Political Discrimination in the Aftermath of Violence: the case of the Greek riots

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GreeSE Paper No 30

Hellenic Observatory Papers on Greece and Southeast Europe

December 2009
Table of Contents

**ABSTRACT** iii

1. Introduction 1

2. Background: the 2008 Riots 5

3. Existing Literature 8

4. Experimental Design 11

5. Results 19

5.1. Participation in Demonstrations 25

5.2. Debriefing 27

6. Discussion 28

Appendix: Newspaper Articles 31

References 32

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**Acknowledgements**

The authors would like to thank the participants of the 4th Hellenic Observatory PhD Symposium and the seminar participants at the MPI Jena for helpful discussions. Furthermore, the authors thank the MPI Jena and the DFG Graduate College RTG 1411 “Economics of Innovative Change” for generous financial support. Special thanks to Ioannis Konstantinidis who made this work possible and Valia Savvidou for invaluable research assistance.
Political Discrimination in the Aftermath of Violence: the case of the Greek riots

David Hugh-Jones*, Alexia Katsanidou* and Gerhard Riener†

ABSTRACT
We examine discrimination against outgroups in the context of the December 2008 riots in Greece after the killing of a 15-year-old student by a special police agent. We examine students’ allocations between themselves and others, including police, in modified Dictator games, allowing us to test theories of discrimination on behavior with real payoff consequences. Treatments examined the effect of in-group norms and environmental cues on discrimination. We find that cues in the environment increase discrimination. However, contrary to existing research, in-group norms do not increase discrimination. We also correlate discrimination with attitudes towards the riots themselves, providing a laboratory test of the “frame alignment” theory of mobilization. Laboratory behaviour was correlated with self-reported participation in demonstrations, supporting the external validity of our measure.

Keywords: Discrimination, Experiment, Greece, Priming.

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1. Introduction

In December 2008, after the police killing of a 15-year-old schoolboy, Greece was shaken by a series of demonstrations, which swiftly turned violent. Participants fought the police and destroyed property. Although mass violence has subsided at the time of writing, terrorist attacks on Greek police have continued, and the December events continue to affect Greek politics and society.

What makes people take action to harm those in other groups? Although large literatures in contentious politics and intergroup discrimination address these questions, clear answers are hard to come by. Psychological experiments have thrown light on the causes of discrimination, but have remained subject to concerns about external validity: can they really explain real-world behaviour? On the other hand, case studies of protest, riots and civil violence have led to interesting hypotheses, but have problems identifying causality. In this paper we use experimental methodology to test hypotheses from both strands in the literature, innovating in two ways. First, we used cash payoffs, so that the choice to discriminate had real monetary consequences for those involved.
Second, experiment participants were Greek students, allocating money between themselves and (among other groups) Greek police, in the charged atmosphere after the December 2008 riots. We could therefore validate our experimental results against participation in anti-police demonstrations.

In particular we focus on three questions, derived from previous work (see Section 3). Our dependent variable is discrimination, by which we mean treating people worse because of their membership in a particular social group.

- In discriminating, do individuals follow their own preferences? Or are they conforming to group norms?

Recent work proposes that ethnic discrimination can be explained not by underlying preferences, but by the “technology of punishment” - that is, bad behaviour towards coethnics is more likely to be punished, for instance by loss of reputation within one’s social network (Habyarimana et al. 2007). An experiment in Bosnia found relatively low levels of intergroup discrimination in a dictator game where behaviour was private (Whitt and Wilson 2007). Similarly, some explanations of group conflict claim that only a minority of extremists actually desire violent conflict, but that they pressure other group members into joining in violent action (Hardin 1995). Social psychologists have suggested that outgroup discrimination takes place when norms preventing it are – sometimes deliberately – broken down (Bar-Tal 1990, Gaertner and Insko 2001, Staub 1990). Finally, recent experimental work on
the Dictator Game suggests that altruistic behaviour in general may be driven more by norms than by innate preferences (Dana et al. 2006).

- Can discrimination be reinforced by cues in the environment?

A large literature on civil war claims that hatred can be fomented by politicians acting instrumentally. The puzzle is to explain why people are affected by politicians’ speeches or prejudiced media coverage, when they should be aware of the underlying motivations. We propose that the mechanism is subconscious priming: cues in the environment, such as newspaper headlines, can awaken mistrust and aggression. We test this claim.

- Is discrimination mediated by attributions of responsibility to opposing group members?

That is, are subjects who blame individual members of the opposing group for a conflict situation more likely to behave antagonistically than those who instead blame chance or institutional structures? This question is motivated both by work on violence, in which blame is used to justify aggression, and by the literature on “frame alignment” for protest mobilization.

To examine these questions, we run experiments in which students may allocate money between (1) themselves, (2) other anonymous recipients identified only by profession and (3) members of the Thessaloniki police force, identified only as police. Our treatments vary the publicity of subjects’ decisions, and expose them to different cues beforehand. Since Thessaloniki
was a center of anti-police activity, and since students were centrally involved, we have a rare opportunity to examine the aftermath of recent civil conflict. We build on an established tradition of examining intergroup behaviour using economic and psychological experiments (Tajfel et al. 1971, Tajfel 1982, Bouckaert and Dhaene 2004, Fershtman and Gneezy 2001a, Chen and Li 2006). However, this is one of the first economic experiments to analyse behaviour between members of opposed political groupings.\footnote{The first, to our knowledge, is Fowler and Kam (2007), which examined giving to identified Democrats and Republicans in a dictator game.} Our main findings are that environmental cues can indeed increase discrimination. On the other hand, in-group norms among students do not appear to have affected discrimination in our experiment, in contrast with the studies mentioned above. Indeed, there was clear evidence of discrimination even when choices were private. Lastly, blame attribution did not affect discrimination, suggesting that frame alignment and blaming have limited explanatory power in this case.

In the next section, we describe the background of our experiment: the Greek riots of 2008, and contemporary Greek society. Section 3 describes the literature from which we derive our hypotheses. Section 4 sets out our design and Section 5 gives our results.
2. Background: the 2008 Riots

The December 2008 riots in Greece were the response to the killing of a 15-year-old Athenian schoolboy by a special police agent. The outrage of a traditionally highly politicised society (Alivizatos 1990:137) escalated to a month-long conflict between the police and demonstrators, including both peaceful demonstrations and violent riots. Aggression against the police and other symbols of state and media power, such as university teachers and journalists, has continued in subsequent months.

The violence demonstrates many Greeks’ anger towards government and state institutions. Public dissatisfaction with public administration, corruption and unsuccessful governance has for many years lacked an effective means of expression, due to Greece’s weak civil society (Mouzelis 1979: 19). The major parties themselves have provided the main alternative to civil society, being a major mobilizing force of the masses in the post-1974 era (Alivizatos 1990:137) and dominating all social relations (Pridham 1990: 116). However, in recent years, disillusionment with the parties has grown, creating a representation gap. Greek politics combines new elements from after the 1974 democratization with old practices of the pre-dictatorship era (Lyrintzis 1984: 99-118; Samatas 1986: 35), which increases frustration. Politics was traditionally in the hands of a few strong families, and although after 1974 entering politics became easier, the tradition of exclusivist parliamentarism remained and continues to oppose the democratization of politics (Mouzelis 1979: 133). Thus, Greeks, particularly youngsters, judge their political system
as elitist, corrupt and inflexible, catering only for its own survival and reproduction instead of the country’s interests (Karamichas 2009: 291).

The main target of the December 2008 protests was the police force. The public did not accept the explanation that the killing was the wrong-doing of one policeman but blamed the police force as a whole for allowing such individuals to operate in this manner through the institution. Thus the police was framed as both symptom and cause of political failure (Fetherstone 2009: 2). The Greek population’s lack of trust in the police force runs deep (Mouzelis 1979: 133), but is also constantly reinforced by the police’s inability to provide good services (Kathimerini 28/12/2008), and the fact that the police is seen as the shield of the establishment, the dominance of the major two parties. Before 1974, the police were used by both dictatorships and elected Right-wing governments to keep the masses out of politics (Mouzelis 1979: 133; Veremis 1997). Support for democracy was suppressed; the state employed family responsibility for “political crimes” to increase mass political surveillance using a vast network of police informers (Samatas 1986: 35). The police infiltration of private life provoked deep hatred. By 1974 the police force was composed mainly of anti-democratic individuals and junta sympathizers. The democratization of the state apparatus by the Karamanlis administration introduced no major reforms in order to avoid a backlash (Clogg 2002: 173; Clogg 1975: 338-42). This led to the disillusionment of ordinary Greek citizens with the police and the civil service (Kassimeris 2001: 262). The death of the school boy only added to this disillusionment increasing the number (eighteen
in total, mostly young males) of controversial deaths attributed to the police since the 1980s (Ios 2006).

Thus, many Greek citizens identify the police with oppression rather than with the provision of security in a democratic country. Students are traditionally seen as a force of political change both by Greek society, as well as by themselves. Them being the major protest group in the December 2008 riots gives us a valuable opportunity for research into outgroup discrimination. The hatred and mistrust exhibited by students for police means that we can examine “outgroup hatred” in a strong form - something that is extremely hard to create with minimal groups in the lab. On the other hand, norms of fairness between ethnic groups, which are common in modern society and may regulate inter-ethnic behaviour in many settings (Fearon and Laitin 1996), are more likely to be absent due to the political nature of the conflict. These norms may interfere with research if they especially affect behaviour under the eye of the experimenter. Indeed, experimental work with “home-grown” groups often finds weaker results than that with minimal groups (e.g. Habyarimana et al. 2007, Whitt and Wilson 2007, Goerg et al. 2008; but cf. Bernhard et al. 2006). Finally, the political situation allows us to examine how social and political beliefs – in particular, blame attributions – affect motivations to harm outgroup members.
3. Existing Literature

We examine discriminatory behaviour in the context of social conflict. Both discrimination and conflict have given rise to huge literatures. Social psychologists have examined discrimination in depth. The “minimal group” experiments of Tajfel and Turner (1981, 1971, 1982), and the Social Identity Theory developed to explain their results, have been particularly influential. The experiments seemed to show that individuals would willingly discriminate against outgroup members in a laboratory setting, even if the group was experimentally created and explicitly arbitrary, and membership knowledge was private. Social Identity Theory explains this as follows: individuals derive part of their sense of identity from belonging to groups. Discrimination against other groups can then be used to bolster or protect self-esteem by increasing the (subjective) value of one’s own group membership. Though Social Identity Theory has a solid track record of predicting laboratory behaviour, it has limitations. The logic works best as a theory of “ingroup love” rather than “outgroup hate”, and indeed it is hard to create discrimination in the lab when people are allocating negative payoffs (Mummendey et al. 1992, Brewer 1999).

Other laboratory experiments have examined behaviour between real social groups. These face a potential “reverse experimenter demand effect”: becoming aware of the experiment’s purpose might trigger anti-discrimination norms, biasing findings against discrimination. Indeed, the evidence from such experiments is quite mixed (Habyarimana et al. 2007, Bernhard et al. 2006, Bouckaert and Dhaene 2004, Fershtman and Gneezy 2001b, McLeish and
Oxoby 2007, Whitt and Wilson 2007). In this context, using real, but non-ethnic, social groups may be a useful approach.

The literature on social conflict is equally large and diverse. Nevertheless, some key themes emerge. First, participation in conflict and violence, rather than being solely a matter of individual preferences, may be driven by norms in which a few extremists encourage or force others to participate (Kuran 1998, Hardin 1995). This is a widespread interpretation of the war in the former Yugoslavia, for example (Mueller 2000). Political scientists and psychologists agree that violence towards outgroups can be supported when norms which encourage it emerge (Horowitz 2001, Bhavnani 2006). Alternatively, the breakdown of norms which usually guard against aggression may also be important (Bar-Tal 1990, Bandura 2002). This is a compelling story, which we would like to test in a controlled fashion (cf. Habyarimana et al. 2007):

**Conjecture 1.** Discrimination will be driven by norms, rather than by individual preferences, and will be most strongly present when individuals are subject to social pressure.

Second, case studies repeatedly put part of the blame for outbreaks of violence on opportunistic behaviour by politicians, who use rhetoric to whip up tensions with the help of a compliant media (Oberschall 2001, 2000, Kaufman 2001, Ignatieff 1998, Bauerlein 2001). The puzzle in this story is to explain why people listen to a media they should know is biased, or to politicians whom they should expect to be opportunistic. One possible psychological mechanism
is that of “priming”. Reporting of violence on the media may affect people’s attitudes without them being fully aware of it. Again, we wish to test this mechanism in a controlled way.

**Conjecture 2.** Discrimination will be increased by priming from cues in the environment.

Another strand of the literature, focused on riots, activism and civil disobedience, takes a more optimistic view of conflict participants’ agency. Participation in conflict can be mediated by role identities and attributions of responsibility (Reicher 1996, Stott and Reicher 1998, Stott and Drury 2000, White 2001). Similarly, a large literature in the study of social movements claims that individuals’ “frames” (roughly, their interpretation of a particular situation) affect their willingness to support particular movements (Klandermans 1984, Snow et al. 1986, Gamson et al. 1982, Ferree and Miller 1985). On this account, someone’s willingness to take action harming certain groups may be a form of expressive political action, and may depend on their attributions of blame for particular events or on their analysis of the situation as a whole.

**Conjecture 3.** Discrimination will be mediated by individuals’ political and social views, including their attributions of responsibility.

This literature also proposes that “frame alignment” – the process by which social movements bring individuals to subscribe to a collective frame
interpreting a situation – is a key step in mobilizing individuals to take part (Snow et al. 1986). This idea has received little experimental testing (but cf. Dardis 2007); in particular, we lack experimental evidence in which frame alignment is causally linked to costly actions with real consequences. Although the concept of framing is different from priming, the distinction is not absolute, and the frame-alignment process may be thought of as an interaction between environmental primes and the individual’s prior beliefs. This leads to our final conjecture:

**Conjecture 4.** *Individuals’ political and social views will have a stronger effect on discrimination in the presence of priming.*

4. Experimental Design

We employed a $2 \times 2$ factorial design, where we varied the publicity of the decisions and the primes administered. We applied these four treatments between subjects. The experiment had two stages: in the first stage subjects were presented with a priming task that used either a neutral prime or a riot prime. In the second stage, subjects played a series of dictator games in which their decisions were either public or private (whether the subjects were in the *private* or the *public* treatment was determined before and did not change during the experiment. This was communicated to the subjects before they made any decisions). In each dictator game subjects could give money to people outside the lab, identified by their profession and gender. In these games
we varied the recipient (the other) and the relative price of giving to the other. After the actual experiment, subjects filled out a questionnaire. Table 1 gives an overview of the experimental design. We describe each stage in detail. All sessions were conducted by the same experimenters who took the same roles in each session.

*Priming Task*

Priming tasks are frequently used in psychological research to make a certain concept more salient (Bargh and Chartrand 2000; see e.g. Tajfel 1981, or Benjamin et al. forthcoming for an application to economics). As we were interested in the role of media in evoking discrimination, we asked subjects to read an article from a Greek newspaper and find spelling mistakes. Subjects had five minutes to complete the task. Half of the subjects read a neutral article about business activities of a large internet telephony company in Greece. The other half was presented with an article connected to the riots, containing a detailed description of the shooting of the 15-year old boy. Subjects were asked to count the spelling mistakes and rewarded €1 for getting the correct number (which was 10).

*Recipients*

The recipients were identified to the subject by profession and gender. To avoid inducing experimenter demand effects by making the police/other distinction

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2 The protocol and written instructions are available on request.
3 A translation of the articles (without spelling mistakes) can be found in the Appendix.
obvious, recipients were either police or members of one of 5 other professions: firefighter, private employee, civil servant, housewife and entrepreneur. Firefighters in particular provide a close comparison group with police, since both groups are uniformed state employees with a strong group identity. This allowed us to check whether our results come from general intergroup hostility, rather than specifically from discrimination against members of the police group. Furthermore, we were careful in how the professions were introduced in order that subjects see the profession as a group with which subjects can identify or not. Recipients were shown with invented names that preserved gender, and subjects were informed of this.

Subjects

Subjects were recruited via two methods: a) voluntary registration during lectures at the European and International Studies department and b) posters and leaflets distributed in and around the University of Macedonia and in the city centre. The subjects were aware of a minimum participation fee of 2.5 Euro plus the potential of earning more, depending on their answers. Volunteers had to contact us by phone, email or in person to subscribe to the session of their choice and were informed that the sessions would run for an hour. At the beginning of each experiment subjects were shown a set of envelopes with the recipients’ names and addresses (concealed for identity protection reasons) and were told that at the end of the session the money allocated to each recipient would be posted in the envelope. A volunteer was
asked to witness the researchers taking the envelopes to the postbox. Subjects were constantly aware in all allocations of the amount of money they could keep or give to the recipients. They were informed that one of their money allocations would be picked at random as the final pay-off for them and the relevant recipient.

**Dictator Game**

In a dictator game subjects are asked to split money between themselves and a recipient. Each subject played six turns of a modified dictator game - one for each profession. In each turn a profession was chosen randomly without replacement, and a recipient was chosen randomly from a pool of potential recipients of the chosen profession. The subject then made 9 decisions allocating money between him- or herself and the recipient. So every subject was presented with all of the six professions in random order.

Motivated by analogous behaviour in civil conflict, we wished to learn how subjects behaved when discrimination carried a cost to the discriminator, and more generally how discrimination was affected by changes in its cost. Therefore, we varied the price of giving to the other person across the 9 decisions. Subjects were shown a series of different budget sets, with payoff to oneself on the y-axis and payoff to the recipient on the x-axis, and were asked...

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4 As there is no reason to believe that the credibility of the experimentors is different by treatment, the treatment effects should be unaffected by credibility concerns. In the post-experimental questionnaire, we asked, whether subjects trusted the experimenter to send the money. Answer could be given on a scale from 1-7, where 1 is “Not at all” and 7 “Very much”. The average responses by treatment were: riot/private: 6.02 riot/public: 6.06 neutral/private: 5.70 neutral/public 5.60. The differences are not significantly different from 0 at a 10% significance level using rank-sum tests.

5 For a similar approach see Andreoni and Miller (2002) or Fisman et al. (2007).
to pick a point on the boundary of the budget set, as shown in Figure 1. (Before the actual task, subjects made a non-paid trial choice to ensure that the setup was well understood.) After a point was chosen, the resulting allocation was shown in figures in the top right corner of the screen. If the subject was satisfied with the decision taken, she could confirm the choice. There were three different kinds of budgets. Four were standard budget sets crossing the x-axis at 7.5 or 15, and the y axis at 7.5 or 15. Thus, the price to give to the other person was either 0.5, 1 or 2 and the own endowment was either 7.5 or 15. One budget set had a zero price of giving: the set crossed the y-axis at 7.5, continued to (7.5,7.5) and then dropped to cross the x-axis at 7.5. Three budget sets had a negative price of giving, i.e. it was actually costly not to give to the other. These started at the origin, and went to either (7.5,7.5), (7.5, 15) or (15,7.5), so that the price of not giving was 0.5, 1 or 2. This is the closest laboratory analogue to behavior, such as participation in riots, that has costs to the actor as well as to the potential victims.

Figure 1: Examples of Budget Sets.
The final budget set in each term was step-shaped (see Figure 2). The step-shaped budget set is suitable for detecting some prototypical forms of other-regarding preferences in a non-parametric way, as choices within certain subsets on the budget line have a direct interpretation in terms of social preferences.

**Figure 2: Step Shaped Budget Set.**

*Note: Diagram labels and emphasized points were not shown on the experimental screen.*

Subjects who choose *Increase difference* want to maximize the difference between their income and the income of the recipient. *Selfish* describes subjects who choose the highest possible outcome for themselves but, given this choice, do not maximize the payoff of the other. *Lexself* subjects maximizes their payoff and then the payoff of the other. *Inequality averse* subjects will forego
their own profit in order to reduce inequality. The *egalitarian* point indicates strong preferences for fairness. Points to the right of this point indicate other-damaging behavior on the horizontal line, and self-damaging behavior on the vertical line.

*Private and Public Treatments*

Half the subjects were in the public treatment, half in the private. In the public treatment, after the dictator games, one set of decisions was chosen and displayed to a single neighbour of the subject; pairs of neighbours were then asked to chat (using the zTree interface) about their decisions for three minutes. In the private treatment, decisions were anonymous and could not be connected to subjects’ real identities by experimenters. In both cases, subjects were informed of this in advance.

*Questionnaire*

The questionnaire started with open questions on the content of the experiment, in order to check for potential demand effects - a concern that subject alter their behavior because they know the purpose of the experiment. Along with demographics, the questionnaire included questions on attachment to the student identity, the attribution of blame for the riots, and participation in demonstrations and riots.
Table 1: Structure of the experiment.

<table>
<thead>
<tr>
<th>I: Introduction and Explanation of Experiment</th>
</tr>
</thead>
<tbody>
<tr>
<td>II: Neutral Prime</td>
</tr>
<tr>
<td>III: Example for choice on the budget sets</td>
</tr>
<tr>
<td>Treatments stratified over primes</td>
</tr>
<tr>
<td>IV: Decisions Private</td>
</tr>
<tr>
<td>Profession chosen at random without replacement out of six professions</td>
</tr>
<tr>
<td>V: Choice on linear budget set chosen randomly without replacement out of 9 different</td>
</tr>
<tr>
<td>Return to V nine times</td>
</tr>
<tr>
<td>VI: Choice on step-shaped budget set</td>
</tr>
<tr>
<td>Return to IV six times</td>
</tr>
<tr>
<td>VI: Post experimental questionnaire</td>
</tr>
</tbody>
</table>

Hypotheses

We operationalize our conjectures as follows, using a simple aggregate measure of discrimination: was giving significantly lower to the police than to other groups? First, since norms affect behaviour by imposing costs on those who publicly violate them, Conjecture 1 leads to:

**Hypothesis 1:** giving to police will be lower in the public treatment.

Conjecture 2 similarly gives us

**Hypothesis 2:** giving to police will be lower in the riot prime treatment.

Finally, we use the questionnaire to test whether discriminatory behaviour is correlated with expressed political beliefs, and whether this interacts with the effect of cues, as in Conjectures 3 and 4.

**Hypothesis 3:** giving to police will be lower among subjects who blame the police for the shooting, and those who lay blame on individual policemen rather than on institutional structures.

**Hypothesis 4:** the police-other giving difference among subjects who blame the police for the shooting will be larger in the riot prime treatment.
5. Results

Experiments were conducted from April 8 to April 11, 2009 at the University of Macedonia, Thessaloniki, Greece in 9 sessions.\(^6\) The sessions were held in the computer laboratory of the Economics Faculty, with adaptations for running computerized experiments.\(^7\) In total 184 subjects participated; the number of subjects per session varied between 12 and 28. 58.6\% of the subjects were female. 20.2\% of the women and 30.9\% of the men stated that they participated in demonstrations connected to the events in December, but nobody admitted taking violent actions. The experiment lasted around one hour. The average payment (including show-up fee and rewards for correct guesses) was about €10.

Table 2 shows average allocations to the different professions by treatment over all budget sets. The first observation we make is that giving when the decision is observed increases giving to the other by around 50€c (t-test, p-value < 0.001). In contrast, there is no significant difference between the riot and the neutral prime over all profession types.

In the private treatment, when subjects received the neutral prime, policemen and entrepreneurs received the lowest average contributions. In the riot prime, the donation to the policemen was lower at 4.01 while the contributions to the other professions increased (or stayed nearly the same as in the case of the civil servant). In the public treatment, the riot prime decreased contributions for all profession types.

\(^6\) Due to the fact that April 11 was a Saturday, we might have selection effects. We have too few observations on Saturday (38 in total in four treatments) to explicitly test for selection effects. However, our results are robust to the exclusion of the Saturday session (available upon request).
\(^7\) Photographs are available on request.
We now turn to the issue of discrimination against policemen in the different treatments. Table 3 reports donations to police vs non-police recipients in the different treatments. There is a significant difference for decisions made in the private, riot prime treatment. To investigate this further, we run OLS regressions on giving to others, using clustered robust standard errors for inference, where the cluster is the individual. Table 4 reports the results. Riot and Public are dummies for the riot prime and public treatments respectively.
### Table 4. Policeman vs Others

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-zero prices</td>
<td>Positive prices</td>
<td>Negative prices</td>
<td>Zero price</td>
</tr>
<tr>
<td>Price</td>
<td>0.802*** (0.0781)</td>
<td>-2.333*** (0.155)</td>
<td>2.342*** (0.0844)</td>
<td></td>
</tr>
<tr>
<td>Endowment</td>
<td>-0.0755*** (0.014)</td>
<td>0.270*** (0.016)</td>
<td>-0.0642** (0.023)</td>
<td></td>
</tr>
<tr>
<td>Riot</td>
<td>0.201 (0.254)</td>
<td>0.502 (0.460)</td>
<td>-0.199 (0.309)</td>
<td>0.471 (0.428)</td>
</tr>
<tr>
<td>Public</td>
<td>0.517 (0.275)</td>
<td>0.640 (0.448)</td>
<td>0.350 (0.288)</td>
<td>1.158 **(0.404)</td>
</tr>
<tr>
<td>Police</td>
<td>-0.154 (0.199)</td>
<td>-0.146 (0.242)</td>
<td>-0.166 (0.202)</td>
<td>-0.711 (0.393)</td>
</tr>
<tr>
<td>Riot × public</td>
<td>-0.188 (0.362)</td>
<td>-0.159 (0.633)</td>
<td>-0.225 (0.436)</td>
<td>-1.159* (0.583)</td>
</tr>
<tr>
<td>Police × public</td>
<td>0.278 (0.235)</td>
<td>0.427 (0.314)</td>
<td>0.0818 (0.257)</td>
<td>0.668 (0.512)</td>
</tr>
<tr>
<td>Police × riot</td>
<td>-0.381 (0.297)</td>
<td>-0.547 (0.340)</td>
<td>-0.161 (0.326)</td>
<td>-0.220 (0.575)</td>
</tr>
<tr>
<td>Police × riot × public</td>
<td>0.363 (0.355)</td>
<td>0.173 (0.449)</td>
<td>0.614 (0.409)</td>
<td>-0.206 (0.769)</td>
</tr>
<tr>
<td>downward</td>
<td>-4.627*** (0.336)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>7.527*** (0.319)</td>
<td>2.339*** (0.376)</td>
<td>9.511*** (0.394)</td>
<td>5.353*** (0.348)</td>
</tr>
<tr>
<td>Combined coefficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police + police × riot</td>
<td>-0.536** (0.221)</td>
<td>-0.692*** (0.241)</td>
<td>-0.327 (0.256)</td>
<td>-0.931** (0.420)</td>
</tr>
<tr>
<td>Police + police × public</td>
<td>0.124 (0.125)</td>
<td>0.281 (0.200)</td>
<td>-0.083 (0.158)</td>
<td>-0.042 (0.328)</td>
</tr>
<tr>
<td>Police + police × riot + police × public</td>
<td>.105 (0.149)</td>
<td>-.092 (0.214)</td>
<td>0.369 (0.190)</td>
<td>-0.468 (0.391)</td>
</tr>
</tbody>
</table>

| Observations          | 7607                     | 4348                     | 3259                     | 1087                     |
| $R^2$                 | 0.2278                   | 0.0989                   | 0.3178                   | 0.0365                   |

Notes: Standard errors in parentheses; Baseline: decision private, neutral cue, non-police recipient; * p<0.05, ** p<0.01, *** p< 0.001.

The regression analysis shows the effect of prices and endowments. While for positive prices these effects go in expected directions, i.e. higher prices reduce giving to the other and higher endowment increases it, the effect of endowment on giving goes in an unexpected direction: the higher the endowment (measured in terms of the maximum that a subject could give to herself), the lower the willingness to contribute, even controlling for the price. This also drives the aggregate results in the column (1) of table 4.
The effects of both priming and publicity treatments on giving to non-police do not reach significance, except for the public treatment effect when prices are zero. For the publicity treatment this is surprising, as these findings are not in line with previous research on social distance and other-regarding behavior (for early evidence in simple dictator games see Hoffman et al. (1996)). The fact that recipients are not present in the laboratory may have dampened the effect of publicity.  

We also construct a measure of individual discrimination by taking the difference between giving to the police and average giving to the other professions over all budget sets. The average difference in the private treatments under the neutral cue is 0.26€ while this difference increases to 0.73€ under the riot cue (rank-sum test, p-value: 0.14). In the public treatments we only see an increase in this difference from 0.01 to 0.06. This increase is not significantly different from zero (rank-sum test, p-value: 0.45).

Examining the Police dummies – and their crosses with different treatments – and the result on the measures of individual discrimination gives our main results.

**Result 1** Discrimination against police is not significantly different between the public and private treatments.

---

8 Findings that donations to a third party outside the lab are higher when identity is reported to a subject within the lab have been found – to the best of our knowledge – only in research on charitable giving. See for example Reinstein and Riener (2009) in the context of charities.
The combined coefficient of police plus police × public is not significantly different from zero. Thus, Hypothesis 1 is not supported. Indeed, the next result shows that if anything, publicity lessens discrimination.

Result 2 Discrimination against police is higher in the riot prime treatment, but only when decisions are private.

Table 5: Preference Types elicited from Choices on the Step Shaped Set (in percent)

<table>
<thead>
<tr>
<th>Preference type</th>
<th>Neutral</th>
<th>Private</th>
<th>Riot</th>
<th>Neutral</th>
<th>Public</th>
<th>Riot</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Police</td>
<td>Not police</td>
<td>Police</td>
<td>Not police</td>
<td>Police</td>
<td>Not police</td>
</tr>
<tr>
<td>Competitive</td>
<td>13.33</td>
<td>10.67</td>
<td>25.00</td>
<td>8.57</td>
<td>4.17</td>
<td>3.72</td>
</tr>
<tr>
<td>Lexicographical self</td>
<td>35.56</td>
<td>47.56</td>
<td>29.17</td>
<td>41.22</td>
<td>45.83</td>
<td>58.26</td>
</tr>
<tr>
<td>Egalitarian</td>
<td>4.44</td>
<td>9.33</td>
<td>2.08</td>
<td>6.12</td>
<td>10.42</td>
<td>5.37</td>
</tr>
<tr>
<td>Equity</td>
<td>11.11</td>
<td>5.78</td>
<td>20.83</td>
<td>17.55</td>
<td>18.75</td>
<td>11.57</td>
</tr>
<tr>
<td>Self damaging</td>
<td>2.22</td>
<td>2.22</td>
<td>0</td>
<td>1.63</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Pearson’s $\chi^2$ -test

<table>
<thead>
<tr>
<th></th>
<th>Private</th>
<th>Riot</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.45 (0.49)</td>
<td>17.17 (0.01)</td>
<td>4.57 (0.47)</td>
</tr>
</tbody>
</table>

Note: p-value in parentheses.

The combined coefficient of police plus police × riot is significantly different from zero and negative. Thus, Hypothesis 2 cannot be rejected for private decisions. However, publicity appears to eliminate the effect of the riot prime, since the combined coefficient police + riot × police + police × public + riot × police × public is not significantly different from 0. Table 5 gives further support for result 2 for the step-shaped budget set. We categorized subjects’ choices on the step-shaped set by their corresponding prototypical social
preferences, as described above. The distributions of social preference types for police and non-police recipients are significantly different ($\chi^2$-test, p-value: 0.01) in the private, riot prime treatment. In particular, subjects are much more likely to show competitive preferences towards police than to non-police. In the other three treatment combinations we do not observe this difference.

**Table 6: Giving to police and controlling for blame for riots.**

<table>
<thead>
<tr>
<th>Blame</th>
<th>Private</th>
<th></th>
<th>Public</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>Riot</td>
<td>Neutral</td>
<td>Riot</td>
</tr>
<tr>
<td>... state</td>
<td>-1.062</td>
<td>-0.579</td>
<td>0.488</td>
<td>-0.261</td>
</tr>
<tr>
<td></td>
<td>(0.758)</td>
<td>(0.731)</td>
<td>(0.690)</td>
<td>(0.855)</td>
</tr>
<tr>
<td>... police leadership</td>
<td>0.412</td>
<td>-2.092***</td>
<td>0.860</td>
<td>0.0783</td>
</tr>
<tr>
<td></td>
<td>(0.905)</td>
<td>(0.663)</td>
<td>(0.762)</td>
<td>(0.877)</td>
</tr>
<tr>
<td>... police</td>
<td>-1.614**</td>
<td>-1.892</td>
<td>-0.0583</td>
<td>2.646</td>
</tr>
<tr>
<td></td>
<td>(0.795)</td>
<td>(1.229)</td>
<td>(1.361)</td>
<td>(1.817)</td>
</tr>
<tr>
<td>... anarchists</td>
<td>0.999</td>
<td>0.415</td>
<td>-0.514</td>
<td>0.427</td>
</tr>
<tr>
<td></td>
<td>(0.886)</td>
<td>(0.641)</td>
<td>(0.836)</td>
<td>(0.920)</td>
</tr>
<tr>
<td>... media</td>
<td>1.053</td>
<td>-0.385</td>
<td>0.523</td>
<td>0.825</td>
</tr>
<tr>
<td></td>
<td>(0.976)</td>
<td>(0.597)</td>
<td>(0.757)</td>
<td>(1.048)</td>
</tr>
<tr>
<td>... government</td>
<td>0.422</td>
<td>2.301***</td>
<td>-1.430</td>
<td>0.379</td>
</tr>
<tr>
<td></td>
<td>(1.153)</td>
<td>(0.596)</td>
<td>(1.038)</td>
<td>(0.940)</td>
</tr>
<tr>
<td>... students</td>
<td>-0.905</td>
<td>-1.442</td>
<td>0.685</td>
<td>-1.065</td>
</tr>
<tr>
<td></td>
<td>(1.374)</td>
<td>(1.338)</td>
<td>(1.333)</td>
<td>(1.087)</td>
</tr>
<tr>
<td>... other</td>
<td>3.687**</td>
<td>0.638</td>
<td>-1.390</td>
<td>-0.250</td>
</tr>
<tr>
<td></td>
<td>(1.736)</td>
<td>(0.718)</td>
<td>(1.073)</td>
<td>(0.896)</td>
</tr>
<tr>
<td>... nobody</td>
<td>0</td>
<td>3.251***</td>
<td>0</td>
<td>1.800*</td>
</tr>
<tr>
<td></td>
<td>(.)</td>
<td>(0.625)</td>
<td>(.)</td>
<td>(0.896)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.476</td>
<td>3.439***</td>
<td>3.342***</td>
<td>3.000***</td>
</tr>
<tr>
<td></td>
<td>(0.969)</td>
<td>(0.803)</td>
<td>(0.919)</td>
<td>(0.896)</td>
</tr>
</tbody>
</table>

**Observations** | 180 | 192 | 192 | 152
**$R^2$** | 0.1672 | 0.3020 | 0.0604 | 0.0705

*Notes:* Cluster robust standard errors. Cluster: subject. Results for downward sloping budget sets; * p<0.10, ** p<0.05, *** p<0.01.

Table 6 reports giving to police separated by treatments and controlling for blame attributions. In the private treatment using the neutral cue, we find a
strong and significant correlation between giving to police and blame attributed to police. In the riot treatments there is still negative correlation of the blame attribution to the police and giving to the police, but this is not statistically significant. However, blaming the police leadership is significantly negatively correlated with giving to police. In the public treatment, blame attributions are not correlated with giving to police forces.

**Result 3**  Those who blame the police for the riots do discriminate significantly more against the police when the decisions are made privately. There is no difference whether subjects received the neutral or the riot treatment. We do not find these correlations in the public treatment.

Thus, Hypothesis 3 cannot be rejected. Anti-police discrimination is significantly correlated with individuals’ expressed attribution of blame to the police. The public treatments show null results: possibly the social norm of giving is stronger than the desire to express blame, or subjects are afraid to express their antagonism in front of another participant whose political views are unknown. On the other hand, the riot treatment did not significantly increase the effect of blame, so that Hypothesis 4 [Error! Reference source not found.] is rejected.

**5.1. Participation in Demonstrations**

Laboratory behaviour can be accurately measured, but does it correlate with behaviour in the real world? To address these concerns, our questionnaire
included measures of participation in the demonstrations. We examine how discrimination correlates with these self-reports.

Around 23% of our subjects participated in the demonstrations. Table 7 shows average donations by treatments and groups. We see very clear and significant discrimination against police among subjects who participated in the demonstrations, but only in the private treatment. The discrimination is stronger in the riot prime treatment. In the public treatment, we do not see discrimination. In contrast, the group of subjects who did not take part in the demonstrations do not appear to discriminate against the police, except in the private treatment when they have been primed with the riot cue.

**Table 7**: Average giving over budget sets with positive prices by treatment.

<table>
<thead>
<tr>
<th>Participated in demonstrations</th>
<th>Neutral/Private</th>
<th>Neutral/Public</th>
<th>Riot/Private</th>
<th>Riot/Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non police</td>
<td>2.98</td>
<td>3.34</td>
<td>4.15</td>
<td>2.12</td>
</tr>
<tr>
<td>Police</td>
<td>1.98</td>
<td>3.85</td>
<td>2.46</td>
<td>1.69</td>
</tr>
<tr>
<td>$\Delta$</td>
<td>1.00 (0.053)</td>
<td>-0.51 (0.240)</td>
<td>1.69 (0.007)</td>
<td>0.434 (0.32)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Not participated in demonstrations</th>
<th>Neutral/Private</th>
<th>Neutral/Public</th>
<th>Riot/Private</th>
<th>Riot/Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non police</td>
<td>2.67</td>
<td>3.43</td>
<td>3.02</td>
<td>4.22</td>
</tr>
<tr>
<td>Police</td>
<td>2.80</td>
<td>3.52</td>
<td>2.58</td>
<td>4.30</td>
</tr>
<tr>
<td>$\Delta$</td>
<td>-0.13 (0.660)</td>
<td>-0.08 (0.780)</td>
<td>0.44 (0.100)</td>
<td>-0.08 (0.830)</td>
</tr>
</tbody>
</table>

*Note: Rank-sum test for differences, p-value in parenthesis.*

We also examined whether subjects who showed greater antagonism towards the police - those subject who chose the competitive point in the step-shaped budget set - were more likely to have been involved in the demonstrations. Estimating a linear probability model with participation in demonstrations on the left hand and the preference type on the right hand side of the equation, we find that those with competitive preferences were significantly more likely to participate in the demonstrations (results available on request).
It could be that subjects misreported their participation in demonstrations so as to justify their behaviour in the experiment. We cannot rule this out completely. However, as a robustness check we examined whether the answers on participation were different between the treatments. If self-justification explained the answers, we would expect that the effect of the treatment on giving would be reflected in the answers. Fortunately, we cannot reject the null hypothesis that the distribution of answers are equal (publicity treatments: \(\chi^2\)-test, p-value: 0.141, cueing treatments: \(\chi^2\)-test, p-value: 0.797).

We expected to find that subjects who participated in the demonstrations gave less to the police in the upward sloping budget sets, but this was not the case. So, although participation was linked to laboratory behavior, we could not replicate the kind of behaviour that has material costs and risks, such as participation in political protest. Further work with a more selected group of subjects might address this issue.

5.2. Debriefing

A concern in psychological experiments is that participants may behave in ways they think the experimenters want. This makes it important that participants do not guess the purpose of the experiment. Priming tasks can be a particular area of concern (Bargh and Chartrand 2000). By including multiple social groups as recipients, and by presenting the article primes as a spelling
task, we aimed to avoid this. As a check, our questionnaire included open questions on the experiment topic. No participant mentioned the police or the December 2008 disturbances.

6. Discussion

A large body of literature on conflict proposes that outgroup hatred can be whipped up by media and elite rhetoric. We were able to reproduce this effect in the lab. Subjects exposed to an inflammatory newspaper article gave significantly less to police than to others in a dictator game. This opens the way to more in-depth study of the media’s effect on preferences - an important research topic given the role played by media in some recent episodes of conflict and genocide.

On the other hand, we were not able to support the claim that discrimination is driven by norms. Indeed, discrimination was more evident in private than in public. Our result contrasts with recent work that has proposed a major role for norms, and a relatively minor one for individual preferences, in driving discrimination. However, the findings of these inter-ethnic laboratory experiments may have been biased, since subjects were aware they were being observed by the experimenter, and since there is in fact a widespread norm against ethnically-based discrimination. In any case, either existing work is mistaken in making social norms so important to discrimination, or norms take effect in some way which our experiment did not capture. For example,
ingroup norms may only become activated during brief periods of conflict; or our subjects may not have been sure enough of the beliefs of their fellow students.

Laboratory experiments will always face questions of external validity. While we have no panacea for these concerns, we were able to link behaviour in the experiment to self-reported participation in demonstrations. It is possible that subjects lied or misremembered their own actions, but we think the simple explanation that there was a genuine correlation with real-world behaviour is more likely, especially as reported participation levels did not vary between treatments.

Our laboratory results cannot explain the causes of the December 2008 riots in Greece. However, we can infer some statements about discrimination and its triggers among Greek students. First and foremost, we found no indication of the existence of a strong political student identity, governed by in-group norms. Students come from different backgrounds and have diverse opinions about the events of December 2008, which in the end matter more than their participation in the student community. Students were reluctant to discriminate in the public treatment, perhaps because they feared the disapproval of fellow participants whose political views were unknown. Although students are not a homogenous body, demonstration participants discriminated more against police than others, suggesting that political participation is linked to individual attitudes for at least some. Finally, the role of the media within the Greek society should not be
underestimated. Subjects who read the inflammatory article on the riots discriminated more against the police. Thus we can infer that the media can have a great impact in shaping individual preferences and potentially discrimination between groups within Greece.

Where to go from here? Our experiment supports the idea that cues from the media can affect people’s behaviour towards others. More generally, we believe that experimental work will become increasingly important in studying the motivations behind political protest, contentious politics and even civil conflict. Both field and laboratory experiments have a role. A key issue will be defining and finding the population of interest. We also hope that our work will generate interest in linking experimental and case-study approaches to these issues. As our experiment shows, the insightful hypotheses provided by qualitative work can be tested experimentally.
Appendix: Newspaper Articles

A.1 Neutral: Skype comes to your iPhone (Taken from Kathimerini 30/03/2009)\(^9\)

The famous phone service provider using computer “Skype” plans its adaptation for mobile phones such as iPhone and Blackberry, scheduled for March. Skype has been trying for a while now to make its services compatible with the most advanced mobile phones in the market. In an attempt to expand its current user base, reaching 400 million people, skype offered low cost and occasionally free calls. Skype manager, Scott Darslang, did not hide his great expectations for the success of adaptation on the iPhone, considering it a great piece of technology very compatible with skype services. “The most important request from our users is the transfer of our service on the iPhone, and this demand is constantly rising”, commented Darslang in his recent interview. Even thought video-calls are the most famous functions of skype, the company has not made clear yet if this function will be available on the iPhone. “We are very careful when it comes to quality”, explained Darslang and he pointed out that they have to first make sure that it can wok without mistakes, before incorporating it in the iPhone package.

Source: [http://portal.kathimerini.gr/4dcgi/_w_articles_kathworld_1_30/03/2009_273107](http://portal.kathimerini.gr/4dcgi/_w_articles_kathworld_1_30/03/2009_273107).

A.2 Riot: The constitution and the blood (Abstract from an article of Pantelis Boukalas Kathimerini 9/12/2008)\(^10\)

December 2008. Exarchia. A special police agent, called “Rambo” by his colleagues, kills the high school student Alexandros Grigoropoulos; the bullet hits the fifteen-year-old in the chest. The tens of protest voices on television, the internet do not let the police to pass the scenario of “policemen in defence” and “emotional turbulence”. Eyewitnesses confirm that the policemen shot cold blooded the boy following an insignificant verbal incident, and immediately after he left with his colleague leaving the boy to die. Students across the country shocked by their brother’s murder protested in anger. Fully aware and bitter that their voice will not be heard they left books (Ancient Greek, Literature, Maths, everything a child reads) and flowers on the “unknown soldier” monument in front of the Greek parliament. In between the books we might see a copy of our constitution with underlined two points: Article 2.1: “The respect and protection of the value of the human being are a major responsibility of the State”. Article 5.2 “Everyone residing in Greece enjoys the full protection of their life, honour and freedom”. The students have underlined this “everyone”. With their blood.


\(^9\) Translated by Alexia Katsanidou.
\(^10\) Translated by Alexia Katsanidou.
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