



# Antecedent Ideological Profiles and Negative Socio-political Outcomes of LGBTQ+ Conspiracy Beliefs

Marco Salvati<sup>1</sup> · Valerio Pellegrini<sup>2</sup> · Valeria De Cristofaro<sup>3</sup> · Mirco Costacurta<sup>1</sup> · Mauro Giacomantonio<sup>2</sup>

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## Abstract

**Introduction** Conspiracy theories and beliefs (CTBs) about LGBTQ+ people are often used as arguments in political debate in Italy and across Europe to hinder the passing of protective laws and negatively affect popular consensus regarding the promotion of anti-discrimination policies and the advancement of civil rights.

**Method** We conducted two correlational studies in Italy starting the data collection at the end of 2022. In Study 1 ( $N=589$ ), we investigated which ideological profile was more associated with LGBTQ+CTBs, between the two profiles identified by Duckitt et al.'s model (*Journal of Personality and Social Psychology*, 83(1), 75–93, 2002): *path A*) high vision of the world as a competitive jungle and consequent high social dominance orientation; *path B*) high vision of the world as dangerous and consequent high right-wing authoritarianism. In Study 2 ( $N=1581$ ), we have also included three potential outcomes associated with LGBTQ+CTBs in the model.

**Results** Through a mediational path model, we found that *path B* was the strongest associated with LGBTQ+CTBs. We found that LGBTQ+CTBs mediated the relationships between the two ideological dispositions and (a) lower support to LGBTQ+ civil rights; (b) lower LGBTQ+ collective action intentions; and (c) higher adherence to economic myths about LGBTQ+ people.

**Conclusions** Socio-psychological research on LGBTQ+CTBs may inform social policies that work to lessen the harm these beliefs do and advance a more welcoming and inclusive society.

**Policy Implications** Such results offer several insights to change and improve the actual debate in political, scientific, and cultural domains, contributing to producing new policies which might increase the self-determination of all LGBTQ+ people.

**Keywords** LGBTQ+ conspiracy theories and beliefs · Right-wing authoritarianism · Social dominance orientation · Support to LGBTQ+ civil rights · LGBTQ+ collective action intentions · LGBTQ+ economic myths

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✉ Marco Salvati  
marco.salvati@univr.it

Valerio Pellegrini  
valerio.pellegrini@uniroma1.it

Valeria De Cristofaro  
valeria.decrisofaro@unicampania.it

Mirco Costacurta  
mirco.costacurta@univr.it

Mauro Giacomantonio  
mauro.giacomantonio@uniroma1.it

<sup>1</sup> Department of Human Sciences, University of Verona, 37129 Verona, Italy

<sup>2</sup> Department of Social and Developmental Psychology, Sapienza University of Rome, Rome, Italy

<sup>3</sup> Department of Psychology, University of Campania “Luigi Vanvitelli”, Caserta, Italy

Significant progress has been made in the global recognition and defense of LGBTQ+ rights during the past few decades (Corrales, 2020; Michelson, 2019; Salvati et al., 2020). Important victories in the struggle for LGBTQ+ equality include the decriminalization of homosexuality in many nations, the legalization of same-sex marriage, and the adoption of anti-discrimination laws (ILGA World, 2022). These developments, based on human rights and social justice principles, have been a significant step in removing the obstacles that have historically excluded and persecuted LGBTQ+ people.

However, at the same time, a phenomenon is emerging that could seriously undermine such goals—the proliferation of conspiracy theories and beliefs targeting LGBTQ+ communities, which are portrayed as evil actors in a larger plot, seeking to undermine societal norms, institutions, and traditional values (Salvati et al., 2023a, b). Such

narratives directly endanger the rights and well-being of LGBTQ+ people by feeding and maintaining stereotypes, stigmatization, and fear (Bettinsoli et al., 2022; Jolley et al., 2020; Klein & Nera, 2020).

Conspiracy theories and beliefs (CTBs), by their nature, might have a profound influence on political environments and when they intersect with political agendas, they have the potential to influence public opinion and policy, with real-world repercussions for disadvantaged groups (Jolley & Douglas, 2014; Maftai & Holman, 2022; Salvati et al., 2022; Sutton & Douglas, 2020). In the context of LGBTQ+ rights, this interaction has led to anti-LGBTQ+ politics, where politicians and religious organizations have utilized LGBTQ+ CTBs as a pretext to justify discriminatory and repressive laws or human rights violations against LGBTQ+ people (Adam, 2019; Herman, 2000; Schmitz et al., 2023). Examples of this are numerous. For instance, in Russia, the “gay propaganda” law in 2013, which banned the “promotion of nontraditional sexual relationships among minors,” was justified through the rhetoric that LGBTQ+ rights advocacy was a Western conspiracy to undermine traditional Russian values (Hill, 2019; Kondakov, 2021). Such a law curtailed LGBTQ+ advocacy and escalated violence and prejudice against LGBTQ+ people (Buyantueva, 2021; Loriga, 2020). Similarly, several municipalities in Poland self-declared “LGBT-free zones” in 2019 and 2020, a move supported by right-wing parties who used disinformation to depict LGBTQ+ rights as an outside danger to traditional Polish values (Bucholc, 2022; Górska & Tausch, 2023; Korolczuk, 2020). At the same time, Hungary implemented several laws and regulations, including a restriction on transgender and intersex people officially altering their gender (Takács et al., 2022). These measures were sold as safeguards against LGBTQ+ influence, echoing claims that LGBTQ+ people indoctrinate minors (Primecz & Pelyhe, 2023). Policies like these fostered by LGBTQ+ CTBs are not confined to European countries. Indeed, Uganda’s anti-homosexuality act in 2014 (Wahab, 2016), the ex Brazilian president Bolsonaro’s opposition to LGBTQ+ education materials and advocacy in schools (Feres Júnior & Gagliardi., 2021), ongoing Tanzania’s persecution of LGBTQ+ individuals (Norlén, 2021), etc., constitute specific examples of how the intersection of LGBTQ+ CTBs and political agendas jeopardize the social well-being and advancement of the rights of LGBTQ+ people around the world (ILGA, 2022; Gibbens, 2021; Lavizzari & Prearo, 2019). In the Italian scenario, previous research reveals that people with unfavorable attitudes toward lesbian women and gay men are older, less educated, more religious, with a right-wing political orientation, and with poor personal relationships with them (Lingiardi et al., 2016). At the same time, other scholars have amply described the existence of anti-gender movements in Italy, to convince the population

through sophisticated rhetoric, fear, and scandal that an LGBT+ lobby exists and is a threat to social order and morality (Lavizzari & Prearo, 2019; Prearo, 2023; Trappolin, 2022).

## Overview

In recent years, socio-psychological research has given more and more consideration to conspiracy theories and beliefs (CTBs) (for a review, see Douglas & Sutton, 2023). CTBs refer to explanations that differ from accepted wisdom and attribute important events or occurrences to shadowy, evil entities (Douglas & Sutton, 2023). The discovery of underlying cognitive and affective processes that underlie adherence to CTBs is a recurring issue in socio-psychological research (Douglas et al., 2019). Previous evidence showed that individuals who are more inclined to believe in CTBs are more likely to have a cognitive prejudice called the proportionality bias (Swami et al., 2014). This bias entails considering major occurrences to need similarly substantial explanations, even when the supporting data is scant or nonexistent. Additionally, those who are more unsure or anxious are more likely to believe in CTBs as a desire to recover control and assurance in an unsteady environment. Furthermore, people seem to be more prone to support CTBs that reflect their social and political identities.

At the same time, previous research explored the consequences of CTBs, such as the potential for CTBs to do harm in the real world (Jolley & Douglas, 2014; Jolley et al., 2022; Lo Vecchio et al., 2019; Maftai & Holman, 2022; Sutton & Douglas, 2020). Indeed, people who believe in CTBs may take activities that endanger public safety or damage trust in institutions (Chayinska et al., 2021; Kroke & Ruthig, 2022; Pellegrini et al., 2022; Pummerer et al., 2022). Furthermore, previous studies showed that being exposed to CTBs can reduce confidence in reputable information sources, making it harder to challenge false information and encourage evidence-based decision-making (Van Prooijen et al., 2020).

## The Dual Process Model of Ideology and Prejudice

The Dual Process Model of Ideology and Prejudice (DPM; Duckitt & Sibley, 2009; Duckitt et al., 2002) aims to explain the creation and manifestation of political and social ideologies. This model has had a significant impact on political psychology, assisting scholars and decision-makers in comprehending the psychological mechanisms that underlie various political and social attitudes (Duckitt & Sibley, 2010; Sibley & Duckitt, 2013). For these reasons, it was used as a theoretical framework to increase our psychological

knowledge of CTBs (Salvati et al., 2022; Wilson & Rose, 2014). The model contends that right-wing authoritarianism (RWA) and social dominance orientation (SDO) are two separate psychological processes that influence people's ideological ideas and attitudes and that may interact to produce a range of ideological orientations and behaviors (Asbrock et al., 2010; Pellegrini et al., 2022; Salvati et al., 2022).

RWA is concerned with a person's psychological propensity for traditionalism and authoritarianism (Altemeyer, 1981). Order, conformity, and authoritative figures are strongly preferred by individuals with high RWA, and they frequently show a rigorous devotion to conventional standards and principles (Funke, 2005; Mallinas et al., 2020). RWA has three core dimensions that are as follows (Duckitt et al., 2010): (a) authoritarian submission, people who score highly on RWA are more likely to submit to institutions and authoritative persons because they place a high value on compliance and order; (b) conventionalism, they reject social change and innovation in favor of maintaining established values and norms; (c) aggression toward outgroups, people with high RWA may be hostile toward groups that disagree with conventional norms or values.

SDO denotes a propensity toward social inequity and hierarchy (Pratto et al., 1994). Indeed, people with high SDO scores frequently support and endorse hierarchical social structures in which certain groups dominate and wield authority over others (Ho et al., 2012). Such hierarchies, in their view, are normal and advantageous for society. Furthermore, individuals with high SDO are frequently competitive and work to uphold or elevate the status of their group, sometimes at the expense of other groups and they are more prone to defend and accept social injustices because they think some groups are intrinsically superior (Etchezahar et al., 2022; Pratto et al., 2000).

The DPM is supplemented with the additional constructs of dangerous world beliefs (DWB) and competitive jungle beliefs (CJB) (Duckitt et al., 2002). Within the framework of this approach, they contribute to explaining how people perceive and react to the social and political environment around them (Chirumbolo et al., 2016; De Cristofaro et al., 2021; Federico et al., 2009).

Specifically, on the one hand, DWB represents the idea that the world is a dangerous and menacing place (Cook et al., 2018). People with high DWB are more likely to be wary and apprehensive because they feel they must be on guard to defend themselves from potential dangers (Stroebe et al., 2017). Furthermore, people with high DWB are more likely to perceive risks from crime, terrorism, and social upheaval, among other things, and they may stress the value of being ready and taking security precautions to guard against potential threats (Blum et al., 2014; Dallago et al., 2012). An increased readiness to recognize challenges to the current social order and a perception of the social world as

dangerous and menacing should result from having a higher dispositional social conformity. By making the motivational aim of social control, security, and stability conspicuous for the individual, high social conformity should also have a direct impact on authoritarian attitudes (Duckitt & Sibley, 2009, 2010). Indeed, DPM (Duckitt et al., 2002) puts the DWB as a direct predictor of RWA.

On the other hand, CJB is the conviction that the world is a fiercely competitive, merciless environment, analogous to a "jungle." People with high CJB frequently perceive society as being intrinsically competitive, with few resources and the requirement to compete for success or survival (Radkiewicz & Skarżyńska, 2021). Furthermore, individuals with high CJB may support Machiavellian strategies for success, including deceit and strategic behavior; they frequently view interactions as one person winning at the expense of another or as zero-sum games, and they may be less trusting of others because they assume that others will take advantage of them (Dehaghi & Zeigler-Hill, 2021; Radkiewicz & Skarżyńska, 2021). The psychological traits of toughmindedness, a lack of empathy, and power motivation have all been empirically associated with SDO. This view tends to engage the motivating goals of power, dominance, and superiority over others (CJB), which are then manifested in high SDO (Duckitt & Sibley, 2009, 2010).

## The Current Research and Hypotheses

Unlike the multitude of studies that have dealt with general CTBs or COVID-19 CTBs (Giacomantonio et al., 2022), climate change CTBs (Biddlestone et al., 2022), and CTBs related to Jewes or other social groups (Kofta et al., 2020), research that has focused on LGBTQ+ CTBs is very scarce (Bettinsoli et al., 2022; Salvati et al., 2023a, b). Thus, the current research aimed at contributing to filling this gap in the literature, grounded in the framework of the Dual Process Model of Ideology and Prejudice (DPM, Duckitt et al., 2002).

On the one hand, people adhering to LGBTQ+ CTBs could endorse views that portray LGBTQ+ people as a danger to the established social order and as threats to society because they think that LGBTQ+ rights and people might take resources and power away from the heterosexual and cisgender majority (Bahns & Crandall, 2013). On the other hand, people who adhere to conventional norms and authorities may be more likely to believe conspiracies that support their preconceived notions about gender and sexuality and see LGBTQ+ people as a threat to traditional values and norms, legitimizing authoritarian leaders and policies that hinder the advancement of policies and actions to support LGBTQ+ people's rights (Grzesiak-Feldman, 2015; Sweigart, 2022). Although both these ideological profiles have

aspects that could predict adherence to LGBTQ+ CTBs, we hypothesized that the “high DWB and RWA” path would have more predictive power than the “high CJB and SDO” path (Dyrendal et al., 2021; Pellegrini et al., 2019; Salvati et al., 2022; Wood & Gray, 2019). This prediction is also supported by some preliminary empirical evidence showing that, although both relationships were statistically significant, RWA predicted adherence to LGBTQ+ CTBs more than SDO, also controlling for socio-anagraphic and other psychological variables, such as DWB, CJB, political orientation, and religiosity (Salvati et al., 2023a, b). In Study 1, we wanted to give greater robustness to these previous results, testing a mediational model where high CJB and high DWB would be associated with high SDO and high RWA, respectively, which in turn would be associated with higher adherence to LGBTQ+ CTBs.

Previous studies also provided preliminary empirical evidence that adhering to LGBTQ+ CTBs is associated with several negative outcomes about stereotypes, prejudice, and actions toward LGBTQ+ people and their rights (Salvati et al., 2023a, b). Specifically, higher adherence to LGBTQ+ CTBs was associated with higher levels of denial of discrimination of LGBTQ+ people, higher levels of economic myths about LGBTQ+ people, and lower levels of support to LGBTQ+ civil rights and collective action intentions (Salvati et al., 2023a, b). Thus, in Study 2, we wanted to replicate the positive associations of SDO and RWA with LGBTQ+ CTBs, adding three potential negative outcomes which were the economic myths about LGBTQ+ people, the support to LGBTQ+ civil rights, and the LGBTQ+ collective action intentions. Specifically, we tested a mediational model where LGBTQ+ CTBs were the mediating variable of the relationships of higher SDO and higher RWA with lower support to LGBTQ+ civil rights, higher economic myths about LGBTQ+ people, and lower LGBTQ+ collective action intentions.

## Study 1

We conducted Study 1 to test our hypothesis that the “high DWB and RWA” path would have more predictive power than the “high CJB and SDO” path (Dyrendal et al., 2021; Pellegrini et al., 2019; Salvati et al., 2022; Wood & Gray, 2019). Specifically, we hypothesized that high CJB and high DWB would be related to high SDO and high RWA, respectively, which in turn would be associated with higher adherence to LGBTQ+ CTBs.

## Participants and Procedures

The sample size was determined by means of a power analysis designed for mediation models with two parallel

mediators, performed by means of an R application (Schoemann et al., 2017). We opted for conservative expected effect sizes and number of replications to achieve the conventional power threshold ( $r = 0.15$ ,  $1 - \beta = 0.80$ , replication = 5000, draws = 20,000, Monte Carlo confidence level = 95%). Analysis revealed a minimal sample size of 650 observations for reaching a statistical power of 0.80 (95%CI = 0.79, 0.81). Seven hundred thirty-one people completed a self-reported questionnaire from October 2022 to January 2023. To be included in the final sample, the inclusion criteria were the following: (a) being Italian; (b) being 18 years old at least; (c) being a cisgender man or woman; (d) being heterosexual; (e) not failing the attentional check item. Based on these criteria, 44 participants failed the attentional check, 7 responded “other” to the item asking gender, and 91 were not heterosexual. Thus, the final sample consisted of 589 Italian participants (men = 170; 28.9%; women = 419; 71.1%), ranging between 18 and 92 years old ( $M = 38.44$ ,  $SD = 16.08$ ). The 5.8% of the sample did not have a high school diploma, the 44.1% had a high school diploma, the 19.0% declared to have a Bachelor’s degree, the 24.3% reported to have a Master’s degree, whereas the 6.8% indicated to have a Phd or a Specialization title.

The Qualtrics platform was used to electronically deliver a self-report questionnaire. The study was presented to participants as a survey collecting opinions about political, gender, and social topics. Convenience sampling was used to find potential volunteers, and they were informed that the survey was fully anonymous and that they may skip any questions they did not want to answer. Before starting the questionnaire, participants signed informed consent and, after finishing, they read a brief description of the real objectives of the study. After the conclusion of the questionnaire, a concise overview of the research hypothesis was provided, with an invitation for participants to reach out to the researchers for any inquiries or clarifications. The Ethical Review Board for Research in Psychology of the Department of Human Sciences at the University of Verona approved the study, which complied with the WMA Declaration of Helsinki (1964/2013).

## Measures

### Socio-demographic Section

Participants’ nationality; age; gender (male, female, other); and education (elementary diploma, middle school diploma, high school diploma, bachelor’s degree, master’s degree, Phd, or other specialization) were collected. Sexual orientation was investigated through a single item with 6 options: 1 = exclusively heterosexual; 2 = predominantly heterosexual; 3 = bisexual; 4 = predominantly homosexual; 5 = exclusively heterosexual; 6 = other. Such a choice allowed us to



select only participants who responded 1 or 2, following the same procedure already used in several previous studies (Salvati et al., 2019, 2021, 2023b; Salvati & Chiorri, 2023).

### Political Orientation

Participants responded to a 7-point single item asking about political orientation, from 1 = *extremely left* to 7 = *extremely right* ( $M = 3.65$ ,  $SD = 1.45$ ).

### Religiosity

Participants responded to five items on a 5-point Likert scale, from 1 = *not at all* to 5 = *completely*, to investigate their level of religiosity through the attendance at religious rites, the importance of religion for them, adhering to the precepts of religion, etc., (Pellegrini et al., 2019; Salvati et al., 2023a) ( $M = 2.54$ ,  $SD = 1.03$ ,  $\alpha = 0.87$ ). An example of an item was “How important is religion for you?” The final religiosity score was calculated based on the mean of the five items.

### Conspirative Mentality Questionnaire (CMQ, Bruder et al., 2013)

Such a tool was used to measure participants’ generic tendency to engage in conspiratorial ideation. It consisted of 5 items on which participants express their personal degree of probability, on an 11-point scale ranging from 0% = *certainly not* to 100% = *certainly yes* ( $M = 7.06$ ,  $SD = 2.11$ ,  $\alpha = 0.88$ ). An example of item was: “I think that many very important things happen in the world, which the public is never informed about”. The final Conspirative Mentality Questionnaire score was calculated based on the mean of the five items.

### Variables of the Dual Process Model of Ideology and Prejudice

Both the tools of *competitive jungle belief* (CJB, Duckitt, 2001) ( $M = 2.18$ ,  $SD = 0.91$ ,  $\alpha = 0.82$ ) and *dangerous world belief* (DWB, Duckitt, 2001) ( $M = 4.02$ ,  $SD = 0.99$ ,  $\alpha = 0.76$ ) consisted of 10 items on a 7-point Likert scale ranging from 1 = *totally disagree* to 7 = *totally agree*. The measure of *social dominance orientation* (SDO, Pratto et al., 1994) included 8 items on a 7-point Likert scale ranging from 1 = *totally disagree* to 7 = *totally agree* ( $M = 1.93$ ,  $SD = 0.91$ ,  $\alpha = 0.81$ ), whereas the measure of right-wing authoritarianism (RWA, Altemeyer & Altemeyer, 1996) included 10 items on a 7-point Likert scale ranging from 1 = *totally disagree* to 7 = *totally agree* ( $M = 2.60$ ,  $SD = 1.17$ ,  $\alpha = 0.85$ ). Examples of items were CJB: “Most people just want to rip you off, so you need to rip them off first when you get the chance!”;

DWB: “In our society, chaos and disorder could erupt at any moment. There are many indications that this may actually happen”; SDO: “It is right that some social groups occupy more relevant positions than others”; RWA: “What our country really needs instead of more “civil rights” is a good stiff dose of law and order.” The final score of every scale was calculated based on the mean of the items of every scale, after having reversed some items that required it.

### LGBTQ+ Conspiracy CTBs

The Gender ideology and LGBTQ+ Lobby conspiracies (GILC) scale (Salvati et al., 2023a, b) was administered to participants, who responded to 9 items on a 5-point Likert scale, ranging from 1 = *totally disagree* to 5 = *totally agree* ( $M = 1.73$ ,  $SD = 0.93$ ,  $\alpha = 0.97$ ). Example of items were “Some very powerful people want to spread ‘gender ideology’ in schools to indoctrinate children” or “A group of LGBT people has organized to infiltrate all major sectors of society to increase their influence on it.” The final GILC score was calculated based on the mean of the nine items.

### Data Analyses

Preliminary analyses were run to test normality and multicollinearity of all the variables, calculating skewness and kurtosis indexes for all continuous variables and running correlation analyses. Normality and multicollinearity were considered not an issue if kurtosis and skewness values were lower than |3.0| (Kline, 2015) and lower than |3.0| (Field, 2009), respectively.

Subsequently, we ran a perfectly identified path analysis model. Specifically, we implemented a mediation model where DWB and CJB were the predictors, SDO and RWA were the parallel mediators, and GILC was the criterion. All paths tested in the model were controlled for participants’ gender, age, education, political orientation, religiosity, and levels of conspiracy mentality. The model was tested by a robust maximum likelihood method, with the Huber–White correction. We used this correction since we were also interested in testing indirect associations, which are conventionally not normally distributed. Analysis was conducted with the R package lavaan (Rosseel, 2012) on the RStudio graphical interface (2023).

### Results

Preliminary analyses confirmed that all the continuous variables were normally distributed, and that multicollinearity was not an issue (Table 1). Also, correlations gave first support to our hypotheses showing that, although both SDO and RWA were positively associated with GILC, the effect size

**Table 1** Correlations (Study 1 *N*=589)

	Gender	Age	EDU	PO	REL	CMQ	CJB	DWB	SDO	RWA	GILC
Gender	1										
Age	.16**	1									
EDU	.10*	.20**	1								
PO	-.10*	-.03	-.28**	1							
REL	.16**	.35**	.12**	.14**	1						
CMQ	.13**	.10*	-.07	.14**	.10*	1					
CJB	-.25**	-.35**	-.21**	.29**	-.14**	.04	1				
DWB	.14**	-.20**	-.27**	.32**	.01	.35**	.20**	1			
SDO	-.17**	-.17**	-.21**	.44*	-.05	.07	.56**	.15**	1		
RWA	-.11**	.01	-.32**	.58**	.22**	.22**	.36**	.39**	.49**	1	
GILC	-.08	.10*	-.17**	.39**	.23**	.28**	.20**	.24**	.34**	.52**	1
Skewness	-	.50	-	.21	.57	-.39	.70	-.04	1.01	.65	1.32
Kurtosis	-	-.99	-	-1.02	-.61	-.22	-.07	-.21	.44	-.24	1.02

Gender: 1 = male; 2 = female, *EDU* education, *PO* political orientation: from 1 = extreme left to 7 = extreme right, *REL* religiosity, *CMQ* Conspiracy Mentality Questionnaire, *CJB* competitive jungle beliefs, *DWB* dangerous world beliefs, *SDO* social dominance orientation, *RWA* right-wing authoritarianism, *GILC* Gender ideology and LGBTQ+ Lobby conspiracies scale

\**p* < .05; \*\**p* < .01

was large for RWA,  $r = 0.52$ ,  $p < 0.01$ , and medium for SDO,  $r = 0.34$ ,  $p < 0.01$  (Cohen, 1992). Furthermore, both CJB,  $r = 0.20$ ,  $p < 0.01$ , and DWB,  $r = 0.24$ ,  $p < 0.01$ , resulted positively associated with GILC, but the effect size was small for both the associations.

The results of the mediational model (Table 2) showed that CJB was positively associated with RWA and SDO. DWB related positively to RWA, but not to SDO. In turn, both RWA and SDO were positively associated with GILC. Thus, we found statistical support for a positive indirect association of CJB and GILC which was significantly mediated by both RWA ( $\beta = 0.07$ ,  $se = 0.016$ ,  $z = 4.46$ ,  $p < 0.001$ ,  $95\%CI = 0.041, 0.104$ ) and SDO ( $\beta = 0.06$ ,

$se = 0.025$ ,  $z = 2.48$ ,  $p = 0.013$ ,  $95\%CI = 0.013, 0.109$ ). As for DWB, we found a significant and positive indirect association with GILC only mediated by RWA ( $\beta = 0.07$ ,  $se = 0.016$ ,  $z = 4.48$ ,  $p < 0.001$ ,  $95\%CI = 0.040, 0.102$ ), and not by SDO ( $\beta = -0.009$ ,  $se = 0.006$ ,  $z = -1.50$ ,  $p = 0.133$ ,  $95\%CI = -0.020, 0.003$ ). Interestingly, such indirect associations could be considered fully mediated since analysis revealed non-significant direct relations of both DWB and CJB with GILC. Note that all associations described above emerged regardless of participants' gender, age, education, political orientation, religiosity, and levels of conspiracy mentality, which represented the covariates included in the model.

**Table 2** Direct associations of the path analysis model (Study 1: *N* = 589)

<i>DV</i>	<i>IV</i>	$\beta$	<i>se</i>	<i>z</i>	<i>p</i>	95% <i>CI</i>	
						Lower	Upper
RWA	CJB	0.21	0.036	5.88	<0.001	0.142	0.284
	DWB	0.21	0.034	6.14	<0.001	0.141	0.274
SDO	CJB	0.46	0.039	11.78	<0.001	0.386	0.540
	DWB	-0.07	0.037	-1.75	0.081	-0.139	0.008
GILC	CJB	0.01	0.046	0.28	0.780	-0.077	0.102
	DWB	0.02	0.039	0.57	0.567	-0.054	0.098
	RWA	0.34	0.049	6.90	<0.001	0.244	0.437
	SDO	0.13	0.053	2.49	0.013	0.028	0.235

The model was tested controlling for participants' gender, age, education, political orientation, religiosity, and levels of conspiracy mentality, which were added as covariates. *DWB* dangerous world beliefs, *CJB* competitive jungle beliefs, *RWA* right-wing authoritarianism, *SDO* social dominance orientation, *GILC* gender ideology and LGBTQ+ Lobby conspiracies scale

## Discussion

Study 1 has been conducted to investigate the antecedent profiles of LGBTQ+ conspiracy theories and beliefs (CTBs), referring to the dual process model of ideology and politics (Duckitt & Sibley, 2009; Duckitt et al., 2002). Specifically, our hypothesis that high levels of right-wing authoritarianism (RWA) and dangerous world beliefs (DBW) would have a higher impact on LGBTQ+ CTBs, compared to high levels of social dominance orientation (SDO) and competitive jungle beliefs (CJB) was confirmed. However, both paths resulted positively associated with high levels of LGBTQ+ CTBs, suggesting that both the ideological profiles of the dual process model could constitute factors that reinforce LGBTQ+ CTBs.

## Study 2

After focusing on some potential antecedents of LGBTQ+ CTBs in Study 1, we wanted to explore potential negative outcomes of LGBTQ+ CTBs through Study 2. On the one hand, we wanted to replicate the positive associations of SDO and RWA with LGBTQ+ CTBs. On the other hand, we hypothesized that high levels of LGBTQ+ CTBs would be associated with lower support to LGBTQ+ civil rights, higher economic myths about LGBTQ+ people, and lower LGBTQ+ collective action intentions. Finally, we investigated the mediating associations of RWA and SDO on the three outcomes by high levels of LGBTQ+ CTBs.

## Participants and Procedures

The sample size was determined by means of a power analysis designed for a mediation model with a single mediator, performed by means of an R application (Schoemann et al., 2017). We opted for conservative expected effect sizes and number of replications to achieve a robust statistical power ( $r = 0.15$ ,  $1 - \beta = 0.90$ , replication = 5000, draws = 20,000, Monte Carlo confidence level = 95%). Analysis revealed a minimal sample size of 660 observations for reaching a statistical power of 0.90 (95% CI = 0.89, 0.91). One thousand seven hundred eighty-four people completed a self-reported questionnaire from November 2022 to March 2023. To be included in the final sample, the inclusion criteria were the same as in Study 1. Following that, 89 participants failed the attentional check, 12 responded “other” to the item asking gender, and 102 were not heterosexual. Thus, the final sample consisted of 1581 Italian participants (men = 729; 46.1%; women = 852; 53.9%), ranging between 18 and 79 years old ( $M = 31.30$ ,  $SD = 14.15$ ). The 8.1% of the sample did not

have a high school diploma, the 60.2% had a high school diploma, the 17.3% declared to have a Bachelor’s degree, the 11.9% reported to have a Master’s degree, whereas the 2.7% indicated to have a Phd or a Specialization title. All the procedures, the information about the study given to participants, and ethical approval were the same as in Study 1.

## Measures

The measures of socio-demographic variables; political orientation ( $M = 3.91$ ,  $SD = 1.40$ ); religiosity ( $M = 2.44$ ,  $SD = 0.96$ ,  $\alpha = 0.86$ ); conspiracy mentality ( $M = 6.81$ ,  $SD = 2.12$ ,  $\alpha = 0.86$ ); social dominance orientation ( $M = 2.16$ ,  $SD = 1.04$ ,  $\alpha = 0.86$ ); right-wing authoritarianism ( $M = 2.79$ ,  $SD = 1.18$ ,  $\alpha = 0.85$ ); and LGBTQ+ CTBs ( $M = 1.75$ ,  $SD = 0.92$ ,  $\alpha = 0.94$ ) were the same used in Study 1. In addition, the following three measures were added:

- Support to LGBTQ+ civil rights (SCR, Brown & Henriquez, 2011): This scale consisted of 20 items on a 7-point Likert scale, from 1 = *totally disagree* to 7 = *totally agree*, asking participants to rate their favor for a list of several civil rights for LGBTQ+ people ( $M = 4.24$ ,  $SD = 0.68$ ,  $\alpha = 0.90$ ). An example item was “LGBTQ+ people should not be allowed to adopt children.” The final SCR score was calculated based on the mean of the 20 items.
- Economic Myths regarding gay and lesbian people (Wilkinson, 2019): This tool had 10 items on a 5-point Likert scale, from 1 = *totally disagree* to 5 = *totally agree*, assessing the economic stereotypical beliefs about LGBTQ+ ( $M = 2.19$ ,  $SD = 0.66$ ,  $\alpha = 0.76$ ). An example item was “Because most same-sex couples do not have children, they often have more disposable income than heterosexual couples.” The final economic myths regarding gay and lesbian people score were calculated based on the mean of the 10 items.
- LGBTQ+ collective action intentions (CAI, Salvati et al., 2023a; Van Zomeren et al., 2008): This scale presented 10 items on a 7-point Likert scale, from 1 = *totally unlikely* to 7 = *totally likely*, asking participants how likely they would be to engage in several behaviors to support the rights of LGBTQ+ people ( $M = 2.92$ ,  $SD = 1.59$ ,  $\alpha = 0.94$ ). An example item was: “Participate in community events focused on LGBTQ+ rights issues.” The final CAI score was calculated based on the mean of the 10 items.

## Data Analyses

Like in Study 1, before testing our hypotheses through the mediational model, we have run preliminary analyses to test the normality and multicollinearity of all the variables,

through skewness and kurtosis values correlation analyses (Field, 2009; Kline, 2015).

Subsequently, we tested a serial mediation model where SDO and RWA represented the purposed predictors; GILC was the mediator; and SCR, EMY, and CAI were the criteria. All paths tested in the model were controlled for participants’ gender, age, education, political orientation, religiosity, and levels of conspiracy mentality. As in Study 1, we tested a perfectly identified model with a robust maximum likelihood method using the R package lavaan (Rosseel, 2012).

### Results

Like in Study 1, preliminary analyses confirmed that all the variables were normally distributed and that multicollinearity was not an issue (Table 3). Furthermore, correlations corroborated the findings of Study 1 showing that both SDO and RWA were positively associated with GILC, but the effect size was large for RWA,  $r=0.54, p<0.01$ , and medium for SDO,  $r=0.40, p<0.01$  (Cohen, 1992). Furthermore, in line with our hypotheses, GILC was negatively associated with SCR,  $r=-0.59, p<0.01$ , showing a large effect size, and with CAI,  $r=-0.36, p<0.01$ , showing a medium effect size, whereas GILC was positively associated with EMY,  $r=0.43, p<0.01$ , showing a medium effect size.

The results of the mediation model (Table 4) showed that both RWA and SDO were positively associated with GILC. In turn, GILC resulted positively associated with EMY and negatively related to SCR and CAI.

Therefore, analysis revealed a positive indirect association of RWA with EMY ( $\beta=0.04, se=0.010, z=4.29, p<0.001, 95\%CI=0.023, 0.063$ ) and negative indirect associations with SCR ( $\beta=-0.07, se=0.011, z=-6.12, p<0.001, 95\%CI=-0.087, -0.045$ ) and CAI ( $\beta=-0.02, se=0.007, z=-3.06, p=0.002, 95\%CI=-0.034, -0.007$ ). Similarly, SDO was indirectly and positively related to EMY ( $\beta=0.03, se=0.008, z=3.50, p<0.001, 95\%CI=0.12, 0.042$ ) while indirectly and negatively related to SCR ( $\beta=-0.04, se=0.008, z=-4.99, p<0.001, 95\%CI=-0.058, -0.025$ ) and CAI ( $\beta=-0.01, se=0.005, z=-2.91, p=0.004, 95\%CI=-0.022, -0.004$ ). Moreover, we found direct associations of SDO with EMY, SCR, and CAI, as well as, direct associations of RWA with EMY, SCR, and CAI. Note that, as in Study 1, all relations described above emerged regardless of participants’ gender, age, education, political orientation, religiosity, and levels of conspiracy mentality, which represented the covariates included in the model.

### Discussion

The results of study 2 corroborated the stronger positive association of RWA, compared to SDO, with LGBTQ+ CTBs and confirmed our hypothesis that LGBTQ+ CTBs, in turn, are associated with high levels of economic myths about gay men and lesbian women (EMY), low levels of support to LGBTQ+ civil rights (SCR), and low levels of collective actions intentions (CAI) to support them. The findings confirmed that LGBTQ+ CTBs can constitute a mediating

**Table 3** Correlations (Study 2  $N=1581$ )

	Gender	Age	EDU	PO	REL	CMQ	SDO	RWA	GILC	SCR	EMY	CAI
Gender	1											
Age	.07**	1										
EDU	.05	.11**	1									
PO	-.14**	.01	-.19**	1								
REL	.08**	.27**	.01	.15**	1							
CMQ	.11**	0.04	-.08**	.21**	.14**	1						
SDO	-.25**	-.08**	-.12**	.43**	.03	.09**	1					
RWA	-.12**	.09**	-.24**	.51**	.27**	.31**	.50**	1				
GILC	-.10**	.10**	-.17**	.44**	.27**	.33**	.40**	.54**	1			
SCR	.26**	-.13**	.17**	-.48**	-.26**	-.17**	-.60**	-.65**	-.59**	1		
EMY	-.19**	.13**	-.11**	.29**	.15**	.21**	.36**	.43**	.43**	-.47**	1	
CAI	.28**	-.15**	.09**	-.44**	-.17**	-.12**	-.39**	-.43**	-.36**	.53**	-.30**	1
Skewness	-	1.15	-	.10	.70	-.31	.77	.50	1.37	-1.18	.57	.53
Kurtosis	-	-.07	-	-1.04	-.35	-.45	-.34	-.53	1.29	1.22	.09	-.85

Gender: 1= male; 2= female; EDU, education, PO political orientation: from 1=extreme left to 7=extreme right, REL religiosity, CMQ Conspiracy Mentality Questionnaire, SDO social dominance orientation, RWA right-wing authoritarianism, GILC gender ideology and LGBTQ+Lobby conspiracies scale, SCR support to LGBTQ+ civil rights, EMY economic myths regarding LGBTQ+ people, CAI LGBTQ+ collective action intention

\*\* $p < .01$



**Table 4** Direct associations of the path analysis model (Study 2:  $N=1581$ )

<i>DV</i>	<i>IV</i>	$\beta$	<i>se</i>	<i>z</i>	<i>p</i>	95% <i>CI</i>	
						<i>Lower</i>	<i>Upper</i>
GILC	RWA	0.26	0.030	8.74	<0.001	0.204	0.322
	SDO	0.17	0.030	5.53	<0.001	0.106	0.223
EMY	RWA	0.16	0.037	4.32	<0.001	0.088	0.235
	SDO	0.10	0.031	3.19	0.001	0.039	0.162
SCR	GILC	0.16	0.034	4.85	<0.001	0.097	0.229
	RWA	-0.29	0.026	-11.24	<0.001	-0.342	-0.241
	SDO	-0.31	0.024	12.77	<0.001	-0.354	-0.259
CAI	GILC	-0.25	0.027	-9.22	<0.001	-0.305	-0.198
	RWA	-0.14	0.030	-4.57	<0.001	-0.198	-0.079
	SDO	-0.15	0.025	-6.18	<0.001	-0.203	-0.105
	GILC	-0.08	0.024	-3.26	0.001	-0.127	-0.032

Note: The model was tested controlling for participants' gender, age, education, political orientation, religiosity, and levels of conspiracy mentality, which were added as covariates. *RWA* right-wing authoritarianism, *SDO* social dominance orientation, *GILC* gender ideology and LGBTQ+Lobby conspiracies scale, *SCR* support to LGBTQ+civil rights, *EMY* economic myths regarding LGBTQ+people, *CAI* LGBTQ+collective action intention

factor in the relationships between RWA and SDO and EMY, SCR, and CAI.

## General Discussion

On the one hand, the current research investigated the antecedent ideological profiles of LGBTQ+ conspiracy theories and beliefs (CTBs) (Study1), based on the theoretical framework of the dual process model of ideology and politics (Duckitt & Sibley, 2009, 2010; Duckitt et al., 2002). We hypothesized that right-wing authoritarianism (RWA) and dangerous world beliefs (DBW) would have a higher impact on LGBTQ+ CTBs, compared to social dominance orientation (SDO) and competitive jungle beliefs (CJB).

On the other hand, we focused on three potential negative social outcomes of LGBTQ+ CTBs (Study 2), which are the stereotypical beliefs that LGBTQ+ people enjoy greater economic well-being than heterosexual and cisgender people, the support to LGBTQ+civil rights such as the right to adoption or equal marriage, and the collective action intentions to engage in several behaviors to support the rights of LGBTQ+ people. Specifically, we hypothesized that high adherence to LGBTQ+CTBs, predicted by high RWA and SDO, may be, in turn, associated to higher economic myths about LGBTQ+ people, and lower support and collective action intentions to LGBTQ+civil rights.

The findings confirmed all our expectations. Specifically, the results of Study 1 showed that RWA, predicted by DWB, was associated to LGBTQ+CTBs with a greater effect size, compared to SDO, predicted by CJB (Salvati et al., 2022). In addition, both the indirect associations of DWB and CJB via RWA, but only the indirect association

of CJB via SDO, were found to have a significant impact on LGBTQ+CTBs in the expected directions. Such results give empirical support to the idea that people adhering to LGBTQ+CTBs might see LGBTQ+ people as a threat to traditional values and norms, more than a threat to an established social order because they might take resources and power away from the heterosexual and cisgender majority. However, both these ideological profiles were found to be associated to higher adherence to LGBGQ+CTBs, suggesting that both the "threats" are relevant to motivate people in engaging LGBTQ+CTBs (Bettinsoli et al., 2022; Salvati et al., 2023a). Importantly, these results assume even more robustness and relevance, considering that all the associations were obtained controlling for socio-anagraphic variables (gender, age, education); political orientation, religiosity, and mainly for a generic conspiracy mentality. Thus, the social world views and the ideological dispositions which constitute the two ideological profiles of the dual process model of ideology and politics (Duckitt & Sibley, 2009, 2010; Duckitt et al., 2002) contribute to explain why people endorse LGBTQ+CTBs, to the net of a general conspiracy mentality, which previous literature found to be associated to several specific CTBs (Bruder et al., 2013; Winter et al., 2022).

The results of study 2 corroborated the stronger positive association of RWA, compared to SDO, with LGBTQ+CTBs and confirmed our expectations according to which LGBTQ+CTBs, in turn, can reinforce the stereotypical beliefs that LGBTQ+ people are richer and more economically well-off than heterosexual and cisgender people, might reduce the support to LGBTQ+civil rights, and discourage the collective actions intentions to support them. These results are not surprising if we consider that

the conspirative rhetoric about the presence of a powerful LGBTQ+ Lobby is often used by politicians in several countries in the world to deny the status of discriminated minority groups to LGBTQ+ people and to legitimize authoritarian leaders and policies that hinder the advancement of policies and actions to support LGBTQ+ people's rights. As in Study 1, all the associations emerged net of the effects of participants' socio-demographics, political orientation, religiosity, and general conspiracy mentality, underlying and confirming a specific role to the LGBTQ+ CTBs, RWA, and SDO on these negative social implications.

Our research is not without limitations, that should be taken into account. The most important limitation is that the correlational research design of both studies does not allow us to infer cause-effect links among the variables. Thus, future research might use experimental research design to manipulate LGBTQ+ CTBs, or longitudinal data to assess their negative social consequences. As potential manipulation for LGBTQ+ CTBs, future studies might use mock journal articles to elicit conspiratorial vs. non-conspiratorial beliefs in participants, in order to investigate potential negative effects on cognitive, affective, and behavioral outcomes. Specifically, experimental studies could be employed to examine whether exposure to conspiracy content leads to an increase in modern forms of sexual prejudice or prejudice against trans and non-binary people, using both explicit and implicit measures. Furthermore, future research might investigate the impact of LGBT+ conspiracy theories on people's attitudes toward sexual and affective education programs in schools.

Secondly, although the sample size of both studies is more than satisfactory, however, the use of a convenience sample of Italian participants only, limits the generalizability of our results. Also, the sample of Study 1, more than Study 2, is characterized by a gender disproportion in favor of female participants. Future research might consider the use of a probabilistic sampling procedure and cross-national research designs to verify our results and compare them in different nations in Europe in the world.

## Social Policy Implications

Our research and generally the socio-psychological research on the antecedents and consequences of LGBTQ+ CTBs might offer insightful knowledge which can be used to guide social policies and interventions. Understanding the variables that contribute to the creation and dissemination of LGBTQ+ CTBs, as well as their effects on people and communities, may assist direct initiatives to advance social cohesion, fight prejudice, and support LGBTQ+ people.

For instance, it could be useful to implement educational initiatives that emphasize critical thinking and media literacy

to aid people in identifying and assessing LGBTQ+ CTBs. At the same time, public awareness campaigns using a variety of media platforms would constitute valid efforts to educate the public on the perils of LGBTQ+ CTBs, their effects on vulnerable people, and the value of acceptance and empathy. On a related note, it would be necessary to encourage better and responsible media representations of LGBTQ+ communities and issues, in order to counteract misinformations, stereotypical beliefs, prejudices, and CTBs on them. Last, but not least, research like these should orient politicians to legislate in favor of policies to promote LGBTQ+ individuals' safety and rights and make them aware about the potential negative effects that contribute to provoke when they often use conspiratorial rhetoric for their propaganda.

In conclusion, socio-psychological research on the antecedents and potential consequences of LGBTQ+ CTBs may inform social policies that work to lessen the harm these beliefs do and advance a more welcoming and inclusive society. These regulations should be evidence-based and take into account the input of LGBTQ+ groups and organizations.

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**Availability of Data and Material** The data that support the findings of this study are available from the corresponding author upon reasonable request.

**Code Availability** Not applicable.

## Declarations

**Conflict of Interest** The authors declare no competing interests.

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