0.066)	0.403*** (0.048)
Pol. Interest			− 0.139*** (0.032)	− 0.104*** (0.023)
Age 35–60		− 0.002 (0.057)		− 0.155*** (0.044)
Age > 60		− 0.713*** (0.066)		− 0.614*** (0.052)
Female		0.197*** (0.049)		0.161*** (0.037)
Edu. middle		− 0.438*** (0.065)		− 0.262*** (0.049)
Edu. high		− 0.943*** (0.070)		− 0.375*** (0.053)
Constant	− 0.793*** (0.117)	5.066*** (0.119)	5.405*** (0.151)	0.359** (0.168)
Observations	10,799	12,223	10,268	9406
R^2	0.577	0.089	0.162	0.595
Adjusted R^2	0.577	0.088	0.160	0.594
Residual SE	1.808 (df = 10,778)	2.703 (df = 12,202)	2.548 (df = 10,246)	1.744 (df = 9374)
F Statistic	736.079*** (df = 20; 10,778)	59.930*** (df = 20; 12,202)	94.210*** (df = 21; 10,246)	444.670*** (df = 31; 9374)

The models include country fixed effects not reported here due to space considerations

Bold font denote effects of particular substantive interest

$*p < 0.1$; $**p < 0.05$; $***p < 0.01$

scale score 0.6 higher on average on the conspiracy beliefs scale, than those on the left. Finally, performance evaluations of governments are negatively associated with conspiracy beliefs above and beyond the trust people lend these governments (supporting to H2a). The performance of the EU has a much smaller effect in comparison and this result is also not robust to the specification of the conspiracy scale (see Appendix Table A7.1 in Supplementary material), lending only mixed support to H2b. This suggests that what governments, and to a lesser extent the EU, do policy-wise during the pandemic does matter and, while small, they have the potential to offset conspiracy beliefs.

Further exploring the effects of government performance and EU performance, Figs. 5 and 6 (based on Appendix Tables A6.1 and A6.2 in Supplementary material) test their moderating effect on populist attitudes. We can see that generally those with more positive performance evaluations (solid black line) score less on the conspiracy scale. Nevertheless, the moderating effects are mixed, out hypothesis H2c being only partially supported. Performance evaluations have little to no interaction effects with when it comes to core populist attitudes and anti-expertise (upper left and lower left graphs). When it comes to anti-elitism we have a significant negative interaction effect: more positive performance evaluations increase the negative effect of anti-elitism on conspiracy beliefs (upper right graph). Finally, against H2c, there is also a very small significant positive interaction effect between government performance and anti-politics. As performance evaluations are more positive, the effect of anti-politics on conspiracy beliefs slightly increases, though as the lower right graph in Fig. 4 shows, this effect is very small as the lines are close to being parallel. We obtain similar results for the interaction between EU performance and these attitudes. While EU performance evaluations have small to null moderating effects in what regards core populist attitudes, anti-elitism, and anti-politics, we observe a similar strong negative interaction effect between anti-elitism and EU performance (lending only partial support to H2d).

In line with expectations, this indicates that those respondents holding anti-elitist views but evaluating the government and the EU's performance positively are less inclined to hold conspiracy beliefs than those who evaluate the government or the EU negatively. This partially offsets the counterintuitive results on the relationship between anti-elitism and conspiracy beliefs previously obtained. Additionally, Fig. A6.1 and Table A6.3 in Appendix in Supplementary material shows similar results in what regards trust in government. While trust has small to null moderating effects on core populist attitudes, anti-elitism, and anti-politics, it has a similar negative interaction effect with anti-elitism, which offsets its initial negative effect on conspiracy beliefs. These negative interaction effects with government performance evaluations, EU performance evaluations, and trust in government indicate that rather than anti-elitism being a stable personality trait with constant effects on conspiracy beliefs, its effect is contingent and conditional on how well governments and the EU perform in crises.
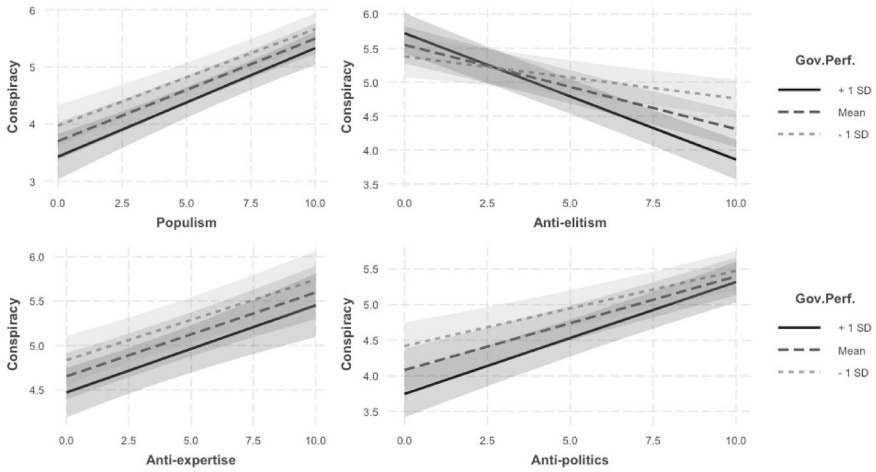
Fig. 5 Interaction effects between populist and anti-technocratic attitudes and government performance (the regression table for the interaction plots presented here can be found in Appendix A3 in Supplementary material)
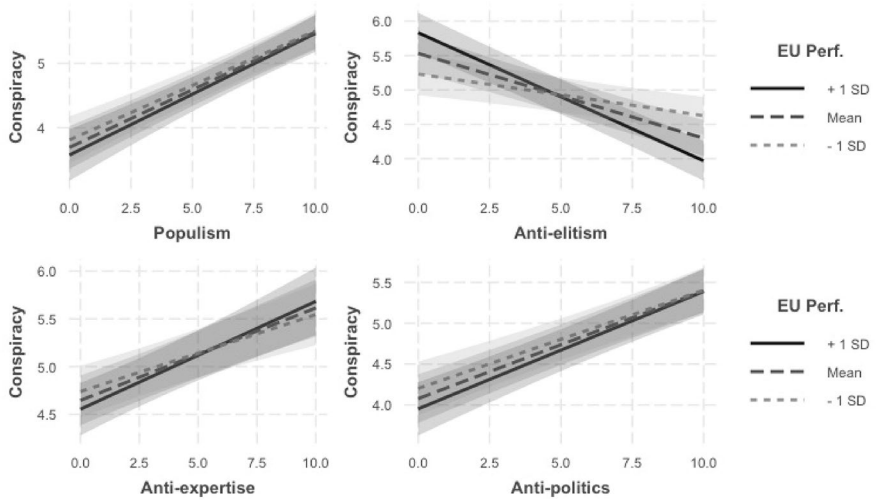
Fig. 6 Interaction effects between populist and anti-technocratic attitudes and EU performance (the regression table for the interaction plots presented here can be found in Appendix A3 in Supplementary material)

Conclusions

Our paper focused on the puzzle of how a supposedly struggling populist landscape is compatible with widespread beliefs in conspiracy theories during the Covid crisis. Analyzing original survey data collected in 16 countries in the summer of 2021, we aimed to explore how support for Covid conspiracy theories is embedded in the attitudinal

map of individuals by examining the link between these and a host of related attitudes and behaviors: populist attitudes, anti-technocratic attitudes, and performance evaluations of governments and the EU. In doing so, our paper offers three contributions to the literature on conspiracy beliefs, populism, and anti-technocratic attitudes. First, we introduce a new scale for measuring conspiracy beliefs, benchmarked on a general conspiratorial mindset item and on a non-conspiratorial item and show that rather than being a fringe phenomenon, conspiracy beliefs related to Covid are highly widespread in Europe. Second, we built on the multidimensionality of the concept of populism, but also of related but empirically distinct anti-technocratic attitudes and show that many of these attitudes survived the pandemic, in spite of what was thought to be a decline in populist attitudes and an initial loss of electoral potential of populist parties. We confirm previous findings in the literature that core populist attitudes are strongly related to conspiracy beliefs and show that this relationship holds during the Covid crisis as well, despite an initial paradoxal coupling of a decline in populist attitudes with an increase in conspiracy beliefs. Moreover, this relation holds not only for core populist attitudes, but also for anti-technocratic attitudes which were likely to be exacerbated by the pandemic given its expert-focused policymaking.

Third, the present study also provides important implications for policy making. Going beyond the literature exploring the relationship between trust and populist attitudes, we also inquire into the role that general (dis)satisfaction with the management of the crisis at both the domestic and the EU level plays into the prevalence of conspiracy beliefs. Our results indicate that how well governments did in handling the crisis is consequential, net of the trust that people have in them, of their ideology, and of populist attitudes. Moreover, the performance of governments has the potential to not only reduce conspiracy beliefs in their own term, but also to offset the relationship between anti-elitist attitudes and conspiracy beliefs. Performance evaluations of the EU play a much more limited role in limiting the prevalence of conspiracy beliefs indicating that the heavy lifting in terms of performance falls in the hands of national governments, but have similar offsetting effects in what concerns moderating between anti-elitism and conspiracy beliefs.

To conclude, we must stress that we are limited here in capturing only developments happening in the summer of 2021. More recent developments seem to indicate that anti-vaccination and anti-restrictions attitudes fueled by conspiracy beliefs have further intensified, capturing media headlines across Europe. Additionally, while the novelty of the crisis might have made political parties reluctant to position themselves clearly in the anti-vaccination debate at the beginning of the crisis, as the vaccination rollout was progressing populist parties might begin to take clearer stances on the issue and increase their electoral benefit from these issues. Going further, future research could examine whether the strength of these relationship has intensified over time, but also focus on its implications for political behavior and for the electoral credibility of populist parties.

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