Negative Campaigns and Interpersonal Trust:
Evidence from Post-revolutionary Egypt*

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Abstract
Previous studies of negative campaigns have not addressed the possible effects of the environment on interpersonal trust between voters. We provide the first evidence of these effects in an incentivized trust game between voters. Trust in other voters is significantly lower (by 15%) when voters are primed with a negative personality campaign as compared to a neutral baseline. Interpersonal trust is lower in negative policy campaigns (by 8%), but positive campaigns have no effect on trust. Furthermore, our results provide unique evidence from an Arab country on the effects of negative campaigns, which previously have been unstudied in this region. We also report the first estimation of trust from an Arab country using the standard incentivized trust game, which has been used to evaluate trust in many western and developed countries, providing new experimental evidence on the extent that interpersonal trust between strangers is lower in Arab countries than elsewhere.

Word Count: 9,212

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I. Introduction

Are negative campaigns problematic? This question has received increasing attention in both journalistic and academic circles during the past 40 years. As Lau and Rovner (2009, p. 287) report, newspaper articles discussing negative campaigns increased from 17 in 1980 to 210 in 2004. They further relate that the first research article in the social science literature on negative campaigns appeared in 1984 but by 2006 they count “110 books, chapters, dissertations, and articles addressing this broad topic empirically, and many more exploring other aspects of negative campaigns.” Despite the large body of work tackling negative campaigns, the extent that negativity in elections is a problem is still hotly debated. On the one hand, many journalists decry negative campaigns and researchers such as Ansolabehere et al (1994, 1995) contend that negative campaigns demobilize voters and reduce trust in government. On the other hand, scholars such as Mayer (1996) and Geer (2006) believe that negative campaigns are necessary for voters to be informed and to some extent may actually be good for democracy.

We focus on an important yet neglected possible effect of negative campaigns – their effect on general interpersonal trust among citizens. We assert that when potential candidates engage in negative campaigns, individuals’ levels of interpersonal trust in society may be affected. Drawing on previous research in psychology, we contend that negative political campaigns can heighten the perception among individuals that the world is comprised of untrustworthy individuals, even if this information is contrary to their personal experiences with trustworthiness. Hence, we connect a classic paradigm from experimental economics, the two-person trust game of Berg et al. (1995), with a standard social psychological manipulation, a priming procedure varying the degree of negativity in a campaign. By doing so, we examine whether activating specific cognitive contents (negative and positive campaigns in our case) via priming has an impact on the initial beliefs people form about the trustworthiness of others. To
the best of our knowledge, this study is the first to measure the effects of priming different campaign environments (negative and positive campaigns) on levels of interpersonal trust.

We also further contribute to both the literatures on negative campaign effects and interpersonal trust in that we conduct our experiment with non-Western subjects in an Arab country in transition (Egypt). Most of the research on negative campaigns has focused on American elections, with some recent studies outside the United States, mainly in Europe.\(^1\) We have little understanding of the effects of negative campaigns on voters’ behavior in other countries, particularly in transitional or Arab countries.

Yet, negative campaigns are also prevalent in developing democracies and Arab countries. Since 2011, negative campaigning has been on the rise in Egypt with its elections witnessing a significant increase in the frequency by which candidates attack each other. Common attacks that have been used include expressions such as “Slaves of military boots” to describe supporters of the military, “Sheep” to describe Islamists following their leaders, and “Retired terrorists” to describe former fundamentalists joining the political arena. With the experience of free elections and the use of free campaign strategies being new to Egyptian society since the ousting of the Mubarak regime, this paper investigates the effects of different campaign environments/strategies, especially negative campaigning, on the level of interpersonal trust among Egyptians. By conducting our experiment in post-revolutionary Egypt, we provide new and rare evidence on the effects of negative campaigns on non-Western subjects.

Similarly, most of the research on interpersonal trust behavior has also been conducted using Western subjects as well with only a few such experiments in Arab countries using a

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\(^1\) See Lau and Rovner (2009) for a review of this literature.
highly simplified variant of the trust game. To our knowledge, ours is the first study in an Arab country using the traditional version of the trust game as typically used in Western countries. Individual beliefs about others’ trustworthiness are argued to play a key role in economic development, the emergence and flourishing of democratic institutions, the rise of gender equality, and the extent to which societies have effective governments. Multiple studies indicate that trust, which encompasses people’s beliefs about others and their willingness to use that knowledge as the basis for action (Luhmann, 1982), contributes to economic, political and social success (Beugelsdijk, et al. 2004; Francois and Zabojnik 2005; Guiso, et al. 2004; Knack and Keefer, 1997a; Piazza-Georgi 2002; Routledge and Von Amsberg 2003; Zak and Knack, 2001; Wolcott 1998). Therefore, low levels of trust are of particular concern in developing countries where factors that can impede economic development can have a large impact.

Data from wave 6, 2010-2014, of the World Values Survey (2012) show that 78.5 percent of Egyptians do not trust others. Relative to Western countries, these survey results

Johnson and Mislin (2011) provide a review of trust game experiments and a meta-analysis of the literature. We have been able to find four studies which report on experiments in Arab countries using a simplified binary version of the trust game in which subjects choose between a sure choice and a risky one requiring interpersonal trust: Bohnet, Greig, Herrman, and Zeckhauser (2008) – Oman, Bohnet, Herrman, and Zeckhauser (2010) – Kuwait, Oman, and the United Arab Emirates, Al-Ississ and Bohnet (2011) – Jordan, and Binzel and Fehr (2013) – Egypt.

When asked the question “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?” 78.5% of Egyptians answered that they need to be very careful.
suggest that interpersonal trust in Egypt is significantly lower.\footnote{In the United States, for example, the figure is 64.3% and in Germany it is 53.8%. Comparisons of the proportion in Egypt with the U.S. yields a z statistic = 9.33, Pr = 0.00 and with Germany z = 15.24, Pr = 0.00.} Johnson and Mislin (2012) find that answers to this question positively correlate to experimentally measured interpersonal trust behavior. If it is indeed true that Egyptians are significantly less willing to trust others in behavior as well as in surveys, the low level of interpersonal trust among Egyptians can have serious implications for the country’s social capital, political transformation and economic development. Our paper provides the first behavioral evidence on the extent that levels of trust of others and trustworthiness is lower in Egypt than other countries in a traditional trust game experiment.

In the next pages we proceed as follows. Section II briefly reviews the related literature on trust and negative campaigning. Section III outlines the theoretical argument whereas the experimental design and results are presented in sections IV and V, respectively. Section VI concludes.

**II. Related Literature**

Trust and its complement, trustworthiness, are key concepts in both economics and political science because of their role in (i) the formation of social capital and civic engagement (Stolle 1998), (ii) the reduction of the cost of exchange in daily market transactions (Knight 2001; Sztompka 1999), and (iii) the existence of stable political institutions (Putnam 1993, 2000). Indeed, there has been evidence that trust has positive effects on economic growth and that it contributes to economic, political and social success (Knack and Keefer 1997b; Zak and Knack 2001).
Two distinct research methods have been used to explore and measure the concept of trust. The first treats trust as a perception of norms and uses survey questions to assess its level. The second is the use of behavioral assessments of trust through incentivized, economics-style laboratory experiments incorporating Berg et al. (1995)’s trust/investment game. According to this game, an individual (truster or first mover) decides whether or not to trust another by deciding to give him/her all, some, or none of his endowment. The person given the money (second mover or trustee) receives the money either doubled or tripled and then decides whether to return all, some, or none of the money he or she receives. This game has become the standard laboratory experiment for measuring trust through measuring a sender’s willingness to trust a receiver. The amount sent is a measure of the extent that the first mover “trusts” the second mover and the amount returned is a measure of the extent that the second mover is “trustworthy” of the first mover’s trust. If we assume that both players care only about their own payoffs, the sub-game perfect Nash equilibrium (SPNE) is for the first mover to send no money to the second mover since by backward induction, the first mover can infer that the second mover will not return the money. Yet, most first movers send money and most second movers return money. In a meta-analysis of 161 trust game experiments conducted across many countries, Johnson and Mislin (2010) report that in these experiments the mean percentage sent is 50% (with a standard deviation of 12%) and the average percentage returned is 37% (with a standard deviation of 11%).

Since the mid-1990s, this standard game has proved to be a valuable vehicle for research on a multitude of questions (Wilson and Eckel 2011). For instance, trust experiments have

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5 For forty years, the General Social Survey (GSS), World Values Survey (WVS), and American National Election Studies (ANES) have used the same questions to assess trust (Wilson and Eckel 2011).
examined the relationship between personal characteristics and behavior (Bellemare and Kroger 2007, Croson and Gneezy 2009, Uslaner, 2002). Zak and Knack (2001a) also have found a strong relationship between the incidence of formal institutions and generalized trust across many countries. Nevertheless, although some researchers have conducted a simplified two-choice version of the trust game in Arab countries (see Bohnet et al 2008, Bohnet et al. 2010, Al-Ississ and Bohnet 2011, and Binzel and Fehr 2013), to our knowledge no previous researcher has conducted a traditional trust game experiment in an Arab country.\(^6\)

As noted in the Introduction, similar to the work on trust, the literature on the effects of negative campaigns is also vast with much left open to debate. A full review is beyond the scope of this paper. Our interest is concentrated on the relationship between trust and negative campaigns. On this score, most empirical evidence suggests that negative campaigns reduce trust in government (see Lau et al.’s 2007 meta-analysis of empirical research on negative campaigns).\(^7\) However, we are unaware of any prior empirical research, which demonstrates an effect of negative campaigns on interpersonal trust in society, which is our focus.\(^8\)

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\(^6\) In the two-choice version First Movers choose whether to take a sure return or to trust by passing to the a chance to choose (trust). In some versions First Movers’ choices are also randomly manipulated such that second-movers do not know for sure whether First Movers’ have chosen the trust option or not. The traditional trust game, in contrast, allows for more nuanced measures of the extent of trust and trustworthiness by allowing First Movers to choose how much they wish to trust the Second Mover and Second Movers to choose how trustworthy they wish to be.

\(^7\) Yet, again there is debate. Craig and Rippere (2014) for example find little evidence that increased campaign negativity has contributed to the loss of public trust in government in recent decades in the U.S. Referring to the ‘figure-ground hypothesis’, they posit that negative
This paper bridges the gap. Given that exposure to different kinds of campaigns is endogenous to one’s environment (Zak and Knack 2001), it is extremely difficult to infer the effect of different types of campaigns on trust from naturally occurring data. A controlled environment that uses priming is thus required. Consequently, the priming techniques developed in social psychology are used to measure a citizen’s trust in others given exposure to different campaign environments. The manipulation used derives from the priming literature (Bargh and Chartrand 2000, for an example from the economics literature, see Benjamin et al., 2010).

Campaigns are most effective among those who possess a high level of trust in their political leaders. The “figure-ground hypothesis” suggests that negative information is more likely than positive information to shape people’s attitudes and behavior, partly because negativity “stands out” in a world where most people have positive expectations of others (Lau 1985, Sears 1983). With high trust uncommon in U.S. politics currently, negative appeals may play to a smaller audience than in the past.

The literature on the relationship between interpersonal trust and political institutions extends back to Almond and Verba (1963) who claim a strong correlation between citizen trust and democratic institutions. Subsequent work has examined the direction of this causality (Putnam 1993, Rothstein 2000). Nevertheless, campaign environments have been largely neglected with one exception: Zahedzadeh and Merolla (2012) conduct a trust game experiment in which subjects first take part in a hypothetical election in which they are randomly assigned to a control group or a negative advertising condition. Subjects then are told they are playing the trust game with either the target or sponsor of the attack (but actually they play the experimentalist). Their study does not explore the level of trust between voters.
III. Theoretical Argument and Predictions

Our central argument is that trust among individuals (interpersonal trust) can be affected by the campaign environment citizens experience. Specifically, we contend that negative campaigns cause a reduction in the level of interpersonal trust in the society. This argument is based on social psychology research, which establishes that the mental representation of a phenomenon can have an effect on behavior outside the context of that phenomenon (Evans 2008, Higgins 1996, Strack and Deutsch 2004). An important driver of these behavioral effects is the limited cognitive abilities of humans, which prevent them from accessing the most relevant mental representations required for a decision. As a result, mental representations that have been recently or chronically accessed have an effect on behavior even if they are not directly relevant. This effect can be thought of as a spillover effect of the mental representation (Al-Ubaydli et al. 2013).

Social psychologists suggest two systems at work in belief formation, which influence one’s trust judgments and decisions: a rational or reflective system and an impulsive system (Evans 2008). The two systems are assumed to be operating simultaneously and influencing each other during the formation of social behavior (Strack and Deutsch 2004, 2005). The *reflective system* requires extensive cognitive resources, and integrates and weighs information on outcome-values and probabilities, in order to reach optimal decisions. It resembles to some extent the traditional rational choice model of behavior. The *impulsive system*, on the contrary, requires little cognitive resources but can have unexpected effects on reflective decision making, through the heightened accessibility of information, that has been activated in the associative structures of the impulsive system (Strack and Deutsch 2004). There is a rich body of classic social cognition findings which demonstrates that people base their judgments and
decisions on information accessible at the specific moment in time where this judgment or decision is to be made (see Higgins 1996, Lodge and Taber 2013).

An interesting fact is that the activated information does not necessarily have to be inherently linked to the judgment to have an impact. Indeed, priming experiments demonstrate that judgment-irrelevant knowledge that is rendered accessible in preceding priming tasks critically shapes how people, in their reflective systems, see, interpret and judge others’ behaviors.

With respect to one’s trusting behavior towards others, the principle of dual processes should also hold. As every other judgment and decision, judgments about another person’s trustworthiness might occur in the reflective system, which may be influenced by the heightened accessibility of information in the impulsive system. This assumption is supported by a recent body of experimental literature (Mayer and Mussweiler 2011, Schul et al. 2008, Todorov et al. 2008). Thus, according to social psychological theorizing and research, reflective trust judgments and trust decisions should clearly be influenced by contents that have been activated in a previous, unrelated task, and still exert their influence in the associative structures of the impulsive system (Posten et al. 2013).

We apply this reasoning to the relationship between negative campaigns and interpersonal trust in society. Specifically, we activate, through a priming lab experiment, different contents (videos on negative, positive and neutral news coverage of a hypothetical election) in the impulsive system to demonstrate its influence on reflective reasoning in the domain of ‘rational’ trust decisions in an economic trust game. The priming used to test the argument is news coverage of a hypothetical election to decide the president of the university’s student union (we describe the experimental procedures more expansively in the next section). Our principal prediction is thus summarized as follows:
**Prediction 1:** *A campaign environment where candidates target each other in a negative fashion reduces the level of trust among voters (interpersonal trust) as compared to a neutral baseline prime.*

Moreover, prior research has suggested that negative campaigns make a greater impression on an audience than positive or neutral campaigns. This result may be driven by individuals placing greater weights on negative information over positive information when forming evaluations of social stimuli (Kellermann 1989, Lang et al. 1995, Lau 1982). Scholars in a number of disciplines have observed a ‘negativity bias’ whereby audiences often give greater weight to negative information than to comparable positive information (Fiske 1980, Holbrook et al. 2001, Klein 1991, Lau 1982, 1985, Soroka 2014). Thus, we expect the effect of our negative primes to be stronger than our positive prime (when both negative and positive primes are compared to a neutral baseline prime). This prediction is summarized below:

**Prediction 2:** *The effects of negative campaigns on interpersonal trust as compared to a neutral baseline prime will be larger than the effects of a positive campaign on interpersonal trust as compared to a neutral baseline prime.*

We also vary the type of negative campaign prime we use. Specifically, we vary whether the negative campaign prime is focused on attacks on opponents’ policies or attacks on opponents’ personalities. As mentioned in the Introduction, a number of scholars argue that negative campaigns are a necessary and desirable aspect of elections in that they provide voters with important information in making their choices. One might argue that policy attacks are hence more informative and useful for voters’ choices than personality attacks and that we might find a differential effect between the two types of negative campaign primes. We expect the negative effects of personality attacks to be quite relevant specifically in an Arab country.
where a mix of tradition, religion, and culture reprehends personal defamation (Bin Hamid 1994). Our third prediction thus is summarized below:

**Prediction 3:** *The effects of a negative personality campaign on interpersonal trust as compared to a neutral baseline prime will be larger than the effects of a negative policy campaign on interpersonal trust as compared to a neutral baseline prime.*

Although our theoretical argument is that negative campaigns will decrease interpersonal trust, we might also expect that negative campaigns have a similar effect on trustworthiness, the willingness of those who receive trust to return the trust given to them as apparently expected. That is, if negative campaigns increase the perception of individuals that they live in a society where trustworthiness is lower and hence result in lower levels of trust, then those who receive trust may also feel less of an incentive to return that trust. Hence, we present our fourth prediction:

**Prediction 4:** *We expect similar effects on levels of interpersonal trustworthiness from the primes as predicted in Predictions 1-3 on the levels of interpersonal trust.*

**IV. Experimental Design**

A. Overview

The experiment was conducted in November 2014 on a sample of 224 undergraduate students at a major Egyptian university. The students were recruited by both an advertisement fixed in the university’s premises and emails. They were promised a monetary reward that depends on their play in a decision making task. Subjects participated in sessions of 28 subjects at a time in a large computer laboratory on campus. Subjects interacted with the experimenter and the other subjects through the computer network and the experiment was programmed in z-tree (Fischbacher 2007). The computers were separated by dividers such that subjects could not see
the choices of their neighbors in the room. They were assigned session specific ID numbers and no record was kept of the relationship between subject ID’s and names ensuring subjects’ anonymity. Payments were made after the experiment was completed in a private place. The average payment for subjects was 102 Egyptian pounds. The experiment took approximately 45-55 minutes to complete. It was conducted fully in Arabic and the instructions were read by an Egyptian not currently engaged in any teaching at the university.

B. Experimental Procedures and Treatments

There were five parts to the experiment (the instructions for the Experiment are contained in the Online Appendix), which began after all subjects were seated and had signed a consent form. In Part I, subjects completed a simple survey of 12 questions for which they received a fixed payment of 2 Egyptian pounds for each. In Part II subjects were shown two videos in Arabic on a mock news report concerning a hypothetical student union election with two candidates “A” and “B” running for “President of the University’s Student Union.” We refrained from using references to general elections (presidential or parliamentary) to increase control. At the same time, we chose the student union contest as a context for the experiment as these elections are nevertheless highly salient to students at the university.

To be able to examine the impact of different campaign environments on the dependent variable (interpersonal trust), four different video treatments were created to match four possible campaign environments: a neutral Base line Treatment, a Negative Personality Treatment, a Negative Policy Treatment, and a Positive Treatment. Subjects in the Negative Personality and Negative Policy Treatments watched news coverage of attacks between candidates targeting either personality or policy of the opponent, depending on the treatment.

9 The exchange rate between an Egyptian pound and the U.S. dollar at this time was 1 USD = 7.15 EGP.
The *Negative Personality* treatment included accusations of fraud and misuse of public funds by opponent. The *Negative Policy* treatment included accusations of overpromising and of flip-flopping by opponent. Subjects in the *Positive Treatment* watched news coverage of each candidate’s positive pledges. These were promises of increasing participation by students in the Union’s decision-making process, increased accountability and transparency of the Union. In all treatments, we made sure that the type of negative or positive campaigning strategy was followed by both candidates in each video to avoid differentiated effects within the same campaigning strategy (i.e. when candidate “A” accused candidate “B” of fraud, a similar accusation was adopted by candidate “B” against candidate “A”). And subjects in the *Baseline Treatment* watched news reports on neutral, non-political events before playing the trust game.\(^{10}\)

We used a between-subjects design in which each subject was exposed to one and only one treatment. Each treatment was conducted in two sessions with 28 subjects per session for a total of 56 subjects per treatment. Table 1 below summarizes the treatments.

\(^{10}\) The reports discussed maritime scientific discoveries and results of a South East Asian golf tournament. Both generally are of no major interest to Egyptians.
Table 1: Summary of Treatments

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Video Content</th>
<th>Sessions</th>
<th>Total Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>Neutral Discussion of Nonpolitical Events</td>
<td>2</td>
<td>56</td>
</tr>
<tr>
<td>Positive</td>
<td>No Attacks Reported, Positive Messages about Future Pledges</td>
<td>2</td>
<td>56</td>
</tr>
<tr>
<td>Negative Personality</td>
<td>Personality Attacks Reported</td>
<td>2</td>
<td>56</td>
</tr>
<tr>
<td>Negative Policy</td>
<td>Policy Attacks Reported</td>
<td>2</td>
<td>56</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>8</strong></td>
<td><strong>224</strong></td>
</tr>
</tbody>
</table>

The reporter in the videos was always the same hired actor, previously unknown to the subjects, with a clear speaking voice. The lighting, background, actor’s dress and other aspects of the videos were held constant such that the only variation in the videos was the content. Subjects were also shown the Arabic transcript of the videos on their computer screens. The Online Appendix contains English translations of the content of the videos and the actual videos are available from the authors on request and will be made available online from the authors upon publication.

After watching the videos, subjects were given four questions related to each video for which they received 2 Egyptian pounds for each correct answer. Subjects were told in advance that they would be asked questions about the videos and had the transcripts to consult in order to answer the questions. These measures were used to ensure that the subjects paid attention to
the videos. In Part III of the experiment, subjects were asked if they would vote in the student election discussed in the video if the election were held the next day. In the Baseline Treatment they were simply asked if they would vote in the student union election if it were held the next day. The answers to this question we use as a measure of whether our manipulations (the primes) were successful in manipulating our subjects’ perception of the campaign environment given that previous research has shown that negative campaign primes in the laboratory have a significant effect on voters’ intentions to participate. It also provides a robustness check for our hypothesized mechanism; if trust decreased in response to exposure to negative campaigns (and not for other reasons) then a similar differentiated effect on turnout should also be found.

In Part IV of the experiment subjects played the standard trust game described in Section II. Despite the fact that surveys, which directly ask subjects about their level of trust in others, have been the traditional way to measuring trust in political science (Cook and Gronke 2005), many scholars are skeptical about attitudinal reports and call for behavioral measures. We wished to generate a similar type of behavioral measure of trust among individuals within our experiment. Specifically, we wished to see subjects’ decisions in a trust game with real monetary stakes following their exposure to the priming. Knowing that they were playing a one-shot game, subjects knew that they needed to decide wisely: Can the subject they were to play the game with be trusted?

In our experimental setting, the First Mover received an endowment in Egyptian pounds of 70, which was equivalent to $10 and was told that any transferred amount would be doubled. In most trust experiments the amount is tripled, so arguably our design reduces the incentive of First Movers to send money. However, Johnson and Mislin (2010) find that there is no significant difference between the percentage sent in trust games depending on whether the

transferred amount is tripled or doubled, although the amount returned by the Second Mover is significantly less when the transferred amount is tripled.\textsuperscript{12} In our experiment only the First Mover is given the endowment, while some trust game experiments both the First Mover and Second Mover are endowed with the Second Mover allowed to keep his or her endowment. By not endowing the Second Mover arguably we increase the motivation of the First Mover to give to the Second Mover if he or she cares about fairness and inequality. Johnson and Mislin find significant evidence in one of their estimations that First Movers send more to Second Movers when Second Movers are not endowed but there is no effect on the percentage returned.\textsuperscript{13} Hence, our design to some extent biases our results to find more trusting and trustworthy behavior.\textsuperscript{14}

The amount transferred to Second Movers in the trust game serves as our dependent variable in evaluating Predictions 1, 2, and 3. We expect that subjects exposed to the negative news reports will send less to their partners (\textit{Negative Personality} and \textit{Negative Policy} Treatments), compared to individuals in the \textit{Baseline} Treatment who were not exposed to the negative news report (Prediction 1). We expect that the difference in amount sent between the \textit{Negative Personality} Treatment and the \textit{Baseline} Treatment will be greater than the difference in amount sent between the \textit{Positive} Treatment and the \textit{Baseline} Treatment (Prediction 2) and

\begin{itemize}
  \item \textsuperscript{12} Johnson and Mislin report that doubling the amount sent is used in 10\% of the trust games they study.
  \item \textsuperscript{13} Johnson and Mislin report that about 54\% of the trust game experiments they study endow the Second Mover.
  \item \textsuperscript{14} In our instructions we never referred to the subjects as partners or opponents, but simply as first and Second Movers who were paired together.
\end{itemize}
also be greater than the difference in amount sent between the Negative Policy Treatment and the Baseline Treatment (Prediction 3).

The amount returned by Second Movers serves as our dependent variable in evaluating Prediction 4. That is, we expect that Second Movers will be less trustworthy in a negative campaign environment as compared to the baseline, and that the differences in effects will be similar to the differences in effects predicted by Predictions 1-3 for First Mover behavior. Finally in Part V of the experiment subjects were asked to answer another five survey questions, for which they were paid 2 Egyptian pounds each.

C. Control Variables

Observational studies have pointed to heterogeneity in generalized trust within a given population. Trust experiments have thus examined the relationship between an individual’s personal characteristics, like gender and ethnicity, and his or her behavior in the game (Wilson and Eckel 2011). Many studies have examined religion and trust (Anderson et al. 2010, Johansson-Stenman et al. 2009). Other studies find experimental evidence that age is related to trust and reciprocity. Croson and Gneezy (2009) find that out of twenty studies on gender differences, nine studies show that men trust more than women.

Consequently, in addition to the use of random assignment as the principal method to control for individual specific variation, we aimed at controlling for various individual differences, which we suspect might affect subjects’ behavior in the trust game. Specifically, subjects were surveyed at the beginning of the experiment as to their age, gender, and religion. We also asked them about their trust in others; asking the following question: “How often would you say that you can trust other people? Options were Always, Most of the time, Half of the time, Once in a while, Never, and Do not know. The distribution of the control variables by treatment are summarized in Table A1 in the Appendix. In general, our samples were largely
balanced (no significant differences) with the exception that in the *Negative Policy* Treatment there were significantly more women than men. We report results both with and without these demographic controls in the results Section.

V. Experimental Results

A. Manipulation Check: Effect of Primes on Intentions to Vote

As a check on whether we effectively manipulated voters’ perceptions of the campaign environment, we investigate whether negative (positive) campaigns can have a negative (positive) impact on voters’ willingness to vote in the Student Union election. That is, we ask our subjects whether they would choose to participate if they were a voter in the hypothetical election (or the next upcoming Student Union election in the *Baseline* Treatment). As noted in the Introduction, previous laboratory studies have found that negative campaign primes significantly reduce voters’ intentions to participate in elections (Ansolabehere and Iyengar 1996, Ansolabehere et al. 1994).\textsuperscript{15} We therefore consider the effects of the priming on

\textsuperscript{15} Other studies, on the contrary, see negative campaigns as stimulating participation (Finkel and Geer, 1998; Freedman et al., 2004). The mechanisms emphasize that negative campaigns convey a significant amount of policy and information to voters (Brians and Wattenberg, 1996; Lipsitz et al., 2005; Sides et al., 2010; Stevens et al., 2008), are awarded given more weight in information processing by audiences (Lang et al., 1995; Lau, 1982), and hence produce stronger emotional responses than positive ones (MacKuen and Marcus, 1994). That said, given the similarities in the experimental environment with previous laboratory studies and that the only information voters will know about the election facing them is the primed provided, we expect to find that negative campaigns significantly reduce voter participation intentions.
intentions to vote as a check as to whether the primes indeed changed voters’ perceptions of the campaign environment in the election.

Figure 1 presents the mean fraction of subjects who intend to vote by treatment and Table 2 below reports the results of a probit estimation with the dependent variable voters’ intention to vote response, coded as 1 for intention to participate, 0 for intention to abstain. The first four columns of Table 2 report the estimation without control variables and the last four columns report with control variables from the survey in Part I of the experiment – such as whether the subject voted in the previous student election (1 for yes, 0 for no, not eligible coded as missing), how interested the student is in student government elections (from 0 to 7), gender, and religion. We find with and without controls that voters’ intention to turnout is significantly lower in our negative campaign treatments (50% lower in the Negative Personality Treatment and 52% lower in the Negative Policy Treatment). We find that our Positive Treatment has a non-significant effect on the probability of voting and that predictably those who voted before and are interested in student politics are significantly more likely to indicate they would participate. Hence, we conclude that our campaign environment treatments indeed appear to have achieved the manipulation desired.
Figure 1: Mean Fraction Intend to Vote by Treatment
Table 2: Probit Estimation of Intention to Vote in Election

(Baseline Treatment is the Null Case)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>No Controls</th>
<th></th>
<th></th>
<th></th>
<th>With Controls</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>dF/dx</td>
<td>Robust Std.</td>
<td>z</td>
<td>Pr &gt;</td>
<td>z</td>
<td></td>
<td>dF/dx</td>
</tr>
<tr>
<td>Positive</td>
<td>0.18</td>
<td>0.09</td>
<td>1.75</td>
<td>0.08</td>
<td>0.06</td>
<td>0.11</td>
<td>0.54</td>
</tr>
<tr>
<td>Negative Personality</td>
<td>-0.40</td>
<td>0.09</td>
<td>-4.17</td>
<td>0.00</td>
<td>-0.50</td>
<td>0.10</td>
<td>-4.49</td>
</tr>
<tr>
<td>Negative Policy</td>
<td>-0.31</td>
<td>0.09</td>
<td>-3.28</td>
<td>0.00</td>
<td>-0.52</td>
<td>0.09</td>
<td>-4.96</td>
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<td>Voted in Previous Election</td>
<td>0.38</td>
<td>0.09</td>
<td>4.03</td>
<td>0.00</td>
<td></td>
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<td>Interested in Student Politics</td>
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<td>0.03</td>
<td>3.07</td>
<td>0.00</td>
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<tr>
<td>Muslim</td>
<td>-0.10</td>
<td>0.15</td>
<td>-0.65</td>
<td>0.95</td>
<td></td>
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<td>1.34</td>
<td>0.18</td>
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<td>Pseudo R²</td>
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<td></td>
<td></td>
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</table>
B. Trust and Campaign Environments

We begin our analysis of behavior in the trust game by examining the choices made by our First Movers. First, we find that, as suggested by the World Values Survey results mentioned in the Introduction, indeed our subjects are much less trusting in general than in other countries. In the Baseline Treatment, the percentage sent by First Movers equals 25%, which is half of the mean across countries found by Johnson and Mislin (2010).

We also find support for Prediction 1, as shown visually in Figure 2 below, which shows the distributions of amounts sent by First Movers in all treatments. Specifically, we find that in our Negative Personality and Negative Policy Treatments, the percentage sent is lower than the Baseline; significantly so for the Negative Personality Treatment using both a parametric and nonparametric test and for the Negative Policy Treatment in a one-tailed parametric test.  

\[ t = 2.81, \text{ Pr} = 0.01 \text{ in a two-tailed test and a Mann Whitney test yields a z statistic} = 2.72, \text{ Pr} = 0.01. \]  

For the comparison of the Negative Policy Treatment with the Baseline Treatment, the t statistic = 1.66, Pr = 0.05 in a one-tailed test and a Mann Whitney z statistic = 1.35, Pr = 0.18.
Furthermore, we find support for both Predictions 2 and 3. That is, we find that the percentage sent in the *Positive* Treatment is not significantly different from the *Baseline* Treatment, supporting Prediction 2. We also find that the percentage sent in the *Negative Personality* Treatment is lower than in the *Negative Policy* Treatment, supporting Prediction 3, although the difference is not significant at the 5% level.\(^{17}\)

\(^{17}\) Comparing the two Negative Treatments yields a t statistic = 1.53, Pr = 0.07 in a one-tailed test and a Mann Whitney test yields a z statistic = 1.69, Pr = 0.09.
We also analyzed the percentage sent by the First Movers using regression analysis with robust standard errors.\footnote{Estimating the log of percent sent to account for the bounds on the percent yields similar results.} Results are presented in Table 3 below. Columns 2-5 provides results with only the three treatment variables as independent variables whereas Columns 6-9 presents results including our measure of trust from the survey in Part I of the experiment as well as variables measuring gender and religion.\footnote{Note that the variable Trust is coded as 1 if the subject responded that he or she trusted people all the time or most of the time, 0 otherwise. One individual who responded as “do not know” was coded as missing data. We considered other specifications of trust and the qualitative results do not change. We also estimated regressions with controls for personality traits as measured in the Part I survey, but the results do not change with these additions and none of these variables are significant.}
Table 3: Regressions of Percentage Sent by First Movers

(Baseline Treatment is the Null Case)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>No Controls</th>
<th>With Controls</th>
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<tbody>
<tr>
<td></td>
<td>Coef.</td>
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<tr>
<td>Positive</td>
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<td>0.05</td>
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<tr>
<td>Negative Personality</td>
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<td>0.05</td>
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<td>Negative Policy</td>
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<tr>
<td>Trust Most of the Time</td>
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</tr>
<tr>
<td>Female</td>
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<tr>
<td>Constant</td>
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<td>0.05</td>
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<tr>
<td>Obs.</td>
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<td></td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.11</td>
<td></td>
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</tbody>
</table>

*One subject declined to answer the trust question.

Without any controls, it is clear that negative campaigns have a significant negative effect on interpersonal trust, when the content of the attack is on personality grounds. The percentages sent by First Movers in the trust game is 15% less with and without controls when exposed to the negative news report targeting candidates’ personalities. Negative policy attacks decrease the percentage sent by 9%, which is significant at the 10% level with controls. With
controls, negative personality campaigns continue to have a significant effect on the percentage sent by First Movers, but negative policy campaigns are not significant. We find no significant effects of the positive campaign treatment or of the demographic controls. Interestingly, answers to the trust survey question have a negative, although insignificant effect on the percent sent, highlighting the difficulty that can occur with relying on survey responses in place of behavioral measures.\textsuperscript{20,21}

C. Trust or Fairness Concerns?

Although our analysis of the percentages sent by First Movers provides valuable evidence, some First Movers might have sent money to the Second Movers because of concerns about fairness, independent of their trust in whether the Second Mover will return this money. That is, in our design as noted above, only First Movers received the endowment of 70 Egyptian pounds. Hence, some First Movers may have felt that they should share their 70 pounds even if they did not trust the Second Mover to return the money. In fact, since the money sent was doubled, First Movers could share without paying a high cost to themselves. For example, a First Mover could send 23 pounds to the Second Mover, retaining 47 pounds for herself. The Second Mover would receive 46 pounds, almost the same amount. A First Mover who cared

\begin{footnotesize}
\textsuperscript{20} Alternative codings of the trust variable lead to similar insignificant results.
\textsuperscript{21} One possible explanation for our finding is that the negative personality campaign environment affects subjects’ moods and, as a consequence, they are less likely to trust. However, previous research on the effects of mood priming (Capra 2004) finds that although good moods might lead subjects to be more trusting, bad moods do not significantly affect trust behavior. Hence, this research suggests that it is our manipulations’ content which causes the effects we observe on trust behavior, not changes in their emotional status induced by the videos.
\end{footnotesize}
about fairness then might send as much as 23 pounds even if she did not trust the Second Mover to return any of the money sent. Arguably, those who send more than 23 pounds, then, are those that are most likely to hope or anticipate that the Second Mover will return some of the money sent. Thus, another way to measure the effects of our treatments on trust is to measure the effects of our treatments on the percentage of First Movers who send more than 23 pounds to the Second Mover.

Figure 3 below presents the mean fractions of First Movers who sent more than 23 Egyptian pounds by treatment. In general, the percentages are low. As can be seen in the figure, the percentage of First Movers who sent more than 23 pounds was 18% in both the Baseline and Positive Treatments, 4% in the Negative Personality Treatment, and 14% in the Negative Policy Treatment. Hence, we find even lower levels of interpersonal trust among our subjects when we use this strict measure. The Negative Personality Treatment percentage is significantly lower than the Baseline using a one-tailed parametric test, while the other Treatments are not significantly lower than the Baseline.

An examination of the explanations First Movers gave for their decisions in the post game survey shows that both motivations were expressed. Approximately 42% mentioned fairness to the other player, 32% mentioned either that they trusted the other player to return money or that they did not trust that the other player would return money, 15% of the subjects mentioned only that they made choices to maximize their own payoffs, and 11% gave only vague answers as to their motives. There were no significant differences across treatments in these motivations.

The z statistic for the test of the proportion in the Negative Personality Treatment with the Positive Treatment is 1.73, Pr = 0.04 in a one-tailed test. Using Fisher’s exact test yields a one-sided significance probability of 0.10.
In summary, our results demonstrate that negative personality campaigns have a strong effect on interpersonal trust. Negative attacks that target candidates’ policy pledges, on the other hand, have less of an effect on interpersonal trust, as expected. Both types of negative campaigns have a stronger effect overall than positive campaigns.

D. Effects on Trustworthiness

Are the low levels of trust supported by a lack of trustworthiness among our subjects? In general, as measured by the percentage returned from Second Movers who were sent positive amounts from First Movers is low in the Baseline Treatment (17%), which is less than half that found to the worldwide average by Johnson and Mislin in their meta-analysis (37%). Somewhat supportive of Prediction 4, we find that the percentage returned is lower in the two
negative campaign treatments, 12% in the Negative Personality Treatment and 9% in the Negative Policy Treatment, than in the Baseline (17%) and the Positive (15%) Treatments. However, these differences are not significant. Figure 4 presents these means graphically.

**Figure 4: Mean Percentages Returned by Second Movers Who Received Positive Amounts**

![Graph showing mean percentages returned by second movers who received positive amounts](image)

Yet as noted above, the vast majority of First Movers gave Second Movers 23 Egyptian pounds or less, and arguably Second Movers may have interpreted the money sent not as trust that they would return money but as a matter of fairness on the part of First Movers. Second Movers who received 23 pounds or less may have felt that the fair response was to keep the money they received. It is reasonable then to focus on the differences in trustworthy behavior of Second Movers depending on those who received more than 23 pounds. However, we have
only a few observations of such cases. In the Baseline Treatment, five First Movers sent more than 23 Egyptian pounds with the mean percentage returned to them by their Second Movers 19% of the amount received; in the Positive Treatment, we have seven such observations with a mean percentage returned of 26%; in the Negative Personality Treatment, we have one observation with a mean percentage returned of 33%; and in the Negative Policy Treatment, we have four observations with a mean more than 23 Egyptian pounds. None of these differences are significant. We therefore do not find any evidence of treatment effects on trustworthiness.

In summary, when we turn to our Prediction 4 concerning trustworthiness, we find that the percent returned is lower in the two negative campaign treatments than in the Baseline and Positive Treatments, but the differences are not significant. Thus we do not find statistical support for declines in trustworthiness with negative campaign environments, although the results are suggestive of a relationship.

VI. Concluding Remarks

Using an incentivized laboratory experiment, we find evidence that priming different campaign environments (positive campaign environments, negative campaign environments attacking the personality of the opponent, or negative campaign environments attacking the policies of the opponent) has an effect on individuals’ judgments of the trustworthiness of anonymous strangers and thus on trusting decisions. Specifically, we found a significant reduction in the amount of money sent by First Movers in the trust game (by 15%) for those subjects who were exposed to news coverage of a hypothetical election between candidates ‘A’ and ‘B’ whose content comprised of negative attacks by each of the two candidates on the personality of the other. We also found the negative policy attacks also reduce interpersonal trust (by 8%). Furthermore, trustworthiness is also reduced, although not significantly so.
In addition to finding significant effects on the levels of interpersonal trust, we find that our campaign environment primes had significant effects on subjects’ intentions to participate, with our negative treatments each reducing participation by approximately 50%.

Notably, our study is not only the first to demonstrate that negative campaign environments can significantly reduce interpersonal trust in society. We also are, to our knowledge, the first researchers to conduct standard trust games in an Arab country and the first to study the effects of negative campaigns in the region as well. We find that survey evidence which suggests low levels of trust in Egypt are supported by behavior; our subjects’ display a tendency to trust and to be trustworthy towards strangers half as much as the mean level of trust in other countries. As noted in the Introduction, the low level of interpersonal trust among Egyptians can have considerable consequences for the country’s social capital, political transformation and economic development.

Moreover, as developing countries adopt western style election campaign strategies, then it is important to understand the effects of these strategies in these countries. If negative campaign environments reduce interpersonal trust to even lower levels and the countries’ development depends on increasing interpersonal trust, then the effects of negative campaigns may be much more problematic for such countries than in Western democracies.
References


Craig, S., and P. Rippere Political Trust and Negative Campaigns: Two Tests of the Figure-Ground Hypothesis: Politics & Policy 42(2014):693-743.


Fischbacher, Urs, z-Tree: Zurich Toolbox for Ready-made Economic experiments, Experimental Economics, 10(2007):171-178


Online Appendix

Table A1: Subjects’ Demographics by Treatment

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Negative Personality</th>
<th>Negative Policy</th>
<th>Positive</th>
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</thead>
<tbody>
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<td>56</td>
<td>56</td>
<td>56</td>
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<tr>
<td>Gender (Female)</td>
<td>62%</td>
<td>57%</td>
<td>89%</td>
<td>53%</td>
</tr>
<tr>
<td>Age bracket (20-22)</td>
<td>85%</td>
<td>96%</td>
<td>100%</td>
<td>96%</td>
</tr>
<tr>
<td>Religion (Muslim)</td>
<td>91%</td>
<td>100%</td>
<td>96%</td>
<td>91%</td>
</tr>
<tr>
<td>Trust Always or Most of the Time</td>
<td>32%</td>
<td>36%</td>
<td>36%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Experiment Instructions

Welcome to the experiment. During the following experiment, we require your complete attention, and ask that you follow the instructions carefully. Please turn off your cell phones. Please raise your hands if you have any questions. The experimenter will come to you privately and answer your questions.

As you entered the experimental laboratory you were given an Experimental ID number. Please note that your Experimental ID number and the seating chart are not linked to your actual identity. In other words, the experimenter and other participants cannot link any of your choices in this experiment to your identity.
This experiment has several parts, which we describe below. For each part of the experiment you will be paid for your participation. The payments you receive will depend partly on the choices you make as well as the choices made by others in the experiment as we explain below. The experiment will be conducted in five parts.

**Part I: First Survey**

In this part of the experiment you will answer a set of survey questions. Please answer as best as you can. For each question, you will receive a fixed payment of 2 Egyptian pounds.

Survey Questions:

1. What is your gender? Male or Female
2. What is your age? – enter in age
3. Which study year are you in? First, Second, Third, Fourth, Postgraduate
4. What is your religion? Muslim, Christian, Other
5. For each of the following statements, please indicate the likelihood that you would engage in the described activity or behavior if you were to find yourself in that situation. Provide a rating from Extremely Unlikely (1) to Extremely Likely (7), using the following scale:
   a. Admitting that your tastes are different from those of a friend.
   b. Disagreeing with an authority figure on a major issue.
   c. Choosing a career that you truly enjoy over a more secure one.
   d. Moving to a city far away from your extended family.
   e. Starting a new career in your mid-thirties.
   f. Speaking your mind about an unpopular issue in a meeting at work.
6. We are interested in how you see yourself. Please mark how well the following pairs of words describes you (options extremely poorly (1), somewhat poorly, a little poorly, neither poorly nor well, a little well, somewhat well, extremely well (7)):
   a. Extraverted, enthusiastic
   b. Critical, quarrelsome
   c. Dependable, self-disciplined
   d. Anxious, easily upset
   e. Open to new experiences, complex
   f. Reserved, quiet
   g. Sympathetic, warm
   h. Disorganized, careless
   i. Calm, emotionally stable
   j. Conventional, uncreative

7. Were you a student at the university and eligible to vote in the last student union election? Yes or No?

8. If the answer to the above is yes, then the question: Did you vote in the last student union election? Yes or no?

9. Are you interested in student union elections? (Very interested 1 to Not Interested at all 5)

10. Have you ever run for an office or thought about running for office in the student union? (yes or no) If answered yes, give opportunity to identify which office. If answered no, please enter the number 'zero'.

11. How often would you say that you can trust other people? Options: Always, Most of the time, half of the time, Once in a while, Never, don’t know.
12. How often would you say that you can trust politicians? Always, Most of the time, half of the time, Once in a while, Never, don’t know.

**Part II: Videos**

In this part you will watch two short videos. After the videos you will be asked a question about the information contained in the videos. You will be paid on how accurate your answer is to the question. Please pay attention to the videos.

**Treatment T0 – Baseline** – Subjects watch a neutral, non political news report video. Instructions before the video: “This video is a news report on X. Please pay attention to the video.”

**Treatment T1 – Positive Campaign** – Subjects watch a video where candidates are described as behaving positively in the campaign. Instructions before the video: “This video is news coverage of a hypothetical election to decide the president of the university student’s union. Please pay attention to the video.”

**Treatment T2 – Negative Personality Campaign** – Subjects watch a video where candidates are described as behaving negatively in personality claims in the campaign. Instructions before the video: “This video is news coverage of a hypothetical election to decide the president of the university student’s union. Please pay attention to the video.”

**Treatment T3 – Negative Policy Campaign** – Subjects watch a video where candidates are described as behaving negatively in policy claims in the campaign. Instructions before the video: “This video is news coverage of a hypothetical election to decide the president of the university student’s union. Please pay attention to the video.”
Question on Video:

Please answer the following question. If you get the question right you will receive 2 Egyptian pounds.

T0 Questions:

1. “Anwar Samaan”, the player who was qualified for the finals of South Asia Amateur Open Championship, is from Indonesia. True or False? (correct False)
2. More than 500 players from the region’s countries qualify for the South Asian Open. True or False? (correct True)
3. “Garra Smarti” is the name of the fish discovered in the Arab region by a PhD student residing in the United Arab Emirates. True or False? (correct True)
4. One of the distinguished features of this new type of fish is the existence of four fins. True or False? (correct False)

T1 Questions:

1. Candidate A would like to have greater integration of students on a regular basis in the decision-making process of the Union. True or False? (correct True)
2. Candidate B would take the initiative to publicize a regular statement of activities at the end of each month on the Union’s website. True or False? (correct True)
3. Candidate A thinks that the prices of books and readings’ packs issued by university professors are not high enough. True or False? (correct False)
4. Candidate B thinks that it is bad for companies to advertise during Union activities and events and will work to reduce such advertisements. True or False? (correct False)
T2 Questions:

1. Candidate A claims that candidate B is too busy with Karate to do a good job as the Union President. True or False? (correct False)

2. Candidate B claims that candidate A cheated on an exam when he was still a freshman in his faculty. True or False (correct True)

3. Candidate B claims that candidate A used funds from the student union to finance his campaign. True or False (correct True)

4. Candidate A claims that candidate B produced a really low quality leaflet for his campaign which shows his poor skills and inappropriateness for being the student union president. True or False? (correct False)

T3 Questions:

1. Candidate A claims that candidate B is making promises about grade changes that are not possible within the powers of the Union. True or False (correct True)

2. Candidate B claims that candidate A wants to reduce funding for sport and entertainment activities. True or False? (correct False)

3. Candidate A claims that candidate B actually supported raising fees to join the Union in the past, even though he says he does not support them now. True or False? (correct True)

4. Candidate B claims that candidate A says things in closed meetings that are opposite from what he says in public. True or False (correct True)
Part III: Second Survey

“Please answer the questions below. There is no “correct” answer, this is just a survey as in Part I.”

T0 Survey Questions:

1. If the student union election is to be held tomorrow, will you vote in it? Yes or No
2. Those who have answered ‘no’ to the vote intention question are asked:
3. “Why don’t you like to vote?” Answer options,:1- Because I think none of the candidates deserve my vote. 2- Because I do not have enough information about the two candidates, 3- Because I think students’ union election are not important, 4- Because I would rather not vote in general, 5- Another reason, please write ___ (Subjects may choose more than one answer in order of importance).

T1, T2, and T3 Survey Questions:

1. If the student union election, covered by the video, is to be held tomorrow, will you vote in it? Yes or No
2. Those who have answered ‘no’ to the vote intention question are asked:
   “Why don’t you like to vote?” Answer options,:1- Because I think none of the candidates deserve my vote. 2- Because I do not have enough information about the two candidates, 3- Because I think students’ union election are not important, 4- Because I would rather not vote in general, 5- Another reason, please write ___ (Subjects may choose more than one answer in order of importance).
Part IV: The Game

“You are now going to play a simple game. In the game there are two players, First Mover and Second Mover. You will be assigned to be one of these roles and matched with another player in the room anonymously who will play the other role. The First Mover will be given 70 Egyptian pounds\(^{24}\). The First Mover will then decide how much of the 70 Egyptian pounds to give to the Second Mover. The First Mover can give any integer amount. That is, the First mover can give 0, 1, 2, 3, … up to 70 Egyptian pounds to the Second Mover. Whatever the First Mover does not give to the Second Mover he or she gets to keep. The First Mover can decide to keep all of the 70 Egyptian pounds or give all of it away or divide it any way he or she wishes. So if the First Mover gives 20 Egyptian pounds to the Second Mover, the First Mover keeps 70 \(-\) 20 Egyptian pounds. Or if the First Mover gives 50 Egyptian pounds to the Second Mover, the First Mover keeps 70 \(-\) 50 Egyptian pounds.

Once the First Mover decides how much to give to the Second Mover, then that amount will be doubled before the Second Mover receives the money. That is, if the First Mover decides to give the Second Mover 30 Egyptian pounds, the Second Mover will actually receive 30 times 2 = 60 Egyptian pounds. Or if the First Mover gives the Second Mover 0 Egyptian pounds, the Second Mover gets 0 times 2 = 0 Egyptian pounds. Or if the First Mover gives the Second Mover 50 Egyptian pounds, the Second Mover gets 50 times 2 = 100 Egyptian pounds.

After the Second Mover receives the money from the First Mover, which has been doubled, then he or she will have the opportunity to give back some of that money to the First Mover. Whatever she or he does not give back he or she can keep. So for example, suppose the First Mover gave the Second Mover 40 Egyptian pounds. The Second Mover then receives 40 times 2 = 80 Egyptian pounds. The Second Mover then can give back to the First Mover any amount of the 80 Egyptian pounds and keep the rest.

\(^{24}\) This is equivalent to $10, as per the exchange rate prevailing at that time.
Before playing this game, please answer the following quiz questions. You must get these questions correct before you can play the game.

**Quiz Question 1:** Suppose that the First Mover chooses to give the Second Mover 10 Egyptian pound. How much will the Second Mover receive? Options: 10 Egyptian pound, 70 – 10 Egyptian pounds, 20 Egyptian pounds. If they answer incorrectly they get a message telling them their answer is incorrect. They can go back to the previous screen to re-read the instructions, if they wish.

**Quiz Question 2:** Suppose that the First Mover chooses to give the Second Mover 50 Egyptian pounds. How much can the Second Mover give back to the First Mover? Options: Any amount less than or equal to 50 Egyptian pounds, Any amount greater than or equal to 100 Egyptian pounds, Any amount less than or equal to 100 Egyptian pounds.

**Quiz Question 3:** Suppose that the First Mover chooses to give the Second Mover 20 Egyptian pounds and the Second Mover chooses to keep 30 Egyptian pounds. How many Egyptian pounds does the First Mover have after the game is over? Options: 30 Egyptian pounds, 10 Egyptian pound, 40 Egyptian pounds, 70 – 20 + 10 Egyptian pounds.

Now you will play the game.”

Subjects will simply be told you are a First Mover or you are a second mover and play the game.

After playing the game, subjects will be asked the following questions:

1. Were you a First Mover in the experiment? Yes or No
2. If Yes, then “Why did you give the amount you gave to the Second Mover?”
3. If Yes, then “Why do you think the Second Mover gave you back the amount he or she gave you?”

4. If No, then “Why did you give back the amount you gave to the First Mover?”

5. If No, then “Why do you think the First Mover gave you the amount he or she gave you?”

6. If given a choice, which position would you like to have? First Mover or Second Mover?

7. Why did you make the choice you made in #6 above.

---

**Part V: Post-Experiment Questionnaire**

Thank you for participating in this experiment. You have earned XXX Egyptian pounds in this experiment. Before paying you for your participation, we would like you to answer the following questions. Do not be surprised that some are questions you answered earlier, we are seeing if you have changed your mind from earlier.

1. For each of the following statements, please indicate the likelihood that you would engage in the described activity or behavior if you were to find yourself in that situation. Provide a rating from Extremely Unlikely (1) to Extremely Likely (7), using the following scale:

   a. Passing off someone’s else work as your own.
   
   b. Driving a car without wearing a seatbelt.
   
   c. Admitting that your tastes are different from those of a friend.
d. Revealing a friend’s secret to someone else.

e. Moving to a city far away from your extended family.

f. Not returning a wallet you found that contains 1,000 Egyptian pounds.

g. Not wearing a motorcycle helmet.

h. Choosing a career that you truly enjoy over a more secure one.

2. The numbers below is an income scale on which 1 indicates the lowest income group and 10 the highest income group in your country. We would like to know in what group you would classify your parents’ income. Please specify the appropriate number, counting all wages, salaries, pensions, and other income that they have.

1 2 3 4 5 6 7 8 9 10

3. How often would you say that you can trust other people? Options: Always, Most of the time, half of the time, Once in a while, Never, don’t know.

4. How often would you say that you can trust politicians? Always, Most of the time, half of the time, Once in a while, Never, don’t know.

5. For each of the statements below state whether you Strongly Agree, Agree, Disagree, Strongly Disagree

   a. I see myself as a world citizen

   b. I see myself as part of my local community

   c. I see myself as part of my religious group

   d. I see myself as part of Cairo University

   e. I see myself as part of the Egyptian nation

   f. I see myself as part of Africa

   g. I see myself as an Arab

   h. I see myself as an autonomous individual
(After completing the questions, subjects see the following): We will now pay you by your experimental ID. We will bring to you your payments privately in an envelope.

**Scripts of Videos**

*I. Baseline treatment (T0) – nonpolitical news coverage:*

a. Nonpolitical News Coverage - 1 (Results of Asian Golf Competition for Minors):

Welcome…

The following is a summary of the most important events of today.

“Anwar Samaan”, a player from the Malaysian national junior golf team, was qualified for the finals of South Asia Amateur Open Championship this year, becoming the first player from Malaysia in the tournament's history, which extends for more than 30 years, to qualify for the finals.

For his part, "Guoyu Kisoma", the secretary general of the Malaysian Golf Federation, sent his congratulations to the Minister of Sports in Malaysia on this achievement, pointing out that the great effort made by the player and the follow-up and attention he received from his parents brought him to this honorable level which is going to be his way towards the international level in Golf. “Guoyu Kisoma” added that golf enjoys a big attention from the President and Vice President of the Olympic Committee due to their keenness to improve the status of Malaysian sports in global forums.

It is worth mentioning that more than 500 players from the region’s countries qualify for the South Asian Open and after the initial qualifying rounds, only 156 players qualify for the finals.
The winner of this tournament qualify directly to participate in the Asia Open Championship for professionals, which is the most famous world championship of golf.

Thank you for watching, we will bring you more details in the upcoming newscasts...

b. Nonpolitical News Coverage - 2 (A New Discovery):

Welcome…

The following is a summary of the most important events of today.

A PhD student residing in the United Arab Emirates discovered a new type of fresh water fish in the Arab region, which she named “Garra Smarti”.

The student Emma Smart, a member in the Emirates Association for Fungal life team - the World Wide Fund for Nature (EWS-WWF), has managed to discover that fish, saying "it is a very exciting discovery, and I am pleased that my project and research has led to the detection of this unique type of fish. This discovery demonstrates our lack of information about the region, and the possibility of the existence of more types of fungal life undiscovered yet. "

It is noteworthy that, until now there were only sixteen major species registered of freshwater fish in various parts of the Arabian Peninsula, which underlines the importance of the new discovery and enhances the unique and great environmental value of the valleys in the Arab region.

This new type of fish differs from the others in a number of features, including the existence of three fins, the relatively small weight, the head is small and often protracted, and having prominent teeth like a small tusk.
It is expected that this new scientific discovery will be introduced in a scientific conference organized during the next summer in the Belgian capital, Brussels, a conference that has traditionally gained a wide academic and media attention.

Thank you for watching, we will bring you more details in the upcoming newscasts...

II. Treatment One (T1) – coverage of positive campaigning:

a. Coverage of positive campaigning – clip 1 (positive campaigning is promises of increasing participation by students, accountability and transparency):

Welcome…

The following is a summary of the most important events that happened today with respect to the election campaign of the two candidates running for President of the University’s Student Union.

Candidate "A" organized today an election rally in the hall allocated by the university administration for that purpose. He presented the main pillars of his election manifesto. These included greater integration of students – and on a regular basis – in the decision-making process within the Union. This will be done by conducting regular opinion polls on the Union’s website to identify the most important demands of the students, their opinions on the many services that are offered to them, how satisfied they are with those services, as well as their suggestions of any activities they want the Union to organize in the next month.
The same hall witnessed two hours later an election rally by Candidate “B”, attended by almost the same number of students as the first meeting. Candidate “B” also used the meeting to present his most important election promises. He mentioned that he would take the initiative to publicize what he called a ‘regular statement of activities’ at the end of each month on the Union’s website. In this statement he would frankly present what he had implemented in the past month with respect to the election promises he made during the election time as well as what could not be implemented, out of a belief – from his side – in accountability and transparency.

This was our coverage of the most important events that happened today between the two candidates running for President of the University’s Student Union.

Thank you for watching. We will provide you with more details in the following news bulletins.

b. Coverage of positive campaigning - clip 2 (positive campaigning is promises of increasing student’s well-being):

Welcome again...

The following is a summary of the most important events that happened today with respect to the election campaign of the two candidates running for President of the University’s Student Union.

By today afternoon, both candidates have issued the final version of their electoral manifestos. The most important parts of those manifestos are as follows.

One of the most important election promises of Candidate "A" is publishing the Union’s end-of-year budget statement on the Union’s website on the Internet, showing in details the revenues and spending items, during the academic year in which he serves as Union President. The
election manifesto of Candidate "A" also included forming a committee to negotiate with the university administration how to lower the prices of books and readings' packs issued by university professors, or whether the university can bear some of the printing cost of those books, so that the sale price comes down.

As for the election manifesto of Candidate “B”, it also included a number of detailed promises. On top of those promises was to work on raising the quality and the hygiene levels in shops selling food and drinks inside the university campus, in order to protect students’ health – especially given the recent observed decline in the quality of those products. The election promises of Candidate “B” also included working on increasing the financial resources of the Union by attracting companies to advertise during the Union activities and events, which - according to Candidate "B" - may generate an increase in the resources of the Union that would allow it to fund new activities it would not be able to finance given the limited budget at its disposal at the moment..

This was our coverage of the most important events that happened today between the two candidates running for President of the University’s Student Union.

Thank you for watching. We will provide you with more details in the following news bulletins. 

III. Treatment two (T2) – coverage of negative campaigning targeting personality of opponent:

a. Coverage of personal attacks - clip 1 (negative campaigning is accusations of fraud by opponent): 

Welcome…
The following is a summary of the most important events that happened today with respect to the election campaign of the two candidates running for President of the University’s Student Union.

Following their election rallies both candidates went on the attack.
From his side, Candidate "A" gave an interview to the university newsletter, in which he stated that Candidate "B" has in fact falsified his nomination papers, and that he did not win a National Championship in Karate as he claims. According to Candidate “A”, Candidate “B” does not play Karate in the first place but made this claim as a desperate attempt to match the great sporting record of Candidate “A” aiming at winning votes by fraud. In response, Candidate "A" said that he would provide documents to prove this to the election committee supervising the elections in order to take the necessary punitive actions against Candidate “B”, and that he was certain of what he was saying.

On his end, and in response to that, Candidate "B" said that Candidate "A" was the one who should not be on the list of candidates because he was caught cheating in one of the exams he sat for when he was still freshman in his faculty. Candidate “B” added that a report was filed regarding that incident back then, and hence that Candidate “A” is the one who should be ashamed of himself, especially that the official documents of that cheating incident are still there and will be examined by the election committee in the next few days.

On a different note, the election committee said that the final preparations for the voting process have been completed to ensure that all procedures take place easily and without complications.
This was our coverage of the most important events that happened today between the two candidates running for President of the University’s Student Union.

Thank you for watching. We will provide you with more details in the following news bulletins.

b. Coverage of personal attacks - clip 2 (negative campaigning is accusations of misuse of public funds by opponent):

Welcome again...

The following is a summary of the most important events that happened today with respect to the election campaign of the two candidates running for President of the University’s Student Union.

As an attachment to his election manifesto, Candidate “B” distributed a leaflet that included a number of campaign slogans. It also included however an attack against Candidate “A”, saying that Candidate ”A” is using the funds deposited in the account of the student union of the faculty he belongs to – the union he presides over at the moment – to finance his campaign for President of the University Student Union which entails a use of public money for personal gains.

When faced with those allegations during one of his tours, Candidate “A” was quick to respond to them, saying that Candidate ”B” had actually printed his election manifesto and the leaflet attached to it on paper owned by the faculty he belongs to, and that he even used the library’s photocopying machines to photocopy both of those documents after he tricked the library’s
staff. He added that this is what should be described as using the faculty’s resources to achieve electoral goals.

This was our coverage of the most important events that happened today between the two candidates running for President of the University’s Student Union.

Thank you for watching. We will provide you with more details in the following news bulletins.

IV. Treatment three (T3) – coverage of negative campaigning targeting policies of opponent:

a. Coverage of policy attacks - clip 1 (negative campaigning is accusations of overpromising of opponent):

Welcome… The following is a summary of the most important events that happened today with respect to the election campaign of the two candidates running for President of the University’s Student Union.

Following their election rallies both candidates went on the attack.

From his side, Candidate "A" gave an interview to the university newsletter, in which he stated that the electoral program of Candidate "B" exaggerates in giving promises that cannot be achieved and hence is in fact tricking students in order to gain votes. An example is that Candidate “B” promises to work on changing the bylaws of the individual faculties to redistribute the term grades to make the new distribution more favorable to students although this is not in the authority of the Union in the first place – something that can be easily found out by readings the Union’s bylaw. He wondered how Candidate “B” could actually make these
promises although he is supposed to be fully aware that they were not within the powers of the Union.

On his end, and in response to that, Candidate "B" said that Candidate "A" is the one who makes this mistake because he mentions in his election manifesto that he would double the number of sport and entertainment activities that the Union would organize in case he wins the elections although the money earmarked for these activities in the Union’s budget for next year is in fact 50% of what was earmarked to these items in this year’s budget. This then raises many doubts on whether Candidate “A” could fulfill this election promise which he makes a central one in his manifesto, especially that he didn’t mention in any part of the manifesto his intention to create new sources of income for the Union, making everybody wonder where the money would come from.

This was our coverage of the most important events that happened today between the two candidates running for President of the University’s Student Union.

Thank you for watching. We will provide you with more details in the following news bulletins.

b. Coverage of policy attacks - clip 2 (negative campaigning is accusations of flip-flopping of opponent):

Welcome again…

The following is a summary of the most important events that happened today with respect to the election campaign of the two candidates running for President of the University’s Student Union.
The election campaign of Candidate "A" witnessed after that an attack against Candidate “B” in response to his opposition to the proposal included in the election manifesto of Candidate “A” to enact a small increase in the fees to join the Union, as a way to increase the Union’s financial resources. The basis of the attack is Candidate "A”’s statement said that Candidate “B” voted for an exactly similar proposal last year, when he was a member of the Student Union on the faculty level, but he opposes the same proposal now only for electoral goals, so that he appears before all students as one who does not want to impose additional burdens on them.

On the other hand, for his part, Candidate "B" also attacked Candidate “A” because saying that he says in closed meetings the opposite of what he says in public election rallies. For example, he changed his opinion more than once on the proposal to amend the Union’s regulations to make the election of the Union Vice-President on the same ballot with the Union President starting from next year. As per Candidate “B”, Candidate “A” had previously agreed to this proposal in the Union meetings of last year, but opposed it this year just because he was in doubt that this year he would find someone to run the election with him as a candidate for the post of the Vice President.

This was our coverage of the most important events that happened today between the two candidates running for President of the University’s Student Union.

Thank you for watching. We will provide you with more details in the following news bulletins.