Online Appendix: Candidate Advertisements and Afro-Brazilian Political Marginalization
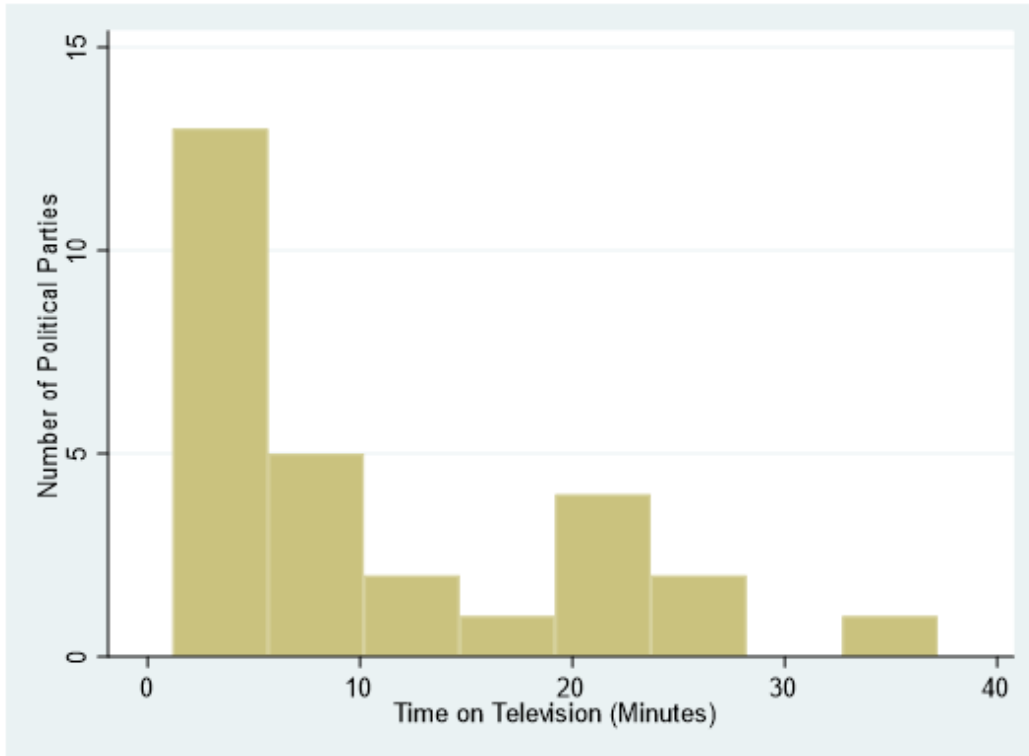Andrew Janusz, Luiz Augusto Campos

Contents

A. Distribution of HGPE Airtime to Political Parties

Appendix Figure A.1: Allotted Time on Television

Note: Appendix Figure A.1 shows the distribution of HGPE propaganda time to political parties in minutes.

B. Political Ad Coding Schema

Appendix Table B.1: Political Ad Coding Schema

Ad Length	How many seconds does the ad last?
Ad Type	What type of ad is used? These include first-person promotional, documentary, news report, dramatization, etc.
Ad Theme	What is the main subject of the ad? Candidate qualifications, issues, group appeal, etc.
Candidate Qualifications	Did the campaign ad mention a candidate's education, occupation or reference a professional achievement.
Issues	What issues does the ad mention? List all
Issue Domain	If the ad identifies a particular issue, what policy domain does it relate to? These include culture, health, education, transportation, security, etc.
Appeal	Does the candidate appeal for support on the basis of a personal attribute or qualification? This includes personal characteristics, political experience, and specific occupational expertise.
Representation Content	Does the candidate present himself or herself as representing a specific group or interest?
Promise	Does the candidate make any political promises? If yes, what does the candidate promise?
Voice	Who speaks in the ad? These include the candidate, an announcer, another person, etc.
Visual Reference	Does any visual reference appear in the ad? These include party logos, candidate images, religious symbols, etc.

C. Distribution of HGPE Airtime to Candidates

Appendix Table C.1: Regression Results Seconds During HGPE - Race Scaled

	Model 1	Model 2
Afro-Brazilian (Scaled)	-2.619***	-1.833***
	(0.443)	(0.473)
College		4.985***
		(1.008)
Business Professional		0.356
		(1.061)
Incumbent		66.010*
		(25.383)
Non-Incumbent Politician		55.496
		(31.959)
Percent Funds		28.755**
		(10.387)
Candidate Wealth		-0.000
(R $10,000)		(0.000)
Female		-7.915*
		(3.252)
Afro-Brazilian (Scaled)*Female		1.221
		(0.769)
Constant	17.430***	10.463
	(1.006)	(2.204)
Party Fixed-Effects	Yes	Yes
N	1,598	1,598
R squared	.027	.311

Standard Error in Parentheses
* p<0.05, ** p<0.01, *** p<0.001

Appendix Table C.2: Regression Results Seconds During HGPE – Restricted Sample

	Model 1	Model 2
Afro-Brazilian (Restricted) Unanimously Classified	-12.457*** (2.202)	-9.192*** (2.624)
College		5.335*** (1.746)
Business Professional		-2.371 (1.737)
Incumbent		82.294* (29.869)
Non-Incumbent Politician		69.241 (48.977)
Percent Funds		21.860*** (18.875)
Candidate Wealth (R $10,000)		-0.000*** (0.000)
Female		-8.477 (4.649)
Afro-Brazilian (Restricted)*Female		7.059 (4.939)
Constant	18.558*** (0.971)	12.346 (2.957)
Party Fixed-Effects	Yes	Yes
N	918	918
R squared	.028	.359

Standard Error in Parentheses

* p<0.05, ** p<0.01, *** p<0.00

Appendix Table C.3: Regression Results Seconds During HGPE - With Wealth Controls

	Model 1	Model 2	Model 3
Perceived Afro-Brazilian	-6.527***	-6.601**	-5.976*
	(1.665)	(2.278)	(2.326)
College	5.246***	4.475**	3.404*
	(1.085)	(1.489)	(1.280)
Business Professional	0.102	0.325	-0.781
	(1.026)	(1.235)	(1.537)
Incumbent	66.528*	80.472***	79.457***
	(25.336)	(16.964)	(17.081)
Electoral Experience	55.248	20.977	20.141
	(31.964)	(17.257)	(17.028)
Percent Resources	28.717*	25.917*	25.703*
	(9.903)	(11.450)	(11.308)
Candidate Wealth (R $10,000)	-0.000		
	(0.000)		
Candidate Wealth (Excludes Non-responses)		-0.000	
		(0.000)	
Candidate Wealth (Logged)			1.695
			(0.860)
Female	-7.267**	-5.780	-5.804
	(2.637)	(4.285)	(4.292)
Perceived Afro-Brazilian*Female	4.562	2.799	3.227
	(2.549)	(4.096)	(3.957)
Constant	9.110	11.263	3.227
	(1.878)	(2.569)	(3.957)
Party Fixed-Effects	Yes	Yes	Yes
N	1,598	793	793
R squared	.310	.385	.390

Standard Error in Parentheses

* p<0.05, ** p<0.01, *** p<0.001

Appendix Table C.4: Zero-Inflated Negative Binomial Results Seconds During HGPE

	Model 1	Model 2
Perceived Afro-Brazilian	-0.780***	-0.427***
	(0.076)	(0.075)
College		0.182**
		(0.069)
Business Professional		0.134
		(0.073)
Incumbent		1.400***
		(0.153)
Non-Incumbent Politician		1.005***
		(0.165)
Percent Funds		1.464***
		(0.173)
Candidate Wealth (R $10,000)		-0.000
		(0.000)
Female		-0.509***
		(0.091)
Perceived Afro-Brazilian*Female		0.286*
		(0.145)
Constant	2.409***	1.990***
	(0.154)	(0.145)
Inflation		
Anytime	-55.057	-50.294
	(51332.06)	(14992.38)
Constant	27.938	25.357
	(43915.79)	(12046.64)
Party Dummies	Yes	Yes
N	1,598	1,598
Log likelihood	-3155.873	-2955.756

Standard Error in Parentheses
* $p<0.05$, ** $p<0.01$, *** $p<0.00$

Appendix Table C.5: Regression Results Log of HGPE Airtime

	Model 1	Model 2
Perceived Afro-Brazilian	-0.390***	-0.299***
	(0.073)	(0.069)
College		0.159*
		(0.059)
Business Professional		0.055
		(0.057)
Incumbent		1.385***
		(0.280)
Non-Incumbent Politician		0.725*
		(0.299)
Percent Funds		0.790***
		(0.212)
Candidate Wealth		-0.000***
(R $10,000)		(0.000)
Female		-0.328***
		(0.074)
Perceived Afro-Brazilian*Female		0.182*
		(0.077)
Constant	2.263***	2.002***
	(0.031)	(0.089)
Party Fixed-Effects	Yes	Yes
N	849	849
R squared	.052	.321

Standard Error in Parentheses

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Appendix Table C.6: Regression Results Percent of HGPE Airtime

	Model 1	Model 2
Perceived Afro-Brazilian	-1.244***	-0.829*
	(0.250)	(0.352)
College		0.999**
		(0.305)
Business Professional		-0.054
		(0.366)
Incumbent		9.348*
		(3.813)
Non-Incumbent Politician		3.503
		(3.319)
Percent Funds		4.093***
		(1.122)
Candidate Wealth		0.000
(R $10,000)		(0.000)
Female		-1.081**
		(0.381)
Perceived Afro-Brazilian*Female		0.615
		(0.445)
Constant	2.312***	1.402
	(0.112)	(0.416)
Party Fixed-Effects	Yes	Yes
N	1,598	1,598
R squared	0.011	0.124

Standard Error in Parentheses

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Appendix Table C.7: Regression Results HGPE Appearance

	Model 1	Model 2
Perceived Afro-Brazilian	-.047*	-0.004
	(0.024)	(0.024)
College		0.057*
		(0.028)
Business Professional		0.028
		(0.017)
Incumbent		0.245***
		(0.057)
Non-Incumbent Politician		0.258***
		(0.051)
Percent Funds		0.180***
		(1.122)
Candidate Wealth		0.000
(R $10,000)		(0.000)
Female		-0.092**
		(0.030)
Perceived Afro-Brazilian*Female		-0.039
		(0.034)
Constant	0.553***	0.497
	(0.011)	(0.020)
Party Fixed-Effects	Yes	Yes
N	1,598	1,598
R squared	0.004	0.055

Standard Error in Parentheses

* p<0.05, ** p<0.01, *** p<0.001

**Appendix Figure C.1: Race and Gender Interaction**
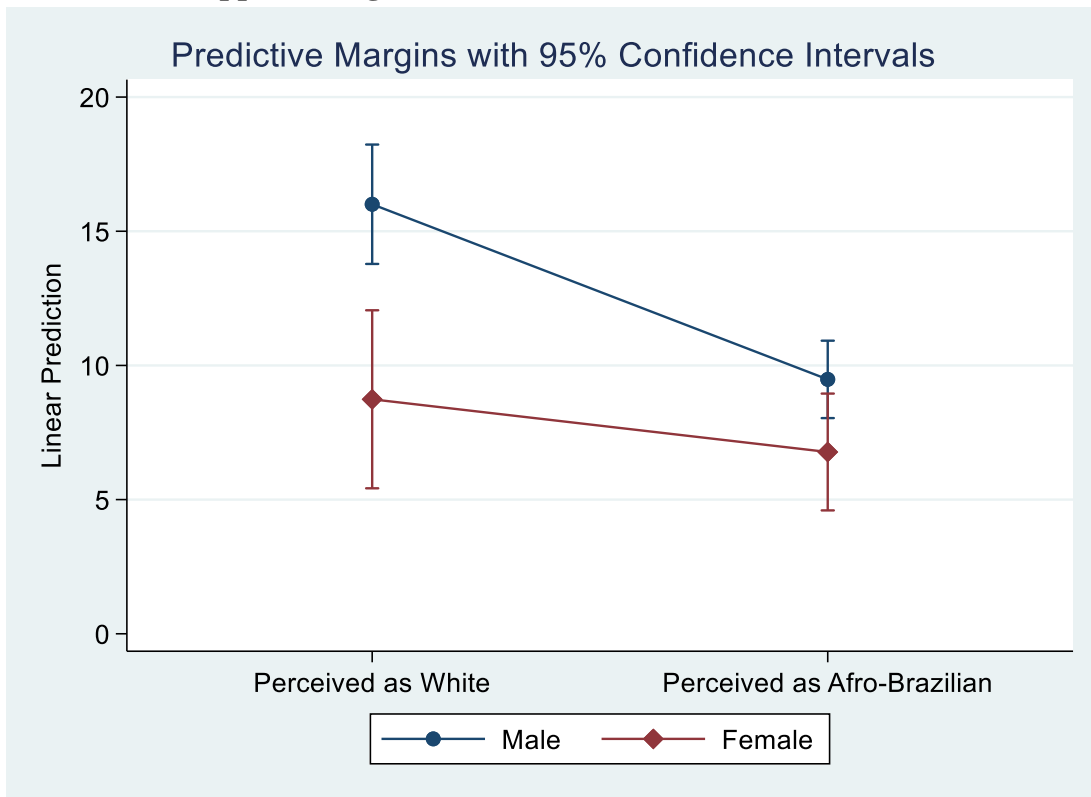
Note: Appendix Figure C.1 shows the relationship between candidate race, gender, and HGPE airtime. It demonstrates there is not a statistically significant difference between how much HGPE airtime Afro-Brazilian men and Afro-Brazilian women receive, nor is there a statistically significant difference between how much airtime white females and Afro-Brazilian females receive.

D. Sensitivity Analysis

An important threat to inference is unobservable confounds. To assess the sensitivity of our results to the "selection on the observables" assumption, we use a sensitivity procedure outlined by Blackwell (2014). This procedure allows us to assess the sensitivity of a treatment effect to an unobserved confound by exploring how large of an effect such an unobservable would have to have to explain away the estimated effect. We present the results of the sensitivity checks in Appendix Figures D.1 and D.2. Together, Appendix Figures D.1 and D.2 provide evidence that the main results are not particularly sensitive to the identifying assumption.

Appendix Figure D.1: Sensitivity of Afro-Brazilian HGPE Airtime to Selection on Unobservables: Raw Confounding
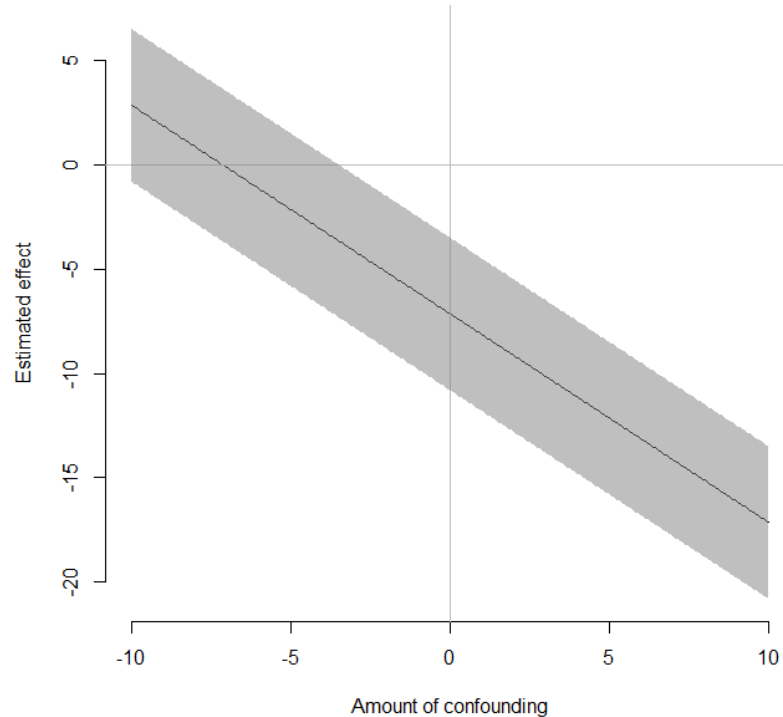
Note: Appendix Figure D.1 shows the relationship between the effect of the potential confounding variable and the estimated effect of the Afro-Brazilian indicator variable. It indicates the raw effect of the confounding variable must be at least half the size of the effect of our Afro-Brazilian indicator variable in order to explain away the results. Shaded band represents 95% confidence intervals.

Appendix Figure D.2: Afro-Brazilian HGPE Airtime to Selection on Unobservables - Variance Explained by Confounding
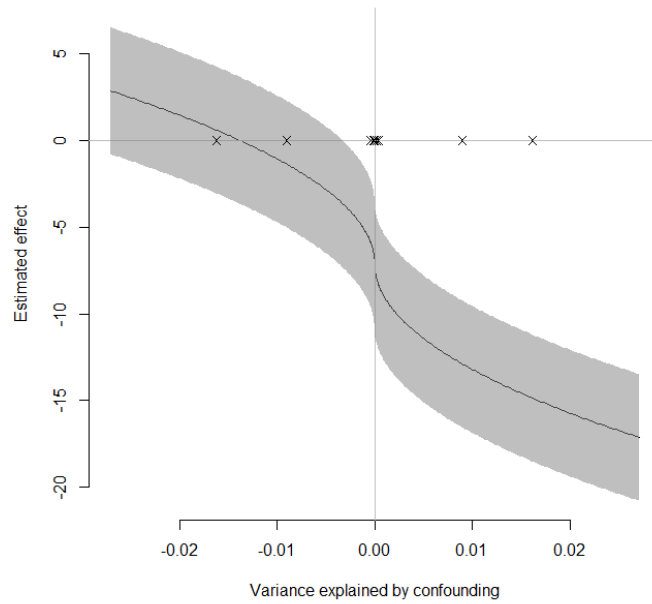
Note: Appendix Figure D.2 shows the relationship between the variance in HGPE airtime explained by confounding and the estimated effect size. It shows that an unmeasured variable would have to explain at least .014 in the variance in HGPE airtime to render our original finding statistically insignificant. Shaded band represents 95% confidence intervals.

E. Ad Content

Appendix Figure E.1: Differences in Ad Content Across Coders
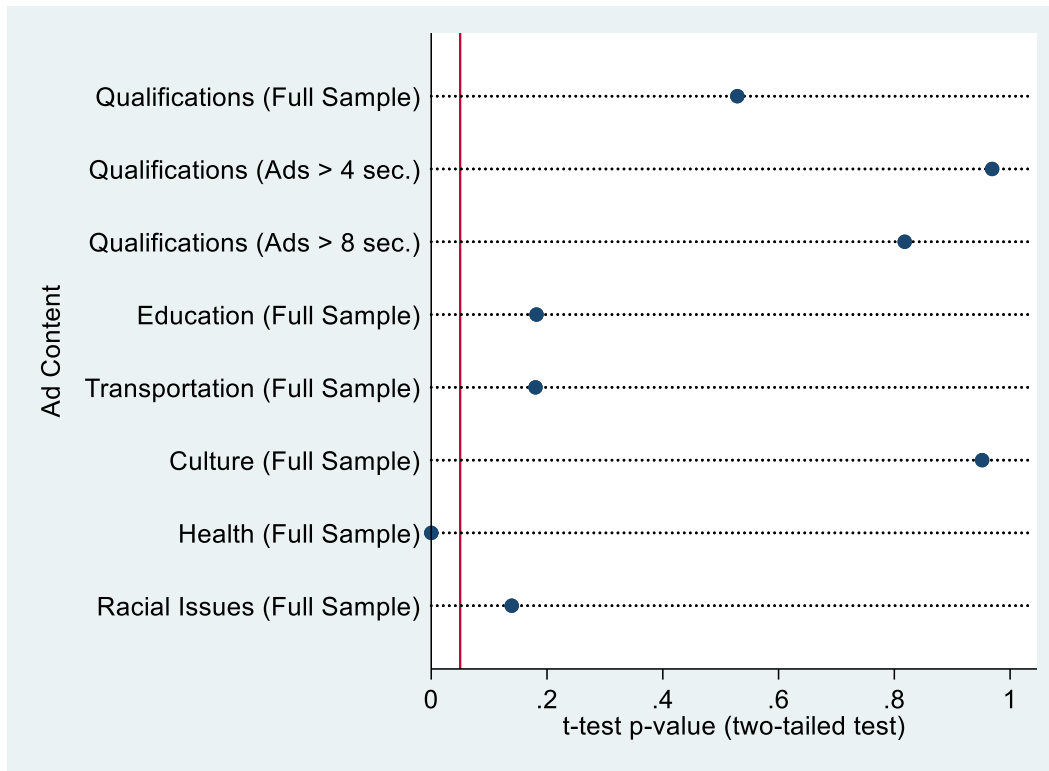
Note: Appendix Figure E.1 shows the p-values for a series of t-tests conducted to assess ad content across coders. Since coders were provided the same instructions and randomly assigned to code ads, the content of the ads they coded should, in expectation, be similar. With the exception of one policy area (health), we find that the content of ads classified by coders does not significantly differ.

Appendix Table E.1: Racial Theme Ads by Candidate Race

	Whites	Afro-Brazilian
Number of Ads	1,528	642
Percentage Mentioning Race or Racial Issues	0.13% (-0.05, 0.31)	1.25% (0.39, 2.10)
Difference in Means		-1.1%***

Note: Appendix Table E.1 shows the percent of campaign ads aired in support of white and Afro-Brazilian candidates that mentioned racial issues. The second row indicates the number of campaign ads that white and Afro-Brazilian candidates aired. The third row indicates the percentage of campaign ads that mention racial issues by racial group, as well as displays 95 percent confidence intervals. The bottom row gives the difference between white and Afro-Brazilian candidates in the percentage of ads that address race. This difference according to a two-tailed t-test is statistically significant at the $p<.001$ level.