Candy We Can Believe In: A Halloween Experiment on Trust and Political Symbolism[1]

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Abstract

We conducted experiments during trick-or-treating at Halloween, four days prior to the 2008 presidential election. We decorated one side of a porch with Obama material and the other with McCain material. Some children are asked to choose a side to get an equal quantity of candy, whereas other children are offered more candy to go to the McCain side. At the candy table, each child chooses between a clear plastic bag and a brown paper bag, thus revealing their level of trust or comfort with ambiguity. We find that, in a predominantly liberal neighborhood, children choose the Obama table and continued to do so even upon the promise of more candy at the McCain table. We also find that Obama supporters, identified as those who choose the Obama table, are more likely than to take the brown bag of candy than the McCain supporters, identified as those who choose the McCain table. These results mimic results from the General Social Survey in which supporters of Kerry over Bush in 2004 are more trusting.

1. Introduction

We conduct trick-or-treating experiments in order to learn about political attitudes regarding the 2008 Presidential election.[2] In a simple setup, we created two tables on the porch of a home for Halloween, one with highly visible Obama material and the other with highly visible McCain material. Children were either given their choice of table to collect equivalent quantity of candy, their choice of table but with more candy from the McCain table,[3] or an assignment without choice to one of the tables. Once at the tables, a final treatment was implemented in which children were given a choice between two bags of candy, a clear bag of candy or a brown bag of candy, and some children were told that the brown bag was better. This setup allows us to ask several questions.

First, we ask not just what proportion support Obama (as indicated by their choice of table), but how elastic this support is, or, more precisely, how elastic their desire is to make a public statement of their support by going to the Obama table to collect their candy. With no incentive, 78% chose the Obama table, whereas when offered twice as much candy at the McCain table, still 68% chose the Obama table.

Second, we ask whether trust or comfort with ambiguity is correlated with support for Obama or McCain. Note that the experimental design does not allow us to separate trust from comfort with ambiguity, but these share a common theme from a personality perspective. In a recent study by the Pew Research Center, no correlation was found between social trust in America and party affiliation or political ideology (Pew Research Center, 2007), but in the 2006 General Social Survey data, those who voted for John Kerry are six percentage points more likely to be trusting in a general question about trusting others in society.[4] Since it is well accepted that political identity is passed from parent to child (Hyman, 1959), this is interesting to note whether trust by children is predictive of their (and thus likely their parent's) candidate choice.

Specifically, we ask whether children who support Obama and go to the Obama table are more willing to "trust" the experimenter by accepting the unknown candy, concealed in a brown bag. We find that in fact Obama supporters are more trusting (or willing to accept the ambiguous offer) than the McCain supporters, but that this effect is only present when the children are given the simple choice of tables (i.e., a public affirmation of their support for their candidate), and not when they are subject to the enticement to choose the McCain table, nor when they are assigned to the table randomly. We discuss below possible interpretations of these differences.

2. Experimental Design

The Halloween experiment took place on the front porch of a single family home in the East Rock neighborhood of New Haven, CT. This neighborhood has several attributes that make it extremely popular with local trick-or-treaters: closely-knit houses, high participation by local residents, and centrally located to New Haven. A typical home in this neighborhood is visited by over five hundred trick-or-treaters throughout the evening. We used this large flow of individuals to perform an

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[2] We also replicated results from a 2007 Halloween experiment, in which children who wore the most common costumes exhibited more aversion to ambiguity. See Anagol et al [2008] for the 2007 experimental results.

[3] Providing an incentive to go to the Obama table would have been logistically infeasible, since even without an incentive we had too many people on line at the Obama table, relative to the McCain table.

[4] Results from data available on the internet at
http://publicdata.norc.org:41000/gss/Quickdata/STATA/VERSION%2010/remp2006.zip.

experiment to test several aspects of political choice.[5]

Two tables were set up on the front porch of the home. The left side of the porch was prominently decorated with Barack Obama election material, and the right side of the patio was decorated with John McCain election material. In addition, life-size cutouts of each candidate, clearly visible at the top of the stairs of the porch, were placed on their respective sides.

There were two stages to the experiment. First, trick-or-treaters were met in front of the porch and told to draw a number from a bowl that assigned them randomly to one of four groups:

1. Choice, equal prices: Children were asked, "You can get two pieces of candy from the Obama table, or two pieces of candy from the McCain table, which do you prefer?"
2. Choice, half price: Children were asked, "You can get two pieces of candy from the Obama table, or four pieces of candy from the McCain table, which do you prefer?"
3. No Choice, Obama: Children were told, "Please go to the Obama table to get your candy" and then were led to the Obama table.
4. No Choice, McCain: Children were told, "Please go to the McCain table to get your candy" and then were led to the McCain table.

This first stage of the experiment will allow us to calculate the "candy elasticity" of John McCain: the sample for this is all children who were assigned to either Treatment 1 or Treatment 2 (346 children).[6]

Second, at the table with the candy, children were presented with a choice between two bags of candy, each containing two pieces (note: if the children were in group "2" above, they were given the two additional pieces of candy independently of this second stage). One bag was clear, transparent plastic, and the other was a small, brown, non-transparent paper bag. Thus, although the total number of candies were the same in the two bags, the children could not see what candy was in the paper bag, nor inspect to confirm that the quantity was the same. The experimenter, sitting behind the table, then alternated whether to say:

1. Suggestion treatment: "I suggest you take this bag [pointing to the brown bag], but the choice is yours, which bag do you prefer?"
2. No suggestion treatment: "Which bag do you prefer?"

This second stage of the experiment will allow us to analyze the difference in trust or comfort with ambiguity between children at the Obama and McCain tables, as the children must trust the experimenters (or be comfortable with ambiguity) in order to be willing to take the brown bag. The suggestion treatment likely heightened the sense of trust required to accept the brown bag. However, it was difficult to control who heard the suggestion treatment and control individuals likely overheard the suggestion to treatment individuals. This effect is likely exacerbated at the Obama table where there was typically a larger crowd, and thus we emphasized the analysis of this treatment less.[7]

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[5] Because no individual identifying information was recorded about each child, and because no harm (beyond that of the socially acceptable excessive sugar intake) was imposed on the children, this was approved by Yale University's Institutional Review Board without needing explicit signed consent by the parents of each child.

[6] In addition, 17 children were omitted from the analysis of the second stage of the analysis because their choice of candy was not recorded.

[7] In results not shown, we find that the suggestion effect is strongest at the McCain table early in the evening, when traffic was lightest, thus supporting the interpretation that there was contamination of the control group during peak traffic times, and more so at the Obama table than the McCain table.

In order to avoid potential gender confound, there were two speaking experimenters behind each table, one female and one male, and they alternated speaking. The gender of the experimenter had no effect on any of the treatments. A third experimenter behind the table recorded the following data: which treatment was administered (suggestion or no suggestion), which number the child drew (the child turned in their number), the costume of the child, a guess of their age, and whether the child chose the clear or brown bag.

568 individuals participated in the experiment. If a child was too young to understand the initial choice between the Obama and McCain table, we gave them candy and they did not participate in the experiment and are not counted in the total.[8]

The summary statistics for the sample population of 551 people are given in Table 1 and brief descriptive statistics in Appendix Table 1 (17 individuals participated but we did not successfully record their demographic data). Over half of the children were aged between 4-10 years, with only 10% of the survey aged over 13 years (this includes adults). The bulk of the trick-or-treaters arrived between 6: 30 and 8:30 pm, with over 200 visitors each hour during this time. The sample was evenly split by gender, with 49% male and 51% female trick-or-treaters.

3. Results

Candy Elasticity

In Treatment "Choice" (i.e., with no price difference), 77.5% of the children chose the Obama table, reflecting the high level of support for the Democratic party in New Haven, CT.[9] When offered twice the amount of candy to go to the McCain table, 67.6% of the children still chose the Obama table. This 9.9 percentage point difference is statistically significant at the 5% level.

Note that the preference for Obama is likely *understated*, as there was consistently a longer line at the Obama table than at the McCain table. This means that even in the "same price" treatment, the "cost" of acquiring candy from the Obama side was slightly higher, as it likely lowered their overall productivity for the evening.

The level of price sensitivity differs greatly by age. Children below the median age of 8 years do not respond to the price incentive, with approximately 30% of children choosing the McCain table in both treatment groups. Children over the age of 8, however, are much more price sensitive. 92% of the older children chose the Obama table when there was no incentive difference, and decreased to 73% with the incentive to go to the McCain table. We posit several explanations for this heterogeneity. Younger children may also have seen the choosing of a table as deeply symbolic of their choice for President, whereas older children saw it more as a simple game and thus were easily swayed away by more candy. The simplest explanation is that younger children did not understand the question as much, or simply were less able to process the tradeoff. They are accustomed to just saying "trick or treat", and this off-equilibrium activity confused them. Younger children may also have been more influenced by their parents, or more fearful of their parents seeing them choose McCain.

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[8] A further 21 children were omitted from the experimental results because, although they arrived at either the McCain or Obama table, we judged that they were too young to understand the question.
[9] In the 2004 Presidential election, 80.5% of New Haven voters voted for John Kerry over George W. Bush.

Trust Results

We define trust as the likelihood a child chooses the brown paper bag over the clear plastic bag. In order to determine what factors contribute to trust, we run the following regression:

$$Paperbag_i = \alpha + \beta_1 \cdot Obama_i + \beta_2 \cdot Suggest_i + \varepsilon_i$$

where $Paperbag_i$ is a dummy variable equal to one if child *i* chose the brown paper bag, $Obama_i$ is a dummy variable equal to one if child *i* went to the Obama table, and $Suggest_i$ is a dummy variable equal to one if the experimenter suggested to child *i* to choose the brown paper bag. We calculated the coefficients for our entire sample and then separately for each treatment group (table choice without price incentives, table choice with price incentives, assigned table) using Ordinary Least Squares with White-adjusted standard errors to correct for heteroskedasticity. We also control for the gender of the child, the gender of the experimenter, the age of the child, the squared age of the child, and the time of night.

Our results are presented in Table 2. In the entire sample, we find no effect of whether or not the child was at the Obama table. In the sample in which the children got to choose their table without any incentives, however, we find that those who chose the Obama table were much more likely to choose the brown paper bag (for the purposes of this paper will be defined as the "Obama effect"). This effect is not present for those children who were assigned a table. This suggests that being able to demonstrate publically one's political preference increased the likelihood that Obama supporters trusted the experimenters on average 18.6 percentage points more than McCain supporters.

Interestingly, the "Obama effect" also does not exist for those children who were offered a candy incentive to choose the McCain table. There are several possible interpretations for this finding. First, it could be that a willingness to trust among less-ardent Obama supporters is most affected by their right to voice their choice. By offering a candy incentive, these less-ardent Obama supporters are more likely to switch to the McCain table, decreasing the difference in trust between Obama and McCain. Indeed, with price incentives, 71% of children choosing the McCain take the brown paper bag, whereas without price incentives, only 58% of children choosing the McCain table take the brown paper bag; whereas at the Obama table, 82% chose the brown paper bag without the incentive while only 67% chose it with the incentive. Alternatively, it could be that by offering a candy incentive to choose the McCain table differentially embittered the children to the experiment, making those who chose the Obama table resentful and thus less likely to trust (i.e., "I won't succumb to their attempt to tempt me over to the McCain table."), while those who chose McCain with the incentive were not resentful of the enticement and, thus, more likely to trust.

Not surprisingly we find that the experimenter's suggestion increased the likelihood of the child choosing the brown paper bag. The one exception is when children were assigned to the table, where we find a positive, but statistically insignificant, effect. This could be because the children were annoyed at having not had a choice and, hence, less likely to trust the experimenter.

4. Conclusion

We draw two broad conclusions from this study. First, the choice of tables is entirely benign, yet strikingly inelastic. Despite doubling the candy one could acquire at the McCain table and despite the strictly symbolic nature of choosing one table over another, most participants still chose the Obama

table. Second, individuals who prefer Obama to McCain, as revealed by their choice of table, are more trusting or comfortable with ambiguity, but this is only true after making salient their political preferences by allowing them to choose without introduction of price incentives. It is likely accurate to describe the act of choosing the brown bag as both one of trust and one of comfort with ambiguity. However, the fact that declaring your support for Obama increases choosing the brown bag seems to show that the trust interpretation is relevant in this setting. The ambiguity interpretation of course may also be an explanation for choosing the brown bag (but seems less likely to be triggered differentially by the act of partisanship induced by asking children to choose a side). In fact, the analysis in Anagaol et al (2007) is replicated here, and similar results are found: children with more common costumes are more likely to choose the ambiguous (in this case, the brown bag) option.

The trust interpretation is consistent with the results reported above from the General Social Survey, and partly consistent with the Pew Research Center results. Whereas the Pew Research Center results find no correlation, there is no focused treatment in which individuals were asked to make a choice affirming their political views. Here, the act of choosing a table made the individuals political identity more salient, perhaps triggering a more instinctual trusting attitude. Since the population was predominantly Obama supporters, we can effectively test the "salience" effect by comparing the likelihood of choosing the brown bag at the Obama table of those who got to choose to be there to those who did not, and we find a 14% percentage point increase in trust for those who chose to be there.

Several sample selection and experimental interpretation issues are important to note. First, the neighborhood is an enclave of Yale University, and also borders lower socioeconomic neighborhoods. In fact, the proportion that chose the Obama table (78%) is similar to the proportion of New Haven voters that chose John Kerry over George W. Bush in the actual 2004 presidential election. Thus even the 20% that support McCain do so knowing they are in the minority in their community, and this could lead to differences in behavior relative to how McCain supporters in more conservative neighborhoods would behave.

Regarding experimental interpretation, the most important cautionary note is that at no time did we ask children to go to the table that reflected their preferred politician. Naturally, most perceived their choice as just that, and exhibited enthusiasm when making this choice. For the particularly young children, parents often spoke, but more often parents were curious to hear what their child would say. This was not an issue when choosing between the clear plastic and brown bag at the tables, as parents expressed no encouragement for or approval of either choice.

Naturally, as with any empirical exercise, questions of external validity remain. In particular, whether results of this experiment were particular to the 2008 election, whether "trust" or "ambiguity aversion" in this context applies to other, arguably more important, settings, such as informal loans, risk sharing, take-up of new agricultural technologies, cooperative work in school or employment, and marital or friendship relationships.

Bibliography

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Table 1: Summary Statistics

Panel A: Selection Treatments and Candidate Choices

	Choice: Same # of Candies	Choice: 2x Candies at McCain Table	No Choice	Total
McCain	36	57	117	210
	22%	32%	53%	37%
Obama	130	123	105	358
	78%	68%	47%	63%
Total	166	180	222	568

Panel B: Selection Treatment and Candidate Choices, Age 8 and under (below median)

McCain	30	31	72	133
	31%	33%	59%	42%
Obama	68	62	50	180
	69%	67%	41%	58%
Total	98	93	122	313

Panel C: Selection Treatment and Candidate Choices, Age 8 and above (above median)

McCain	5	22	35	62
	8%	27%	41%	27%
Obama	59	59	50	168
	92%	73%	59%	73%
Total	64	81	85	230

Note 1: P-values for the t-test of equality of proportion choosing Obama in Column 1 versus Column 2 is [0.036], [0.689], and [0.003] for Panels A, B and C, respectively. Analysis similar to Panel B and Panel C but for males and females yielded no significant heterogeneity.
Note 2: Age was not recorded for 25 children.

Table 2: Choosing Brown Bag over Clear Plastic Bag
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Selection Treatment	All	Given Choice	Choice, With Enticement to Choose McCain	Assigned to Table Randomly
	(1)	(2)	(3)	(4)
Obama Table	0.012	0.186**	-0.072	-0.067
	(0.042)	(0.093)	(0.077)	(0.069)
Suggestion Treatment	0.132***	0.213***	0.151**	0.059
	(0.038)	(0.065)	(0.071)	(0.064)
Controls	yes	yes	yes	yes
Observations	551	162	177	212
r-squared	0.046	0.125	0.067	0.067

Appendix Table 1: Sample Frame Description

Age	Frequency	Percent	Cumulative Percent
1-4 years	4	0.73	0.73
4-7 years	138	25.05	25.77
7-10 years	167	30.31	56.08
10-13 years	178	32.30	88.38
Over 13 years	51	9.26	97.64
Missing	13	2.36	100.00
Total	551	100.00	

Time of evening

	Frequency	Percent	Cumulative Percent
5.30pm-6.30pm	62	11.25	11.25
6.30pm -7.30pm	236	42.83	54.08
7.30pm-8.30pm	253	45.92	100.00
Total	551	100.00	

Gender

	Frequency	Percent	Cumulative Percent
Male	270	49.00	49.00
Female	281	51.00	100.00
Total	551	100.00	