

Persuasion by Populist Propaganda: Individual Level Evidence from the 2015 Argentine Ballotage

(joint with Rafael Di Tella, Harvard University and Ernesto Schargrodsky, UTDT)

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Motivation

- Can person A persuade person B of something that benefits person A?
- Can A do it with lies / deception / manipulation?
- Can he/she do it when this is well known?
- In advanced democracies, political campaigns have traditionally been constrained by norms and institutions that ensure the quality of electoral outcomes.
 - For example, by limiting the extent to which candidates can lie or make misleading statements about their competitors
 - or by restricting the influence of the State on the content of the media.

Motivation 2

- Democratic institutions also ensure diversity of media outlets so people who do not want to consume political advertisements can avoid them.
- In less developed countries, these institutional constraints are often absent so State-sponsored propaganda is more frequent
- and presumably more effective.
- The “fake news” phenomenon and the recent success of populist candidates in rich countries, however, suggests that learning about propaganda campaigns, even when they take place in authoritarian contexts, may have broader relevance ☺

Preview of results: We locate 4 political videos

- Control: **Placebo**
 - A video explaining the voting process and the type of positions for which people voted on the first round.
- Treatment 1: **Propaganda**
 - The video of an “ad” for the program 678, aired during several programs, notably during the halftime interval of the soccer matches.
- Treatment 2: **Antidote Positive**
 - The same as in treatment 1 followed by a video of an ad of the Macri campaign showing candidate Mauricio Macri explaining his proposals.
- Treatment 3: **Antidote Negative**
 - The same as in treatment 1 followed by a video of an ad of the Macri campaign showing candidate Mauricio Macri explaining what he will not do.
- Treatment 4: **Antidote Fake News**
 - The same as in treatment 1 followed by a video of candidate Daniel Scioli defending the neoliberal government of the 1990’s. (informal ad)

Preview of Results

- We exploit the institutional weaknesses that allowed Argentina's populist president to set up a propaganda machine that included lies and hard to avoid campaigns
- It included an “ad” for a State sponsored TV program that attacked the opposition candidate aired the week prior to the 2015 ballotage
- Our data was produced that same week when members of a marketing panel were randomized into groups watching the “ad” or a control video.
- Pre treatment characteristics are balanced so the randomization seems successful
- Treated individuals are 7.5 percentage points less likely to report they will vote for the challenger.
- Three percentage points more likely to vote for the incumbent party’s candidate and 4.5 more likely to report to be undecided.
- Consistent with the “do nothing” recommendation of political analysts, the three strategies considered (ignoring the attack, responding to the attack or 3rd party attacking the attacker) are ineffective in protecting the challenger from the attack.
- The effect is mainly driven by women.

Selected Prior Work

- Social scientists have been interested in propaganda at least since Lasswell (1927).
- Early research often uncovered effects described as “minimal effects”.
 - As described in Iyengar, et al., (1982), “Four decades ago, spurred by the cancer of fascism abroad and the wide reach of radio at home, American social scientists inaugurated the study of what was expected to be the sinister workings of propaganda in a free society. What they found surprised them. Instead of a people easily led astray, they discovered a people that seemed quite immune to political persuasion. ... later research on persuasion drove home the point repeatedly: propaganda reinforces the public's preferences; seldom does it alter them (e.g., Katz and Feldman, 1962; Patterson and McClure, 1976; Sears and Chaffee, 1979).”
- Later studies documented a correlation between measures of exposure to political advertising and voter preferences (e.g., Baum, 2002).
- An early paper to study the causal effect of political advertising is della Vigna and Kaplan (2007), who exploit the staggered availability of the Fox News channel on voting in the US. They find Fox availability in otherwise similar towns increased the Republican share of votes in the 2000 presidential election by half a percentage point.
- A related study by Gerber et al. (2011) provides experimental evidence on the effects of political advertising during a gubernatorial campaign in Texas in 2006. Exploiting the random assignment of the launch date and volume of television advertising to each experimental media market, they find strong but short-lived effects on voter preferences captured with a large daily tracking poll.
- della Vigna and Gentzkow (2010) is an excellent review of persuasion.

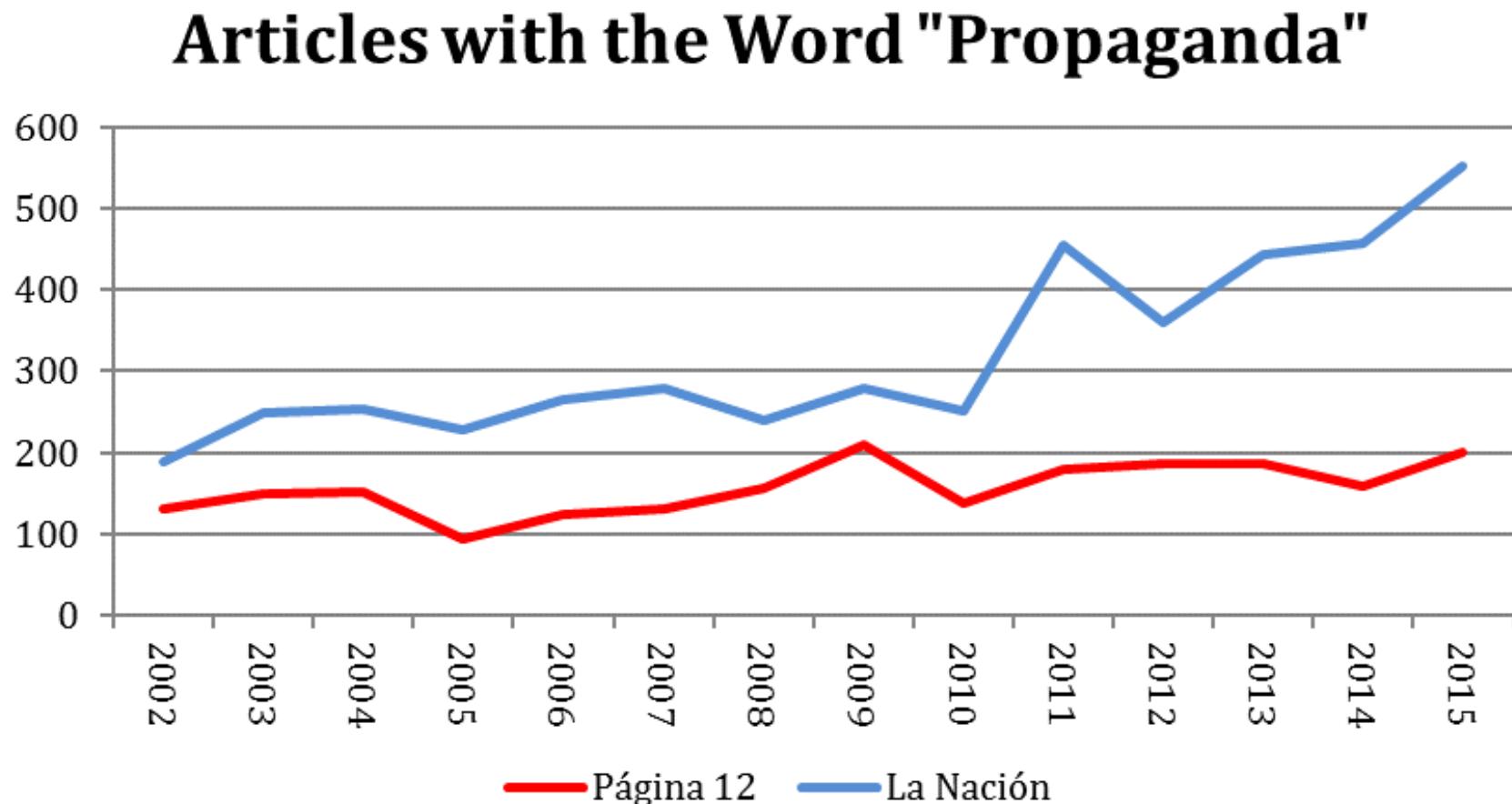
Prior Work

- Studies of the effect of the media outside of the US uncover bigger effects and are closer in spirit to the setting we study given the weaker institutional setting.
- For example, Enikolopov, Petrova and Zhuravskaya (2009) study the government controlled media market in Russia. They show how access to the one independent TV station was largely idiosyncratic conditional on observables and correlated with a decrease in the vote of government party of almost 9 percentage points and a decrease in turnout of under 4 points. For a review, see Prat and Stromberg (2013).
- Selection is important in thee settings. For example, Durante and Knight (2012) provide a clean demonstration of how media consumption changes with the perception of partisan bias. Using data for Italy under Berlusconi, they show that when news content on public television shifted to the right, right-leaning viewers increased consumption of public channels, while left-leaning viewers reacted by switching to other another channel controlled by the left. Apparently, this behavioral response did not fully offset the changes in public news content to the right.
- See also Knight and Tribin (2016), who show how Hugo Chavez's propaganda efforts generated different changes in viewership across channels depending on the latter's ideological inclination.

Setting: Argentina 2015

- Kirchner government set up a propaganda machine that allowed it to attack critics (eg., economists), firms (e.g., Shell, Suez) and the opposition.
- One example, which demonstrates the low cost of lying, is
 - *Investment versus Propaganda in the Formation of beliefs about the Argentine Water Privatization.* Di Tella, Galiani and Schargrodsky 2012, JPubE
- This included the public TV channel as well as private media that biased its coverage in response to transfers.
 - *Government Advertising and Media Coverage of Corruption Scandals..* Di Tella and Franceschelli, 2011 AEJ: Applied

Word count consistent with perception of an active propaganda campaign



Data: Setting Argentina 2015

- One component of this effort was *Futbol para Todos* (Soccer for All), an agreement with the soccer federation to transmit soccer matches (1st & 2nd division, **Libertadores cup, Sudamericana** and national team) which was started in August 2009.
- Only state-sponsored advertising or “official ads” allowed (i.e., no advertising by private entities). FPT made available on Public TV, América, Canal 9, Crónica, 360 TV Digital, CN23, Canal 10 de Córdoba, Canal 11 de Paraná, Canal 10 de Tucumán, Canal 12 de Posadas, Canal 5 de Corrientes y Canal 7 de Jujuy, amongst others with the purpose that “none of the more than 40 million argentines be excluded”. The Facebook page of FPT had 1.8 million followers, besides an exclusive app and a youtube channel.
- The audience was considerable, with an average of 10 percentage points for an average match, with approximately three times that amount for matches involving the more popular teams, such as Boca or Racing Club. Anecdotal evidence suggests that ads aired at halftime together with first half highlights received considerable attention. (see Grinberg, 2015).

DATA

- The 1st round of the 2015 presidential election took place on October 25th.
- Daniel Scioli obtained 37.15% of the votes, and Mauricio Macri 34.15%. As no candidate got 45% of the votes, nor 40% and a 10% difference, a ballotage was called for November 22nd.
- As late as November 11th Macri was expected to win comfortably, by 10.6 percentage points (54.8% vs 45.2%).
- Eventually, he won the ballotage by 2.68 points (51.34% to 48.66%).
- During the interim period between the 1st and 2nd rounds, a “dirty campaign” accusing Macri of resemblance with the 1976-83 military dictatorship and of being in favor of reducing wages.

DATA

- The propaganda campaign was aired in FPT. It was then reproduced in other TV shows and media. For example, it aired during halftime of Boca-Tigre which had very high ratings as it was the game that allowed Boca to win the season Championship.
- The Macri campaign feared replies would be ineffective and did little to respond (Iglesias Illa, 2016). Macri complained “I regret this because I assumed that Daniel Scioli was a good person”.
- Instead, it mainly continued their positive propaganda.
- One mild specific response was a TV add on what Macri wouldn’t do.
- A short clip showing Scioli supporting Menem’s neoliberal policies of the 1990’s circulated in the social networks, aired by supporters.

DATA: Wonderpanel

- Wonder (www.wonderconsultora.com.ar) is a consulting firm specialized in marketing and public opinion research.
- Since 2008, they developed Wonderpanel, an on-line panel of individuals.
- Individuals participate voluntarily in the panel. In exchange for participation, they earn prizes or chances for participation in lotteries for prizes.

DATA: Wonderpanel's Experiment

- Once the dirty campaign started, the firm Wonder attempted to learn about its effects and potential responses to counteract it.
- They performed a randomized control trial on their panel population.
- The survey was carried out in the ten running days between November 11th and November 20th, the interim period between the General Election of October 22nd and the Ballotage of November 25th.
- As we were acquainted with the director of the firm, we gave her some advice on how to learn from RCTs, but we did not participate directly in the design of this study.
- We do not know if the firm sold the results of this study to any of the political parties, but we do know that they were involved in other ways with the Macri campaign.
- We bought the data from them after the ballotage.

DATA

- 1202 Wonderpanel members participated on line in a RCT.
- After a short number of questions:
 - 1/3 of the sample were exposed to a placebo video on the election procedures (control group).
 - Another 1/3 was exposed to the dirty campaign video (treatment group).
 - The last 1/3 was divided in thirds and exposed to the dirty campaign video plus three “antidotes” (treatment+antidote group):
 - A positive Macri video.
 - The “What I am not going to do” Macri video.
 - The clip accusing Scioli of supporting Menem’s policies.
- A questionnaire was completed after the video exposure asking subjects:
 - whether they thought Macri believed that lowering wages was necessary.
 - their opinion of Macri.
 - whether they would rather make a donation to a soup kitchen sponsored by Scioli or Macri.
 - how they intended to vote on the ballotage round.

The Videos

- Control: The first video explained the voting process and the type of positions for which people voted on the first round. This video consisted on the placebo treatment for this study
- Treatment: Respondents watched a video in which the economic plans of Presidential Candidate Macri are compared with those of the military regime that ruled Argentina between 1976 and 1983, a period characterized by a severe economic and financial crisis. The video is an extract from a program on a state-owned channel, thus constituting the “propaganda” treatment
- Antidote Positive: consists on the propaganda video and another clip where Macri explains his economic proposal
- Antidote Negative: In the fourth video respondents watch the propaganda video and another video of Macri responding to several accusations made against him
- **Fake News:** The fifth video consists on the propaganda video and a widely circulated clip of an interview of the government-backed Presidential Candidate Scioli in the 1990's defending the privatization of the state-owned oil and gas company YPF

Empirical Strategy

- We estimate regressions of the form
- $Vote_i = a + b Propaganda_i + \mu_i$
- where $Vote_i$ is person's i answer to the question "Who will you vote for in the ballotage of November 22nd? We group Blank and Don't Know into one category and report the 3 options separately so as to study the distribution of vote intentions post treatment. The errors in the three equations are (by construction) statistically dependent, so we estimate them by means of Seemingly Unrelated Regressions (SUR), which is more efficient than OLS.
- Identification of the average causal effect of propaganda is based on the random assignment of subjects to treatment arms by the marketing firm. Table 1A reports the pre-treatment characteristics of the control and treated samples. There do not seem to be significant differences in observable characteristics across the two samples, so it is reasonable to assume that unobservables are also balanced.

Table 1A: Pre-treatment Characteristics – Control vs Treatment Group

Variables	Control			Treatment			Difference	SE	p-value
	Mean	SD	N	Mean	SD	N			
Gender	0.450	0.498	400	0.456	0.498	802	-0.006	0.031	0.835
Household Head	0.628	0.484	400	0.635	0.482	802	-0.007	0.030	0.808
Age	43.988	12.051	400	43.231	11.371	802	0.757	0.710	0.287
Years of Education	16.370	2.171	400	16.256	2.201	802	0.114	0.134	0.394
HH - Years of Education	16.218	2.481	400	16.112	2.579	802	0.105	0.156	0.500
Buenos Aires City	0.425	0.495	400	0.398	0.490	802	0.027	0.030	0.365
Greater Buenos Aires	0.315	0.465	400	0.322	0.467	802	-0.007	0.029	0.815
Messi is Better	0.533	0.500	400	0.488	0.500	802	0.045	0.031	0.142
Poor don't make Effort	0.215	0.411	400	0.228	0.420	802	-0.013	0.026	0.606
Penalty	27.758	21.465	400	26.244	20.639	802	1.513	1.280	0.238

Notes: *Gender* is a dummy variable that equals one if the respondent is male, and zero if the respondent is female. *Household Head* is a dummy variable that equals one if the respondent self-defines as the head of the household, and zero otherwise. *Age* is the age declared by the respondent. *Years of Education* is the education level declared by the respondent. *HH - Years of Education* is the education level declared by the respondent referring to the household head. *Buenos Aires City* is a dummy variable that equals one if the respondent lives in Buenos Aires City. *Greater Buenos Aires* is a dummy variable that equals one if the respondent lives in Greater Buenos Aires. *Messi is Better* is a dummy variable that equals one if the respondent thinks that Lionel Messi is a better soccer player than Diego Maradona. *Poor don't make Effort* is a dummy variable that equals one if the respondent thinks that poor people are poor because they do not make effort. *Penalty* is the number of months that the respondent considers that a 20-year-old man should be in prison if he is found guilty of robbery for the second time.

Table 1B: Pre-treatment Characteristics – Control vs Only Propaganda Groups

Variables	Control			Propaganda			Difference	SE	p-value
	Mean	SD	N	Mean	SD	N			
Gender	0.450	0.498	400	0.418	0.494	400	0.033	0.035	0.354
Household Head	0.628	0.484	400	0.648	0.478	400	-0.020	0.034	0.557
Age	43.988	12.051	400	42.855	11.283	400	1.133	0.825	0.170
Years of Education	16.370	2.171	400	16.183	2.235	400	0.188	0.156	0.229
HH - Years of Education	16.218	2.481	400	15.978	2.698	400	0.240	0.183	0.191
Buenos Aires City	0.425	0.495	400	0.400	0.491	400	0.025	0.035	0.473
Greater Buenos Aires	0.315	0.465	400	0.330	0.471	400	-0.015	0.033	0.650
Messi is Better	0.533	0.500	400	0.470	0.500	400	0.063	0.035	0.077
Poor don't make Effort	0.215	0.411	400	0.233	0.423	400	-0.018	0.029	0.553
Penalty	27.758	21.465	400	26.543	20.941	400	1.215	1.499	0.418

Notes: *Gender* is a dummy variable that equals one if the respondent is male, and zero if the respondent is female. *Household Head* is a dummy variable that equals one if the respondent self-defines as the head of the household, and zero otherwise. *Age* is the age declared by the respondent. *Years of Education* is the education level declared by the respondent. *HH - Years of Education* is the education level declared by the respondent referring to the household head. *Buenos Aires City* is a dummy variable that equals one if the respondent lives in Buenos Aires City. *Greater Buenos Aires* is a dummy variable that equals one if the respondent lives in Greater Buenos Aires. *Messi is Better* is a dummy variable that equals one if the respondent thinks that Lionel Messi is a better soccer player than Diego Maradona. *Poor don't make Effort* is a dummy variable that equals one if the respondent thinks that poor people are poor because they do not make effort. *Penalty* is the number of months that the respondent considers that a 20-year-old man should be in prison if he is found guilty of robbery for the second time.

Table 1C: Pre-treatment Characteristics – Control vs Antidote 1 Group

Variables	Control			Propaganda + A1			Difference	SE	p-value
	Mean	SD	N	Mean	SD	N			
Gender	0.450	0.498	400	0.500	0.502	134	-0.050	0.050	0.316
Household Head	0.628	0.484	400	0.612	0.489	134	0.016	0.048	0.748
Age	43.988	12.051	400	43.761	11.889	134	0.226	1.199	0.850
Years of Education	16.370	2.171	400	16.194	2.209	134	0.176	0.218	0.419
HH - Years of Education	16.218	2.481	400	16.157	2.551	134	0.061	0.249	0.808
Buenos Aires City	0.425	0.495	400	0.373	0.485	134	0.052	0.049	0.292
Greater Buenos Aires	0.315	0.465	400	0.321	0.469	134	-0.006	0.047	0.899
Messi is Better	0.533	0.500	400	0.530	0.501	134	0.003	0.050	0.958
Poor don't make Effort	0.215	0.411	400	0.239	0.428	134	-0.024	0.041	0.566
Penalty	27.758	21.465	400	27.067	21.221	134	0.690	2.136	0.747

Notes: *Gender* is a dummy variable that equals one if the respondent is male, and zero if the respondent is female. *Household Head* is a dummy variable that equals one if the respondent self-defines as the head of the household, and zero otherwise. *Age* is the age declared by the respondent. *Years of Education* is the education level declared by the respondent. *HH - Years of Education* is the education level declared by the respondent referring to the household head. *Buenos Aires City* is a dummy variable that equals one if the respondent lives in Buenos Aires City. *Greater Buenos Aires* is a dummy variable that equals one if the respondent lives in Greater Buenos Aires. *Messi is Better* is a dummy variable that equals one if the respondent thinks that Lionel Messi is a better soccer player than Diego Maradona. *Poor don't make Effort* is a dummy variable that equals one if the respondent thinks that poor people are poor because they do not make effort. *Penalty* is the number of months that the respondent considers that a 20-year-old man should be in prison if he is found guilty of robbery for the second time.

Table 1D: Pre-treatment Characteristics – Control vs Antidote 2 Group

Variables	Control			Propaganda + A2			Difference	SE	p-value
	Mean	SD	N	Mean	SD	N			
Gender	0.450	0.498	400	0.500	0.502	134	-0.050	0.050	0.316
Household Head	0.628	0.484	400	0.634	0.483	134	-0.007	0.048	0.888
Age	43.988	12.051	400	42.433	10.716	134	1.555	1.171	0.185
Years of Education	16.370	2.171	400	16.403	2.049	134	-0.033	0.214	0.877
HH - Years of Education	16.218	2.481	400	16.373	2.123	134	-0.156	0.239	0.516
Buenos Aires City	0.425	0.495	400	0.388	0.489	134	0.037	0.049	0.454
Greater Buenos Aires	0.315	0.465	400	0.321	0.469	134	-0.006	0.047	0.899
Messi is Better	0.533	0.500	400	0.522	0.501	134	0.010	0.050	0.840
Poor don't make Effort	0.215	0.411	400	0.201	0.403	134	0.014	0.041	0.741
Penalty	27.758	21.465	400	25.679	20.017	134	2.078	2.107	0.324

Notes: *Gender* is a dummy variable that equals one if the respondent is male, and zero if the respondent is female. *Household Head* is a dummy variable that equals one if the respondent self-defines as the head of the household, and zero otherwise. *Age* is the age declared by the respondent. *Years of Education* is the education level declared by the respondent. *HH - Years of Education* is the education level declared by the respondent referring to the household head. *Buenos Aires City* is a dummy variable that equals one if the respondent lives in Buenos Aires City. *Greater Buenos Aires* is a dummy variable that equals one if the respondent lives in Greater Buenos Aires. *Messi is Better* is a dummy variable that equals one if the respondent thinks that Lionel Messi is a better soccer player than Diego Maradona. *Poor don't make Effort* is a dummy variable that equals one if the respondent thinks that poor people are poor because they do not make effort. *Penalty* is the number of months that the respondent considers that a 20-year-old man should be in prison if he is found guilty of robbery for the second time.

Table 1E: Pre-treatment Characteristics – Control vs Antidote 3 Group

Variables	Control			Propaganda + A3			Difference	SE	p-value
	Mean	SD	N	Mean	SD	N			
Gender	0.450	0.498	400	0.485	0.502	134	-0.035	0.050	0.482
Household Head	0.628	0.484	400	0.619	0.487	134	0.008	0.048	0.867
Age	43.988	12.051	400	44.619	11.718	134	-0.632	1.195	0.597
Years of Education	16.370	2.171	400	16.388	2.248	134	-0.018	0.219	0.934
HH - Years of Education	16.218	2.481	400	16.209	2.659	134	0.009	0.252	0.973
Buenos Aires City	0.425	0.495	400	0.425	0.496	134	0.000	0.049	0.994
Greater Buenos Aires	0.315	0.465	400	0.299	0.459	134	0.016	0.046	0.722
Messi is Better	0.533	0.500	400	0.463	0.500	134	0.070	0.050	0.162
Poor don't make Effort	0.215	0.411	400	0.231	0.423	134	-0.016	0.041	0.693
Penalty	27.758	21.465	400	25.097	19.905	134	2.660	2.105	0.207

Notes: *Gender* is a dummy variable that equals one if the respondent is male, and zero if the respondent is female. *Household Head* is a dummy variable that equals one if the respondent self-defines as the head of the household, and zero otherwise. *Age* is the age declared by the respondent. *Years of Education* is the education level declared by the respondent. *HH - Years of Education* is the education level declared by the respondent referring to the household head. *Buenos Aires City* is a dummy variable that equals one if the respondent lives in Buenos Aires City. *Greater Buenos Aires* is a dummy variable that equals one if the respondent lives in Greater Buenos Aires. *Messi is Better* is a dummy variable that equals one if the respondent thinks that Lionel Messi is a better soccer player than Diego Maradona. *Poor don't make Effort* is a dummy variable that equals one if the respondent thinks that poor people are poor because they do not make effort. *Penalty* is the number of months that the respondent considers that a 20-year-old man should be in prison if he is found guilty of robbery for the second time.

Empirical Strategy II

- While all p-values are above conventional values in Table 1A, the one for *Messi is Better* is relatively low (0.142). Given that the difference in the average for this variable is large (4.5 percentage points) it is important to note that the sign implies a potential confound. Indeed, it is not impossible to imagine Macri voters to favor Lionel Messi over Maradona given his introverted nature, the time he spent in his formative years in Europe and Maradona's public support for Fidel Castro and Hugo Chavez.
- To investigate this further, in Table 2 we study whether an ideological indicator (Will Vote Macri) is correlated with *Messi is Better* in the control group. The coefficient is positive and significant suggesting this is a potential confound. Accordingly, we check if our results are affected by this variable.
- An obvious control is to add *Messi is better* as a control variable.
- A more extreme approach is to control for vote in the first round. It is a post treatment variable, so it is impossible to rule out that the estimated coefficient on this variable is capturing effects of the treatment itself. But one virtue of the approach is that it helps interpretation in the most pessimistic scenario: if all that the Propaganda treatment is capturing is a failure in the randomization, where the group that received the treatment was already anti-Macri, then one would expect that the coefficient on Propaganda in regressions that include prior vote is close to zero (and insignificant). We show that this is not the case below.

Table 2: Effects of Propaganda

Variables	(1) Will Vote Macri	(2) Will Vote Scioli	(3) Doesn't Know / Will Vote Blank	(4) Will Vote Macri	(5) Will Vote Scioli	(6) Doesn't Know / Will Vote Blank
Propaganda	-0.075** (0.030)	0.029 (0.025)	0.046* (0.027)	-0.065** (0.030)	0.020 (0.024)	0.045* (0.027)
Constant	0.580*** (0.025)	0.187*** (0.020)	0.233*** (0.022)	0.061 (0.125)	0.495*** (0.101)	0.444*** (0.113)
Observations	1,202	1,202	1,202	1,202	1,202	1,202
Controls	No	No	No	Yes	Yes	Yes
R-squared	0.005	0.001	0.002	0.059	0.065	0.018

Notes: Seemingly unrelated regression (SUR) estimates. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. *Will Vote Macri* is a dummy variable that equals 1 if the respondent will vote Macri in the ballotage of November 22nd, and zero otherwise. *Will Vote Scioli* is a dummy variable that equals 1 if the respondent will vote Scioli in the ballotage of November 22nd, and zero otherwise. *Doesn't Know / Will Vote Blank* is a dummy variable that equals 1 if the respondent does not know who will vote or will vote blank in the ballotage of November 22nd, and zero otherwise. *Propaganda* is a dummy variable that equals 1 if the respondent was shown a part of an episode of 6, 7, 8, and zero otherwise. In columns (4), (5) and (6) *Gender, Household Head, Age, Years of Education, HH - Years of Education, Buenos Aires City, Greater Buenos Aires, Messi is Better, Poor don't make Effort* and *Penalty* are included as controls.

Table 3: Effects of Propaganda and Antidotes

Variables	(1) Will Vote Macri	(2) Will Vote Scioli	(3) Doesn't Know / Will Vote Blank	(4) Will Vote Macri	(5) Will Vote Scioli	(6) Doesn't Know / Will Vote Blank
Propaganda	-0.062* (0.034)	0.025 (0.028)	0.037 (0.031)	-0.062* (0.034)	0.025 (0.028)	0.037 (0.031)
Any Antidote	-0.005 (0.034)	-0.011 (0.028)	0.016 (0.031)			
Antidote 1				0.024 (0.048)	-0.042 (0.039)	0.018 (0.044)
Antidote 2				-0.035 (0.048)	-0.021 (0.039)	0.056 (0.044)
Antidote 3				-0.004 (0.048)	0.029 (0.039)	-0.025 (0.044)
Constant	0.060 (0.125)	0.494*** (0.101)	0.446*** (0.113)	0.060 (0.125)	0.496*** (0.101)	0.444*** (0.112)
Observations	1,202	1,202	1,202	1,202	1,202	1,202
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.059	0.065	0.018	0.060	0.067	0.020

Notes: Seemingly unrelated regression (SUR) estimates. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. *Will Vote Macri* is a dummy variable that equals 1 if the respondent will vote Macri in the ballotage of November 22nd, and zero otherwise. *Will Vote Scioli* is a dummy variable that equals 1 if the respondent will vote Scioli in the ballotage of November 22nd, and zero otherwise. *Doesn't Know / Will Vote Blank* is a dummy variable that equals 1 if the respondent does not know who will vote or will vote blank in the ballotage of November 22nd, and zero otherwise. *Propaganda* is a dummy variable that equals 1 if the respondent was shown a part of an episode of 6, 7, 8, and zero otherwise. *Any Antidote* is a dummy variable that equals 1 if the respondent was shown some type of counter video, and zero otherwise. *Antidote 1* is a dummy variable that equals 1 if the respondent was shown a video of Macri describing his economic proposals, and zero otherwise. *Antidote 2* is a dummy variable that equals 1 if the respondent was shown a video of Macri describing the measures that he was not willing to undertake, and zero otherwise. *Antidote 3* is a dummy variable that equals 1 if the respondent was shown an interview of candidate Scioli defending the candidacy of then-president Carlos Menem and the privatization of state-owned oil company YPF in the late 90's, and zero otherwise. *Gender*, *Household Head*, *Age*, *Years of Education*, *HH - Years of Education*, *Buenos Aires City*, *Greater Buenos Aires*, *Messi is Better*, *Poor don't make Effort* and *Penalty* are included as controls.

Table 4: Effects of Propaganda and First-Round Vote

Variables	(1) Will Vote Macri	(2) Will Vote Scioli	(3) Doesn't Know / Will Vote Blank	(4) Will Vote Macri	(5) Will Vote Scioli	(6) Doesn't Know / Will Vote Blank
Propaganda	-0.039* (0.020)	0.019 (0.016)	0.020 (0.022)			
Propaganda*				-0.044 (0.031)	-0.002 (0.024)	0.046 (0.033)
Voted Macri					-0.044 (0.048)	0.003 (0.037)
Propaganda*					-0.068 (0.060)	0.181*** (0.047)
Voted Scioli					-0.004 (0.044)	-0.018 (0.034)
Propaganda*						-0.114* (0.047)
Voted Massa						(0.065)
Propaganda*						0.021
Voted others						(0.047)
Voted Macri	0.563*** (0.049)	-0.098** (0.039)	-0.465*** (0.053)	0.592*** (0.053)	-0.097** (0.041)	-0.495*** (0.057)
Voted Scioli	-0.304*** (0.053)	0.740*** (0.041)	-0.437*** (0.057)	-0.274*** (0.062)	0.739*** (0.048)	-0.464*** (0.067)
Voted Massa	0.166*** (0.054)	0.032 (0.043)	-0.198*** (0.059)	0.212*** (0.069)	-0.095* (0.054)	-0.117 (0.075)
Voted others	-0.154*** (0.051)	0.021 (0.040)	0.134** (0.055)	-0.153** (0.060)	0.034 (0.046)	0.120* (0.064)
Constant	0.277*** (0.097)	-0.007 (0.076)	0.730*** (0.105)	0.248*** (0.096)	0.012 (0.074)	0.740*** (0.103)
Observations	1,202	1,202	1,202	1,202	1,202	1,202
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.557	0.590	0.337	0.557	0.595	0.339

Notes: Seemingly unrelated regression (SUR) estimates. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. *Will Vote Macri* is a dummy variable that equals 1 if the respondent will vote Macri in the ballotage of November 22nd, and zero otherwise. *Will Vote Scioli* is a dummy variable that equals 1 if the respondent will vote Scioli in the ballotage of November 22nd, and zero otherwise. *Doesn't Know / Will Vote Blank* is a dummy variable that equals 1 if the respondent does not know who will vote or will vote blank in the ballotage of November 22nd, and zero otherwise. *Propaganda* is a dummy variable that equals 1 if the respondent was shown a part of an episode of 6, 7, 8, and zero otherwise. *Voted Macri* is a dummy variable that equals 1 if the respondent voted for Macri in the general election of October 25th, and zero otherwise. *Voted Scioli* is a dummy variable that equals 1 if the respondent voted for Scioli in the general election of October 25th, and zero otherwise. *Voted Massa* is a dummy variable that equals 1 if the respondent voted for Massa in the general election of October 25th, and zero otherwise. *Voted others* is a dummy variable that equals 1 if the respondent voted any other candidate in the general election of October 25th, and zero otherwise. *Gender, Household Head, Age, Years of Education, HH - Years of Education, Buenos Aires City, Greater Buenos Aires, Messi is Better, Poor don't make Effort* and *Penalty* are included as controls.

Table 5A: Effects of Propaganda on Women

Variables	(1) Will Vote Macri	(2) Will Vote Scioli	(3) Doesn't Know / Will Vote Blank	(4) Will Vote Macri	(5) Will Vote Scioli	(6) Doesn't Know / Will Vote Blank
Propaganda	-0.118*** (0.040)	0.042 (0.032)	0.076** (0.037)	-0.101** (0.045)	0.024 (0.036)	0.076* (0.043)
Antidote 1				-0.030 (0.067)	0.017 (0.054)	0.013 (0.063)
Antidote 2				-0.055 (0.067)	-0.016 (0.053)	0.070 (0.063)
Antidote 3				-0.025 (0.066)	0.110** (0.053)	-0.085 (0.062)
Constant	0.007 (0.170)	0.411*** (0.135)	0.582*** (0.159)	0.001 (0.170)	0.420*** (0.135)	0.579*** (0.159)
Observations	656	656	656	656	656	656
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.070	0.086	0.022	0.071	0.093	0.028

Notes: Seemingly unrelated regression (SUR) estimates. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. *Will Vote Macri* is a dummy variable that equals 1 if the respondent will vote Macri in the ballotage of November 22nd, and zero otherwise. *Will Vote Scioli* is a dummy variable that equals 1 if the respondent will vote Scioli in the ballotage of November 22nd, and zero otherwise. *Doesn't Know / Will Vote Blank* is a dummy variable that equals 1 if the respondent does not know who will vote or will vote blank in the ballotage of November 22nd, and zero otherwise. *Propaganda* is a dummy variable that equals 1 if the respondent was shown a part of an episode of 6, 7, 8, and zero otherwise. *Antidote 1* is a dummy variable that equals 1 if the respondent was shown a video of Macri describing his economic proposals, and zero otherwise. *Antidote 2* is a dummy variable that equals 1 if the respondent was shown a video of Macri describing the measures that he was not willing to undertake, and zero otherwise. *Antidote 3* is a dummy variable that equals 1 if the respondent was shown an interview of candidate Scioli defending the candidacy of then-president Carlos Menem and the privatization of state-owned oil company YPF in the late 90's, and zero otherwise. *Household Head*, *Age*, *Years of Education*, *HH - Years of Education*, *Buenos Aires City*, *Greater Buenos Aires*, *Messi is Better*, *Poor don't make Effort* and *Penalty* are included as controls.

Table 5B: Effects of Propaganda on Men

Variables	(1) Will Vote Macri	(2) Will Vote Scioli	(3) Doesn't Know / Will Vote Blank	(4) Will Vote Macri	(5) Will Vote Scioli	(6) Doesn't Know / Will Vote Blank
Propaganda	-0.005 (0.044)	-0.008 (0.036)	0.013 (0.038)	-0.011 (0.052)	0.024 (0.042)	-0.012 (0.045)
Antidote 1				0.057 (0.070)	-0.097* (0.057)	0.040 (0.060)
Antidote 2				-0.035 (0.070)	-0.024 (0.057)	0.059 (0.060)
Antidote 3				0.015 (0.070)	-0.052 (0.058)	0.037 (0.060)
Constant	0.118 (0.192)	0.680*** (0.157)	0.202 (0.165)	0.111 (0.192)	0.687*** (0.157)	0.202 (0.165)
Observations	546	546	546	546	546	546
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.062	0.077	0.020	0.065	0.082	0.022

Notes: Seemingly unrelated regression (SUR) estimates. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. *Will Vote Macri* is a dummy variable that equals 1 if the respondent will vote Macri in the ballotage of November 22nd, and zero otherwise. *Will Vote Scioli* is a dummy variable that equals 1 if the respondent will vote Scioli in the ballotage of November 22nd, and zero otherwise. *Doesn't Know / Will Vote Blank* is a dummy variable that equals 1 if the respondent does not know who will vote or will vote blank in the ballotage of November 22nd, and zero otherwise. *Propaganda* is a dummy variable that equals 1 if the respondent was shown a part of an episode of 6, 7, 8, and zero otherwise. *Antidote 1* is a dummy variable that equals 1 if the respondent was shown a video of Macri describing his economic proposals, and zero otherwise. *Antidote 2* is a dummy variable that equals 1 if the respondent was shown a video of Macri describing the measures that he was not willing to undertake, and zero otherwise. *Antidote 3* is a dummy variable that equals 1 if the respondent was shown an interview of candidate Scioli defending the candidacy of then-president Carlos Menem and the privatization of state-owned oil company YPF in the late 90's, and zero otherwise. *Household Head*, *Age*, *Years of Education*, *HH - Years of Education*, *Buenos Aires City*, *Greater Buenos Aires*, *Messi is Better*, *Poor don't make Effort* and *Penalty* are included as controls.

Table 6: Macri wants to lower wages

Variables	Total		Women		Men	
	(1) Macri wants to lower wages	(2) Macri wants to lower wages	(3) Macri wants to lower wages	(4) Macri wants to lower wages	(5) Macri wants to lower wages	(6) Macri wants to lower wages
Propaganda	0.015 (0.027)	0.027 (0.032)	0.062* (0.036)	0.053 (0.041)	-0.044 (0.042)	-0.005 (0.050)
Antidote 1		0.000 (0.046)		0.083 (0.067)		-0.094 (0.065)
Antidote 2		-0.060 (0.045)		-0.064 (0.060)		-0.053 (0.068)
Antidote 3		-0.013 (0.045)		0.036 (0.063)		-0.067 (0.066)
Constant	0.661*** (0.114)	0.658*** (0.115)	0.492*** (0.151)	0.503*** (0.153)	0.911*** (0.177)	0.917*** (0.177)
Observations	1,202	1,202	656	656	546	546
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.067	0.068	0.089	0.095	0.062	0.066

Notes: OLS estimates. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. *Macri wants to lower wages* is a dummy variable that equals 1 if the respondent believes Macri wants to lower wages, and zero otherwise. *Propaganda* is a dummy variable that equals 1 if the respondent was shown a part of an episode of 6, 7, 8, and zero otherwise. *Antidote 1* is a dummy variable that equals 1 if the respondent was shown a video of Macri describing his economic proposals, and zero otherwise. *Antidote 2* is a dummy variable that equals 1 if the respondent was shown a video of Macri describing the measures that he was not willing to undertake, and zero otherwise. *Antidote 3* is a dummy variable that equals 1 if the respondent was shown an interview of candidate Scioli defending the candidacy of then-president Carlos Menem and the privatization of state-owned oil company YPF in the late 90's, and zero otherwise. *Household Head, Age, Years of Education, HH - Years of Education, Buenos Aires City, Greater Buenos Aires, Messi is Better, Poor don't make Effort and Penalty* are included as controls. In columns (1) and (2), *Gender* is also included as control.

Conclusion

- In this paper, we exploit aspects of the propaganda machine set up in Argentina by the government of Nestor and Cristina Kirchner over the period 2003-15, to study the effect of propaganda on voter preferences.
- Specifically, the propaganda machine included a large influence on media outlets, either directly through ownership by regime insiders, or indirectly through the discretionary distribution of subsidies.
- The Cristina Kirchner nationalized the transmission of soccer matches, eliminating all fees under a program called “Soccer for All”. This allowed the government to insert these messages during half-time.
- Following the 2015 first-round presidential elections in Argentina, a runoff between the challenger Mauricio Macri and Daniel Scioli of the incumbent Peronist party was scheduled for November 22nd.
- Macri was expected to obtain a comfortable victory of 10.6 percentage points.
- The government’s propaganda machine was set in full, explicit motion and 12 days later Scioli had almost closed the gap, with Macri winning the presidency by less than 2.7 percentage points.

Conclusion

- Once the dirty campaign started, the firm Wonder attempted to learn about its effects and potential responses to counteract it.
- They performed a randomized control trial on their panel population. A group of subjects was treated with one of the key pieces of propaganda employed in the campaign: an ad for “6-7-8”, a controversial state-sponsored TV program that “explained” the similarities between Macri and the economic program of the military dictatorship.
- They then answered a follow-up survey on their vote intentions. A sub-group was also asked to watch the response of the Macri campaign, which fall into three categories: a denial of the accusations, an attack on Scioli and a set of policy proposals that did not refer to the accusations in the add.
- Pre treatment characteristics are balanced so the randomization seems successful
- Treated individuals are 7.5 percentage points less likely to report they will vote for the challenger. Three percentage points more likely to vote for the incumbent party’s candidate and 4.5 more likely to report to be undecided.
- Consistent with the “do nothing” recommendation of political analysts, the three strategies considered (ignoring the attack, responding to the attack or 3rd party attacking the attacker) are ineffective in protecting the challenger from the attack.
- The effect is mainly driven by women.

Online Appendix Table A1: Voted for Macri in the General Election of October 25th

Variables	Voted for Macri	Robust standard errors
Gender	0.001	0.060
Household Head	0.005	0.059
Age	0.001	0.002
Years of Education	0.016	0.018
HH - Years of Education	0.009	0.016
Buenos Aires City	-0.013	0.064
Greater Buenos Aires	-0.035	0.067
Messi is Better	0.135***	0.051
Poor don't make Effort	0.071	0.062
Penalty	0.001	0.001
Constant	-0.082	0.204
Observations	400	
R-squared	0.040	

Notes: *** p<0.01, ** p<0.05, * p<0.1. *Voted Macri* is a dummy variable that equals 1 if the respondent voted for Macri in the general election of October 25th, and zero otherwise. *Gender* is a dummy variable that equals one if the respondent is male, and zero if the respondent is female. *Household Head* is a dummy variable that equals one if the respondent self-defines as the head of the household, and zero otherwise. *Age* is the age declared by the respondent. *Years of Education* is the education level declared by the respondent. *HH - Years of Education* is the education level declared by the respondent referring to the household head. *Buenos Aires City* is a dummy variable that equals one if the respondent lives in Buenos Aires City. *Greater Buenos Aires* is a dummy variable that equals one if the respondent lives in Greater Buenos Aires. *Messi is Better* is a dummy variable that equals one if the respondent thinks that Lionel Messi is a better soccer player than Diego Maradona. *Poor don't make Effort* is a dummy variable that equals one if the respondent thinks that poor people are poor because they do not make effort. *Penalty* is the number of months that the respondent considers that a 20-year-old man should be in prison if he is found guilty of robbery for the second time.

Online Appendix Table A2: Pre-treatment Characteristics – Control vs Treatment Groups - Women

Variables	Control			Treatment			Difference	SE	p-value
	Mean	SD	N	Mean	SD	N			
Household Head	0.423	0.495	220	0.422	0.494	436	0.001	0.041	0.986
Age	39.527	10.065	220	39.869	9.526	436	-0.342	0.803	0.670
Years of Education	16.123	2.087	220	16.170	2.270	436	-0.047	0.183	0.797
HH - Years of Education	15.809	2.562	220	15.876	2.800	436	-0.067	0.225	0.766
Buenos Aires City	0.414	0.494	220	0.408	0.492	436	0.005	0.041	0.895
Greater Buenos Aires	0.336	0.474	220	0.349	0.477	436	-0.012	0.039	0.756
Messi is Better	0.582	0.494	220	0.544	0.499	436	0.038	0.041	0.353
Poor don't make Effort	0.223	0.417	220	0.239	0.427	436	-0.016	0.035	0.652
Penalty	29.045	21.221	220	26.587	20.384	436	2.458	1.709	0.151

Notes: *Household Head* is a dummy variable that equals one if the respondent self-defines as the head of the household, and zero otherwise. *Age* is the age declared by the respondent. *Years of Education* is the education level declared by the respondent. *HH - Years of Education* is the education level declared by the respondent referring to the household head. *Buenos Aires City* is a dummy variable that equals one if the respondent lives in Buenos Aires City. *Greater Buenos Aires* is a dummy variable that equals one if the respondent lives in Greater Buenos Aires. *Messi is Better* is a dummy variable that equals one if the respondent thinks that Lionel Messi is a better soccer player than Diego Maradona. *Poor don't make Effort* is a dummy variable that equals one if the respondent thinks that poor people are poor because they do not make effort. *Penalty* is the number of months that the respondent considers that a 20-year-old man should be in prison if he is found guilty of robbery for the second time.

Online Appendix Table A2: Pre-treatment Characteristics – Control vs Treatment Groups - Men

Variables	Control			Treatment			Difference	SE	p-value
	Mean	SD	N	Mean	SD	N			
Household Head	0.878	0.328	180	0.888	0.316	366	-0.010	0.029	0.726
Age	49.439	12.060	180	47.235	12.084	366	2.204**	1.099	0.045
Years of Education	16.672	2.239	180	16.358	2.115	366	0.314	0.196	0.110
HH - Years of Education	16.717	2.287	180	16.393	2.261	366	0.323	0.207	0.118
Buenos Aires City	0.439	0.498	180	0.385	0.487	366	0.054	0.045	0.230
Greater Buenos Aires	0.289	0.455	180	0.290	0.454	366	-0.001	0.041	0.986
Messi is Better	0.472	0.501	180	0.421	0.494	366	0.051	0.045	0.255
Poor don't make Effort	0.206	0.405	180	0.216	0.412	366	-0.010	0.037	0.783
Penalty	26.183	21.714	180	25.836	20.959	366	0.347	1.931	0.857

Notes: *Household Head* is a dummy variable that equals one if the respondent self-defines as the head of the household, and zero otherwise. *Age* is the age declared by the respondent. *Years of Education* is the education level declared by the respondent. *HH - Years of Education* is the education level declared by the respondent referring to the household head. *Buenos Aires City* is a dummy variable that equals one if the respondent lives in Buenos Aires City. *Greater Buenos Aires* is a dummy variable that equals one if the respondent lives in Greater Buenos Aires. *Messi is Better* is a dummy variable that equals one if the respondent thinks that Lionel Messi is a better soccer player than Diego Maradona. *Poor don't make Effort* is a dummy variable that equals one if the respondent thinks that poor people are poor because they do not make effort. *Penalty* is the number of months that the respondent considers that a 20-year-old man should be in prison if he is found guilty of robbery for the second time.