



## Too positive to act? Positivity, psychological distance, and collective action intentions in response to global threats<sup>☆</sup>

Federica Scarci<sup>a,\*</sup>, Silvana Mula<sup>b,1</sup>, Sofia Sorvillo<sup>c</sup>, Annalisa Theodorou<sup>d</sup>

<sup>a</sup> Department of Education, Roma Tre University, Via del Castro Pretorio, 20, 00185, Rome, Italy

<sup>b</sup> Department of Pedagogy, Psychology, Philosophy, University of Cagliari, Via Is Mirrionis, 1, 09127, Cagliari, Italy

<sup>c</sup> Department of Psychology of Developmental and Socialization Processes, Sapienza University of Rome, Via dei Marsi, 78, 00185, Rome, Italy

<sup>d</sup> Department of Systems Medicine, University of Rome Tor Vergata, Via Montpellier, 1, 00133, Rome, Italy

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### ABSTRACT

Individuals today face two major global threats: climate change and the potential outbreak of a world war. Understanding the psychological factors that shape collective engagement in response to such threats is essential. This research focuses on positivity, a stable disposition potentially reflecting a balanced time perspective, which may influence how individuals mentally represent threats and behavioral responses to them. Drawing on Construal Level Theory, we hypothesized that higher levels of positivity may be associated with greater perceived psychological distance (across temporal, social, and hypothetical dimensions) from existential threats, thereby reducing intentions to engage in collective and mitigative actions. Two correlational studies were conducted with Italian adult samples. Study 1 ( $N = 168$ ) tested a mediation model in which positivity predicted lower intentions to engage in war-related collective action via increased psychological distance from the threat of a global war. Study 2 ( $N = 283$ ) replicated this model and extended it to climate change mitigation. In both studies, higher positivity was associated with greater psychological distance, which in turn predicted lower behavioral intentions, through a fully mediated pathway. These findings highlight a potential collateral effect of positivity and suggest that reducing perceived distance from existential threats may enhance collective engagement.

### 1. Introduction

According to the World Economic Forum's Global Risks Report 2025, a growing number of geopolitical, environmental, societal, and technological challenges are threatening the stability of our governments and the serenity of our future (World Economic Forum, 2025). In particular, based on the assessments of over 900 international experts, state-based armed conflicts and extreme weather events have been identified as the most pressing existential threats for 2025 and beyond, with severe consequences for civil society and international institutions. These escalating threats underscore the urgent need for coordinated collective action. Collective action can be defined as a series of actions performed by a group to enhance its social conditions or welfare (e.g., van Zomeren, 2013; for a review, see Agostini & van Zomeren, 2021). Shifting our perspective from individual concerns to collective issues

may make the difference in motivating participation in group-based actions aimed at addressing the multifaceted global challenges above defined, such as climate change (e.g., Ardoin & Bowers, 2025; Masson & Fritsche, 2021) and interstate conflicts with the potential to escalate into large-scale wars (Stanley Center for Peace and Security, 2020).

Therefore, given the positive outcomes that joint efforts to address global challenges can generate (e.g., Ardoin & Bowers, 2025), it becomes relevant to investigate the socio-psychological factors that influence individuals' propensity to engage in collective (in)action. Concerning personality research on collective action, despite scholars having focused on numerous individual differences (e.g., Duncan, 2012), as far as we know, time perspective (e.g., Zimbardo & Boyd, 1999) has received relatively limited attention (e.g., Milfont et al., 2012). Defined by Zimbardo and Boyd (1999, p. 1272) as a "cognitive temporal 'bias' toward being past, present, or future oriented", time

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\* Corresponding author.

E-mail addresses: [federica.scarci@uniroma3.it](mailto:federica.scarci@uniroma3.it) (F. Scarci), [silvana.mula@unica.it](mailto:silvana.mula@unica.it) (S. Mula), [sofia.sorvillo@uniroma1.it](mailto:sofia.sorvillo@uniroma1.it) (S. Sorvillo), [annalisa.theodorou@uniroma2.it](mailto:annalisa.theodorou@uniroma2.it) (A. Theodorou).

<sup>1</sup> These authors contributed equally and should be considered co-first authors.

perspective represents, if chronically elicited, a dispositional style which enables individuals to give order, coherence, and meaning to the flow of personal and social experiences. The authors identified five distinct temporal orientations: Past-Negative, Past-Positive, Present-Hedonistic, Present-Fatalistic, and Future, with the latter conceptualized as mainly positive (see Carelli et al., 2011). A decade later, Zimbardo and Boyd (2008) conceptualized the Balanced Time Perspective (BTP) as the optimal combination of temporal orientations, characterized by a strong focus on a positive past and minimal focus on a negative one, a moderate orientation toward both the future and the hedonistic present, and a weak orientation toward a fatalistic present. Recent evidence suggests that positivity – a dispositional positive attitude toward oneself, life, and the future (Caprara et al., 2009) – may be indicative of a balanced time perspective (Sobol-Kwapinska & Jankowski, 2016), highlighting stronger associations with the more positive temporal dimensions, but weaker associations with present-focused dimensions as defined in the original formulation of Time Perspective Theory. Positivity can affect the way individuals reflect upon their life events and react to them, sometimes leading to a distorted perception of the self and the world to maintain a positive outlook on the future (Caprara et al., 2013).

Although positivity has been linked to various positive socio-psychological adjustments (see Caprara et al., 2019 for a review), a relatively unexplored area concerns its relationship with collective action for social change. The present research, therefore, aims to investigate the potential relationship between positivity and the propensity to engage in collective action in response to two of the most pressing existential threats of our time: the potential outbreak of a third world war and climate change. In exploring this relationship, we consider psychological distance (e.g., Trope & Liberman, 2010) from such threats as a potential mediator. Specifically, we examine how positive individuals perceive war-related and climate-related threats in terms of social, temporal, and hypothetical distance (e.g., Liberman & Trope, 2014), and whether these perceptions are associated with collective (in) action.

### 1.1. Positivity and collective (in)action

Positivity is defined as a dispositional tendency to have a positive view of oneself, life, and future (Caprara et al., 2009). It is conceptualized as a common latent factor composed of self-esteem, life satisfaction, and optimism (Caprara et al., 2009). Theorized starting from Beck's (1967) definition of depression (i.e., a negative view of oneself, life, and future), the construct stems from the positive psychology tradition, which aims to identify advantageous personal dispositions that foster personal growth and development (contrary to Beck's definition; see Caprara et al., 2019). For this reason, it has been defined and proved to be a resource to confront major individual and social stressful events (e.g., Caprara et al., 2024; Livi et al., 2018; Theodorou et al., 2017; Theodorou et al., 2021). It has been argued that what distinguishes positivity from other related constructs, such as optimism, is the central importance it places on satisfaction with past experiences (Theodorou et al., 2021). This construct constitutes a broader and more complex personal characteristic that has been shown to support individuals in coping with adversities (Caprara et al., 2019, Caprara et al., 2024). Over the years, numerous pieces of evidence attest that a good level of this construct is linked to positive outcomes at different levels (e.g., biological and genetics, individual, couple, group; Caprara et al., 2017; Caprara et al., 2019; Livi et al., 2015; Theodorou et al., 2020; Theodorou et al., 2021) and across different contexts (e.g., school, workplace; Parrisé et al., 2024; see Caprara et al., 2019 for a review). Importantly, positivity has been demonstrated to be linked to behavior, such as organizational citizenship behaviors, job performance, and health behaviors (Caprara et al., 2019). Nevertheless, evidence is missing regarding the role of positivity in predicting important social behaviors, such as collective action (Van Zomeren et al., 2008).

Collective action can be seen as the engine that fuels social change

and innovation in society; this is particularly relevant, especially when this change is needed to confront important phenomena able to pose severe risks to entire societies, and even the world as a whole (e.g., Fritsche et al., 2018). Although a long tradition identifies an objective state of disadvantage as the motivation behind collective actions, another important recent shift has analyzed the sociopsychological determinants of collective action, under the assumption that the subjective sense of disadvantage is at the core of people's motivation to engage in such behaviors (Van Zomeren et al., 2008). Thus, it seems relevant to analyze the role of subjective appraisal in determining collective action.

Following this reasoning, studies conducted on optimism bias (or unrealistic optimism; Weinstein, 1989), defined as the expectation to have a better future than others, have attested that this bias may lead to a lower perception of threats and lower perceived impact of pro-environmental behaviors. According to this conceptualization (Weinstein, 1980), positive illusion may act as a sort of advantageous defence mechanism for the individual, reducing stress and anxiety about the future (see also Jefferson et al., 2017). Indeed, it has been demonstrated that optimism bias is related to lower perceptions of future environmental personal threats and an underestimation of the impact of self-protective behaviors (Hatfield & Job, 2001).

In line with the abovementioned studies, a few pieces of evidence highlighted the possible collateral effects of positivity too. For instance, it has been demonstrated that positivity contributes to the better-than-average effect, and it seems to be possibly related to seeing oneself in a more positive light than one's partner (Caprara et al., 2013; Theodorou et al., 2020). These findings highlight how it is possible that, under certain conditions or in certain situations, positive individuals may be motivated to protect their positive view at all costs, even through a distortion of reality (Caprara et al., 2013; Theodorou et al., 2020). This may extend to their appraisal of societal threats. Thus, it seems reasonable to expect that positivity may be negatively related to collective actions. Moreover, in the present study, we focus on psychological distance as the mechanism explaining such a relationship.

### 1.2. Psychological distance

Psychological distance, as defined by Construal Level Theory (e.g., Trope & Liberman, 2010), refers to the subjective perception of how far a given stimulus is from the egocentric reference point of the self (Liberman & Trope, 2014). The four dimensions of psychological distance – temporal, spatial, social, and hypothetical – represent the ways in which individuals mentally locate stimuli relative to the self, defining their perceived proximity or remoteness. These dimensions do not operate independently; rather, they interact and influence one another, contributing to the formation of a coherent and unified psychological representation of the stimulus (Maglio, Trope, Liberman, 2013a, 2013b). Psychological distance determines the level of abstraction with which a stimulus is mentally represented: stimuli perceived as distant tend to be represented in abstract, schematic, and decontextualized terms, while proximal stimuli evoke more concrete and context-specific representations (e.g., Soderberg et al., 2015). Consequently, perceiving an event as distant along one dimension can influence the perception of other dimensions, resulting in an overall more abstract mental construal compared to the same event perceived as proximal.

This process may also influence threat perception and the propensity to engage in collective action (e.g., Chandran & Menon, 2004; Fritsche et al., 2018; Glasford & Caraballo, 2016; van Zomeren et al., 2010). Understanding how individuals perceive existential threats is important to determining whether and to what extent such perceptions are linked to coping strategies and collective responses (e.g., Aguilar-Luzón et al., 2023; Gulliver et al., 2023; Scarci, Desiato, et al., 2025; Stollberg et al., 2023; Xu & McGregor, 2018). Generally, when a threatening event is perceived as psychologically close, it is processed in more concrete terms, eliciting stronger emotional responses, greater relevance, higher risk perception, and increased action tendencies (e.g., Chu & Yang,

2018; Milfont et al., 2014; Stamps, 2011; Tang & Chooi, 2023; White et al., 2014; Zwicke & Wilson, 2013). This pattern has been observed across various domains, including public health and environmental crises (e.g., Griffioen et al., 2016; Hoppe et al., 2025).

The literature on environmental risk perception has shown that psychological proximity also enhances pro-environmental behavioral intentions (e.g., Kim & Ahn, 2019; Maiella et al., 2020; Millarhouse et al., 2020; Wang et al., 2019). In particular, environmental threats represented in more concrete and proximal terms have been found to predict stronger mitigation intentions (Carmi & Kimhi, 2015). In contrast, greater psychological distance tends to reduce the salience of threats and the motivation to act, thereby promoting inaction (e.g., McDonald et al., 2015; Van Lange & Huckelba, 2021). Specifically, Carmi and Kimhi (2015) demonstrated that perceiving climate change as imminent (low temporal distance), likely (low hypotheticality), and personally relevant (low social distance) is associated with increased pro-environmental behaviors and collective coping strategies. Overall, the literature suggests that psychological distance shapes the perceived salience of threats and, in turn, influences the tendency to engage in collective action.

An interesting area that remains underexplored concerns how individuals' temporal orientation relates to the perception of psychological distance in the context of existential threats. Some authors have argued that a future- or past-oriented temporal perspective may be associated with a tendency to mentally construe events more abstractly and, consequently, as more temporally distant (e.g., Andre et al., 2018; Maglio et al., 2015). This effect appears to extend to threat perception, particularly in the environmental domain, where greater abstraction has been linked to lower threat salience and reduced motivation for collective engagement (e.g., Tang & Chooi, 2023). These insights highlight the need for further research to examine the relationship between temporal orientation and psychological distance in the appraisal of existential threats.

Important to our aims, research on optimism bias (e.g., Weinstein, 1989) has suggested that optimistic individuals tend to believe that the negative consequences of future events, such as global threats, will affect others rather than themselves, or that such consequences will only materialize in a distant future, thereby reducing the perceived salience of the threat (e.g., Gifford et al., 2009; Jakovcovic et al., 2013; Milfont et al., 2011). While such optimistic appraisals may in some cases serve a regulatory and self-protective function, they can also be dysfunctional when it comes to threats, as they may foster inaction (e.g., Fowler & Geers, 2015; Tang & Chooi, 2023; see also Peetz et al., 2009). This bias may reinforce the belief that the consequences of threats will primarily affect others or future generations, thereby increasing psychological distance and diminishing the sense of urgency to change one's behavior (see also Han & Gershoff, 2018). In this regard, positivity – which encompasses optimism as a central component – may contribute to the perception of existential threats as more psychologically distant, potentially reducing their perceived salience and weakening the motivation for collective action.

### 1.3. The present research

In light of the aforementioned literature, this study focuses on the role of positivity in predicting collective action through perceived psychological distance. Recent research has shown that psychological distance – particularly temporal, social, and hypothetical dimensions – influences the perception of threats such as war and climate change, as well as the motivation to act in response to them (Carmi & Kimhi, 2015). However, individual differences in how such threats are perceived in terms of psychological distance remain underexplored. Specifically, it is not yet clear how individuals' temporal orientation – especially positivity, conceptualized as indicative of a balanced time perspective (Caprara et al., 2019) – is associated with perceived psychological distance of threats, and, consequently, with collective action.

In particular, we propose a mediation model in which a higher level of positivity is related to lower collective action intentions through higher perceived psychological distance. Research on optimism bias has shown that individuals with a positive orientation tend to underestimate the likelihood that negative events will occur (hypothetical distance), while attributing a higher probability to such events affecting others (e.g., Fowler & Geers, 2015; Tang & Chooi, 2023). In terms of social distance, this tendency may translate into perceiving threats as more distant from the self. Moreover, a recent study found that the core dimensions of positivity are more strongly associated with the positive dimensions of past and future time perspective, while showing weaker or no correlations with the present-oriented dimensions originally conceptualized within Time Perspective Theory (Sobol-Kwapinska & Jankowski, 2016), thereby requiring further investigation.

As suggested by Caprara et al. (2019), a central feature of positivity – beyond optimism – is the tendency to appraise the past positively, drawing on a sense of life satisfaction. This favorable view of the past may serve as a foundation for projecting a positive and confident outlook toward the future. Specifically, what makes positivity theoretically relevant to psychological distance more than other related constructs such as optimism is that it reflects not only future-oriented expectancies, but also a broader temporal perspective that includes positive evaluations of one's past experiences, anchoring individuals both in their positive past and in their anticipated future. Following these insights and research suggesting an association between psychological distance and both past- and future-oriented time perspective (e.g., Andre et al., 2018; Maglio et al., 2015), it seems possible to hypothesize that positivity, given its strong focus on the positive dimensions of past and future time perspective, may be linked to perceiving threats as more temporally distant. Given that, according to Construal Level Theory, the various dimensions of psychological distance are interrelated and contribute to an abstract and unified representation of the stimulus (e.g., Maglio et al., 2015; Yan, 2014), we hypothesize that positivity is associated with a generally greater perceived psychological distance from threats; across temporal, social, and hypothetical dimensions.

We focus on two types of existential threats: the potential outbreak of a third world war and climate change. A novel contribution of this research lies in examining psychological distance from the threat of a global war and, more specifically, in investigating whether this perception is associated with individuals' willingness to engage in collective action in response to this type of threat. While climate-related threats and associated mitigation intentions have been widely studied in relation to psychological distance (e.g., Maiella et al., 2020), other threats, such as war, have received limited attention in this context. In light of the current geopolitical landscape and the growing sense of global uncertainty, it is particularly relevant to examine how these threats are mentally represented and how such perceptions affect collective engagement. Existing literature on climate change has shown that a psychologically closer perception of threats is associated with a stronger intention to act (e.g., Maiella et al., 2020; Tang & Chooi, 2023), highlighting the value of communication strategies that frame climate change in more concrete terms and emphasize its immediacy and proximity to individuals (Jones et al., 2017; van der Linden et al., 2015; Van Lange & Huckelba, 2021; see also Brügger et al., 2016; Huang & Guo, 2024). We first examine these effects in the context of the threat of a global war, and subsequently extend the investigation to climate change, to test whether similar patterns hold across distinct types of global threats.

Accordingly, this research aims to investigate whether individuals high in positivity are less inclined to engage in collective action related to war and climate change, due to perceiving such threats as more psychologically distant (and therefore less salient), thus suggesting a potential collateral effect of positivity on collective engagement. To test our hypothesis, we conducted two correlational studies in two Italian samples. Study 1 tests the mediation model proposed in the context of

the threat of a global war, while Study 2 tests the same model, extending its predictive power to the threat posed by climate change.

## 2. Study 1

Study 1 investigated whether the relationship between positivity and collective action intentions is mediated by the perceived psychological distance from the threat of a third world war. Literature suggests that, in some cases, an optimistic outlook on the future may reflect a cognitive bias, leading individuals to underestimate the likelihood or personal relevance of negative events (e.g., Fowler & Geers, 2015; Tang & Chooi, 2023). Thus, it was hypothesized that higher levels of positivity may lead to perceiving the war threat as psychologically more distant. In turn, greater psychological distance was expected to predict lower intentions to engage in war-related collective action, as distant threats are typically perceived as less salient and urgent, thus reducing the motivation to act (e.g., Van Lange & Huckelba, 2021).

### 2.1. Methods

#### 2.1.1. Participants and procedure

A priori power analysis based on simulation studies (Fritz & MacKinnon, 2007; Schoemann et al., 2017) suggests that detecting small-to-moderate path coefficients (approximately 0.26) for both  $\alpha$  and  $\beta$  paths with a statistical power of 0.80 requires a minimum sample size of 162 participants. Data were collected between April and June 2025, during a period characterized by heightened geopolitical tensions, including the ongoing war in Ukraine and escalating conflicts in the Middle East. A total of 248 Italian adults were recruited through snowball sampling. An initial group of respondents was invited to complete the online questionnaire. They were then asked to share the survey link with others who could be interested in participating in the study and met the inclusion criteria (i.e., Italian adults). This sampling strategy was selected because it allowed us to efficiently reach a large group of participants across different regions of Italy through multiple online platforms. Participation in the study was entirely voluntary, and no form of compensation or incentive was provided. Fifty-eight participants were excluded from the analyses because they did not complete the full questionnaire. Additionally, twenty-two participants were excluded from the analyses because they failed both attention check items, to ensure higher data quality and to reduce noise due to careless responding. Therefore, the final sample consisted of 168 participants (97.6 % Italian). The average age of the participants was 29.46 years ( $SD = 11.17$ ), with a range from 18 to 71 years. Of the sample, 81 % identified as women, 18.5 % as men, and 0.6 % as non-binary. All participants provided informed consent prior to participation and completed an online questionnaire. The privacy rights of human participants were fully respected. All procedures involving human participants were conducted in accordance with the ethical guidelines and standards of the relevant institutional and national research committees, as well as with the 1964 Declaration of Helsinki and its subsequent amendments or comparable ethical principles. All the data for this research are available at the following link: [https://osf.io/c295u/?view\\_only=447dff339c349bf97fcc1a0181ba719](https://osf.io/c295u/?view_only=447dff339c349bf97fcc1a0181ba719)

#### 2.1.2. Measures

Positivity was assessed using the Positivity Scale (Caprara et al., 2012), an 8-item instrument in which participants indicated their agreement with a series of statements (e.g., “I have great faith in the future”) on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Internal consistency was acceptable ( $\omega = 0.84$ ).

Perceived psychological distance from the threat of a third world war was measured using three items adapted from Carmi and Kimhi (2015). Participants were asked to reflect on the potential threat of a third world war and rate: (1) the extent to which this threat would affect them personally (social distance), (2) the likelihood of such a threat

materializing (hypotheticality), and (3) when in time such a threat might occur (temporal distance). Responses were provided on a 5-point scale, and the three items were averaged to form a composite index of psychological distance, with higher scores indicating greater psychological distance ( $\omega = 0.69$ ).

Intentions to engage in collective action were measured using the Belief-Aligned Collective Action Scale (Cervone et al., 2024), which includes 9 items ( $\omega = 0.84$ ). Participants indicated, on a scale from 1 (*definitely not*) to 7 (*definitely yes*), how likely they would be to engage in various actions in the future to support their position regarding the war (e.g., “I would sign a petition in favour of my position”).

### 2.2. Results

Descriptive statistics and Pearson’s correlations among the study variables are presented in Table 1. In particular, according to the hypotheses, positivity showed a positive correlation with psychological distance from the threat of a third world war and psychological distance showed a negative correlation with war-related collective action intentions. To test the hypothesized model, a mediation analysis was conducted using the bootstrap method with 5000 resamples. Positivity was entered as the predictor, perceived psychological distance from the threat of a third world war as the mediator, and war-related collective action intentions as the outcome variable.

The results (see Fig. 1) revealed a significant positive association between positivity and perceived psychological distance from the threat ( $\beta = 0.25$ ,  $SE = 0.08$ ,  $t = 3.37$ ,  $p = .001$ , 95 %  $CI [0.11, 0.43]$ ), suggesting that individuals with a more positive future orientation tend to perceive the threat of a third world war as more psychologically distant. In turn, psychological distance was significantly and negatively associated with collective action intentions ( $\beta = -0.27$ ,  $SE = 0.16$ ,  $t = -3.48$ ,  $p = .001$ , 95 %  $CI [-0.87, -0.24]$ ), indicating that the more distant the threat is perceived to be, the less likely individuals are to engage in actions to counter it. Positivity was not directly associated with collective action intentions ( $\beta = -0.05$ ,  $SE = 0.17$ ,  $t = -0.69$ ,  $p = .49$ , 95 %  $CI [-0.46, 0.22]$ ). However, the indirect effect of positivity on collective action intentions through psychological distance was significant and negative ( $\beta = -0.07$ ,  $BootSE = 0.03$ , 95 %  $CI [-0.13, -0.02]$ ), indicating full mediation. Lastly, as resulted also in the correlation matrix, there was no association between positivity and war-related collective action intentions, thus, no total effect ( $\beta = -0.12$ ,  $SE = 0.17$ ,  $t = -1.57$ ,  $p = .12$ , 95 %  $CI [-0.61, 0.07]$ ).

As expected, the results suggest that positivity may be linked to perceiving the threat of a third world war as more psychologically distant, and that this perception, in turn, is associated with reduced intentions to engage in collective action against the war. These findings provide initial support for the hypothesized mediation model and highlight the relevance of examining its applicability to other global threats.

## 3. Study 2

The aim of Study 2 was to replicate the findings of Study 1 using a larger sample and to test the same mediation model regarding the threat of climate change. Specifically, it was hypothesized that the relationship

**Table 1**  
Descriptive statistics and Pearson’s correlations (Study 1).

	M	SD	1.	2.	3.
1. Positivity	3.47	0.64	–		
2. PD (war)	2.57	0.69	0.25*	–	
3. War-related collective action intentions	3.56	1.43	–0.12	–0.28*	–

PD = psychological distance.

\*  $p \leq .001$ .

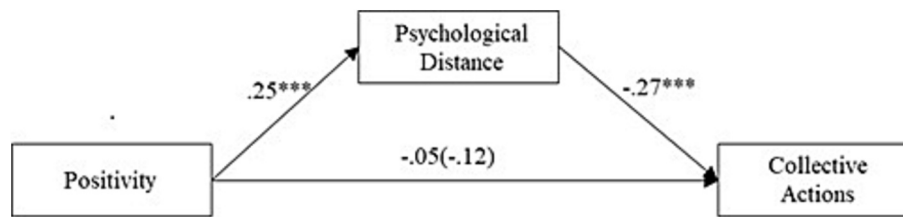


Fig. 1. Effects of positivity on collective action intentions via psychological distance from third world war threat.  $N = 168$ . The total effect is inside the parentheses. \*\*\* $p \leq .001$ ; \*\* $p \leq .01$ ; \* $p \leq .05$ .

between positivity and war-related collective action intentions would be fully mediated by the perceived psychological distance from the threat of a third world war. Similarly, we also hypothesized that the relationship between positivity and climate change-related mitigation intentions would be mediated by the perceived psychological distance from the threat of climate change. Individuals with a positive orientation may represent climate change as more psychologically distant, reducing their perceived salience (e.g., Fowler & Geers, 2015; Gifford et al., 2009; Tang & Chooi, 2023). Perceiving environmental threats as temporally, socially, and hypothetically distant has been linked to lower mitigation intentions (e.g., Carmi & Kimhi, 2015; Maiella et al., 2020). In line with these insights, Study 2 tested whether positivity would indirectly predict lower climate change-related mitigation intentions through higher perceived psychological distance from the climate change threat.

### 3.1. Methods

#### 3.1.1. Participants and procedure

A priori power analysis based on simulation studies (Fritz & MacKinnon, 2007; Schoemann et al., 2017) suggests that detecting small-to-moderate path coefficients (approximately 0.26) for both  $\alpha$  and  $\beta$  paths with a statistical power of 0.80 requires a minimum sample size of 162 participants. Nevertheless, small samples exhibit a tendency to overestimate the effect size (Loken & Gelman, 2017). Thus, for this study, we collected a larger sample. As in Study 1, data were collected between April and June 2025. A total of 329 participants were recruited using a snowball sampling method, following the same procedure as in Study 1. Participation was voluntary, and no form of compensation or incentive was offered. Twenty-three participants were excluded from the analyses because they did not complete the full questionnaire, and an additional twenty-three were excluded for failing both attention check items, following the same conservative criteria adopted in Study 1 to ensure data quality and consistency. The final sample therefore consisted of 283 participants (98.6 % Italian). The average age of participants was 38.16 years ( $SD = 15.37$ ), with an age range of 19 to 87 years. Of the total sample, 70 % identified as women, 27.6 % as men, and 2.5 % as non-binary. All participants provided informed consent prior to completing the online survey, which followed the same procedure as in Study 1. All the data for this research are available at the following link: [https://osf.io/c295u/?view\\_only=447dfff339c349bf97fcc1a0181ba719](https://osf.io/c295u/?view_only=447dfff339c349bf97fcc1a0181ba719)

#### 3.1.2. Measures

The same instruments used in Study 1 were employed to assess positivity ( $\omega = 0.89$ ), perceived psychological distance from the threat of a third world war ( $\omega = 0.75$ ), and war-related collective action intentions ( $\omega = 0.94$ ).

In addition, three items adapted from Carmi and Kimhi (2015) were used to assess the perceived psychological distance from the climate change threat. Participants were asked to focus on climate change and rate: (1) the extent to which the threat would affect them personally (social distance), (2) the likelihood that the threat would occur (hypotheticality), and (3) when in time the threat was expected to materialize

(temporal distance). Responses were provided on a 5-point scale. The three items were aggregated into a composite index of psychological distance, with higher scores reflecting greater perceived psychological distance of climate change ( $\omega = 0.80$ ).

Finally, climate change-related mitigation intentions were assessed using 12 items from Duan et al. (2021), which asked participants to indicate the likelihood (on a scale from 1 to 5) of engaging in a list of behaviors aimed at counteracting climate change (e.g., “I intend to switch off lights when not in use”;  $\omega = 0.90$ ).

### 3.2. Results

Descriptive statistics and Pearson’s correlations among the study variables are presented in Table 2. Interestingly, as in Study 1, positivity did not show significant associations with both war-related collective action and climate change-related mitigation intentions. All the other correlations were significant. As in Study 1, simple mediation analyses with bootstrapping (5000 resamples) were conducted to test whether the relationship between positivity and intentions to engage in both war-related collective action and climate change-related mitigation intentions was mediated by the perceived psychological distance from the respective threats.

The analyses replicated the findings of Study 1 in the context of war. Results (see Fig. 2) showed that positivity was associated with higher perceived psychological distance from the threat ( $\beta = 0.32$ ,  $SE = 0.08$ ,  $t = 5.61$ ,  $p < .001$ , 95 % CI [0.28, 0.58]), which in turn was negatively associated with collective action intentions ( $\beta = -0.25$ ,  $SE = 0.09$ ,  $t = -4.04$ ,  $p = .001$ , 95 % CI [-0.56, -0.19]). Again, positivity was not directly associated with collective action intentions ( $\beta = -0.01$ ,  $SE = 0.13$ ,  $t = -0.17$ ,  $p = .86$ , 95 % CI [-0.27, 0.23]), but the indirect effect was significant ( $\beta = -0.08$ ,  $BootSE = 0.03$ , 95 % CI [-0.14, -0.03]), indicating full mediation. The total effect was non-significant ( $\beta = -0.09$ ,  $SE = 0.12$ ,  $t = -1.50$ ,  $p = .13$ , 95 % CI [-0.43, 0.06]).

For the second mediation model (see Fig. 3), involving climate

Table 2  
Descriptive statistics and Pearson’s correlations (Study 2).

	M	SD	1.	2.	3.	4.	5.
1. Positivity	3.51	0.63	–				
2. PD (war)	2.90	0.86	0.32**	–			
3. War-related collective action intentions	3.20	1.33	-0.09	-0.25**	–		
4. PD (climate change)	2.28	0.87	0.15*	0.39**	-0.31**	–	
5. Climate change-related mitigation intentions	3.38	0.69	-0.01	-0.22**	0.36**	-0.47**	–

PD = psychological distance.

\*\*  $p \leq .001$ .

\*  $p \leq .01$ .

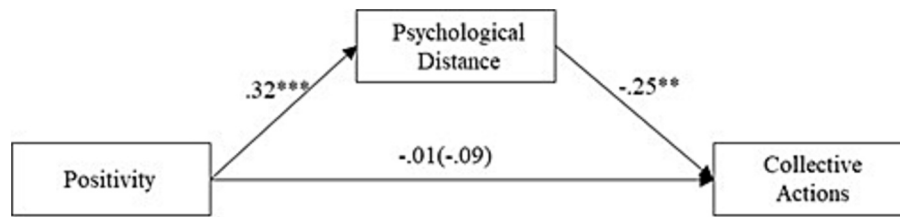


Fig. 2. Effects of positivity on collective action intentions via psychological distance from third world war threat.  $N = 283$ . The total effect is inside the parentheses. \*\*\* $p \leq .001$ ; \*\* $p \leq .01$ ; \* $p \leq .05$ .

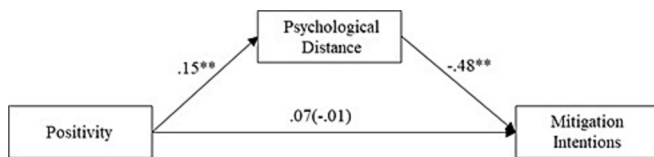


Fig. 3. Effects of positivity on mitigation intentions via psychological distance from climate change threat.  $N = 283$ . The total effect is inside the parentheses. \*\*\* $p \leq .001$ ; \*\* $p \leq .01$ ; \* $p \leq .05$ .

change, the analyses revealed that positivity was significantly and positively associated with the psychological distance from the climate change threat ( $\beta = 0.15$ ,  $SE = 0.08$ ,  $t = 2.60$ ,  $p = .01$ , 95 % CI [0.05, 0.37]), further supporting the notion that a positive future orientation may be linked to perceiving negative threats as more psychologically distant. In turn, psychological distance was negatively associated with mitigation intentions ( $\beta = -0.48$ ,  $SE = 0.04$ ,  $t = -9.03$ ,  $p < .001$ , 95 % CI [-0.46, -0.30]), suggesting that the more distant the threat of climate change is perceived to be, the less likely individuals are to engage in mitigation behaviors. As in the previous model, the direct effect of positivity on mitigation intentions was not significant ( $\beta = 0.07$ ,  $SE = 0.06$ ,  $t = 1.23$ ,  $p = .22$ , 95 % CI [-0.04, 0.19]), while the indirect effect was significant and negative ( $\beta = -0.07$ ,  $BootSE = 0.03$ , 95 % CI [-0.13, -0.01]), again indicating full mediation. The total effect was non-significant ( $\beta = -0.01$ ,  $SE = 0.06$ ,  $t = -0.14$ ,  $p = .89$ , 95 % CI [-0.14, 0.12]).

Overall, Study 2 replicated the findings of Study 1 regarding war-related collective action, showing that the relationship between positivity and behavioral intentions was fully mediated by the perceived psychological distance from the threat of a global war. Furthermore, similar patterns were observed in the context of climate change: higher levels of positivity were associated with perceiving the threat as more psychologically distant (in terms of time, social distance, and hypotheticality), which in turn was related to reduced intentions to act to mitigate the consequences of climate change. These results extend the findings of Study 1 and suggest that the proposed mediation model may apply across different types of existential threats.

#### 4. General discussion

The overarching purpose of this research was to examine whether positivity may negatively predict individuals' engagement in collective and pro-environmental action, through higher perceived psychological distance from threats. Across two correlational studies, we found that positivity was associated with a lower likelihood of engaging in action-oriented behaviors, and that this relationship was fully mediated by the perceived psychological distance from two distinct global threats. Study 1 found that individuals higher in positivity tended to perceive the threat of a third world war as more psychologically distant. This perception, in turn, was associated with reduced intentions to engage in collective action related to the war. Study 2 replicated this mediation model with a larger sample and extended the findings to a different domain of threat: climate change. In this context, positivity was

similarly associated with greater psychological distance from the threat of climate change (in terms of social distance, hypotheticality, and temporal distance), which in turn predicted lower climate change-related mitigation intentions. Interestingly, across the three models, the total effects were all nondifferent from zero; this result suggests that positivity may be associated with war-related and climate change-related actions only through psychological distance from the threat (war or climate change), strengthening the importance of considering this variable.

These findings provide novel evidence that positivity – a trait typically associated with adaptive and prosocial outcomes (Caprara et al., 2019) – may exert a counterintuitive “dark side” effect when it comes to collective mobilization against large-scale threats. This paradoxical role may stem from the fact that positivity facilitates optimistic appraisals and abstract construals of negative events, which can downplay the urgency and relevance of threatening scenarios. In this light, psychological distancing may serve a protective function, allowing individuals to buffer anxiety (e.g., Fowler & Geers, 2015; Peetz et al., 2009), but also reducing perceived threat salience and subsequent motivation to act (e.g., Van Lange & Huckelba, 2021). Importantly, our findings align with prior work on optimism bias, which suggests that individuals tend to underestimate the likelihood and personal relevance of negative events (e.g., Tang & Chooi, 2023; Weinstein, 1980). Such biased appraisals have been shown to reduce perceived risk and engagement in protective behaviors, particularly in the environmental domain (e.g., Gifford et al., 2009; Hatfield & Job, 2001). Our results extend this literature by suggesting that a general positive orientation, beyond domain-specific optimism, can similarly increase psychological distance across multiple dimensions and across threat domains.

This research also contributes to the literature on Time Perspective Theory (Zimbardo & Boyd, 1999), by suggesting a potential collateral effect of its positive temporal dimensions on threat appraisal and collective action. While prior work has emphasized the motivational benefits of a balanced time perspective, characterized by predominantly positive temporal dimensions (e.g., Webster & Ma, 2013), our findings suggest that under certain conditions, such orientation may have unintended side effects. However, this hypothesis requires empirical testing, as the present research did not directly assess balanced time perspective, but rather employed a measure of positivity, which has been suggested to be an expression of balanced time perspective (e.g., Sobol-Kwapinska & Jankowski, 2016).

Furthermore, our findings support the integrative potential of Construal Level Theory by suggesting that trait-level differences in temporal orientation (e.g., positivity) can systematically shape the mental representation of threats in terms of psychological distance. Maglio et al. (2015) highlighted the importance of examining how dispositional factors influence, and are influenced by, situational construal processes. Although we adopted a composite index of psychological distance (combining temporal, social, and hypothetical dimensions), our findings suggest a generalized distancing tendency in high-positivity individuals. Future work could unpack the differential role of each distance dimension and examine whether certain types of threats (e.g., realistic vs. symbolic; Stephan et al., 2009) are more susceptible to such effects.

#### 4.1. Strengths and practical implications

Our research presents several strengths that may contribute to both theoretical advancement and practical understanding. First, we explored a largely under-investigated area by examining the relationship between positivity and collective action intentions, as well as between positivity and psychological distance. By doing so, we offer novel insights at the intersection of individual differences, Time Perspective Theory (e.g., [Zimbardo & Boyd, 1999, 2008](#)), and Construal Level Theory (e.g., [Trope & Liberman, 2010](#)). In particular, by conceptualizing positivity as an expression of a balanced time perspective (e.g., [Caprara et al., 2019](#)), our findings suggest that even psychologically adaptive dispositions can have unintended consequences when they increase psychological distancing from urgent global threats.

Second, our research design enhances the robustness and generalizability of the findings. We replicated the same pattern of results across two independent samples and two different global threats: climate change and the risk of global war, an underexplored but increasingly relevant global issue. The consistency of our findings across these distinct domains strengthens the claim that the distancing effects of positivity may generalize across issue types. Notably, while the relationship between threat salience and mitigation intentions in the environmental domain aligns with previous literature (e.g., [Gifford et al., 2009](#)), our study extends this body of work by suggesting that dispositional traits, such as positivity, may shape the cognitive construal of these threats.

From a practical standpoint, our findings suggest that public campaigns aimed at promoting engagement in collective efforts may need to consider how messages are framed for individuals with a predominantly positive time outlook. For these individuals, it may be especially important to reduce psychological distance by emphasizing the immediacy, personal relevance, and tangible consequences of global threats (e.g., [Van Lange & Huckelba, 2021](#)). In other words, fostering a sense of psychological proximity, rather than relying solely on hopeful messaging, may be more effective in mobilizing collective action among positive-minded individuals. For example, interventions targeting highly positive individuals may benefit from using vivid, emotionally engaging, and concretely framed messages that portray the near-term and personal consequences of climate change or geopolitical instability. Such approaches may counteract the tendency of high-positivity individuals to mentally distance themselves from threatening scenarios. Achieving an appropriate balance between hopeful narratives and concretely articulated, proximal consequences may thus serve as a strategy for sustaining public engagement with global challenges.

#### 4.2. Limitations and future research directions

This research also presents some limitations that should be acknowledged and addressed in future studies. First, the use of correlational designs in both studies precludes any inference of causality. Experimental or longitudinal designs would be needed to test the directional and dynamic nature of the relationships among positivity, psychological distance, and collective action intentions. For example, future research could manipulate the salience or proximity of threat framing to test potential interactions with individual dispositions such as positivity. Second, our samples were not gender-balanced and consisted mainly of Italian participants, which may limit the generalizability of the findings across genders and cultural contexts (see [Scarci, Cecalupo, et al., 2025](#)). In addition, participants were recruited through snowball sampling, a non-probabilistic method which, despite its practical advantages, may entail sampling bias. However, to enhance sample heterogeneity and reduce clustering effects, recruitment began from multiple initial seeds and was disseminated through various social media channels. While the consistency of the results across two independent samples and two distinct threat domains (war and climate change), together with the adoption of a conservative participant

exclusion procedure, adds robustness and credibility to our findings, cross-cultural replications are necessary to validate the general applicability of the proposed model. Nevertheless, the Italian context provides a meaningful case for examining collective engagement with global threats, given its socio-political characteristics and relevance to the phenomena under study.

Moreover, while our measure of psychological distance followed the multidimensional approach proposed by [Carmi and Kimhi \(2015\)](#) – assessing temporal, social, and hypothetical distance – we did not include spatial distance, which has been shown to play a relevant role in threat appraisal, particularly in the environmental domain (e.g., [Griffioen et al., 2016](#)). Future studies should adopt a more comprehensive assessment of psychological distance by including all four dimensions.

Furthermore, the types of threats considered in this research – war and climate change – are inherently collective, potentially perceived as less personally relevant than individual-level threats such as illness or personal economic hardship. Previous work suggests that personally salient threats may elicit different patterns of psychological distance and behavioral response (e.g., [Griffioen et al., 2016](#)). Future research should explore whether the mechanisms identified in our studies generalize to more personally framed threats.

Finally, while our findings highlight a potential disengaging effect of positivity on collective action intentions, it is plausible that certain variables may moderate or mitigate this tendency. For instance, prior studies have shown that positive beliefs about the future may enhance collective action tendencies when they boost perceived outcome efficacy ([Schneider et al., 2021](#)) or self- and collective efficacy ([Ojala, 2013](#)). Indeed, if individuals high in positivity believe that collective efforts can effectively mitigate threats or that their contributions matter, they may be more likely to engage. Future research should test more complex moderated mediation models, including efficacy beliefs as a potential buffer to the distancing effect of positivity. Similarly, personal experience with threat or geographical proximity can reduce psychological distance, making the issue feel more immediate even for optimistically inclined individuals ([McDonald et al., 2015](#)).

Another relevant factor that may moderate the relationship between positivity and threat construal is the role of social identity and normative influence. According to the Social Identity Model of Pro-Environmental Action (SIMPEA; [Fritsche et al., 2018](#)), individuals' motivation to engage in collective action is not only shaped by personal appraisals of threats, but also by their identification with social groups that promote engagement. In this regard, individuals high in positivity might be more likely to perceive a distant threat as urgent and personally relevant when they strongly identify with a group that is actively mobilized around that threat. In such cases, normative pressure and collective efficacy beliefs embedded within the group may override the tendency to construe threats abstractly or optimistically. Future research should therefore investigate how social identity salience and group norms interact with dispositional positivity to influence psychological distance and action intentions.

## 5. Conclusion

In a time marked by intensifying global threats, such as climate change and geopolitical conflict, examining the socio-psychological factors related to collective (in)action is of the utmost importance. The present research offers novel insights into how a generally adaptive trait like positivity, potentially reflective of a balanced time perspective, may reduce individuals' propensity to act collectively by increasing their psychological distance from existential threats. Our findings highlight the importance of considering individual differences in time perspective and cognitive construal when designing interventions. Communication strategies may be more effective when they emphasize the immediacy, relevance, and proximity of global threats, particularly for individuals with a predominantly positive temporal orientation. Although our findings suggest a potential unintended consequence of positivity, they

also open avenues for future research aimed at identifying strategies to mobilize ever wider segments of the population in the urgent pursuit of collective action.

### CRedit authorship contribution statement

**Federica Scarci:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Silvana Mula:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Sofia Sorvillo:** Writing – review & editing, Writing – original draft, Investigation, Conceptualization. **Annalisa Theodorou:** Writing – review & editing, Writing – original draft, Supervision, Methodology, Investigation, Formal analysis, Conceptualization.

### Ethical statement

All procedures involving human participants were conducted in accordance with the ethical guidelines and standards of the relevant institutional and national research committees, as well as with the 1964 Declaration of Helsinki and its subsequent amendments or comparable ethical principles. The privacy rights of human participants were fully respected. All participants provided informed consent prior to participation. The study was approved by the Ethical Committee of the University of Cagliari (2025-UNCACLE-0323595).

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### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Data availability

All the data for this research are available at the following link: [https://osf.io/c295u/?view\\_only=447dff339c349bf97fcc1a0181ba719](https://osf.io/c295u/?view_only=447dff339c349bf97fcc1a0181ba719)

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