

Appendix

Candidate Web Content Analysis Results

To produce the probabilities reported in Table 1, we ran a set of regressions on our outcome variables. We then produced predicted values using *Clarify* (Tomz et al., 2000). The regressions included a set of control variables, as follows. The results appear below in Tables A-1a, b.

The challenger and open seat variables are dummy variables (i.e., 0 or 1) indicating whether the candidate is a challenger or running for an open-seat. When both are equal to 0, it signifies incumbent status. Competition is a four-point score of how competitive the election was, based on the Cook non-partisan ratings. Senate, Democrat, and Female are dummy variables indicating whether the candidate is, respectively, running for the Senate, a Democrat, and a female. Funds raised is the amount of money the candidate raised according to the Federal Election Commissions. Front-runner is a three-point scale ranging from clear trailer to clear front-runner (see Druckman et al. 2009). District Republican is the percentage of the district that voted for the Republican presidential candidate in 2008. Opponent negativity is a dummy variable indicating whether the candidate's opponent went negative on his or her website. Prior office is a dummy variable indicating whether the candidate held any prior elective office. We include that for the incumbency factor variables so as to differentiate pure incumbency advantage as opposed to general "prior office" advantage.

Table A-1a: Web Campaign Features

	Negativity	Issue Ownership	Positions	Endorse
Challenger	1.860*** (0.395)	1.762*** (0.455)	0.165* (0.086)	0.439 (0.307)
Open Seat	1.117*** (0.315)	0.678 (0.451)	0.218*** (0.081)	0.535* (0.287)
Competition	1.403*** (0.344)	-0.428 (0.384)	0.204*** (0.070)	0.173 (0.241)
Senate	-0.108 (0.364)	0.141 (0.448)	0.142* (0.081)	0.436 (0.276)
Democrat	0.084 (0.215)	9.706*** (0.325)	-0.035 (0.060)	0.073 (0.223)
Female	0.154 (0.270)	0.316 (0.387)	-0.010 (0.071)	0.555** (0.251)
Funds Raised	10.835** (4.384)	2.499 (2.093)	0.218 (0.378)	1.066 (1.357)
Front-runner	-0.490*** (0.173)	1.045*** (0.235)	0.017 (0.044)	0.055 (0.149)
District Republican	0.517 (0.788)	-1.649 (1.195)	-0.152 (0.229)	-1.264* (0.732)
Opp. Negative	0.574** (0.265)			
Constant	-0.389 (0.707)	-5.918*** (0.966)	2.401*** (0.184)	2.510*** (0.613)
Observations	369	367	369	369
R-squared		0.749		
Log Likelihood	-109.8	-881.1	-1196	-1256

Note: The negativity model is a probit regression; issue ownership is an ordinary least squares regression; and positions and endorsements are negative binomial regressions. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1 for two-tailed tests.

Table A-1b: Web Campaign Features

	Leadership	Empathy	Experience	Familiar	District Actions
Challenger	0.575*** (0.219)	0.510** (0.218)	-1.098*** (0.294)	-0.498** (0.238)	-1.062*** (0.193)
Open Seat	0.295 (0.215)	0.350* (0.212)	-0.740*** (0.283)	-0.276 (0.225)	-0.771*** (0.170)
Competition	-0.369** (0.185)	0.335* (0.182)	0.047 (0.269)	-0.085 (0.192)	0.259* (0.156)
Senate	-0.251 (0.217)	0.092 (0.211)	-0.150 (0.298)	-0.377* (0.218)	0.075 (0.177)
Democrat	0.345** (0.154)	0.273* (0.153)	0.381* (0.211)	0.100 (0.152)	0.584*** (0.128)
Female	-0.284 (0.184)	0.004 (0.181)	-0.291 (0.249)	-0.253 (0.181)	-0.154 (0.150)
Funds Raised	1.937* (1.073)	-0.240 (0.987)	-1.970 (1.637)	-0.110 (1.070)	0.892 (0.936)
Front-runner	-0.038 (0.112)	0.092 (0.112)	-0.170 (0.161)	-0.131 (0.117)	-0.068 (0.098)
District Republican	-0.816 (0.567)	0.191 (0.559)	0.533 (0.817)	0.258 (0.557)	0.476 (0.505)
Prior Office			2.288*** (0.295)	0.158 (0.209)	0.705*** (0.183)
Constant	-0.006 (0.457)	-0.601 (0.457)	-0.742 (0.670)	0.408 (0.463)	0.935** (0.419)
Observations	369	369	369	369	369
Log Likelihood	-240.5	-245.1	-120.9	-245.6	-922.1

Note: The leadership, empathy, experience, and familiarity models are probit regressions; and district actions is a negative binomial regression. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1 for two-tailed tests.

Details on the District/Campaign

Illinois’ 9th District includes northern parts of Chicago and northern suburbs and lies alongside Lake Michigan. During the 2010 campaign, district statistics, as listed at *Congressional Quarterly’s* Roll Call, stated an estimated population (from 2000) of 653,647, a median income of \$46,531, and a demographic breakdown as follows: 68.5% White, 10.9% Black, 12.4% Asian, 11.5% Hispanic, 0.3% Native American, and 4.6% other. It is a highly Democratic district that had a Cook Partisan Voting Index Score of D+20 (meaning that the average Democratic share of the presidential vote in the district exceeds the national average share by 20%).

The District has been represented by a Democrat since 1949, with Jan Schakowsky being first elected in 1998. From 1998 to 2008, Schakowsky always garnered at least 70% of the vote. She has been one of the most liberal-leaning members of Congress. The 2010 election was expected to be at least relatively more competitive than prior contests (although it was still seen as a safe Democratic district). As mentioned in the text, Schakowsky ended up beating Pollak 66% to 31%.

Sample Demographics

Gender (n = 394)	60% female
Ethnicity/Race (n = 387)	70% White; 6% African-American; 15% Asian American; 4% Hispanic; 5% Other
Age (n = 391)	52% 18-24; 27% 25-34; 13% 35-50; 7% 51-65; 1% Over 65
Income (n = 363)	15% < \$30,000; 35% \$30,000-\$69,999; 20% \$70,000-\$99,999; 21% \$100,000-\$200,000; 9% Over \$200,000
Education (highest level) (n = 392)	4% High School; 37% Some College; 34% 4 Year College Degree; 25% Advanced Degree
Party Identification (n = 382)	25% Strong Democrat; 23% Weak Democrat; 22% Independent leans Democrat; 15% Independent; 7% Independent leans Republican; 5% Weak Republican; 3% Strong Republican

Pre-test

To ensure the webpage content was perceived as intended, we conducted a pre-test. To do this, we relied on a sample of 68 respondents who did not participate in the main experiment. We provided them with various segments meant to capture the variables (see Table 1) and asked them to rate them. For issue ownership, we listed a host of issues (e.g., see note below Table 2) and asked respondents which party they trust to do a better job at handling the issue (on a 7-point scale from “clearly Democrats” to “clearly Republicans”). For position-taking, we included statements and asked respondents to rate the extent to which it is an ambiguous or unambiguous in offering of a clear position (on a 7-point scale). For endorsements, we asked respondents to rate where each group political fell, from “strong Democrat” to “strong Republican” (on a 7-point scale). For each image, we asked respondents to rate the extent to which the statement portrayed the candidate as being a “leader,” “honest,” or “empathetic” (on 7-point scales). We used a similar approach for the incumbency factors of familiarity and taking actions. We present the results in the Table A-2, which provides mean value ratings across statements we *used* in the experiment. The results clearly suggest our content coheres with the constructs we intend.

Table A-2: Pre-Test Results

Democratic Issue Owned	2.54 (0.57)
Republican Issue Owned	5.37 (0.33)
No Issue Ownership	4.22 (0.46)
Schakowsky Clear Position	6.10 (0.39)
Pollak Clear Position	5.66 (0.75)
Schakowsky Ambiguous Position	2.53 (0.49)
Pollak Ambiguous Position	2.14 (0.30)
Democratic Endorsements	2.45 (1.32)
Republican Endorsements	5.05 (1.36)
Schakowsky Leadership	5.67 (0.15)
Pollak Leadership	5.61 (0.10)
Schakowsky Honesty	5.27 (0.38)
Pollak Honesty	5.13 (0.28)
Schakowsky Empathy	4.50 (0.23)
Pollak Empathy	5.28 (0.24)
Schakowsky Familiarity	6.15 (0.37)
Pollak Familiarity	6.10 (0.41)
Schakowsky Actions	6.03 (0.15)
Pollak Actions	5.92 (0.25)

Entries are averages with standard deviations in parentheses.

Experimental Survey Measures

How close do you think this election (Schakowsky vs. Pollak) will be?

1 2 3 4 5 6 7
Not Close at Not Sure Very Close
All

Using the scale below, please indicate how likely you are to vote for Pollak or Schakowsky. (If you plan to vote for neither, please circle 4.)

1 2 3 4 5 6 7
Definitely Not Sure Definitely will
will vote for vote for
Pollak Schakowsky

Which candidate—Pollak or Schakowsky—do you think possesses greater experience in public office?

1 2 3 4 5 6 7
Definitely Not Sure Definitely
Pollak Schakowsky

Which candidate—Pollak or Schakowsky—do you think is more familiar with the 9th Congressional District?

1 2 3 4 5 6 7
Definitely Not Sure Definitely
Pollak Schakowsky

Which candidate—Pollak or Schakowsky—do you think has taken more actions on behalf of voters in the 9th Congressional District?

1 2 3 4 5 6 7
Definitely Not Sure Definitely
Pollak Schakowsky

How well does each of the following words/phrases describe Pollak?

Not Not Very
Well at Sure Well
All

Honest
(e.g., trustworthy, forthcoming) 1 2 3 4 5 6 7

Compassionate
(e.g., cares about ordinary people,
empathic)

1 2 3 4 5 6 7

Strong Leader
(e.g., gets things done)

1 2 3 4 5 6 7

How well does each of the following words/phrases describe Schakowsky?

*Not
Well at
All*

*Not
Sure*

*Very
Well*

Honest
(e.g., trustworthy, forthcoming)

1 2 3 4 5 6 7

Compassionate
(e.g., cares about ordinary people,
empathic)

1 2 3 4 5 6 7

Strong Leader
(e.g., gets things done)

1 2 3 4 5 6 7

Do you think the government should be less involved with regulating business/the economy (e.g., private industry, banking)?

1 2 3 4 5 6 7
Definitely NOT Not Sure Definitely YES

Using the same 1-7 scale, where would you place Pollak's position on business/economic regulation (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky's position on business/economic regulation (i.e., what do you think Schakowsky thinks)? _____

Do you think there should be expanded health care coverage (e.g., requiring employers to provide coverage) in line with the recently passed health care law?

1 2 3 4 5 6 7
Definitely NOT Not Sure Definitely YES

Using the same 1-7 scale, where would you place Pollak's position on health care (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky’s position on health care (i.e., what do you think Schakowsky thinks)? _____

Do you think the government should spend more on crime prevention (e.g., salaries for law-enforcement officers, community policing programs)?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak’s position on crime prevention spending (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky’s position on crime prevention spending (i.e., what do you think Schakowsky thinks)? _____

Do you think the government should spend more on education (e.g., after-school programs, grants to modernize, renovate, and repair public schools)?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak’s position on education spending (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky’s position on education spending (i.e., what do you think Schakowsky thinks)? _____

Do you think the government should lower capital gains taxes (i.e., taxes on the sale of stocks, bonds, and property)?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak’s position on capital gains taxes (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky’s position on capital gains taxes (i.e., what do you think Schakowsky thinks)? _____

Do you think the government should be doing more to stop undocumented workers from entering the country?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak's position on undocumented workers (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky's position on undocumented workers (i.e., what do you think Schakowsky thinks)? _____

Do you think the government should be more progressive (i.e., liberal) when it comes to moral and ethical issues like abortion and same-sex marriage?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak's position on moral and ethical issues (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky's position on moral and ethical issues (i.e., what do you think Schakowsky thinks)? _____

Do you think the government should spend more on Social Security?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak's position on Social Security spending (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky's position on Social Security spending (i.e., what do you think Schakowsky thinks)? _____

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Do you think the government should be doing more to end government corruption and waste?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak’s position on government corruption (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky’s position on government corruption (i.e., what do you think Schakowsky thinks)? _____

Do you think the government should take a tougher stand against Palestinian groups in the Middle East?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak’s position on the Middle East (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky’s position on the Middle East (i.e., what do you think Schakowsky thinks)? _____

Do you think the government should reduce spending in order to lower the deficit?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak’s position on the deficit (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky’s position on the deficit (i.e., what do you think Schakowsky thinks)? _____

Do you think the government should promote energy production from renewable sources (e.g., wind, biomass, geothermal, hydropower)?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak's position on energy (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky's position on energy (i.e., what do you think Schakowsky thinks)? _____

Do you think the US government should sever relations (diplomatic, economic) with countries that harbor suspected terrorists?

1	2	3	4	5	6	7
<i>Definitely</i>			<i>Not Sure</i>			<i>Definitely</i>
<i>NOT</i>						<i>YES</i>

Using the same 1-7 scale, where would you place Pollak's position on relations with countries that harbor suspected terrorists (i.e., what do you think Pollak thinks)? _____

Using the same 1-7 scale, where would you place Schakowsky's position on relations with countries that harbor suspected terrorists (i.e., what do you think Schakowsky thinks)? _____

Are you male or female?

<i>Male</i>	<i>Female</i>
-------------	---------------

Which of the following do you consider to be your primary racial or ethnic group?

<i>White</i>	<i>African American</i>	<i>Asian American</i>	<i>Hispanic</i>	<i>Native American</i>	<i>Other</i>
--------------	-------------------------	-----------------------	-----------------	------------------------	--------------

What is your age?

18-24	25-34	35-50	51-65	Over 65
-------	-------	-------	-------	---------

What is your estimate of your family's annual household income (before taxes)?

< \$30,000	\$30,000 - \$69,999	\$70,000-\$99,999	\$100,000-\$200,000	> \$200,000
------------	---------------------	-------------------	---------------------	-------------

What is the highest level of education you have completed?

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

<i>Less than High School</i>	<i>High School</i>	<i>Some College</i>	<i>4 Year College Degree</i>	<i>Advanced Degree</i>		
Generally speaking, do you consider yourself a Democrat, Independent, or Republican?						
1 <i>Strong Democrat</i>	2 <i>Weak Democrat</i>	3 <i>Independent leans Democrat</i>	4 <i>Independent</i>	5 <i>Independent leans Republican</i>	6 <i>Weak Republican</i>	7 <i>Strong Republican</i>

For Peer Review

Supplementary Results/Models

In the first column of Table A-3, we replicate model 2 of Table 5 except we also include interactions for the conditions where both candidates used an issue/image strategy (i.e., condition 2) and where neither candidate used such a strategy (i.e., condition 5). We do this to confirm that it is specifically the incumbent actions that prime policy and traits, and to explore whether there is an added impact when both candidates use the issue/image strategy. The results show that the findings reported in Table 5 are largely robust. The interactions with incumbency factors and policy remain significant, although the one with traits falls just shy of statistical significance. Perhaps more importantly, no other interaction is significant, thereby confirming that it is the incumbent's rhetorical choices, and only those choices, that influence voters' criteria and it is his/her influence alone.

The second model in Table A-3 uses the individual items for the incumbency image (i.e., honesty, care, leadership) rather than the aggregate measure. We include this given that the aggregate measure does not have a particularly high alpha score. The results show that it is largely perception of leadership that drives the results. As noted in the text, this is interesting since it might be that explicit attention to leadership by a woman candidate primed it.

Table A-3: Vote Preference Regressions

VARIABLES	(1) All Interactions	(2) Trait Interactions
Incumbency Factors	0.757*** (0.143)	0.648*** (0.078)
Candidate Traits	0.046 (0.199)	--
Policy	0.030 (0.293)	0.198* (0.101)
Party ID (Rep.)	-0.105** (0.049)	-0.127*** (0.049)
Female	0.106 (0.131)	0.083 (0.131)
Minority	-0.003 (0.157)	0.038 (0.154)
Age	-0.007 (0.078)	0.035 (0.079)
Income	-0.072 (0.055)	-0.060 (0.055)
Education	0.046 (0.088)	0.040 (0.089)
Inc. Iss./Im.	2.546*** (0.968)	1.863*** (0.551)
Inc. Iss./Im. X Inc. Fac.	-0.656*** (0.190)	-0.481*** (0.107)
Inc. Iss./Im. X Traits	0.309 (0.226)	--
Inc. Iss./Im. X Policy	0.723** (0.320)	0.415*** (0.115)
Chall. Iss./Im.	0.414 (0.893)	-0.095 (0.540)
Chall. Iss./Im. X Inc. Fac.	-0.194 (0.173)	-0.065 (0.104)
Chall. Iss./Im. X Traits	0.097 (0.223)	--
Chall. Iss./Im. X Policy	0.304 (0.313)	0.092 (0.118)
Both Iss./Im.	-1.383 (1.245)	--
Both Iss./Im. X Inc. Fac.	0.258 (0.243)	--
Both Iss./Im. X Traits	-0.134 (0.269)	--
Both Iss./Im. X Policy	-0.392 (0.355)	--
None Iss./Im.	-0.088 (0.935)	--
None Iss./Im. X Inc. Fac.	-0.078 (0.179)	--
None Iss./Im. X Traits	0.040 (0.242)	--
None Iss./Im. X Policy	0.080 (0.317)	--
Honesty	--	0.030 (0.080)
Compassion	--	0.123* (0.064)
Leadership	--	-0.076 (0.066)
Inc. Iss./Im. X Honesty	--	0.054 (0.088)
Inc. Iss./Im. X Compassion	--	-0.088 (0.069)
Inc. Iss./Im. X Leadership	--	0.294*** (0.075)
Chall. Iss./Im. X Honesty	--	-0.007 (0.091)
Chall. Iss./Im. X Compassion	--	-0.007 (0.075)
Chall. Iss./Im. X Leadership	--	0.017 (0.077)
Constant	1.637* (0.856)	1.874*** (0.566)
Observations	344	341
R-squared	0.589	0.590

Entries are OLS coefficients with standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1 for two-tailed tests.

In Table A-4, we present the mean scores for overall vote choice, policy positions, and trait perceptions. The most notable result is the lack of variance on vote choice – Pollak’s chances do not improve when voters attend to policy and traits. In fact, there are no significant differences across conditions and in all cases, Schakowsky is the clear favorite (e.g., comparing conditions 1 and 5, gives $t_{135} = .77$, $p \leq .45$, for a two-tailed test).

To understand why this is the case, consider the final two columns of the table. When Schakowsky uses an issue/image strategy, leading voters to consider policy and traits, she also effectively persuades them to favor her to a greater extent on image. Even when Pollak introduces traits (condition 2), Schakowsky still persuades such that respondents are significantly more favorable towards her. The merged means on traits for when Schakowsky uses an issue/image strategy is 1.03 versus .46 when she does not ($t_{390} = 3.92$, $p \leq .01$, for a two-tailed test). Unlike the incumbency factors, image perceptions are moveable via campaign rhetoric but it is the incumbent Schakowsky who is persuasive and thus she wins even when using an issue/image strategy.

Likewise, issue perceptions can be affected by campaign rhetoric but Pollak is unable to leverage this into an advantage. In the cases where he explicitly discusses his issue positions (i.e., when he employs an issue/image strategy, conditions 2 and 4), it backfires as respondents move further in favor of Schakowsky. Consider condition 3 where positions matter to voters but Pollak opts for a homestyle strategy and does not discuss issues. In that case, the average perceived policy proximity score is .36. Condition 2 differs only in that Pollak discusses his issue positions and the score actually increases toward Schakowsky to 1.02 ($t_{162} = 3.06$, $p \leq .01$, for a two-tailed test).

Table A-4: Vote, Image, and Issue Proximity Scores

	Vote (1-7 scale, toward Sch.)	Policy (-6 to 6 scale, toward Sch.)	Traits (-6 to 6 scale, toward Sch.)
1) Control	5.13 (1.34; 45)	0.35 (0.82; 41)	0.31 (1.11; 44)
2) Schakowsky Iss./Im. / Pollak Iss./Im.	4.98 (1.90; 80)	1.02 (1.56; 80)	1.21 (1.47; 80)
3) Schakowsky Iss./Im. / Pollak Homestyle	5.02 (1.57; 82)	0.36 (1.22; 84)	0.86 (1.40; 84)
4) Schakowsky Homestyle / Pollak Iss./Im.	5.04 (1.72; 91)	0.73 (1.49; 92)	0.57 (1.77; 91)
5) Schakowsky Homestyle / Pollak Homestyle	4.91 (1.72; 92)	0.03 (1.31; 92)	0.42 (1.16; 93)
Overall	5.00 (1.68; 390)	0.50 (1.39; 389)	0.70 (1.46; 392)

Entries are averages with standard deviations and n in parentheses.