Organized Crime, Violence and Support for the State*

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Abstract

The pervasive violence perpetrated by criminal organizations poses a substantial threat to numerous countries around the world. This study investigates the influence of organized crime violence on public perceptions of organized crime and support for the state. To address this unexplored issue, we conducted an experimental study with a representative sample of 6,000 individuals in Italy, a country with a historical presence of organized crime. Participants' perceptions of crime trends diverged significantly from actual data, overestimating a 26.6% increase in overall homicides and a 17.3% rise in organized crime-related killings over two decades, while data showed a reduction of approximately two-thirds. Exposure to journalistic depictions of violence related to organized crime led to increased trust in state institutions and perception of state performance, irrespective of factual corrections. These findings underscore the potential impact of media narratives on shaping public attitudes toward crime and state authorities.

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Introduction

The monopoly on violence is a defining feature of modern states (Hobbes, 1651; Weber, 1918). Such monopoly is however constantly jeopardized by the rise of non-state actors such as criminal and terrorist organizations, which challenge governments over political and economic power (Acemoglu et al., 2013; Pinotti, 2015; Limodio, 2022; Alesina et al., 2019; Acemoglu et al., 2020; Masera and Yousaf, 2022). To underscore the significance of the issue, a study by Global Organised Crime Index (2021) estimated that nearly 80% of the global population resides in countries where organized crime presents a high risk.

Citizens can play a crucial role in the fight against organized crime and other non-state criminal actors (United Nations, 2019). By supporting law enforcement agencies and providing valuable information, citizens can help disrupt criminal activities and bring perpetrators to justice. Additionally, citizens can help build community resilience by fostering a sense of shared responsibility and solidarity in the face of criminal threats. Despite the importance of citizens' support to effectively fight organized crime, it can be challenging for governments to sustain citizens' trust if criminal organizations wield considerable power and state institutions are weak. To make matters worse, criminal organizations often use violence as a means to achieve their objectives. Previous research has shown that direct or indirect exposure to violence, and hence in turn crime and insecurity, can reduce trust, further complicating this delicate balance (Blanco and Ruiz, 2013; Singer et al., 2019; Corbacho et al., 2015; Rolla et al., 2022). Consequently, increasing awareness about the dangers and costs of organized crime comes at the risk of over-exposing citizens to information on criminal violence, which may ultimately backfire by further weakening the legitimacy of the state — a delicate trade-off.

This paper provides evidence of this trade-off through a survey experiment on 6,000 Italian individuals.[1] We expose respondents to journalistic stock images of organized crime violence, and contextually emphasize or not the involvement of criminal organizations in the depicted events to random and mutually exclusive groups of respondents. Specifically, our treatment variation consists of the elicitation of the respondents' beliefs about *either* the trend of mafia-related homicides *or* homicides in general (i.e., without any reference to organized crime) in Italy over the past two decades. Exposure to (the same set of) violent images, therefore, is constant across treatments and serves the purpose of focusing the respondents on the criminal nature of the perpetrated acts. We expose two more groups to the same treatments but, in addition, we update their beliefs by revealing factual information on actual trends in (mafia-related or general) homicides. We generate two control groups by exposing the respondents to either the same violent images used in the other treatment arms, or to non-violent and non-criminal images of urban settings, without any additional belief elicitation or reference to the nature of the criminal acts eventually portrayed. We estimate the effect of exposure to different types of violence (organized crime, generic, or unlabelled as in the control group) on attitudes towards the state: trust in institutions, perceived institutional quality, attitudes towards taxation, and social trust. We also include an incentivized outcome aimed at capturing trust in the state, namely choosing in what proportions to donate a total of 1 euro to the Italian Ministry of Health (a public governmental body) and the International Red Cross (a private NGO) — in both cases, the donations were known to be directed to

[1]The sample is representative of the Italian population in terms of age, gender, and income, and we over-sample individuals from regions with a greater presence of organized crime.

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specific funds earmarked by both organizations to support their fight against the Covid-19 pandemic.

We first show that respondents vastly exaggerate trends in homicides over the last two decades, regardless of whether they are elicited beliefs on mafia-related homicides or homicides in general. In particular, respondents estimate that mafia-related and total homicides increased, on average, by 17.3% and 26.6%, while in reality, both types of homicides declined by two-thirds in the period under consideration. At the same time, referring explicitly to mafia-related homicides generates significant responses in attitudes toward the state. In particular, donations to the public sector (as opposed to the private NGO) increase by 11.1%, perceived institutional quality by 11.6%, and trust in political institutions by 10.3%. Social trust and preferences for public safety also increase (by about 8%), but these effects are not significant at conventional confidence levels after adjusting p-values for multiple hypothesis testing. Conversely, there is no effect on attitudes toward taxation and trust in the judiciary system. Our results hold across robustness checks showing that filtering steps for the final sample selection do not affect the outcomes of the experiment.

Interestingly, updating beliefs has no significant effect. Therefore, respondents seem to be much more sensitive to interventions focusing their attention on organized crime than to factual information on trends in (different types of) homicides.[2]

This paper contributes to different areas of research. First, we contribute to the debate on the effects of exposure to crime. Previous scholarship has shown the detrimental effects of exposure to crime on individual (Sviatschi, 2022; Damm and Dustmann, 2014) and aggregate outcomes (Pinotti, 2015; Piemontese, 2020). Related to this article, observational studies (Blanco and Ruiz, 2013; Singer et al., 2019; Corbacho et al., 2015; Rolla et al., 2022; Calamunci and Frattini, 2023) documented a negative relationship between exposure to crime or organized crime and trust in institutions and state legitimacy. In the context of our experiment, the causal effect goes in the opposite direction: awareness of violence, especially when linked to organized groups, strengthens state support. A potential explanation for our findings might be that we are centering our study on media exposure to crime (Esberg and Mummolo, 2018; Mastrorocco and Minale, 2018), as opposed to previous studies that focused on direct experiences of victimization or generic perceptions of insecurity. However, our results were more pronounced for individuals with direct or indirect experience with organized crime, suggesting a different explanation.

An alternate explanation can be drawn from studies on collective violence: exposure to violence driven by terrorism often leads to increased support for the state and its institutions (known as the "rally around the flag" effect). This pattern has been observed in studies of US citizens after 9/11 (Schubert et al., 2002; Chanley, 2002; Hetherington and Nelson, 2003; Perrin and Smolek, 2009; Huddy and Feldman, 2011), as well as European citizens following the 2004 Madrid terrorist attacks (Dinesen and Jæger, 2013).

However, different from terrorism, reducing organized crime to an “us versus them” dichotomy is challenging, as organized crime affiliates are often part of the same community as ordinary citizens, sharing the same racial, cultural, and religious traits. Moreover, organized crime groups provide services that are demanded by a portion of the population, such as illicit drugs. Finally, some criminal organizations thrive thanks also to connections with corrupt bureaucrats and politicians, which may

[2]This finding aligns with recent observations in different contexts (Naumann and Stoetzer, 2018; Martinangeli and Windsteiger, 2022; Alesina et al., 2023).

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impact negatively on State legitimacy. In light of this, our finding suggests that a "rally" effect might arise even against domestic criminal organizations is all the more remarkable.

By studying the Italian mafias, we contribute to the literature on organized crime, which has shown the detrimental effects of organized crime on the economy (Le Moglie and Sorrenti, 2022; Dell, 2015) and on politics (Daniele and Geys, 2015; Di Cataldo and Mastrorocco, 2022; Alesina et al., 2019). Related literature has studied the origins of organized crime, investigating how criminal organizations are more likely to emerge in contexts with low social trust (Varese, 2006; Putnam et al., 1992; Gambetta, 1996b). In this paper, we focus on the opposite relationship, i.e. whether organized crime might affect trust. While observational studies find a negative link between organized crime and trust (Rolla and Justino, 2022; Calamunci and Frattini, 2023), our experimental results suggest that governments might leverage narratives on organized crime violence to garner greater legitimacy in their fight against criminals.

We also relate to the literature on the determinants of political trust (Levi and Stoker, 2000; Citrin and Stoker, 2018; Aassve et al., 2018). State legitimacy is a serious problem for contemporary democracies, and lack of trust from the public can result in significant non-adherence to government policies, as evidenced by the resistance of certain subgroups towards COVID safety measures (Levi, 2022). We document a non-trivial determinant of trust in state institutions, in a context marked by a prevalence of organized crime.

Finally, we contribute to the literature on weak states and non-state actors (Acemoglu et al., 2020; Limodio, 2022; Masera and Yousaf, 2022; Fergusson et al., 2021). In the presence of organized crime groups that can weaken or even substitute states by providing protection and labor in specific contexts (Gambetta, 1996a; Aziani et al., 2020), we find that updating beliefs on state performance is not sufficient to foster state support.

Methods

The Italian case

Italy has been historically characterized by a pervasive presence of criminal organizations at least since the emergence of the Sicilian Mafia in the nineteenth century. Two other major criminal organizations, namely the 'Ndrangheta from Calabria and the Camorra from Campania (collectively referred to as "mafias"), also marked the country's recent economic and political history. These organized crime groups have expanded from Southern regions to the entire country during the last few decades (Dugato et al., 2020), highlighting the national scale of the phenomenon,[3] in contrasts to its original local character.

Previous research showed that organized crime lowered Italian GDP (Pinotti, 2015). This negative effect occurs through several mechanisms, such as reductions in foreign investment (Daniele and Marani, 2011), distortion of public transfers (Barone and Narciso, 2015; Daniele and Dipoppa, 2022), and extortion of private firms (Piemontese, 2020; Mirenda et al., 2022). However, recent evidence suggests that the presence of organized crime can attenuate the impacts of economic crises by investing in the

[3]Research shows that Italian Mafias are much more than a national issue, as they have been able to spread across many other countries, especially in Europe. See for instance Calderoni et al. (2016).

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legal economy during economic downturns (Le Moglie and Sorrenti, 2022), which in turn may generate public support for criminal organizations.

Organized crime in Italy also has profound political effects. Criminal organizations may corrupt and intimidate politicians, especially around elections (Daniele and Geys, 2015; Daniele, 2019), leading in turn to negative selection into political office (Daniele and Dipoppa, 2017; Alesina et al., 2019) and the distortion of public spending (Di Cataldo and Mastrorocco, 2022). Therefore, organized crime in Italy has been — and continues to be — a central phenomenon for the country's economic and political development.

Although they have been traditionally associated to terror and violence, Italian mafias have changed their strategies over the years (Catino, 2020; Euronews, 2021). Between the late 1940s and the mid-1990s, in fact, the mafias employed aggressive and violent tactics to pursue their goals, including the murder of hundreds of activists, journalists, police officers, prosecutors, judges, and politicians. This escalation ultimately led to more stringent laws and enforcement, culminating in the so-called "maxi-trial", which significantly weakened criminal organizations at the beginning of the 1990s (Paoli, 2007). Following this phase, the mafias have become less violent and adopted less-visible tactics in order to reduce the risk of a strong reaction by the state. Panel (a) in Figure 2 shows the dramatic increase in mafia homicides through the early 1990s, followed by a sharp decline during the last twenty-five years in the wake of government crackdowns. A similar pattern is visible for the overall homicide rate, which parallels the drop in mafia homicides. Italy now ranks among the European countries with the lowest homicide rate, with 0.47 intentional homicides per 100,000 inhabitants in 2021 – half of the homicide rate in Germany, slightly less than one-third of that in France, and roughly 14 times lower than that in the United States (United Nations Office on Drugs and Crime, 2020). We thus study a country in which exposure to violence has declined dramatically over the past two decades, with younger generations growing up in a much safer and more peaceful country compared to older generations.

The survey

We collected data from 6,000 individuals from the general Italian adult population. We oversampled from the Italian south, where the presence of organized crime has historically been strongest, while maintaining representativeness of the sample to population characteristics – gender, age, and income – within northern and southern regions. The survey was administered online and the distribution of the link was outsourced to the professional survey company Demetra (`https://www.demetra.com/`). We collected responses between July 15, 2022, and September 29, 2022. To improve the reliability of the collected data, we trim the top and bottom 5% of the sample in terms of completion time – less than 3m30s and more than 24 minutes, respectively.[4] The average completion time is around 9 minutes. After this filtering, we obtained a total of 5,374 complete responses.

First and foremost, our respondents were informed of the anonymity of the data generated during the study, that participation was voluntary, and that they could interrupt the survey at any point in time. In addition, they were informed that images that may be considered disturbing by some would

[4]Tables S10 to S14 in the Supplementary Materials show that our results are robust to not excluding the fastest and slowest responses.

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be displayed while completing the survey.[5]

From each respondent, we elicited several demographic variables to use as controls in the statistical analysis and heterogeneity tests: age, gender, region of origin, political placement, marital status, household size, household income, education level, employment status, and political orientation.

Our outcome variables tap into four different dimensions of the relationship between the individual and the state. We aggregate those variables using principal component analyses (PCA).[6] The first component measures the perceived quality of institutions – specifically, usefulness of public policy, institutional corruption, and efficiency of public institutions. The second component measures perceptions of the tax burden – both the general tax burden in Italy and one's own tax burden. The third component is attitudes towards tax evasion, namely whether tax compliance is perceived as a duty and whether tax evasion warrants jail time. The fourth and fifth dimensions measure trust in political institutions (Parliament, regional politicians, local politicians, national government, the public administration, and the European Union) and the judiciary system (police and courts). In addition, we measure generalized social trust and the positioning on the trade-off between personal freedom and public safety. Finally, we elicit a behavioral measure of trust in the state. Specifically, we ask each respondent to allocate one Euro between two institutions, in accounts earmarked for the same purpose, i.e. fighting the Covid-19 epidemic: the Italian Ministry of Health and the International Red Cross. We emphasize that the former is an Italian governmental body and the latter is a non-governmental organization, so the respondent's allocation will reveal their relative trust in governmental and non-governmental bodies.

Experimental strategy

Our survey was pre-registered (AEARCTR-0009733).[7] Our experimental design consists of six mutually exclusive groups, labeled T0 to T5. The survey flow is displayed in Table 1.

All experimental groups, except for T0 (discussed later), expose the respondents to the same set of three journalistic stock images of criminal violence (murders). The difference across conditions T1-T5 lies in the focus placed on the type of murder depicted and whether the respondents' beliefs are updated or not. Experimental conditions T1 and T3 focus the respondents, respectively, on *organised crime* murders or *general*, not better specified murders. T1 emphasizes *organized crime* by eliciting, on the very same page displaying the images, the respondent's prior beliefs about the time trend of mafia-related homicides between 2002 and 2020. T3 exposes the respondents to the very same murder images as T1 but *omits* to emphasize the organized nature of the perpetrators by eliciting beliefs about the trend in homicides, not further qualified, over the same time span.

Comparing the responses of groups T1 and T3 reveals whether acts of (extreme) violence shift individual preferences in predictably different ways when they are focused on criminal organizations

[5]This point was carefully discussed with the IRB. Ethics clearance was granted on the grounds that the images used do not expose participants to more stress than normally induced by watching TV news about criminal violence and that subjects unwilling to participate in the survey on those grounds were warned early on and could opt for exiting the survey at the start. Notice moreover that our results might therefore be considered lower-bounds precisely because more sensitive individuals might be more prone to leaving the study following this warning. Notice however that we did not, at this stage, disclose the content of the images beyond their potentially disturbing character. The images were selected from recent Italian media reports and they are displayed in the SI section "Media Images".

[6]Details in SI section "Principal component indices".

[7]Deviations from the pre-analysis plan are highlighted in the Supplementary Materials. The pre-analysis plan can be found at the AEA RCT Registry (https://www.socialscienceregistry.org/trials/9733).

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Experimental condition groups

T1	T2	T3	T4	T5	T0
Consent					
Demographics					
Obfuscation Questions 1					
Violence Images*		Violence Images*		Violence Images*	Neutral images
Mafia prior		General prior			
	Belief update		Belief update		
Obfuscation Questions 2					
Target questions					
				General/ mafia prior	General/ mafia prior
Posterior beliefs					
Debriefing					

Table 1: Survey flow displaying the progress of each condition group through the survey. Participants passing through empty cells skip the corresponding blocks. (*): Asterisk signals that violent images are the same for all respondents in treatment groups T1, T2, T3, T4, and T5.

rather than not. Notice that because mafia-related homicides are but a subset of the set of "murders" of any kind, by using the same images of mafia-related murders in all conditions and omitting to specify their nature (in T3) we can focus the respondents on organized crime or not without deception.

We augment this design with two conditions, T2 and T4, respectively identical to T1 and T3, in which we update the respondents' beliefs with factual information about homicide rates. Respondents in T2 are informed about the (declining) trend in mafia-related homicides, while respondents in T4 are informed about the (again declining) trend in general homicides, occurring in Italy over the period 2002-2020. As the decline is very similar for either type of homicide, we could offer the same (approximate) figure – "around 65%" – to respondents in either group.[8]

Finally, we include two different baseline conditions: the neutral baseline condition (T0) and the violence baseline condition (T5). The group in T0 is exposed to neutral and non-violent images mimicking the urban settings depicted in the violent images used in conditions T1-T5 (i.e., they show the streets of relatively anonymous cities from different parts of Italy). Instead, condition T5 exposes the respondents to the same violent images used in conditions T1-T4 without eliciting any beliefs, thus

[8]The respondents are debriefed about the precise number, and informed about the source for those statistics, at the very end of the survey (see Section).

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omitting any reference to the mafia or generic nature of the fact. Comparing T5 with T1-T4 removes the effect of exposure to violent images. Respondents in both T0 and T5 are addressed immediately to the target questions without elicitation of beliefs. Beliefs about trends in homicide rates are instead elicited at the end of the survey. For comparability, we randomize (at the respondent level) whether we elicit beliefs about mafia-related or generic criminal homicides.

Concretely, beliefs are elicited via a slider which the respondent could move over a range spanning -100% (total absence of murders nowadays) to +100% (double the number of murders today relative to the early 2000s).[9]

We embed an attention checker into the survey by exploiting the images displayed to the participants: we asked the respondent to write the number of images displayed in letters ("*tre*" in Italian) and generate a dummy variable taking value one if the respondent correctly answered the question (regardless of capitalization). This strategy has the advantage of further reinforcing the focus on the images displayed while distinguishing attentive from inattentive participants.

Identification, obfuscation and debriefing

Italian respondents might immediately associate murder images with organized crime, especially in southern regions. Should this be the case our treatment effects would capture a lower bound of the difference in responses we would observe in the organized crime murder conditions (T1 and T2) and in the total absence of organized crime from the minds of viewers of generic murder images (T3 and T4). Notice however that should this "spillover" effect be present, so it would be in the real life of Italian citizens, thus not detracting from the external validity of our results.

Our survey design is susceptible to demand effects (Zizzo, 2010; de Quidt et al., 2018; Mummolo and Peterson, 2019) due to the visibility of the link between the experimental conditions and the subsequent target questions. We minimize such risk in two ways. First, we deliver our experimental conditions in a *between* subject design: Respondents are not aware that multiple, different conditions exist. Second, we compare conditions in which (i) violent images are accompanied by wording focusing the respondents on *organized* crime with (ii) conditions in which the same violent images are accompanied by wording focusing on *ordinary* crime and with (iii) a baseline in which the same violent images are presented with no further description (see the fourth row in Table 1). Therefore, any demand effect as well as effects driven by emotional responses to violence portrayed should be orthogonal to our experimental design. Third, we obfuscate the purpose of the survey. Immediately before and immediately after being exposed to the experimental conditions, the respondent received questions gauging their consumption and perception of image usage in journalistic reporting. These questions prepare the participant for the upcoming images and increase their attention to them. More importantly, they give the images a specific purpose orthogonal to our objectives and thus hide the true objectives of our survey.

When debriefing, we ask respondents to identify the purpose of our questionnaire (selecting among nine alternatives; see SI section "The Survey"). The most frequently selected option, by far, was "Correlating the use of images in information with concentration, attention and the ability to memorize

[9] Upon moving the slider, the respondent could read text translating in words what the current position of the slider implied: when placed on position x between -100% and -1% the text would read "*decreased* by x%", would switch to "remained the same" when at position 0%, and switched to "*increased* by x%" when placed between +1% and +100%.

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content and information", while the response closest to our true purpose, "Gauging perceptions of the Institutions", is selected much less frequently and in a way that is uncorrelated across conditions. Finally, we gauge the respondents' previous direct or indirect experience with organized crime and their exposure to news about the topic at the very end of the survey. SI section "The Survey" reports the transcripts of the survey, SI sections "Media Images" and "Update beliefs image" report the images displayed in the treatments and the updated belief treatment (translated from Italian to English).

Estimating equation

We regress the outcomes of interest on indicator variables for the experimental condition, controlling for additional control variables to improve precision:

$$y = \alpha + \beta T + \gamma' X + FE_r + \varepsilon, \tag{1}$$

where T describes various configurations and comparisons between our experimental conditions T0-T5, which will be spelled out when describing the results; X is a vector of individual control variables, namely gender, age, and age squared, a dummy for marital status (single/married), eight income categories, a set of nine dummies for the occupational status, a dummy for holding a university degree, and a dummy for having passed the attention test in the survey; and FE_r denotes a set of region fixed effects.[10] In reporting our results, we include p-values corrected for multiple hypotheses using the method by List and colleagues List et al. (2019).

Results

Description of the Sample and (Mis)Perceptions of Crime

Supplementary Materials Tables S1 and S2 report the descriptive statistics for all control variables and outcomes of interest. On average, respondents directed 45.47% of the donation to counter the Covid-19 pandemic to the *Protezione Civile* (a governmental body) and the remaining part, 54.53%, to the Red Cross (a non-governmental organization). They are disillusioned about corruption in institutions: the average score on this dimension is only 3.53 on a 1-10 scale, where 1 means that institutions are extremely corrupt and 10 means that they are free from corruption. Similar results arise in terms of state performance and trust towards state institutions. With the exception of trust in police and the justice system, all the other institutions report average responses below 4. Although taxes are widely perceived as too high, most respondents believe that those who frequently do not pay taxes should be incarcerated (mean=6.80) and that paying taxes is a civic duty (mean=8.63). More descriptive statistics are presented in SM Table S1.

Figure 1 depicts the distribution of respondents at the Italian regional level. Sicily (N=708, 13.17% of total respondents), Lazio (N=695, 12.93%), Campania (N=637, 11.85%), Apulia (N=596, 11.09%),

[10] Tables S10 to S14 in the Supplementary Materials show that our results are robust to not controlling for the attention checker.

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and Lombardy (N=488, 9.08%) are the most represented regions, with the latter one being the only northern region among the most prevalent ones (and being the most populated in Italy overall).

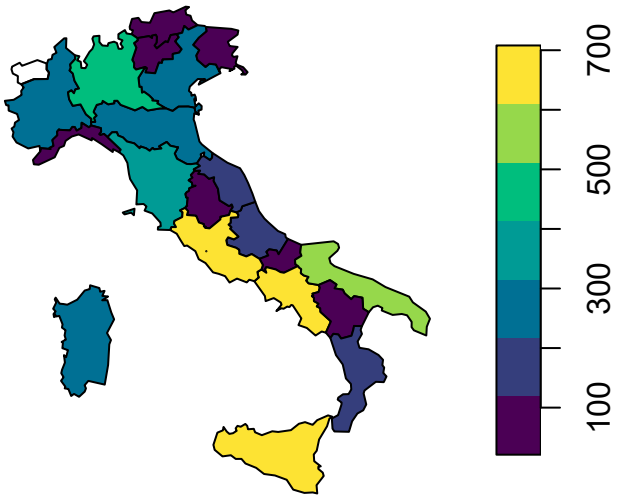


Figure 1: Regional distribution of respondents in the survey (N=5,374). Color breaks are evenly distributed across seven equal categories. The darker the color, the lower the number of respondents, the lighter the higher. Valle d'Aosta, a small region in the north-west of the country did not record any respondents after filtering out those not passing the attention check and those being among the most fast and slow to complete the survey (Valle d'Aosta is also the less populated region in Italy according to the Italian National Institute of Statistics). Southern regions are oversampled individually, meaning that each southern region has more respondents than it would have had with no oversampling. Calabria and Sardinia, for instance, might seem not particularly prevalent, but the number of respondents would have been lower with no oversampling, as these two regions have relatively few inhabitants.

Figure 2, panel (b), plots the distribution of beliefs about trends in mafia-related homicides (groups T1 and T2) and in homicides in general (T3 and T4) over the period 2002-2020. On average, respondents estimate that mafia-related homicides and homicides in general increased, respectively, by 17.30% and 26.61% while, in fact, they decreased by 69% and 64%, respectively. Half of the respondents in T1 and T2 (T3 and T4) believe that mafia-related homicides (all homicides) increased by at least 20% (30%). Overall, these results show that respondents greatly exaggerate changes in homicides – both mafia-related and other homicides – over the last two decades. One potential explanation lies in the dynamics of media coverage. As mafia-related homicides have decreased over time, their coverage in the media has paradoxically increased. This can be attributed to the "novelty" of these events. As such incidents become less frequent, they acquire a heightened news value due to their rarity, thus receiving more media attention. Corroborating this interpretation, Appendix Figures S1 and S2 present an example focusing on politically-targeted homicides, where data are readily accessible. In the last

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	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β(T1-T2 vs T0)	0.111***	0.116***	-0.049	0.061	0.103***	0.045	0.082**	0.079**
	(0.040)	(0.040)	(0.039)	(0.040)	(0.039)	(0.041)	(0.040)	(0.040)
	[0.035]**	[0.025]**	[0.358]	[0.326]	[0.040]**	[0.269]	[0.185]	[0.179]
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	2,692	2,692	2,692	2,692	2,692	2,692	2,692	2,692
R-squared	0.032	0.064	0.073	0.064	0.079	0.049	0.052	0.041

Table 2: The table reports estimates of equation (1) pooling the mafia violence conditions (T1 and T2) in comparison to the neutral baseline condition (T0). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses, robust p-values corrected for multiple hypotheses, in square brackets. *** p<0.01, ** p<0.05, * p<0.1.

twenty years, there has been a significant decrease in the number of murdered politicians. However, the media attention accorded to each of these events has seen a marked increase, as evidenced by news coverage from *La Repubblica*, a major Italian newspaper. This highlights the increased newsworthiness of these less frequent but impactful events.

An alternate explanation may be related to the geographical expansion of the mafias into the northern regions of Italy during this period. It is plausible that respondents could conflate the increased presence of the mafia with an escalation in mafia violence. However, this interpretation is challenged by the broad misperceptions also present for general violence. If accurate, this explanation should specifically relate to misperceptions about mafia-related homicides, not violence more broadly.

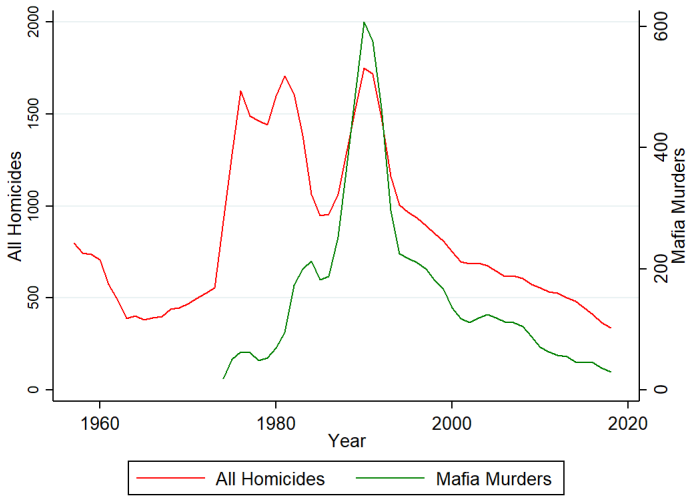
Experimental Results

The first set of experimental results is visualized in Table 2, which pools together the two groups exposed to images of mafia-related violence (T1 and T2) and compares them against the neutral baseline (T0). All outcome variables have been standardized with respect to the outcomes in the control condition (T0) so that coefficients can be interpreted in terms of standard deviation changes for that group. The table also reports robust standard errors (in parentheses) and p-values corrected for multiple hypotheses testing (in square brackets).

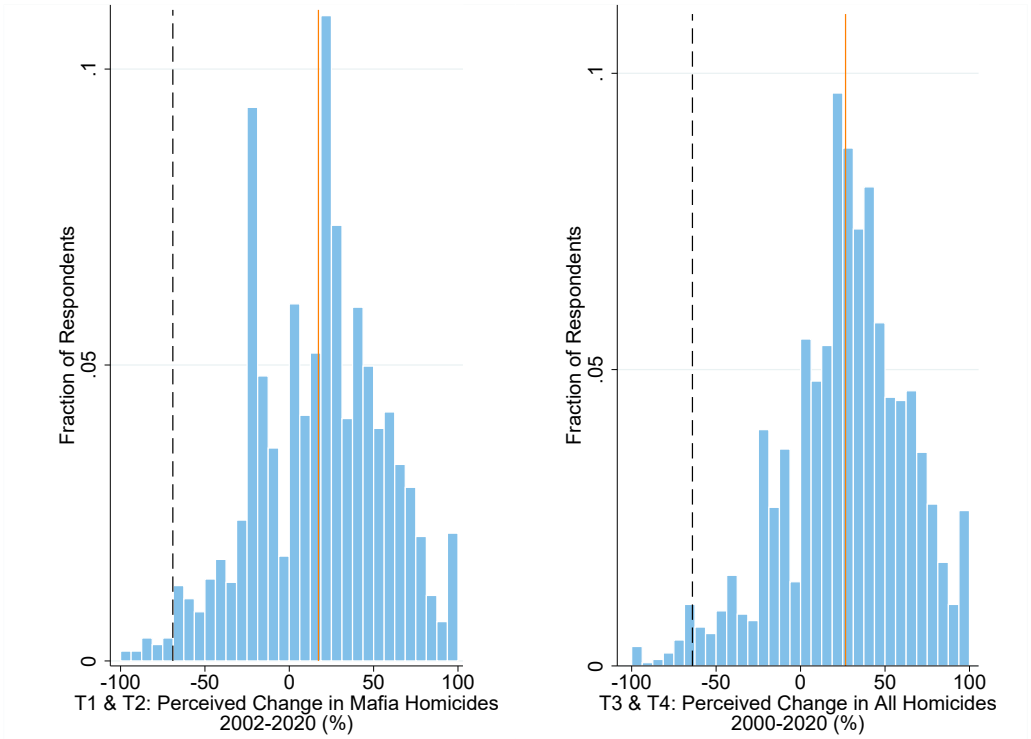
Exposure to images of mafia-related violence significantly increases trust in the state, as measured by donations to the public sector to fight the pandemics (+11.1%), perceived institutional quality (+11.6%), and trust in political institutions (+10.3%). Social trust and preferences for public safety also increase (by about 8%), but these effects are not significant at conventional confidence levels after adjusting p-values for multiple hypothesis testing. Conversely, there is no effect on attitudes toward taxation and trust in the judiciary system.

In Table 3 we replicate the analysis for groups exposed to images of generic – i.e., not mafia-related – homicides (T3-T4), and Table 4 compares the outcomes between the violence baseline treatment (T5)

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(a)



(b)

Figure 2: (a) Trends in homicides and mafia-homicides in the period 1955-2019 in Italy (all homicides in green, mafia homicides in red). (b) Distribution of respondents' beliefs regarding 2002-2020 variation in mafia homicides (groups T1 and T2, left) and 2000-2020 variation in all homicides (groups T3 and T4, right). Orange solid lines indicate average belief in the considered treatment groups, while black dashed lines refer to the ground truth variation (-69% and -64%, respectively).

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and the neutral baseline (T0). In both tables, all coefficients remain small in magnitude (below 6%) and not statistically significant. Therefore, only the association of violent images with mafia positively affects support and trust in the state, while neither violent images *per se* nor the association of such images with generic homicides have the same effect. This finding is also corroborated by the null effects across all outcomes detected when pooling together all the violence treatments (T1-T5) against the neutral baseline (T0), as shown in SM Table S4.

	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β(T3-T4 vs T0)	0.058	0.027	-0.008	0.053	0.059	0.006	0.019	-0.005
	(0.040)	(0.040)	(0.038)	(0.040)	(0.039)	(0.041)	(0.040)	(0.040)
	[0.671]	[0.956]	[0.994]	[0.688]	[0.615]	[0.988]	[0.980]	[0.891]
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	2,714	2,714	2,714	2,714	2,714	2,714	2,714	2,714
R-squared	0.023	0.057	0.093	0.070	0.077	0.042	0.050	0.045

Table 3: The table reports estimates of equation (1) pooling the general violence conditions (T3 and T4) in comparison to the neutral baseline condition (T0). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses, robust p-values corrected for multiple hypotheses, in square brackets. *** p<0.01, ** p<0.05, * p<0.1.

	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β (T5 vs T0)	0.0553	-0.0146	0.0654	0.0319	0.0294	-0.00645	-0.0705	0.0503
	(0.0484)	(0.0462)	(0.0437)	(0.0469)	(0.0445)	(0.0466)	(0.0475)	(0.0477)
	[0.784]	[0.936]	[0.635]	[0.902]	[0.826]	[0.890]	[0.605]	[0.773]
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
R-squared	0.032	0.045	0.101	0.087	0.069	0.057	0.053	0.051

Table 4: The table reports estimates of equation (1) analyzing the violence baseline condition (T5) in comparison to the neutral baseline condition (T0). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses, robust p-values corrected for multiple hypotheses, in square brackets. *** p<0.01, ** p<0.05, * p<0.1.

In the second step of the experimental analysis, we compare the mafia homicides treatments (T1 and T2) against the violence baseline (T5); results are presented in Table 5, while in SM Table S5 we compare the generic homicides treatments (T3 and T4) against the violence baseline (T5). As the images are the same in all treatments, experimental effects can be attributed only to the wording of the prior belief elicitation questions focusing the respondents' on *organized* or *general* criminal violence, and not

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to design confounds – notably, demand effects and differences in emotional response to graphic content. These estimates disentangle the effect of exposing respondents to images of organized and general crime violence, respectively, with violence of unspecified nature. Mafia violence treatments, T1-T2, significantly increase perceptions of institutional quality (+13.5%, p-value<0.01), reduce perceptions of excessive tax burden (-11.1%, corr. p-value<0.05), and boost social trust (+14.8%, corr. p-value<0.01) compared to the baseline violence condition T5. Conversely, generic violence treatments T3-T4 produce no additional effect compared to the baseline violence condition T5, further confirming that explicit references to mafia are clearly responsible for the detected effects.

Supplementary analyses reported in Table S6 provide additional differential effects of the mafia-related violent treatments via direct comparison of the pooled mafia treatments (T1 and T2) against the pooled general violence treatments (T3 and T4). Estimates indicate that being exposed to mafia-related violence pictures increases perceived institutional quality (+9.29%, corr. p-value<0.05) and respondents' willingness to sacrifice freedom over safety for themselves and their families (+8.17%, corr. p-value<0.10).

Both comparisons of T1-T2 against T5 and T1-T2 against T3-T4 represent a lower bound to the effect of the mafia-related treatments, as the comparison group includes unspecified or generic violence, which might include as well mafia homicidal violence.

	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β(T1-T2 vs T5)	0.0576	0.135***	-0.111***	0.0297	0.0690*	0.0463	0.148***	0.0326
	(0.0419)	(0.0399)	(0.0390)	(0.0405)	(0.0399)	(0.0401)	(0.0422)	(0.0410)
	[0.524]	[0.004]***	[0.023]**	[0.456]	[0.333]	[0.566]	[0.002]***	[0.658]
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660
R-squared	0.033	0.068	0.070	0.061	0.071	0.050	0.057	0.042

Table 5: The table reports estimates of equation (1) pooling the mafia violence conditions (T1 and T2) in comparison to the violence baseline condition (T5). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses, robust p-values corrected for multiple hypotheses, in square brackets. *** p<0.01, ** p<0.05, * p<0.1.

Finally, Table 6 compares the two mafia-related treatments, namely T1 vs T2. The rationale is to capture the differential effect that belief updates about homicide trends in Italy have on respondents. Interestingly, belief updates do not significantly modify respondents' views, despite the strong decline in violence over the last two decades. In fact, although the effects on most outcomes have the expected direction, they are not significant at conventional confidence level after correcting for multiple hypothesis testing.[11]

Figures S5 and S6 in the SI materials report heterogeneity tests on two levels of the analytical flow,

[11] We further discuss the analyses of the respondents' posterior beliefs in SI section "Instrumental Variable analysis of posterior beliefs".

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	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β(T2 vs T1)	0.013	0.020	0.059	-0.025	-0.012	0.052	0.005	0.089**
	(0.046)	(0.046)	(0.046)	(0.046)	(0.047)	(0.046)	(0.048)	(0.045)
	[0.987]	[0.985]	[0.746]	[0.984]	[0.957]	[0.775]	[0.922]	[0.312]
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,777	1,777	1,777	1,777	1,777	1,777	1,777	1,777
R-squared	0.042	0.079	0.068	0.058	0.085	0.053	0.060	0.048

Table 6: The table reports estimates of Model 1 comparing the mafia violence condition with updated beliefs (T2) in comparison to the mafia violence condition without updated beliefs (T1). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses, robust p-values corrected for multiple hypotheses, in square brackets. *** p<0.01, ** p<0.05, * p<0.1.

namely comparing mafia treatments (T1 and T2) against the neutral baseline T0 and comparing the organized crime-related treatments T1 and T2 with T5.

We conduct our heterogeneity tests across eight different dimensions: (1) males versus females, (2) respondents reporting having a direct/indirect versus no experience with organized crime; (3) respondents above or below age 55, (4) respondents holding or not a university degree, (5) respondents living in historic mafia regions (i.e., Campania, Sicily, Calabria), (6) respondents born in Italy; (7) respondents above and below median income, (8) respondents voting or not for right-wing parties.

When pooling the mafia treatments T1 and T2 to compare them against the neutral baseline T0 (Figure S5), we find that those who are aged 55 or above (i.e., those who were at least 18 years old in 1985, the year that marks the beginning of the harsher phase of the clash between mafias and the state) exhibit reduced donations towards the state institution, reduced perception of institutional quality, decreased attitudes towards taxation, lower trust in the justice system and lower willingness to sacrifice freedom for safety. In addition, respondents reporting previous direct or indirect exposure to organized crime exhibit a statistically significant increase in political and social trust. However, none of those findings survive correction for multiple hypothesis testing.

When comparing the mafia-related treatments with T5 (Figure S6), we observe more robust heterogeneous effects. Females (compared to men) report decreased political trust and perception of institutional quality. Additionally, respondents having an income above the median show a strong decrease in trust in political as well as justice institutions. Remarkably, we observe that individuals who have had direct or indirect encounters with organized crime exhibit heightened levels of political trust and trust in the justice system, along with more positive attitudes towards taxation. A total of 667 respondents, amounting to 12.3% of the entire sample, reported direct or indirect experiences with OC (more details on the type of experience are available in Tables S8 and S9 in the SI). This phenomenon can be attributed to a scarring effect, whereby individuals who have experienced victimization, or have known someone who has, develop a closer connection to state institutions and demonstrate greater faith in their efficacy:

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This would be consistent with a "rally" effect, where support for state institutions is bolstered in the aftermath of a traumatic event.

Conclusions

In this work, we have experimentally demonstrated that exposure to visual and textual content related to organized crime violence increases trust in the state and satisfaction with institutional performance. To address this research problem which — to the best of our knowledge — was not previously tackled, we conducted an experimental study on 6,000 respondents, examining the effect of exposing them to violent media images enriched with information on the event's context. We focused on Italy, a country with a history marked by the pervasive presence of organized crime groups, that has nevertheless witnessed a substantial decrease in violence in the last three decades. Our work fits and contributes to different research lines providing empirical indications that are relevant beyond Italy, especially given the salience of the organized crime phenomenon around the world.

We uncover large upward misperceptions regarding homicide trends in our sample, highlighting how citizens are largely unaware of the actual trends in violent crimes in the country, possibly due to biased media narratives and ineffective communication strategies by the state.

Contrary to recent correlational research on the relationship between exposure to violence and trust in the state, we have provided evidence that such a relationship is positive. A possible explanation relates to the rich literature investigating the effects of terrorism on state support, suggesting "rally around the flag" effects. This aspect is particularly relevant given that in terrorism an "us versus them" dynamic, characterized by the identification of an external threat or enemy, emerges more easily creating the conditions for the rally effect. Surprisingly, this might be the case also for organized crime, even though criminal organizations and citizens are often part of the same social, cultural, and religious context, and criminal organizations provide illicit goods and services that are in demand by a portion of the population.

Despite the relevance and robustness of the findings here presented, we acknowledge that our work bears a limitation, as we cannot perfectly disentangle the mechanisms through which changes in our outcomes emerge as a byproduct of our treatments. At this stage, we can only offer possible hypotheses that theoretically align with different strands of research to which we contribute, such as the literature on the "rally" effect mentioned in earlier sections.

All these results speak to broader practical and policy implications. The fact that exposure to images of explicitly organized crime-related violence engenders greater support for public institutions may partially explain the shift in the strategy adopted by mafias in the 1990s. The decline in support from portions of the population and civil society's forceful reaction against organized crime-related murders likely contributed to this shift.

Somehow relatedly, our results provide evidence that images reporting the consequences — however dramatic — of organized crime-related events can contribute to boosting trust in political institutions, offering local, regional, and national governments a media ally in the fight against organized crime.

Additionally, however, the appearance of a "rally effect" in this study may also signal a troubling fact. Organized crime has been a longstanding issue in Italy, and state institutions have been confronting it

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for a prolonged period without achieving a conclusive victory. Unlike contexts where we often observe a "rally effect", such as sudden terrorist attacks driven by external actors, the state bears responsibility and accountability for combating organized crime, including this issue in bipartisan political agendas. Therefore, the emergence of a "rally effect" — coupled with the detected levels of mis-perceptions — may implicitly suggest a lack of accountability regarding the state's ability to reduce the perceived increase in violence and its responsibility to combat organized crime.

Finally, and interestingly, the lack of significant effects on trust in the justice system and the police (along with the already low baseline levels across the sample) demonstrate how increased trust in political institutions and other fellow citizens is not accompanied by the same sentiment towards those institutions that are primarily engaged in investigative and judicial activities against mafias. This finding might underline that, while people share values that go against criminal organizations and are reflected in high-level institutions, they are disillusioned about the operative ability of courts and law enforcement in the fight against organized crime. This hypothesis also aligns with the large misperceptions in homicide trends detected in our experiment.

Italy is a peculiar country that is characterized by the extensive presence of organized crime groups and that, in fact, has undergone a stark change in rates of mafia-related violence over the years. Future research endeavors may investigate whether the effects we uncovered appear also in other countries with considerable presence of criminal organizations, e.g. Mexico. Whether the consequences of exposure to organized crime-related violent images are confined to Italy or are common to other contexts currently remains an open question that, however, may provide important insights into the relationship between citizens, institutions, and criminal organizations. Such insights may help us garner fundamental knowledge on the constant interplay between these subjects, whose fragile equilibrium results fundamental to the stability, prosperity, safety, and wealth of countries around the world.

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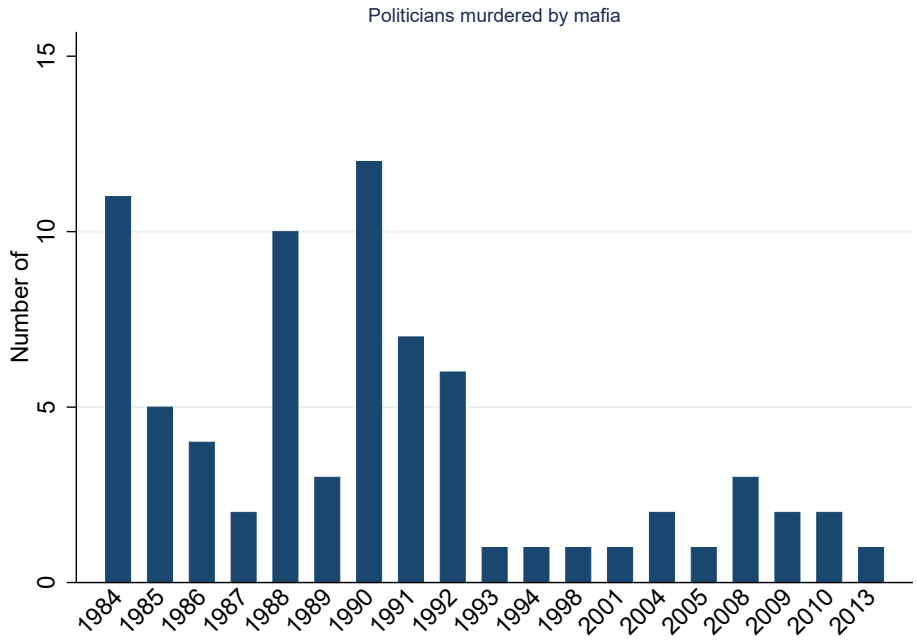
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SUPPLEMENTARY MATERIALS

Additional Images - Text Analysis

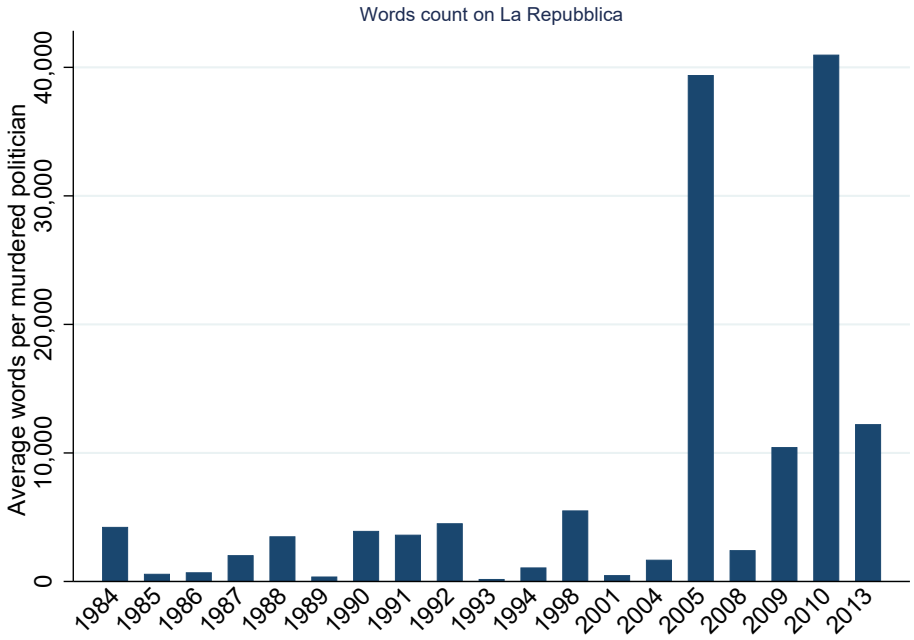
Figure S1 shows the number of politicians murdered by organized crime in Italy in the period 1984-2013 (there were no more political assassinations afterwards). Figure S2 illustrates the volume of words used by the print edition of *La Repubblica* in covering each political assassination by organized crime during the specified period. The second analysis is based on a text analysis in which we look for all news articles (word counts) mentioning a specific murdered politician.

Figure S1: Politicians Murdered by Organized Crime over Time



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Figure S2: Average Media Coverage of a Politican Murder by Organized Crime



Description of the Sample

Table S1 reports the descriptive statistics for both the control variables included in the estimated models as well as the outcomes of interest. After filtering out the 5% fastest and 5% slowest respondents, the total number of complete responses is 5,374. Gender-wise, 53% of the respondents are female. In terms of age, the mean is 41.77 with a standard deviation of 12.44, covering participants aged from 18 to 73. Respondents are mostly employed in the private sector (35%) and their household monthly earnings lie mostly in the 1,000-1,999 Euros range (49%). 29% of the participants hold a technical high school diploma (a specific typology of high school in Italy that educates and train students for technical jobs across several sectors), and a total of 1,809 participants (33%) hold a University degree (summing bachelor's degree, master's degree and doctorates altogether). Most participants are married, involved in a civil union or cohabiting with their partners (58%).

Focusing on the outcomes, respondents on average donated 45.47% of the allocated Euro to the Protezione Civile (a governmental body seeking to prevent and control all major hazardous events on the Italian, territory, including public health emergencies and natural disasters). On average the Red Cross (a non governmental organization) collected thus more donations (54.53% of the budget), although with a large standard deviation (28.52).

In terms of perceived institutional quality, tax burden, attitudes towards taxes, political trust and trust in the justice system, the distributions following PCA aggregations are standardized and have mean$\sim$0 and standard deviation $\sim$1. We refer to Table S2 for the description of the original disaggregated variables for the sake of easier interpretations.

On average, on a 1-10 scale, participants score 5.81 (S.D.=2.71) on whether to sacrifice personal

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Variable (Controls)	**N**	**Mean**	**St. Dev.**	**Min**	**Max**
Gender					
Male	2,507	0.46	0.50	0	1
Female	2,856	0.53	0.50	0	1
Other	11	0.00	0.04	0	1
Age	5,374	41.77	12.95	18	73
Occupation					
Employed in the public sector	830	0.15	0.36	0	1
Employed in the private sector	1,892	0.35	0.48	0	1
Self-employed with employees	200	0.04	0.19	0	1
Self-employed without employees	441	0.08	0.27	0	1
Unemployed (looking for a job)	581	0.11	0.31	0	1
Unemployed (not looking for a job)	95	0.02	0.13	0	1
Student	455	0.08	0.28	0	1
Retired	306	0.06	0.23	0	1
Homemaker	574	0.11	0.31	0	1
Income (household/monhtly, net of taxes)					
<1,000 Euros	769	0.14	0.35	0	1
1,000-1,999 Euros	2,631	0.49	0.50	0	1
2,000-2,999 Euros	1,334	0.25	0.43	0	1
3,000-3,999 Euros	335	0.06	0.24	0	1
4,000-4,999 Euros	147	0.03	0.16	0	1
5,000-5,999 Euros	49	0.01	0.10	0	1
6,000-6,999 Euros	26	0.00	0.06	0	1
>7,000 Euros	83	0.01	0.12	0	1
Education					
Elementary School	38	0.00	0.08	0	1
Middle School	503	0.09	0.29	0	1
Professional High School	322	0.06	0.24	0	1
Technical High School	1,588	0.29	0.45	0	1
Liceo High School	1,114	0.21	0.40	0	1
Bachelor's Degree	743	0.14	0.34	0	1
Master's Degree	978	0.18	0.39	0	1
PhD/Doctorate	88	0.01	0.13	0	1
Marital Status					
Single (Never married, widow, divorced)	2,281	0.42	0.49	0	1
Married/Civil union/Cohabitation	3,093	0.58	0.49	0	1
Variable (Outcomes)	**N**	**Mean**	**St. Dev.**	**Min**	**Max**
Perceived Crime Change	5,359	21.80	38.66	-100	100
Donation	5,374	45.47	28.55	0	100
Quality	5,374	-0.03	0.98	-3.37	1.07
Taxburden	5,374	0.04	0.96	-4.12	0.92
Taxatt	5,374	0.02	0.99	-3.37	1.07
Poltrust	5,374	-0.04	0.98	-1.50	3.00
Judtrust	5,374	-0.01	0.99	-2.12	2.31
Social Trust	5,903	4.40	2.24	1	10
Safety	5,374	5.81	2.71	1	10

Table S1: Descriptive statistics (number of observations, average, standard deviation, minimum and maximum) for control and outcome variables used in the analyses

freedom in exchange of safety for them and their families. Finally, the social trust outcome also has a relatively low score, with an average of 4.40 (S.D.=2.24).

Table S2 also displays the descriptive statistics for the disaggregated outcomes, along with their corresponding aggregated category. Descriptive statistics are in line with the ones presented above. Participants on average think that the ability to implement useful policies in the long-term is 4.12 (S.D.=2.19). Respondents manifest disillusioned views about corruption in institutions, as on average (on the same 1-10 scale), they report that the extent to which institutions are free from corruption in Italy is 3.53 (S.D.=2.26). On average, also the efficiency of institutions has a low score (4.08, S.D.=2.12). The outcomes addressing fiscal issues, instead, report higher scores. On a 1 (too low) to 10 (too high) scale, participants believe that tax burden in Italy is generally very high (mean=8.34, S.D.=2.05). When asked about their own tax burden, the average value increases (mean=8.49, S.D.=1.83). In

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spite of this negative views about the amount of taxes in Italy, most respondents believe that those who frequently do not pay taxes should be incarcerated (mean=6.80, S.D.=2.89) and that paying taxes is a civic duty (mean=8.63, S.D.=2.03). In terms of institutional trust, mean responses outline an overall pessimistic tendency. The institution gathering the highest trust is police (average=5.97, S.D.=2.44), followed by trust in the justice system (average=4.68, S.D.=2.26) and bureaucracy/public administration (average=4.64, S.D.=2.25). All the other institutions report average responses below 4. In decreasing order: trust in local politicians (3.83, S.D.=2.33), trust in the Parliament (3.66, S.D.=2.27), trust in the national government (3.60, S.D.=2.34), trust in regional politicians (3.56, S.D.=2.25).

Variable (Disaggregated)	**Aggregated Outcome**	**N**	**Mean**	**St. Dev.**	**Min**	**Max**
Useful	Institutional Quality	5,374	4.12	2.19	1	10
Uncorrupt	Institutional Quality	5,374	3.53	2.26	1	10
Efficient	Institutional Quality	5,374	4.08	2.12	1	10
Tax too high	Tax Burden	5,374	8.34	2.05	1	10
My tax to high	Tax Burden	5,374	8.49	1.83	1	10
Jail Tax Evasion	Tax Attitude	5,374	6.80	2.89	1	10
Tax Duty	Tax Attitude	5,374	8.63	2.03	1	10
Trust in Parliament	Political Trust	5,374	3.66	2.27	1	10
Trust in Regional Politicians	Political Trust	5,374	3.56	2.25	1	10
Trust in National Government	Political Trust	5,374	3.60	2.34	1	10
Trust in the EU	Political Trust	5,374	4.80	2.53	1	10
Trust in Local Politicians	Political Trust	5,374	3.83	2.33	1	10
Trust in Bureaucracy	Political Trust	5,374	4.28	2.17	1	10
Trust in Police	Judicial Trust	5,374	5.97	2.44	1	10
Trust in Justice	Judicial Trust	5,374	4.64	2.25	1	10

Table S2: Descriptive statistics (number of observations, average, standard deviation, minimum and maximum) for disaggregated outcome variables, along with information relative to their corresponding aggregated outcome. Statistics for perceived donation, social trust and safety were not aggregated and are reported in Table S1.

Principal component indices

This section describes the principal component factor analyses we used to obtain summary indices of our outcome variables by class of variables. Principal component analysis reduces the dimensionality of the data to a smaller number of orthogonal variables (factors) each summarising progressively smaller portions of the variation in the underlying data. In the case of classes of variables measuring relatively close outcomes, a single factor can summarise most of the variance in the class. The individual scores on the single factor can then be taken to summarise the individual's placement on the underlying variables in the class. In other words, an individual scoring high on all variables in a class will also score high on the factor summarising the class, and vice versa if an individual scores low on each variable.

Our outcomes can be organized into five classes: *Institutional quality*, *Tax attitudes*, *Perceived tax burden*, *Trust in the judiciary* and *Political trust*. Table S3 reports, for each class, the underlying variables, their factor loading on the first and only retained factor (measuring the degree to which the variable is associated with the factor), the retained factor eigenvalue (an indicator of the amount

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of variance in the underlying data retained by the factor) and, for comparison, the eigenvalue of the second (not retained) factor. In each class, the factor loadings are all large and close to each other, suggesting that the variables in the classes indeed measure a same underlying attitude (e.g. political trust). The first component summarises most of the underlying variance in all cases, as seen by the difference between the first and second factor eigenvalues. We thus retain only one component and use individual prediction scores on this component as a summary index of the information conveyed by the underlying variables. The class *institutional quality* gathers variables measuring our respondents' perception of the quality of the institutions: the usefulness of the enacted policies, their freedom from corruption, and their efficiency. The class *tax attitudes* measures the respondents' attitudes towards taxation: their perception of evasion as a serious crime deserving harsh jail sentences and their view of tax compliance as a citizens' duty. *Perceived tax burden* measures the respondents' perception of their own and the Italian tax burden as excessive. The class *Trust in the judiciary* measures their trust in the judiciary system, in the police force. Finally, *Political trust* measures the respondent's trust in: local (municipal) politicians, regional politicians, in the national government, in the parliament, in the public administration and in the European Union.

Variable	1^{st} factor loading	1^{st} factor eigenvalue	2^{nd} factor eigenvalue
Institutional quality			
Usefulness of policies	0.8740		
Freedom from corruption	0.8845	2.358	0.357
Efficiency	0.9007		
Tax attitudes			
Tax evasion as crime	0.8387	1.407	0.593
Tax compliance as duty	0.8387		
Perceived tax burden			
Italian tax burden	0.8892	1.581	0.418
Own tax burden	0.8892		
Trust in the judiciary			
Trust in the judiciary	0.8647	1.495	0.505
Trust in police force	0.8647		
Political trust			
Local politicians	0.8578		
Regional politicians	0.8803		
National government	0.8909	4.349	0.582
Parliament	0.8835		
Public administration	0.8256		
European Union	0.7630		

Table S3: The table reports the factor loading and first and second factor eigenvalues for the principal component summary indices aggregating our raw outcome variables.

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Instrumental Variable analysis of posterior beliefs

To gauge whether our experimental conditions affected the individuals' perception of state effectiveness in dealing with crime, we further elicit *all* respondents' posterior beliefs. We avoid duplicating the information elicited by collecting posteriors about a different proxy, namely the fraction of total homicides cleared in a given year by the Italian police (i.e. a culprit is identified), incentivised against the official clearance rate in Italy.[12] Official statistics place the clearing rate in Italy at 76% of all homicides. Comparisons of posteriors elicited across our experimental conditions would allow us to gauge the effect of exposure to violent crime of (non-)organized nature in contrast with the impact of exposure to factual information about State effectiveness. This strategy would allow us, in addition, to investigate the effect of perceived state effectiveness leveraging exogenous exposure of our respondents to violent crime and belief updates in an instrumental variable framework (Fuster and Zafar, 2022), the effect of perceived state effectiveness as a mediator of any effects found across experimental conditions in our baseline analyses.

Because we provided them with updated information about the decrease in homicides observed in Italy over the 20 years between 2000 and 2020, respondents in T2 and T4 should have more optimistic posteriors about state performance, specifically related to crime policy. We could thus investigate whether (updated) beliefs about state effectiveness can be seen as a mechanism underlying the results presented in section Results by exploiting the randomness with which they were shifted through information provision.

We acknowledge however that our respondents managed to uncover the (incentivised) value sought for via a simple internet search on a webpage published just days before the launch of our survey.[13] Information about the clearance rate was previously not easily accessible to our respondents as we ascertained during the design phase of our project. As our respondents became thus aware of the correct number to declare in order obtain the extra incentive, any treatment effect on the posterior and hence of the posterior on our outcome variable likely became undetectable.

This suspicion is confirmed by Figure S3, displaying the distribution of posterior beliefs over the entire sample. The distribution, though fairly spread out over the entire support, nonetheless reveals evidence of bunching around the true and correct value for the clearance rate.

[12] Eliciting beliefs about the trends in homicides a second time would amount to a mnemonic exercise in which respondents re-state the information received as part of the belief update, rather than an actual belief elicitation (Haaland et al., 2023; Fuster and Zafar, 2022).

[13] https://www.truenumbers.it/casi-irrrisolti-omicidi/, published on 07/07/022.

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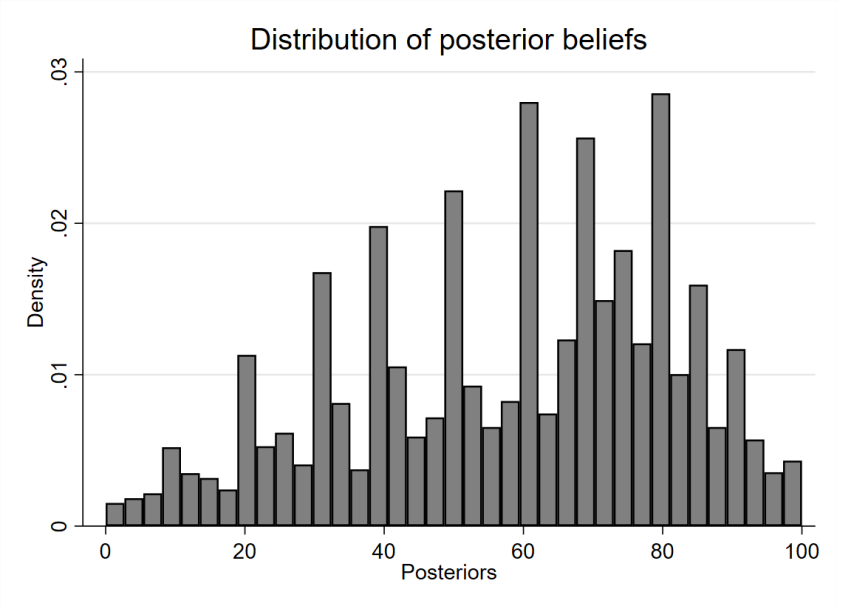
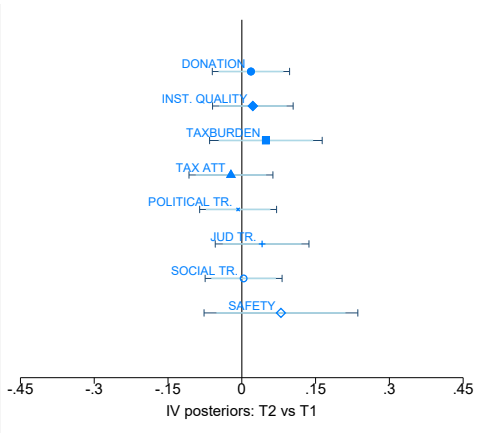


Figure S3: Distribution of posterior beliefs about state effectiveness in combating crime.

Figure S4 displays the second stage regression coefficients of our outcome variables in an analysis instrumenting posteriors via our experimental conditions (including the same set of controls of the main analysis). While correctly signed, none of the coefficients is significantly different from zero.

Figure S4: IV posteriors: T2 Vs T1



*Notes:*The figure reports estimates from the IV estimation of Appendix B. Outcomes variables have been standardised with respect to the outcomes in the control condition (T0). Light blue (dark blue) report 90% (95%) confidence intervals.

Additional Experimental Results

This section reports additional analyses, all supporting the evidence presented in the Results section in the main text. Table S4 pools all conditions exposing the respondents to violent images (T1 through

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T5) and compares them with condition T5 presenting only neutral images. The results, though much weakened, are analogous to what discussed earlier: Stronger political trust and greater donations to the governmental agency, though none survive multiplicity corrections.

Table S5 reports the results of an analysis analogous to that reported in Table 5 in the main text: It compares responses by individuals who were exposed to violent images with a generic reference to non-qualified homicides. Apart from an increase in social trust (not robust to multiplicity correction) none of the results presented in Section Results is visible. Exposing the respondents to homicidal violence without focusing their attention on its organized criminal nature does not induce increases in support for the state and its institutions.

Table S6 compares the mafia conditions T1 and T2, pooled, with the generic homicide conditions T3 and T4, pooled as well. We see results going in the same direction as those presented in Table 5 in the main text, though with weaker significance and, save for perception of institutional quality and demand for safety, not robust to multiplicity corrections. This observation should not be surprising. The effects of focusing the respondents' attention to mafia-related or to generic homicidal violence in Italy are expected, albeit to different extents, to go in the same direction compared to the baselines.

Finally, Table S7 evaluates the effect of belief updating in the generic homicide conditions T3 and T4. None of the effects discussed earlier is visible.

	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β(T1-T5 vs T0)	0.0785**	0.0564	-0.0105	0.0541	0.0696**	0.0179	0.0255	0.0413
	(0.0361)	(0.0358)	(0.0340)	(0.0359)	(0.0339)	(0.0362)	(0.0355)	(0.0358)
	[0.200]	[0.500]	[0.755]	[0.496]	[0.214]	[0.853]	[0.840]	[0.667]
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	5,374	5,374	5,374	5,374	5,374	5,374	5,374	5,374
R-squared	0.021	0.054	0.074	0.060	0.067	0.040	0.044	0.038

Table S4: The table reports estimates of Model 1 pooling together all the treatments related to violence (T1-T5) in comparison to the neutral baseline condition (T0). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses, robust p-values corrected for multiple hypotheses, in square brackets. *** p<0.01, ** p<0.05, * p<0.1.

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	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β(T3-T4 vs T5)	0.000	0.039	-0.070*	0.014	0.024	0.011	0.085**	-0.056
	(0.042)	(0.040)	(0.038)	(0.040)	(0.039)	(0.040)	(0.042)	(0.041)
	[0.998]	[0.809]	[0.337]	[0.980]	[0.948]	[0.955]	[0.272]	[0.629]
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682
R-squared	0.027	0.060	0.090	0.064	0.074	0.048	0.053	0.048

Table S5: The table reports estimates of Model 1 pooling the general violence conditions (T3 and T4) in comparison to the violence baseline condition (T5). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses, robust p-values corrected for multiple hypotheses, in square brackets. *** p<0.01, ** p<0.05, * p<0.1.

	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β (T1-T2 vs T3-T4)	0.0570*	0.0929***	-0.0434	0.0107	0.0565*	0.0413	0.0717**	0.0817***
	(0.0324)	(0.0321)	(0.0314)	(0.0321)	(0.0325)	(0.0330)	(0.0333)	(0.0316)
	[0.324]	[0.025]**	[0.416]	[0.739]	[0.263]	[0.373]	[0.155]	[0.057]*
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	3,576	3,576	3,576	3,576	3,576	3,576	3,576	3,576
R-squared	0.027	0.069	0.072	0.055	0.074	0.039	0.048	0.044

Table S6: The table reports estimates of Model 1 pooling the mafia violence conditions (T1 and T2) in comparison to the pooled general violence conditions (T3 and T4). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses, robust p-values corrected for multiple hypotheses, in square brackets. *** p<0.01, ** p<0.05, * p<0.1.

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	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β (T4 vs T3)	-0.022	-0.023	-0.013	-0.112**	-0.013	-0.015	0.021	-0.008
	(0.046)	(0.045)	(0.043)	(0.046)	(0.045)	(0.047)	(0.047)	(0.045)
	[0.997]	[0.998]	[0.987]	[0.094]*	[0.950]	[0.994]	[0.993]	[0.849]
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,799	1,799	1,799	1,799	1,799	1,799	1,799	1,799
R-squared	0.026	0.074	0.096	0.069	0.088	0.051	0.061	0.055

Table S7: The table reports estimates of Model 1 comparing the general violence conditions with updated beliefs (T4) in comparison to the general violence condition without updated beliefs (T3). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses, robust p-values corrected for multiple hypotheses, in square brackets. *** p<0.01, ** p<0.05, * p<0.1.

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Heterogeneity Tests

Figures S5 and S6 display the results of heterogeneity tests for the coefficients of interest in the analyses comparing T1 and T2 with T5 and T0, respectively. Heterogeneity is explored along the gender, direct experience with organized crime, age (age 18 or older in 1985), possession of a university degree, residence in a region with strong mafia presence, whether the respondent was born in Italy, has a family income higher than median and whether their political preferences lean on the right. These indicators are interacted with the experimental condition indicators. We correct the p-values of the resulting estimates for multiple hypothesis tests (List et al., 2019). The Figures display the point estimate and the *uncorrected* standard errors for the interaction coefficients. We mark the corrected significance of the interaction at conventional thresholds by placing asterisks (*) next to the variable name.

As discussed in the Results section in the main text, we observe robust drops in political trust and in trust in the judiciary system among higher incomes. However, consistent with the results presented in the main text, we moreover uncover strong and very robust *increases* in political trust, trust in the judiciary, and more positive tax attitudes among respondents who reported having had direct experience with organized crime. This last finding is noteworthy as it validates the assumption, implicit in our design, that exposure to images of organized crime violence will induce, in some measure, reactions of the same type as those induced by exposure to organized crime in daily life.

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Given the specific relevance of the variable mapping OC experience reported by respondents, Tables S8 and S9 provide details on such experiences. Specifically, Table S8 shows the experience disaggregated by crime type and Table S9 shows the experience disaggregated by victim type. Table S8 shows that the majority of reported OC experiences regarded theft/robbery incidents (N=161, amounting to 24.32% of all reported experiences), intimidation (N=119, 17.98%) and assault (N=115, 17.37%). Concerning victim types, Table S9 documents that 80 respondents had direct OC experience (amounting to 12.08% of all the respondents that reported any OC experience, translating into 1.49% of the total sample). More than 1/3 of all reported experiences concern acquaintances (N=239). Friends are the second-most represented victim category (N=143, 21.60%).

Table S8: Distribution of crime type for those reporting direct/indirect experience of OC in the sample

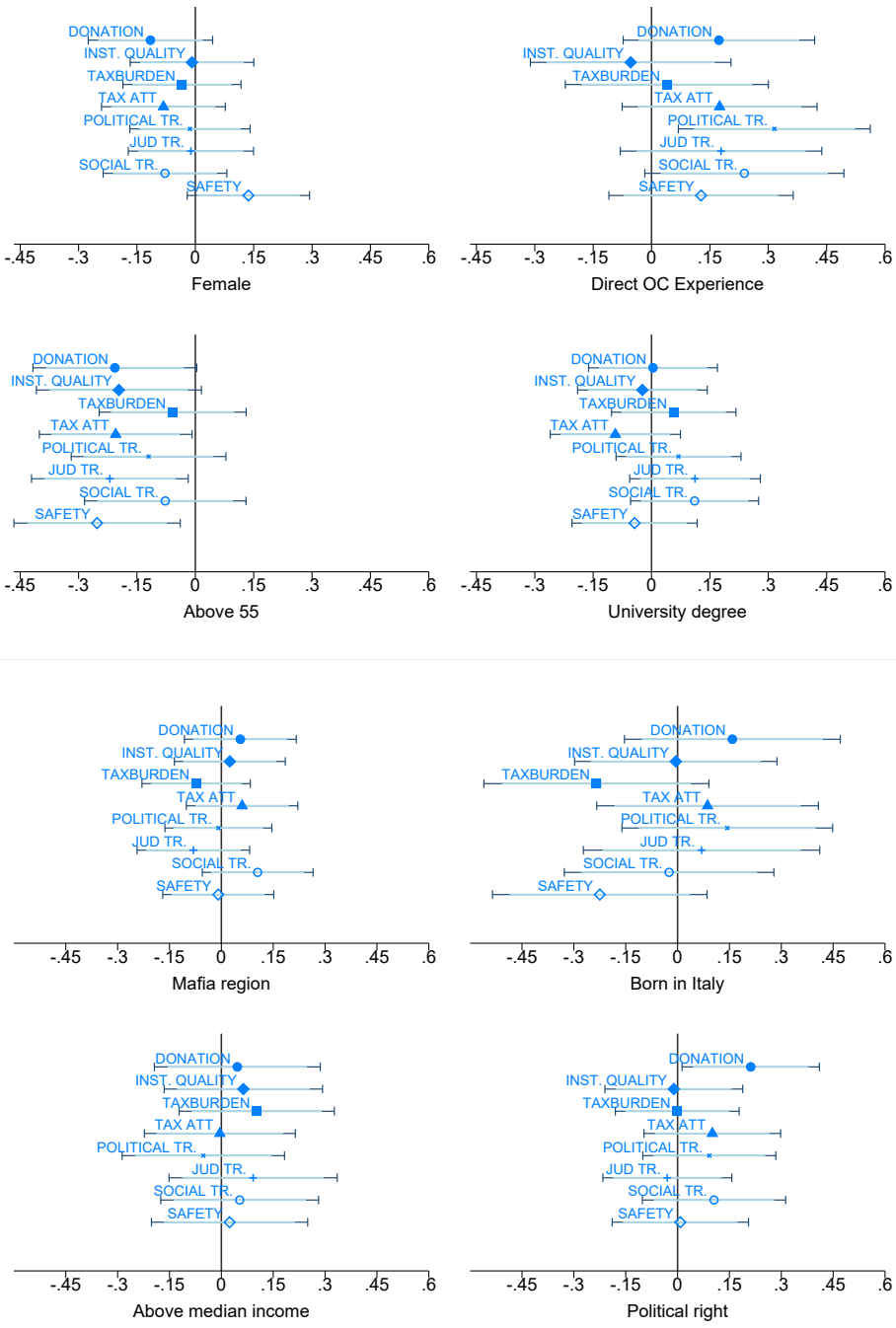
Type of Crime	N	% (over total sample)	% (over those who had OC experience)
Racketeering	74	1.38	11.18
Assault	115	2.14	17.37
Intimidation	119	2.14	17.98
Threat	89	1.66	13.44
Theft/Robbery	161	3.00	24.32
Other	57	1.06	8.61
Prefer not to say	47	0.87	7.10
Total	662	12.31	100.00

Table S9: Distribution of victim type for those reporting direct/indirect experience of OC in the sample

Who was the victim?	N	% (over total sample)	% (over those who had OC experience)
The respondent	80	1.49	12.08
A relative	136	2.53	20.54
A friend	143	2.66	21.60
An acquaintance	239	4.45	36.10
Prefer not to say	64	1.19	9.68
Total	662	12.31	100.00

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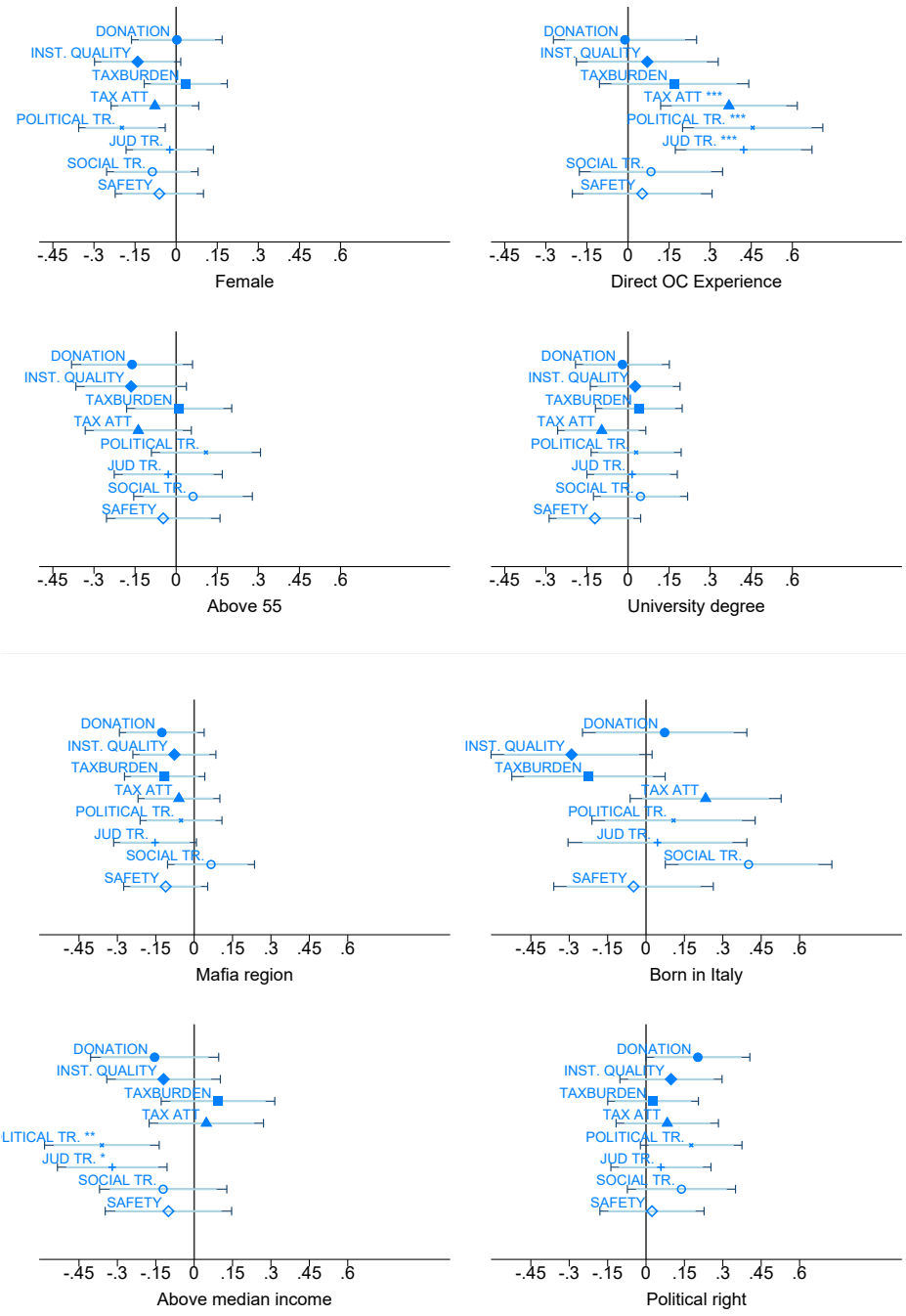
Figure S5: Heterogeneity: T1T2 vs T0



Notes: The figures report estimates from Model 1, where the treatment indicator has been interacted with selected individual characteristics. Outcomes variables have been standardised with respect to the outcomes in the control condition (T0). Light blue (dark blue) report 90% (95%) confidence intervals. We only report the interacted coefficients for the heterogeneity dimensions investigated, i.e. gender, experience with organized crime, age, education, mafia region, income, whether the respondent was born in Italy and political ideology. The comparison is between T1-T2 and T0. Asterisks next to the variable names indicate the interaction effects' significance at conventional levels after multiple hypotheses testing: *** p<0.01, ** p<0.05, * p<0.1

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Figure S6: Heterogeneity: T1T2 vs T5



Notes: The figures report estimates from Model 1, where the treatment indicator has been interacted with selected individual characteristics. Outcomes variables have been standardised with respect to the outcomes in the control condition (T0). Light blue (dark blue) report 90% (95%) confidence intervals. We only report the interacted coefficients for the heterogeneity dimensions investigated, i.e. gender, experience with organized crime, age, education, mafia region, income, whether the respondent was born in Italy and political ideology. The comparison is between T1-T2 and T5. Asterisks next to the variable names indicate the interaction effects' significance at conventional levels after multiple hypotheses testing: *** p<0.01, ** p<0.05, * p<0.1

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Full sample estimation

Tables S10 to S14 report the output of analyses analogous to those reported in Tables 2 and 6 in Section in the main text of the article. The difference between these analyses and those reported in Section is that we here do not exclude the top 5% and bottom 5% response times, and do not control for the respondent having passed or not the attention checker. As can be seen comparing the tables, our results are robust to these changes in the estimation models.

	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β(T1-T2 vs T0)	0.082**	0.123***	-0.033	0.046	0.095**	0.041	0.064	0.084**
	(0.039)	(0.039)	(0.038)	(0.039)	(0.037)	(0.039)	(0.039)	(0.038)
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	2,940	2,940	2,940	2,940	2,940	2,940	2,940	2,940
R-squared	0.025	0.053	0.077	0.059	0.071	0.043	0.043	0.033

Table S10: The table reports estimates of equation (1) pooling the mafia violence conditions (T1 and T2) in comparison to the neutral baseline condition (T0). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses. The sample is not trimmed to exclude the top 5% and bottom 5% response times and the regression does not control for having passed or not the attention check. *** p<0.01, ** p<0.05, * p<0.1.

	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β(T3-T4 vs T0)	0.036	0.036	-0.011	0.045	0.062*	0.006	0.013	0.003
	(0.039)	(0.039)	(0.038)	(0.038)	(0.037)	(0.039)	(0.039)	(0.038)
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	2,965	2,965	2,965	2,965	2,965	2,965	2,965	2,965
R-squared	0.020	0.045	0.088	0.068	0.068	0.039	0.042	0.038

Table S11: The table reports estimates of equation (1) pooling the general violence conditions (T3 and T4) in comparison to the neutral baseline condition (T0). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses. The sample is not trimmed to exclude the top 5% and bottom 5% response times and the regression does not control for having passed or not the attention check. *** p<0.01, ** p<0.05, * p<0.1.

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	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β (T5 vs T0)	0.0634	0.0188	0.0462	0.0206	0.0564	0.00416	-0.0472	0.0616
	(0.0457)	(0.0452)	(0.0437)	(0.0448)	(0.0431)	(0.0444)	(0.0458)	(0.0449)
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	2,007	2,007	2,007	2,007	2,007	2,007	2,007	2,007
R-squared	0.023	0.032	0.093	0.080	0.065	0.047	0.048	0.039

Table S12: The table reports estimates of equation (1) analyzing the violence baseline condition (T5) in comparison to the neutral baseline condition (T0). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses. The sample is not trimmed to exclude the top 5% and bottom 5% response times and the regression does not control for having passed or not the attention check. *** p<0.01, ** p<0.05, * p<0.1.

	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β(T1-T2 vs T5)	0.0227	0.108***	-0.0772**	0.0218	0.0363	0.0338	0.105***	0.0296
	(0.0394)	(0.0390)	(0.0385)	(0.0386)	(0.0386)	(0.0381)	(0.0405)	(0.0385)
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	2,937	2,937	2,937	2,937	2,937	2,937	2,937	2,937
R-squared	0.022	0.055	0.068	0.056	0.066	0.043	0.047	0.033

Table S13: The table reports estimates of equation (1) pooling the mafia violence conditions (T1 and T2) in comparison to the violence baseline condition (T5). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses. The sample is not trimmed to exclude the top 5% and bottom 5% response times and the regression does not control for having passed or not the attention check. *** p<0.01, ** p<0.05, * p<0.1.

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	(1) State Donation	(2) Institutional Quality	(3) Tax Burden	(4) Tax Attitude	(5) Political Trust	(6) Judicial Trust	(7) Social Trust	(8) Safety
β(T2 vs T1)	0.021	-0.016	0.063	-0.007	-0.031	0.060	-0.005	0.081*
	(0.044)	(0.044)	(0.045)	(0.044)	(0.045)	(0.044)	(0.047)	(0.043)
Constant	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1,935	1,935	1,935	1,935	1,935	1,935	1,935	1,935
R-squared	0.033	0.072	0.074	0.053	0.078	0.048	0.048	0.039

Table S14: The table reports estimates of Model 1 comparing the mafia violence condition with updated beliefs (T2) in comparison to the mafia violence condition without updated beliefs (T1). Outcomes variables have been standardized with respect to the outcomes in the neutral baseline condition (T0). Controls include: gender, age, age squared, marital status (single vs otherwise), income class, occupation, having a university degree, and having passed the attention checker during the survey. Robust standard errors in parentheses. The sample is not trimmed to exclude the top 5% and bottom 5% response times and the regression does not control for having passed or not the attention check. *** p<0.01, ** p<0.05, * p<0.1.

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Deviations from the preanalysis plan

Outcomes: Different from what reported in the preanalysis plan, we did not collect the respondents' attitudes towards crime and prosecution, which we instead replaced with elicitations of their stated trust in the judiciary.

Dimensions of heterogeneity: In addition to the preregistered dimensions of heterogeneity (income, education, location of residence (north/south), age) we moreover investigate heterogeneity with respect to political orientation, whether the respondent was born in Italy or not, whether they reside in a region with historically high mafia presence, gender and whether the respondent had or not direct experience of organised crime.

Hypotheses: Different from what registered, rather than testing the single experimental conditions separately against the baseline (H1), we aggregate the conditions by type of violence investigated. We hence investigate whether the mafia conditions T1 and T2, and the general murder T3 and T4 conditions, induce different attitudes compared to T0 (Tables 2 and 3) and T5 (Tables 5 and S5).

In addition to the registered hypotheses, we add analyses pooling all conditions exposing the respondents to violent images against the neutral conditions (Table S4). To gain a sense of the simple effect of being exposed to violent images, we test the effect of exposure to T5 against T0 (Table 4).

We do not test whether the strength of the treatment effect without updates changes with the respondents' misperceptions of the crime trend (H1B).

Further minor deviations: We do not cluster the standard errors in our analyses and use instead robust standard error estimations.

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The survey

We are **researchers from independent research institutions**. We would love to hear your personal opinion on some issues of public interest.

For the success of our research, it is extremely important that you **read all the questions** carefully before answering, and you provide us with **your sincere opinion**. If you are not sure what the correct answer to the question is, please provide your best guess, but take care to take the time to read and understand the question.

Providing **answers without paying attention or skipping questions may result in your compensation not being paid**.

It is very important to us that **the entire questionnaire** is completed once it has started. On average, this survey will take about 15 minutes of your time.

Note: Your participation in the survey is purely voluntary. No information that can identify you will be recorded. The results can only include summary data from which you can never be identified. The data collected will be stored on our servers and will be kept confidential. The anonymous data could be made available to other researchers for the purpose of replicating this investigation.

Please also note: publicly available journalistic archive images may be shown during the questionnaire that may disturb some viewers.

- ○ Yes, I want to participate in the survey
- ○ No, I don't want to participate in the survey

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What is your gender?

- ○ Female
- ○ Male
- ○ Other

What is your age?

What is your province of residence? (drop- drill-down)
Region
Province

What is your marital status?

- ○ Single (Never married, widowed, Separated, Divorced)
- ○ Married, Civil Union , Cohabitation

How many people does your family consist of (including yourself)?

- ○ Adult (over 14 years)
- ○ Children (under 14)

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How much is your household's total **monthly income, after tax?** (Include all of your family's sources of income: salaries, scholarships, social security benefits, dividends from shares, income from rental properties, child care and alimony , etc. We are not interested in the type of source of income. Please only indicate the total monthly income earned by all membersof your household).

- ○ < 1000 Euro
- ○ 1000-1999 Euro
- ○ 2000-2999 Euro
- ○ 3000-3999 Euros
- ○ 4000-4999 Euros
- ○ 5000-5999 Euro
- ○ 6000-6999 Euro
- ○ 7000 Euro and more

Where do you fit along the political spectrum, where 1 represents the left and 5 represents the right?

- ○ 1 Left
- ○ 2 Center Left
- ○ 3 City Center
- ○ 4 Center Right
- ○ 5 Right
- ○ No placement

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Do you think that the use of images helps the public to approach the journalistic world?

- ○ Yes
- ○ No

Which of the following statements best represents you?

- ○ The use of images in journalism diverts my attention from the message
- ○ The use of images in journalism increases my attention to the message
- ○ The use of images in journalism does not affect my attention to the message

Which of these sources of information do you consult most frequently?

- ○ TV News
- ○ Social media (social networks, blogs)
- ○ Radio/podcasts
- ○ Online newspapers/Apps
- ○ Newspapers
- ○ I don't get informed

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*** Neutral images control group**

[THREE JOURNALISTIC IMAGES OF URBAN SCENES ARE DISPLAYED HERE]

A recurring problem in these types of studies is the fact that some participants do not pay attention to the questions asked and answer randomly, making it difficult to draw conclusions from the survey. To confirm the fact that you are paying attention to the questions, please answer by writing three in letters to the following question, in which we ask you to tell us how many images are on this page.

*** Mafia violence images**

[THREE JOURNALISTIC IMAGES OF MURDERS ARE DISPLAYED HERE]

A recurring problem in these types of studies is the fact that some participants do not pay attention to the questions asked and answer randomly, making it difficult to draw conclusions from the survey. To confirm the fact that you are paying attention to the questions, please answer by writing three in letters to the following question, in which we ask you to tell us how many images are on this page.

We would now like to ask you how you think the **number of murders** perpetrated in Italy by **organized crime** has **changed** in the last two decades (2002-2020).
You will receive, in addition to your compensation for participating in this survey, an **additional compensation** that depends on how close your response is to real change according to recent statistics. You will receive:
- 0.15€ more if your answer deviates by a maximum of 3 percentage points (above or below) from the real value
- 0.10€ more if your answer deviates by a maximum of 5 percentage points (above or below) from the real value
- 0.05€ more if your answer deviates by a maximum of 10 percentage points (above or below) from the real value

Provide your answer by moving the slider in the bar below.
According to you in the last 20 years, the **murders** perpetrated in Italy by **organized crime** (range: -100%, +100%)

_____

On a scale of 1 (not at all certain) to 10 (completely certain), to what extent are you certain of your answer to the previous question?

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*** Mafia violence images + update**

Recent data show that in fact, over the last two decades, the number of **Mafia-related** murders perpetrated in Italy decreased by **about 65%.**

[AN IMAGE WITH A GRAPHICAL DEPICTION OF THE DECREASE IS DISPLAYED HERE]

Were you aware of this fact?

- ○ Yes
- ○ No

*** General violence images**

[THREE JOURNALISTIC IMAGES OF MURDERS ARE DISPLAYED HERE]

A recurring problem in these types of studies is the fact that some participants do not pay attention to the questions asked and answer randomly, making it difficult to draw conclusions from the survey. To confirm the fact that you are paying attention to the questions, please answer by writing three in letters to the following question, in which we ask you to tell us how many images are on this page.

We would now like to ask you how you think **the number of homicides** perpetrated in Italy has **changed** in the last two decades (2000-2020).
You will receive, in addition to your compensation for participating in this survey, an **additional** compensation which depends on how close your answer is to real change according to recent statistics.

Receive:
- €0.15 more if your answer deviates by a maximum of 3 percentage points (above or below) from the real value, or
- €0.10 more if your answer deviates by a maximum of 5 percentage points (above or below) from the real value, or
- 0.05€ more if your answer deviates by a maximum of 10 percentage points (above or below) from the real value

Provide your answer by moving the slider in the bar below.
According to you in the last 20 years, the **murders** perpetrated in Italy (range: -100%, +100%)

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On a scale of 1 (not at all certain) to 10 (completely certain), to what extent are you certain of your answer to the previous question?

*** General violence images + update**

Q220 Recent data show that in fact, over the last two decades, the number of **homicides** perpetrated in Italy decreased **by about 65%.**

[AN IMAGE WITH A GRAPHICAL DEPICTION OF THE DECREASE IS DISPLAYED HERE]

Were you aware of this fact?

- ○ Yes
- ○ No

*** Unspecified violence images**

[THREE JOURNALISTIC IMAGES OF MURDERS ARE DISPLAYED HERE]

A recurring problem in these types of studies is the fact that some participants do not pay attention to the questions asked and answer randomly, making it difficult to draw conclusions from the survey. To confirm the fact that you are paying attention to the questions, please answer by writing three in letters to the following question, in which we ask you to tell us how many images are on this page.

*** END OF CONDITION6SPECIFIC BRANCHMENT**

Which of the following statements best represents you?

- ○ The use of images in journalism reduces my interest in the news
- ○ The use of images in journalism increases my interest in the news
- ○ The use of images in journalism does not affect my interest in the news

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According to you, journalistic reports and articles should:

- ○ Reduce image usage (1)
- ○ Increase the use of images (2)

You now have 1 Euro.
This is an extra amount, and independent, of your participation fee. All other survey participants also received 1 Euro.
You can choose **in what proportion** to **donate the Euro to two entities**.
Both entities contribute to addressing the epidemiological emergency of the Covid-19 virus on the front line.
Your donation will be used to support the families of doctors and nurses who have lost their lives carrying out activities in the field to combat the epidemic, or to support health workers who support the affected population.

Italian Red Cross:
Non-governmental organization operating in Italy

Italian Civil Protection:
Department of the Italian Government at the Presidency of the Council of Ministers

We will send your chosen allocation **to the two entities.** The bar below allows you to choose how many cents to donate to the Civil Protection (Department of the Italian government) up to a maximum of 100 (1 Euro). The remainder will be sent to the Red Cross (non-governmental organization).

You can send everything to the Civil Protection, everything to the Red Cross, or part to the Civil Protection and part to the Red Cross.

	0 10 20 30 40 50 60 70 80 90 100
Donation to Civil Protection (Department of Government)	

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On a scale of 1 to 10, how much of your personal freedom would you be willing to give up for your safety and that of your family?

- ○ 1 (none at all)
- ○ …
- ○ 10 (completely) (10)

On a scale of 0 to 10, to what extent do you think public institutions make useful policies in the long run?

- ○ 1 (Not useful)
- ○ …
- ○ 10 (Completely useful)

On a scale of 0 to 10, to what extent do you think public institutions are upright and free from corruption?

- ○ 1 (Completely uncorrupt)
- ○ …
- ○ 10 (Completely corrupt)

On a scale of 0 to 10, to what extent do you think public institutions are efficient?

- ○ 1 (Completely inefficient)
- ○ …
- ○ 10 (Completely efficient)

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On a scale of 1 to 10, you would say that:

Is the tax burden in Italy too low (1) or too high (10)?

- ○ 1 (too low)
- ○ …
- ○ 10 (too high)

Taxes **you** pay are too low (1) or too high (10)

- ○ 1 (too low)
- ○ …
- ○ 10 (too high)

On a scale of 1 to 10, **to what extent do you agree** or **disagree with the following statements?**
(1 = completely disagree; 10 = completely agree)

Those who routinely evade taxes should be jailed.

- ○ 1 (no)
- ○ …
- ○ 10 (yes)

It is the civic duty of every citizen to pay taxes honestly.

- ○ 1 (no)
- ○ …
- ○ 10 (yes)

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In general, would you say that you can trust most people or that you can never be careful enough? On a scale of 1 to 10 indicates if you think you can never be careful enough (1) or that you can trust most people (10).

- ○ 1 (Most people cannot be trusted)
- ○ …
- ○ 10 (Most people can be trusted)

On a scale of 1 to 10, how much trust do you place in the following institutions? (1 = none; 10 = a lot)

In the Parliament

- ○ 1 (none)
- ○ …
- ○ 10 (a lot)

In municipal politicians

- ○ 1 (none)
- ○ …
- ○ 10 (a lot)

In regional politicians

- ○ 1 (none)
- ○ …
- ○ 10 (a lot)

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In the national government

- 1 (none)
- …
- 10 (very)

In law enforcement

- 1 (none)
- …
- 10 (very)

On a scale of 1 to 10, how much trust do you place in the following institutions? (1 = none; 10 = a lot)

In the mainstream media (TV, newspapers,...)

- 1 (none)
- …
- 10 (a lot)

In the justiciary

- 1 (none)
- …
- 10 (a lot)

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In the Public Administration

- ○ 1 (none)
- ○ …
- ○ 10 (a lot)

In the European Union

- ○ 1 (none)
- ○ …
- ○ 10 (a lot)

Which is the Italian region where you lived until the age of 15? (Drop-down)

How would you describe your ethnic group? Indicates all relevant entries.

- ○ Caucasian (European, North American, etc.)
- ○ African
- ○ Asian
- ○ Arabic numerals
- ○ More than one ethnic group
- ○ Other
- ○ Caribbean/Latin American
- ○ Middle Eastern

Were you born in Italy?

- ○ Yes
- ○ No

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Are your parents both born in Italy?

- ○ Yes
- ○ No

What is your current employment status?

- ○ Public sector employee
- ○ Private sector employee
- ○ Self-employed person with employees
- ○ Self-employed without employees
- ○ Not employed and looking for a job
- ○ Not employed and not looking for a job
- ○ Student
- ○ Retired
- ○ Houseworker

What is your highest qualification?

- ○ Primary school
- ○ Middle school
- ○ Vocational education
- ○ High School Diploma
- ○ High School
- ○ Bachelor's degree
- ○ Master's degree (Master's or 5-year single-cycle degree)
- ○ PhD

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Did you vote in the last national elections?

- ○ Yes
- ○ No

Party Which party would you vote for if the next national elections were to happen next Sunday?

- ○ Democratic Party
- ○ Lega
- ○ Movimento 5 Stelle
- ○ Forza Italia
- ○ Italia Viva
- ○ Fratelli d'Italia
- ○ Other (please specify) _____
- ○ Wouldn't vote

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*** ONLY ASKED TO THOSE IN THE CONTROL CONDITIONS, AND ONLY THE MAFIA OR GENERAL HOMICIDE QUESTION (BELOW), RANDOMLY SELECTED**

We would now like to ask you how you think **the number of homicides** perpetrated in Italy has **changed** in the last two decades (2000-2020).
You will receive, in addition to your compensation for participating in this survey, an **additional** compensation
which depends on how close your answer is to real change according to recent statistics.

Receive:
- 0.15€ more if your answer deviates by a maximum of 3 percentage points (above or below) from the real value, or
- €0.10 more if your answer deviates by a maximum of 5 percentage points (above or below) from the real value, or
- 0.05€ more if your answer deviates by a maximum of 10 percentage points (above or below) from the real value

Provide your answer by moving the cursor in the bar below. According to you in the last 20 years, the **murders** perpetrated in Italy

_____

On a scale of 1 (not at all certain) to 10 (completely certain), to what extent are you certain of your answer to the previous question?

- ○ 1 (not at all certain)
- ○ …
- ○ 10 (Quite certain)

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We would now like to ask you how you think **the number of homicides** perpetrated in Italy by **organized crime** has **changed** in the last two decades (2002-2020).

You will receive, in addition to your compensation for participating in this survey, an **additional compensation** that depends on how close your response is to real change according to recent statistics. Receive:
- 0.15€ more if your answer deviates by a maximum of 3 percentage points (above or below) from the real value
- 0.10€ more if your answer deviates by a maximum of 5 percentage points (above or below) from the real value
- 0.05€ more if your answer deviates by a maximum of 10 percentage points (above or below) from the real value

Provide your answer by moving the cursor in the bar below.
According to you in the last 20 years, the **murders** perpetrated in Italy by **organized crime**

_____

On a scale of 1 (not at all certain) to 10 (completely certain), to what extent are you certain of your answer to the previous question?

- ○ 1 (not at all certain)
- ○ …
- ○ 10 (Quite certain)

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*** POSTERIOR BELIEFS (entire sample)**

Every year the Italian State finds the culprit of a part of the **total** number of murders perpetrated in Italy, but some remain unsolved. Out of a hundred murders, of how many do you think the culprit is identified in the end?
Here, too, you can earn an additional compensation, more than your total compensation so far, based on how **close** your answer is to the **real value for 2019** (the most recent official estimate currently available).

To be precise, you will earn:
- 0.15€ if your answer deviates by a maximum of 3 units (above or below) from the real value, or
- 0.10€ if your answer deviates by a maximum of 5 units (above or below) from the real value, or
- 0.05€ if your answer deviates by a maximum of 10 units (above or below) from the real value.

Provide your answer by moving the bar below.
Out of a hundred total **homicides**, the state identifies the culprit of:

0 10 20 30 40 50 60 70 80 90 100

Number of murders solved	

*** ONLY DISPLAYED TO THOSE WHO RECEIVED UPDATING INFORMATION AND ONLY ACCORDING TO THEIR CONDITION (MAFIA OR GENERAL)**

*** GENERAL MURDERS**

During the questionnaire you were given an approximate figure regarding the decrease in the number of homicides perpetrated in Italy by organized crime.
On a scale of 1 to 10, how credible do you think the data presented to you is , where 1 corresponds to "*not at all* credible" and 10 corresponds to "*completely credible*"?

- ○ 1 (not at all credible)
- ○ …
- ○ 10 (fully credible)

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Do you remember what data you were given about the decline in the number of homicides perpetrated in Italy by organized crime?
The data provided indicates a decrease in homicides perpetrated by organized crime by approximately (move the bar to indicate the percentage):

	0 10 20 30 40 50 60 70 80 90 100
Percentage decrease in homicides	

*** MAFIA MURDERS**

During the questionnaire you were given an approximate figure regarding the decrease in the number of homicides perpetrated in Italy.
On a scale of 1 to 10, how credible do you think the data presented to you is , where 1 corresponds to "*not at all* credible" and 10 corresponds to "*completely credible*"?

- ○ 1 (not at all credible)
- ○ …
- ○ 10 (fully credible)

Do you remember what data you were given about the decline in the number of homicides perpetrated in Italy? The data provided indicates a decrease in homicides perpetrated approximately by (move the bar to indicate the percentage):

	0 10 20 30 40 50 60 70 80 90 100
Percentage decrease in homicides	

Now we would like to ask you some questions about your perception of this survey

Do you think this questionnaire was ideologically motivated?

- ○ Yes
- ○ No

Which of these do you think is the ultimate intent of this study?

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- ○ Measuring participants' perception of the institutions
- ○ Measuring perceived risk factors for the coming years
- ○ Measuring the correlation between information consumption and the perception of institutions
- ○ Measuring the correlation between institutional perception and support for state intervention
- ○ Correlating political participation to information consumption
- ○ Correlating information consumption with the perception of visual elements
- ○ Correlating the use of images in information, the ability to concentrate, the level of attention and the memorization of content
- ○ Studying the perception of priorities for the Italian government
- ○ Studying the perception of criminal phenomena

How often do you find news (in newspapers, magazines or on TV) about violent crimes perpetrated by organised crime? For example, attacks, murders, intimidation.

- ○ Several times a week
- ○ About once a week
- ○ Several times a month
- ○ About once a month
- ○ Less than once a month

Have you ever been (or know someone who has been) a victim of organized crime?
(We remind you that it is **impossible** for us or anyone else to trace your identity, either directly or indirectly, on the basis of the data collected in this questionnaire, and that the results of this survey will only be disclosed in aggregated form and in the form of statistical processing)

- ○ Yes
- ○ No
- ○ I prefer not to answer

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What crime was it? (if answered yes)

- ○ Racketeering
- ○ Aggression
- ○ Intimidation
- ○ Threat
- ○ Theft/Robbery
- ○ Other _____
- ○ I don't know/prefer not to answer

Can you tell us who the victim was? (if answered yes)

- ○ The interviewee
- ○ A relative
- ○ A friend
- ○ An acquaintance
- ○ I prefer not to answer

*** DEBRIEFING INFORMATION**

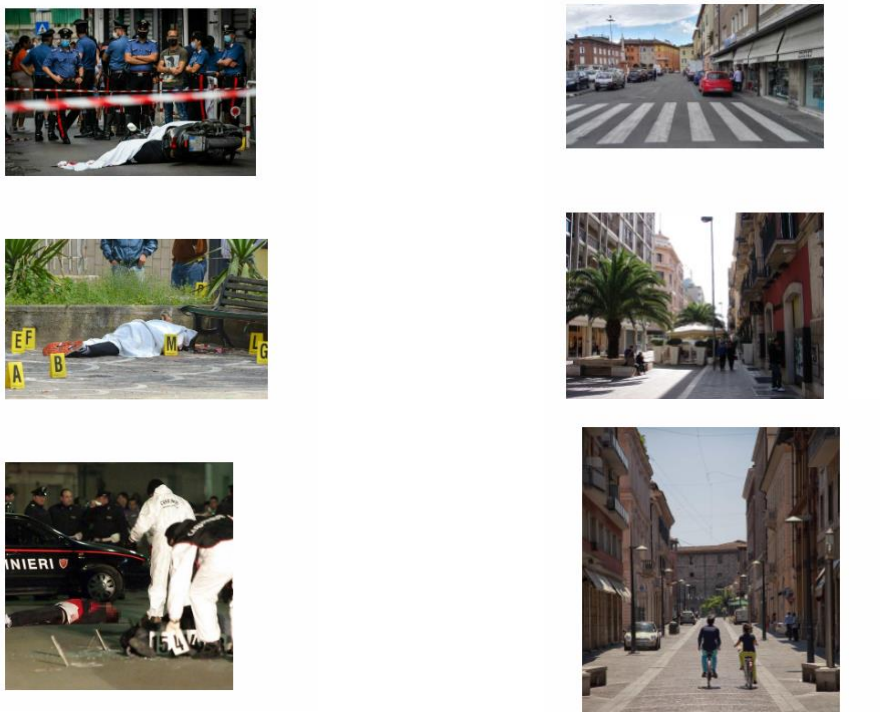
During the questionnaire you were asked for your opinions on some criminal phenomena. Below are the data provided by the Ministry of the Interior.
Change in the number of homicides (non-organized crime) from 2002 to 2020: decrease of about 63%
Change in the number of homicides (organised crime) from 2000 to 2020: decrease of about 69%
Number of total murders solved (identification of the culprit) per 100 murders: 76 murders solved

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Media Images

Figure S7 shows on the left column the three images depicting homicidal events used as exposure for individuals in treatment groups T1, T2, T3, T4, and T5. On the contrary, on the right column are shown the three generic images showing southern Italy cities' streets, used for the control group T0.

Figure S7: Journalistic images of murders (left), urban scenes (right)

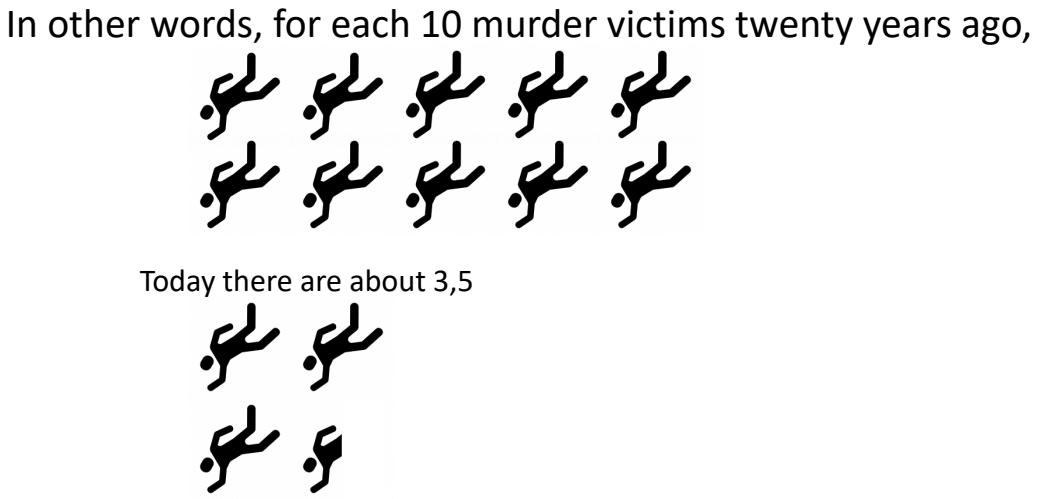


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Update beliefs image

Figure S8 shows the image shown to respondents exposed to the updated belief mechanism. In particular, we show in a stylized fashion that for 10 murder victims two decades ago, now there are 3.5, underlying the sensible reduction in homicides occurred in Italy in the past twenty years.

Figure S8: Graphical depiction of the decrease in mafia-related / general homicides



References - Supplementary Materials

[App1] Andreas Fuster and Basit Zafar. Survey Experiments on Economic Expectations. Technical Report w29750, National Bureau of Economic Research, Cambridge, MA, February 2022. URL http://www.nber.org/papers/w29750.pdf.

[App2] Ingar Haaland, Christopher Roth, and Johannes Wohlfart. Designing Information Provision Experiments. *Journal of Economic Literature*, 2023. ISSN 0022-0515. doi: 10.1257/jel.20211658. URL https://www.aeaweb.org/articles?id=10.1257/jel.20211658.

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