An examination of the 2008 United States of America presidential election[1]

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Abstract

This project examines the results of an online survey conducted during the final two months of the 2008 US presidential election. In election surveys respondents are often asked to evaluate candidates' personal attributes and positions on issues; this approach, however, treats variables as independent of one another. Exploration of the entire set of relationships among the concepts of interest using Galileo methodology is a viable alternative. This methodology allows multiple attributes and issues to be considered not only as related dimensionally to each other but also as related to their own spatial positions at both future and past times.

An examination of the 2008 United States of America presidential election

From their first introductory course in research methods, social scientists in general and communication students in particular are taught a model of scientific research that is unlike any model used in the physical sciences. Social science students are taught mainly to use categorical scaling methods, random sampling, correlational analysis, and statistical tests against the null hypothesis. They are taught that the goal of research is to make inferences about a universe or population from which their sample was drawn.

In physics, however, students learn that measurement is comparison to some standard, sampling of any kind is uncommon, and observations are reported with errors expressed as regions of uncertainty. Tests against the null hypothesis are not used and students are taught that the goal of research is to provide precise measures of the parameters of the sample observed. Statistical inferences to a population from which observations were drawn are never attempted, but rather the results of research are routinely checked by other scientists instead.

In this paper an introductory graduate class reports findings built upon work completed by an undergraduate class in research methods. Students in these both courses studied the U.S. presidential election, which occurred during the time the courses were taught, and were taught the research model used in physical science. The candidates' political positions relative to key issues were measured over an eight week period terminating one week after the election. The distances between the issues, as well as the student's positions toward these same issues, were measured as ratios as compared to an arbitrary standard distance.

Past Research

Traditionally, studies of the decision-making process in marketing, advertising, public relations, and political communication have used focus groups or surveys to determine attitudes, intentions, and actions (Brody & Page, 1972; Lazarsfeld, Berelson, & Gaudet, 1983; Reid & Soley, 1982; Walker & Knox, 1997); these same methods are also used to examine relationships among these variables. This procedure is often carried out at particular points in time, sometimes only once. When the scope of research is confined to political communication, there have often been significant efforts to try to understand the effect of attitudes toward candidates on voting decisions. Conventional methodology, particularly methodology developed in the U.S., tends to focus on measuring the candidates' personal attributes and issue positions as discrete independent variables (Abelson, Kinder, Peters, & Fiske, 1982; Cwalina, Falkowski, & Kaid, 2000; Kim, Scheufele, & Shanahan, 2005).

A problem with this approach is that the variables measured are considered as intrinsic, static, and one-dimensional characteristics. Most polls conducted during presidential election campaigns are a good example of this methodology. Yet as a simple sum of the individual attitudes measured by pollsters, polling fails to represent precise public opinion toward both the candidates' issue positions and personal attributes. This is largely because, as suggested by Abelson as early as 1954, both issues and attitudes are most usefully represented and examined as multidimensional structures (Abelson, 1954).

The Galileo model can reliably measure interconnected associations and is thus able to make these interrelations more accessible than unidimensional, linear attitude models (J. Woelfel, Barnett, Pruzek, & Zimmelman, 1989; J. Woelfel & Fink, 1980; J. Woelfel & Saltiel, 1988). Accordingly, since the aim of this project was to understand the interrelated associations

between perceived attitudes toward issue positions and candidates held by a loosely related group of voters during the final two months of the 2008 U.S. presidential election, the Galileo model was used.

Self-Reflective and Activity Attitudes as Collective Consciousness

Human thought is derived from categorizing and classifying object sets (e.g., issues in a political campaign) based on experience of the social world (J. Woelfel & Haller, 1971). Woelfel and Napoli (1984) argue that, "[the objects of] experience must be encoded into symbols to be communicated and it is the symbolic representations of observations that are actually compared, never the 'observations' themselves" . If this is so, then clearly the self perceives categorized political issues related to presidential candidates through mediating symbolic interactions with others and a given political environment (e.g., information received from interpersonal political discussions or political media use).

This mediated symbolic interaction can be thought of as similar to the actions of any organism interacting with its environment. Indeed the Galileo model, building on the work of Mead, Durkheim, Haller, Sewell and others, considers all objects to be socially designated (J. Woelfel, 1967). A belief is defined as the distance between objects and an attitude is the distance conceived between the self concept and an object (J. Woelfel & Stoyanoff, 2007). Political attitudes are therefore the relationship between the self and other objects; these relationships depend on information the self has received at a given time or across an interval of time and can change (Barnett, 1978; Barnett, Serota, & Taylor, 1976).

At a micro level, an individual forms, negotiates, or changes the relationship with campaign issues by classifying them based on the similarities or dissimilarities to self and, therefore, self-definition of these relationships is understood as a continuous cognitive process

rather than a fixed cognitive consequence. These relationships are constantly redefined over time; as political attitudes are reinforced or changed, an individual reinterprets their attitudes in relation to their own experience.

This is not merely, however, an individual process since a particular self considers not only their own positions but also those held by others. In this way the self not only internalizes the collective consciousness of political attitudes held by others around them, but their own attitudes in turn influence others, adjusting collective cognitive perceptions. Particular selves thus both reflect and transform the collective consciousness and this self-reflexivity allows the self to be an object within its particular social environment; this is consistent with Mead's idea that the self is situationally variable (Mead, 1934).

Such a view lays the cornerstone for a theory of communication networks which allows individual selves to maintain function as a node in a given communication network yet also allows them to be constrained and formed by their structural position. This view goes further than Beim's idea that culture is formed by social interaction and is, rather, closer to Sewell's idea that social structure itself is a both a collective and individual dynamic process, that "Structure is dynamic, not static; it is the continually evolving outcome and matrix of a process of social interaction" (Sewell, 2007). Although Beim's desire to reject duality is laudable, even as his desire to retain hierarchical and ontological schemata allows him to consider "what parts of structure affect which people" (Beim, 2007) it limits his ability to consider process.

Indeed attitudes, as the conceived distance between self and objects, are the socially constructed structure of cognitive processes. As such, attitudes are potentially open to change when additional information is received from any node in the network, including the self, at any given moment or over time (Dinauer & Fink, 2005; J. Woelfel, 1993b); this is analogous to an

information processing system of feedback in both input and output nodes. The collective cognitive process as a whole may thus be considered the changing pattern of activation between linked nodes in a communication network, whether individuals or groups of individuals, are aware of these interconnections or not (J. Woelfel, 2010; J. Woelfel, Danielson, & Yum, 2009; J. Woelfel & Murero, 2005; J. Woelfel, Richards, & Stoyanoff, 1993). The Galileo model represents attitudes, thoughts, beliefs, motivations, norms, and values as a whole and portrays them both mathematically and graphically in a multidimensional space.

Neural Networks in the Galileo System

Some communication and sociology scholars argue that networks exist everywhere from neural networks in the brains of living organisms to interpersonal, organizational, and institutional networks (e.g., person-to-person, hierarchical positions at work, broadcast networks, or social networking sites on the Internet) to semantic networks among concepts and words (Barnett, 1988a, 1988b; J. Woelfel, 1993b).

Networks can reveal the relationship between the self and social objects, not just the characteristics of attitudes themselves as intrinsic parts of psychological cognition. Patterns of connectedness between nodes are stored and can be captured and portrayed as moments in time, so much so that actual movies can be made of the patterns traveling through time-space (J. Woelfel, 1993b). In this manner there is a consciousness, although not a self-consciousness, that may be attributed to networks as a whole. “Self-consciousness” can, however, be modeled in network theory by the use of feedback loops between nodes showing the system is aware of and considering its actions and patterns (J. Woelfel, 1993b).

The Galileo system is both a theoretical and methodological model (Vishwanath & Chen, 2008) and presents the structural relationship of concepts as objects in multidimensional space.

These objects can then be placed into points in a spatial structure; the changing proximity patterns of particular points can then be visualized and the relative positions compared (J. Woelfel & Muero, 2005; Yum, 1988). This should not be taken to mean, however, that a Galileo space is composed of a number of discrete objects. Just as the boundary between self and other is more permeable than sometimes construed, the space itself is continuous and the set as a whole provides context for each element.

This is similar to the idea of collective consciousness discussed earlier as well as to Whorf's thought on language. He declares that anyone who believes words to have an exact meaning is mistaken; it is only within the larger framework of a sentence that words take on exact meaning. An analogy he cites is that of a wave. In English it is easily understood that a particular wave may be regarded as a discrete object—but another way of considering the same phenomena is as part of a larger surface of "everchanging undulating motions" (Whorf, 1970). In language we have agreed to consider only part of the whole, the wave, even though singular waves are not the norm. It is in this manner that objects in Galileo spaces may be discussed individually yet must nonetheless also be regarded as parts of a larger whole.

Woelfel and Evans suggest that attitude change and cognitive process, which is measured by points in motion over time (J. Woelfel & Saltiel, 1988), can be calculated as "the coordinates of points from their interpoint distances" (J. Woelfel & Evans, 2008) in the vector space of cognitive representations. Attitude change may therefore be considered a cognitive process reflecting variation in the amount of movement between two or more concepts in multidimensional Riemann space.

Data can be obtained for N concepts by administering ratio paired comparison judgments of N(N-1)/2 times. Data collected are averaged to signify a collective consciousness (Lee &

Barnett, 1997; Vishwanath & Chen, 2006)—which can then examined as points in a matrix based on the similarity and dissimilarity between the concepts. From a set of coordinates produced using the multidimensional scaling algorithm, a structural space in the Galileo system can be made to represent how respondents perceive the linked relationships between concepts. Concepts which are similar are placed closer together and concepts which are different are placed the further apart. In this manner it is clear that no concepts alone have meaning. Rather, it is the relations between the concepts that provide meaning (J. Woelfel & Fink, 1980).

Method

Survey

Participants completed an online survey (Appendix A & B) which included five demographic questions (gender, age, political affiliation, ethnic group, level of education attained) and 105 complete pair comparisons using direct magnitude estimation for 15 terms (2 presidential candidates, 2 vice-presidential candidates, "yourself," and 10 issues). The 10 issues were chosen by having 20 student groups (~5 students/group) each choose 10 issues they felt were important to consider in relation to the election; Catpac, a neural network analysis program, was then utilized to determine the concepts of most interest. The survey was created using Limesurvey, an open source survey tool, and was available online from September 16th, 2008, until November 13th, 2008 (although it should be noted that the single response from 9/16/08 was only counted in the weekly, but not daily, data subsets and most of the weekly datasets do not include the six responses from week 9).

Participants

373 full responses were gathered for this survey; 334 partial, unsubmitted responses (most with fewer than 10 answers) were also gathered but are not included in the analysis. The respondents were 99 students in an undergraduate communication course in the United States at a public, research university as well as those in their online social networks. Many students posted the link to their survey (21 groups ran identical surveys, each with their own link) on Facebook or MySpace in addition to emailing their friends and family to enlist participation.

Data sets

The entire set of 373 responses was examined; it was also broken into a number of subsets and those were also examined. In addition to breakdown by the demographics gender (146 male respondents, 216 female respondents, and 11 who chose not to give their gender) and political party affiliation (151 democrats, 59 republicans, 70 independent, 53 indicated they did not belong to a political party, and 40 who left the question blank), the larger set was also considered as subsets by time period.

The weekly data subsets were:

Week	Dates	Number of responses
1	9/16-9/22	51 surveys
2	9/23-9/29	143 surveys
3	9/30-10/6	37 surveys
4	10/7-10/13	16 surveys
5	10/14-10/20	22 surveys
6	10/21-10/27	16 surveys
7	10/28-11/3	14 surveys
8	11/4-11/10	68 surveys

9	11/11-11/13 (surveys deactivated 11/13)	6 surveys

There were 35 responses on the day of the election (11/4/08) and 39 responses after the election. The data was also split into 53 daily subsets. No one did the survey on 10-13, 10-26, 10-31, 11-1, 11-7, and 11-9, so there are no daily subsets for those dates. Also, since there was only one respondent on 9/16, 10/6, 10/10, 10/11, 10/17, 10/24, 10/30, 11/2, 11/10, and 11/13, those 10 days do not appear as part of the daily graph results.

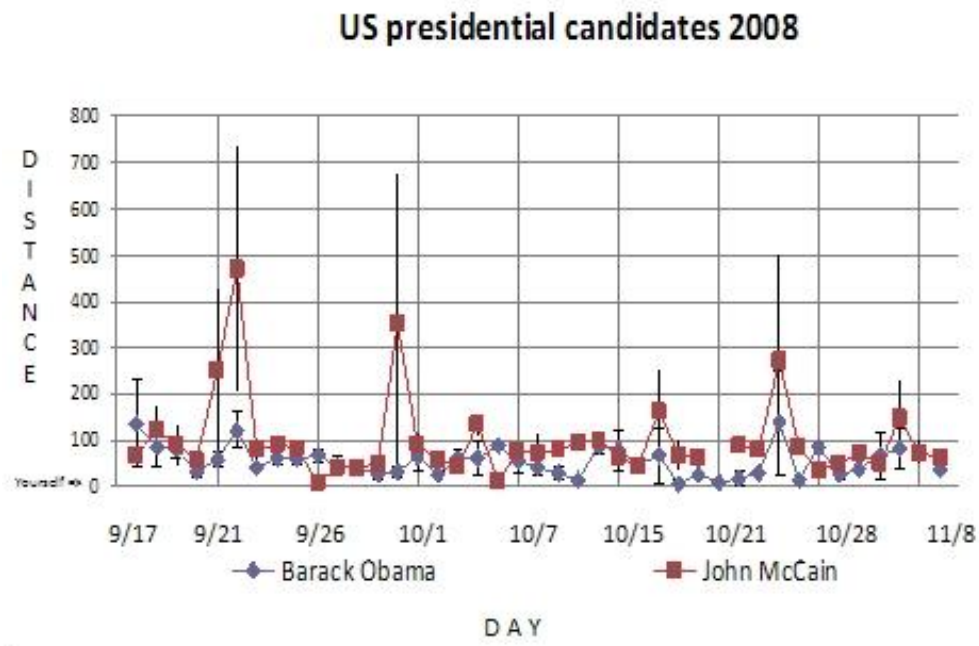
Method of Analysis

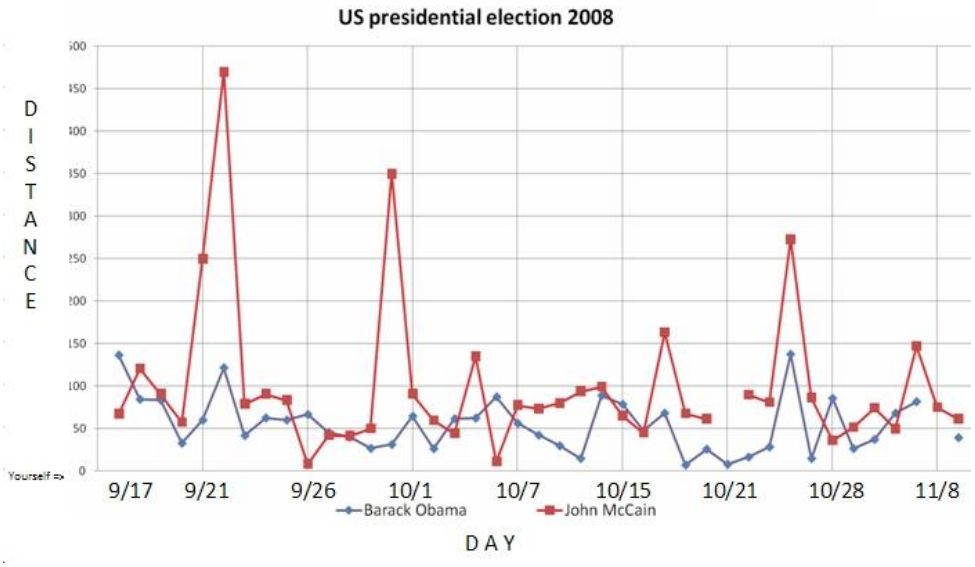
Analysis was done using Galileo software. The distance between "yourself" and the presidential candidates was graphed both daily and weekly; error information was included in these graphs. Messages for each of the initial 8 weeks were determined using the automatic message generator. Tables showing the distance between each of the candidates and all issues were examined. Finally, results from BALLOT (a program that determines which candidate is closer to the self but disregards all information about how close) were graphed and compared to the time graphs created using the exact distances.

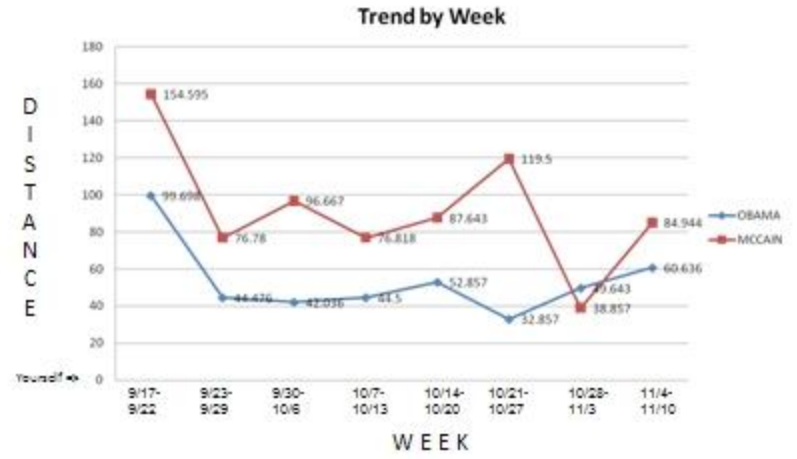
Results

The daily and weekly graphs (below) include mean pair distances generated by INTERGAL and include error bars using the standard error values obtained. As every measurement always contains some error it's important to note the potential error range because how much error is contained in measurement tells how small an effect may be seen. For example: if error for the distance something moved is 6.7 units +- 2 units you couldn't have seen anything smaller than 2 units. Two daily graphs have been included though, one with and one without error, as the potential error for McCain at three points was high enough to cause the scale for the graph to become so large that the smaller daily fluctuations are difficult to view.

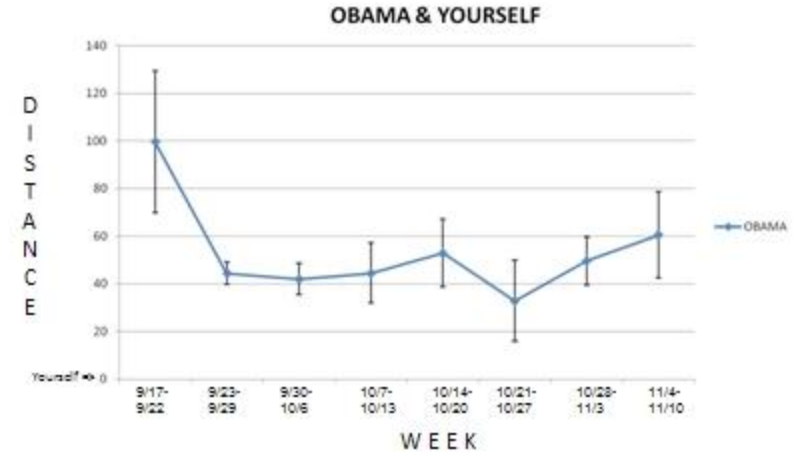
The information contained on the daily graph without error bars is felt to be a bit more accessible at some points because of this so both have been included.





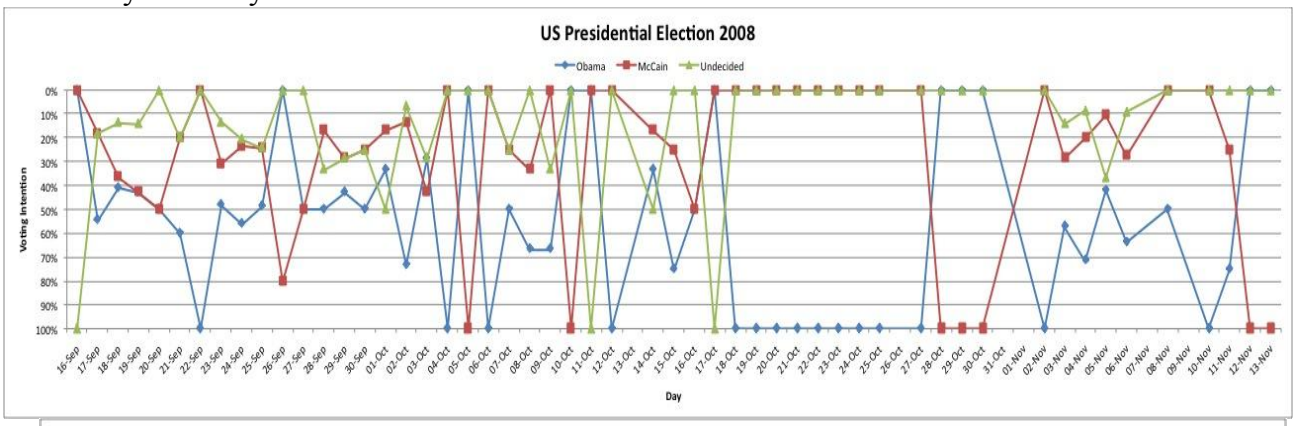

Trend by Week
DISTANCE
Yourself
180
160
140
120
100
80
60
40
20
0
154.595
99.698
76.78
96.667
76.818
87.643
119.5
84.944
44.476
42.036
44.5
52.857
32.857
49.643
38.857
60.636
9/17-9/22
9/23-9/29
9/30-10/6
10/7-10/13
10/14-10/20
10/21-10/27
10/28-11/3
11/4-11/10
WEEK
OBAMA
MCCAIN

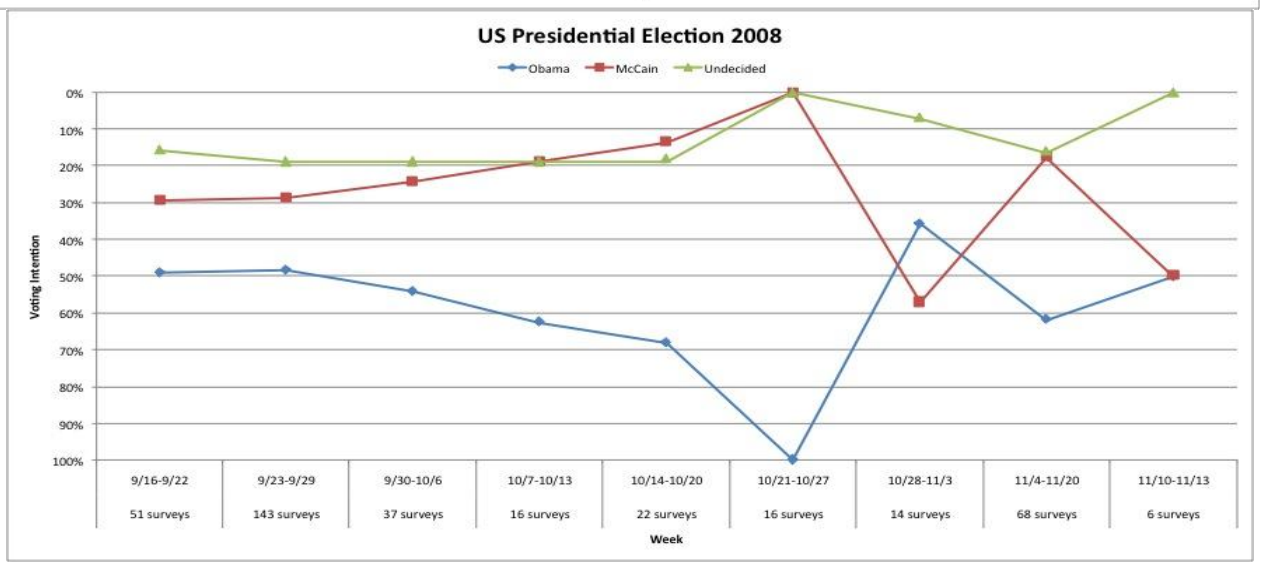

MCCAIN & YOURSELF
DISTANCE
Yourself
250
200
150
100
50
0
154.595
76.78
96.667
76.818
87.643
119.5
84.944
38.857
9/17-9/22
9/23-9/29
9/30-10/6
10/7-10/13
10/14-10/20
10/21-10/27
10/28-11/3
11/4-11/10
WEEK
MCCAIN


OBAMA & YOURSELF
DISTANCE
Yourself
140
120
100
80
60
40
20
0
9/17-9/22
9/23-9/29
9/30-10/6
10/7-10/13
10/14-10/20
10/21-10/27
10/28-11/3
11/4-11/10
WEEK
OBAMA

It is clear that although perception of both candidates similarity to self fluctuated daily, overall Obama was felt by the respondents in this sample to be closer to themselves the most often. Previous research suggests that "Political candidates that are close to the average voter's self point receive more votes that those who are farther away" (J. Woelfel & Stoyanoff, 2007). This can be viewed another way by daily graphs of results generated by another Galileo program, BALLOT. This program only inspects the data for which of the options specified is closest to self; the exact magnitude of that distance is not taken into account. This is useful for a voting situation since when voting a person might favor a candidate only a little or a great deal—yet both votes will merely be counted as a vote in favor of that candidate.

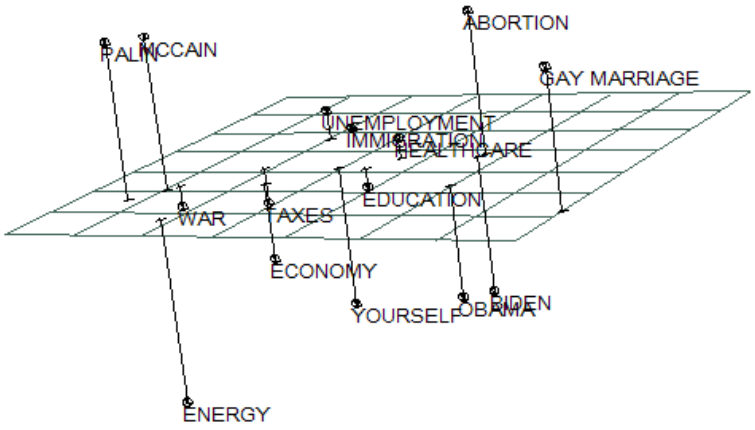
Weekly and daily BALLOT results:



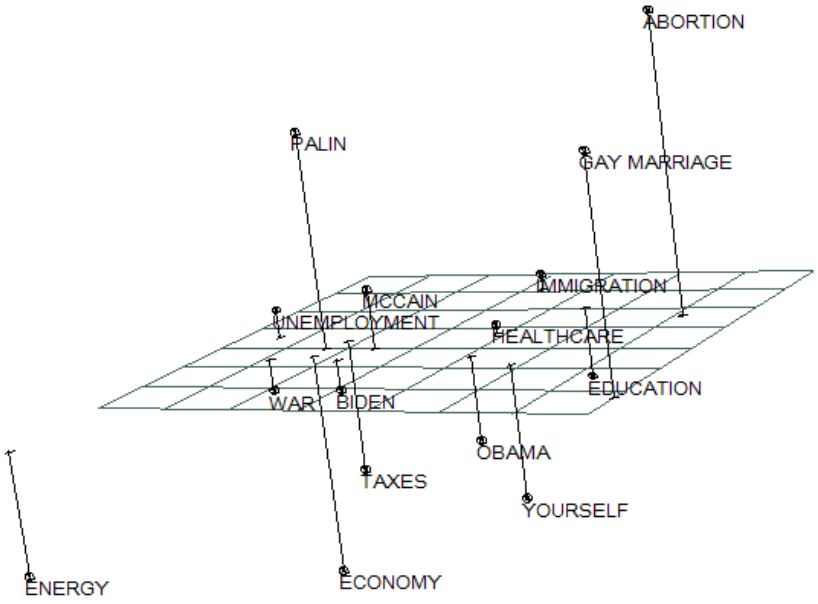


As was stated earlier, not only can the distance from a person to a political candidate to gathered using paired-comparison measurement analyzed by Galileo but an overview of all the objects of interest in a particular space is possible. A movie with daily views of the coordinate space is available at http://www.acsu.buffalo.edu/~woelfel/mov.htm. The coordinates from the first week and election week are below.

Week 1, all responses:



Week 8, all responses:



Date	Main Events During the Election Campaign
9/19	President George W Bush confirms the Treasury Secretary's proposal for a $700bn bail-out of the financial sector
9/26	The First Presidential Debate focusing on foreign policy and national security
9/29	The House of Representatives votes down the $700bn bail-out plan
10/2	Vice-presidential debate with Governor Palin and Senator Biden held at Washington University in St. Louis.
10/3	Congress passes the $700bn financial rescue package
10/7	The Second Presidential Debate focusing on health policies, energy policies and entitlement reform
10/15	The Final Presidential Debate focusing on domestic policy and the economy
10/19	Collin Powell announces that he is endorsing Barack Obama
11/4	Election Day
11/5-15	Post Election

Sources: BBC http://news.bbc.co.uk/2/hi/in_depth/629/629/7360265.stm, http://debate.wustl.edu/home.php & CNN http://www.cnn.com/ELECTION/2008/results/president/; complete text from BBC timeline in Appendix C.

The issues abortion and gay marriage appear fairly stable in position and not to have influenced this election very much (although it may be seen in the graphs showing the distance between all issues and self that gay marriage was perceived as being closest to self after the vice-presidential nominees discussed that in their debate during the third week of this survey). War is consistently seen as closer to McCain than Obama and self. Caution should be exercised when interpreting this, however, as rather than showing students are unconcerned about war, it is at least as likely that this reflects students' unfavorable opinion of war. Those issues far from self, although most often considered to be unimportant to self, may also reflect a self's perceived dissimilarity. So students could indeed be concerned but at the same time not view themselves as the sort of people who would choose to fight in the war in which the United States is presently involved; this would be similar to the idea put forth in Woelfel's work that people buy products that are appropriate for themselves, for people like them. In either case, McCain's continued perceived closeness to war did not bode well for him.

It is also interesting to see that energy, despite skyrocketing gas prices during this time period, maintained a fair distance from self—although it is at least possible that the further removal of energy from self in week 8 is perhaps in part due to the fact that gas prices had begun to come down by that time. Also, as Palin is already seen as closer to energy than either Obama or Biden, one wonders whether focusing on that was a strength for the McCain/Palin campaign.

Nonetheless, the messages generated by week do include energy both in the first message and the last two messages. As in the graphs, however, perhaps what is most immediately apparent is that a different best message was generated each week. This makes sense when one considers the methodology of automatic message generation in Galileo. Since messages average

as vectors in Galileo space (J. Woelfel & Stoyanoff, 2007), when the space changes the best messages to move things within that space will also change.

The federal bailout solutions to economic crisis which had steadily emerged from the fall of 2008 stood out among main events in the course of the 2008 general election campaign. This is illustrated by the changing distance from respondents themselves to economy, unemployment, and taxes between week 1 and week 8; respondents felt those issues were closer to them over time than any other issues except education (since many respondents were student close proximity to education is not unexpected).

Weekly messages (generated using the Automatic Message Generator program, part of INTERGAL in the Galileo software suite):

Top Message by Week Moving McCain to Self

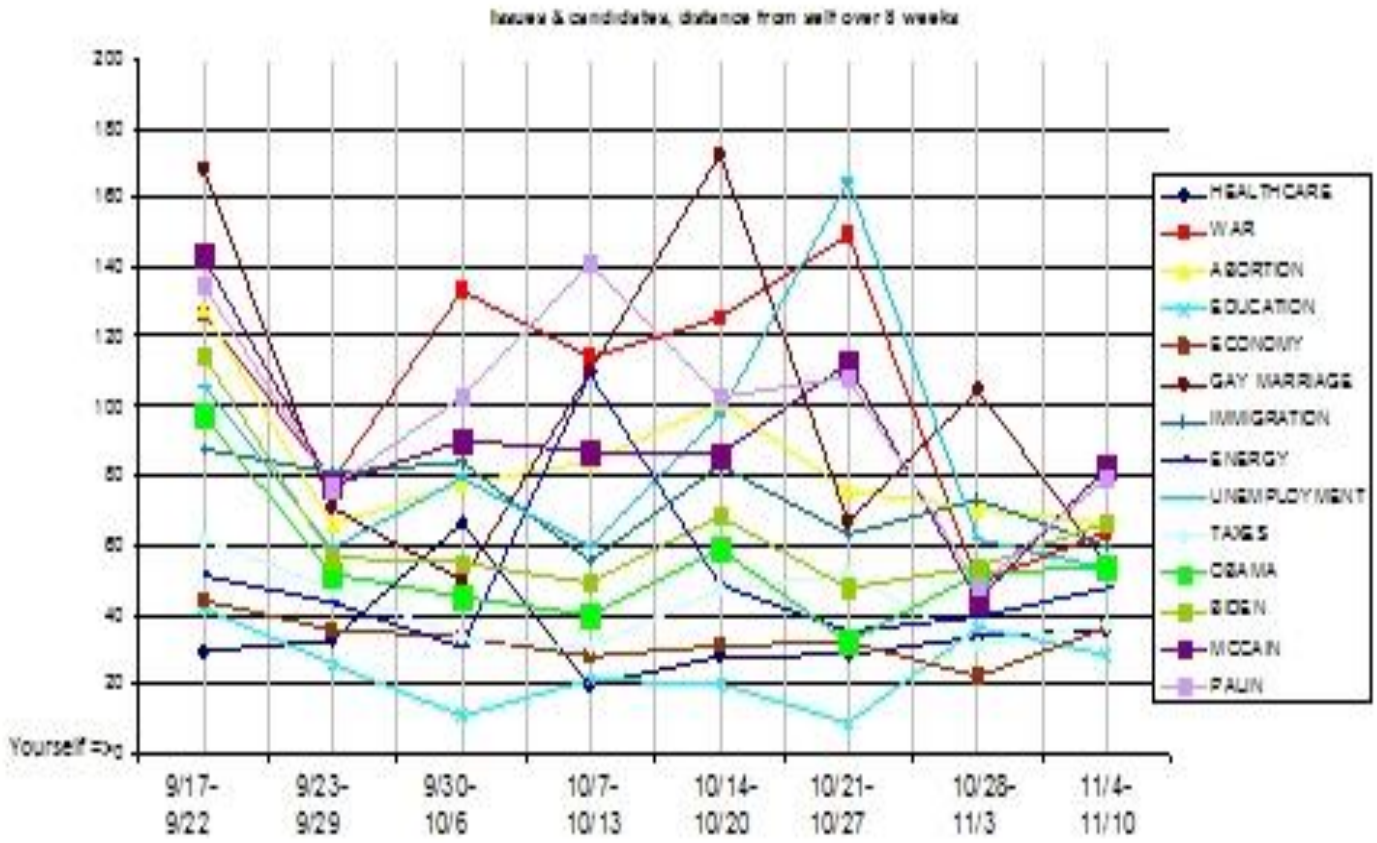
Week	Message Concepts	% Remaining	Distance Remaining
Week1	IMMIGRATION ENERGY	7.05	-10.10
Week2	EDUCATION ECONOMY GAY MARRIAGE TAXES	2.26	1.74
Week3	WAR ABORTION ECONOMY	3.22	3.18
Week4	HEALTHCARE IMMIGRATION BIDEN	1.65	-1.44
Week5	ABORTION EDUCATION GAY MARRIAGE TAXES	3.06	-2.63
Week6	HEALTHCARE EDUCATION ECONOMY	2.98	3.35
Week7	EDUCATION ENERGY TAXES	3.13	1.37
Week8	EDUCATION ENERGY TAXES	.84	-.69

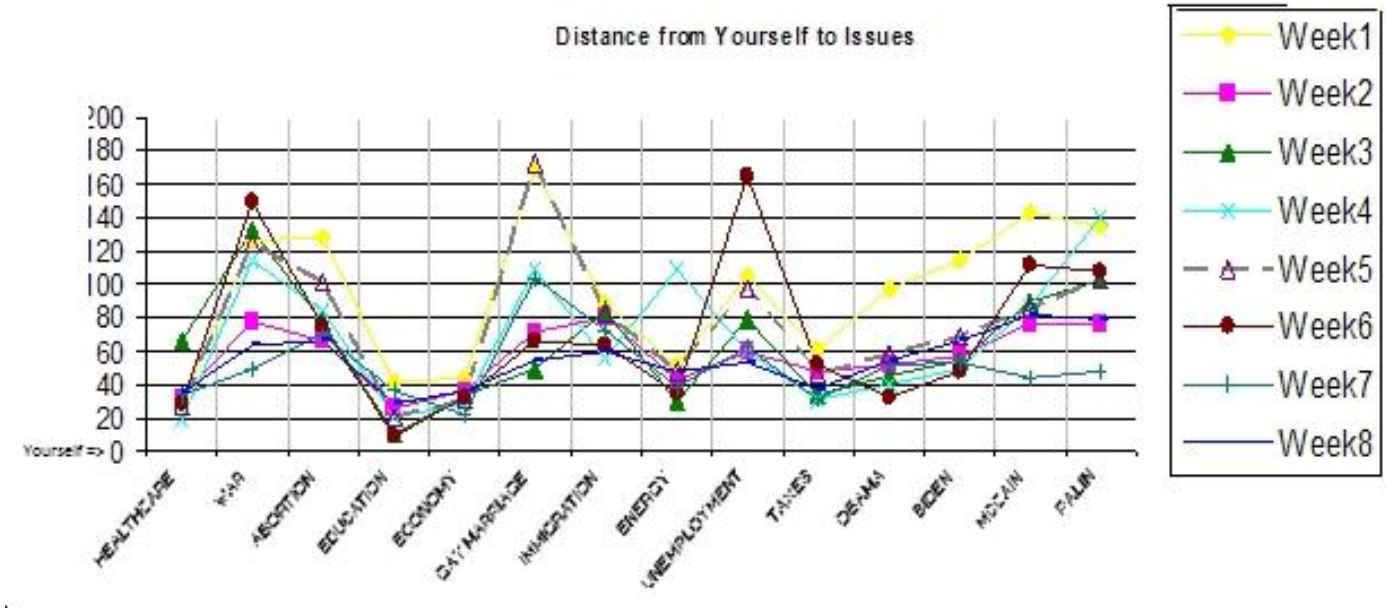
Top Message by Week Moving Obama to Self

Week	Message Concepts	% Remaining	Distance Remaining
Week1	IMMIGRATION ENERGY	10.37	-10.10
Week2	EDUCATION ECONOMY GAY MARRIAGE TAXES	3.36	1.74
Week3	EDUCATION GAY MARRIAGE OBAMA PALIN	2.04	.92
Week4	HEALTHCARE IMMIGRATION BIDEN	3.61	-1.44
Week5	ABORTION EDUCATION GAY MARRIAGE TAXES	4.46	-2.63
Week6	HEALTHCARE EDUCATION ECONOMY	10.38	3.35
Week7	EDUCATION ECONOMY TAXES MCCAIN	2.65	1.37
Week8	EDUCATION ENERGY TAXES	1.28	-.69

As discussed earlier, not only did the distances from self to the individual candidates change over time but also the distances from the issues to the self; some issues fluctuated more than others. For this particular sample education remained consistently close; keeping in mind most were college students or family and friends of college students this makes good sense. Other issues, in particular unemployment and war, were more volatile. Although consistently relatively far from self in relation to other issues, the position of war changes. A change in unemployment's distance from self, which was especially high (far away) in week six, the week after stock markets around the world collapsed, is also perhaps not surprising—although it was unanticipated by the researchers. As noted in Appendixes A & B, unemployment and education were used as the criterion (example) pair. Generally it is more useful for respondents if the

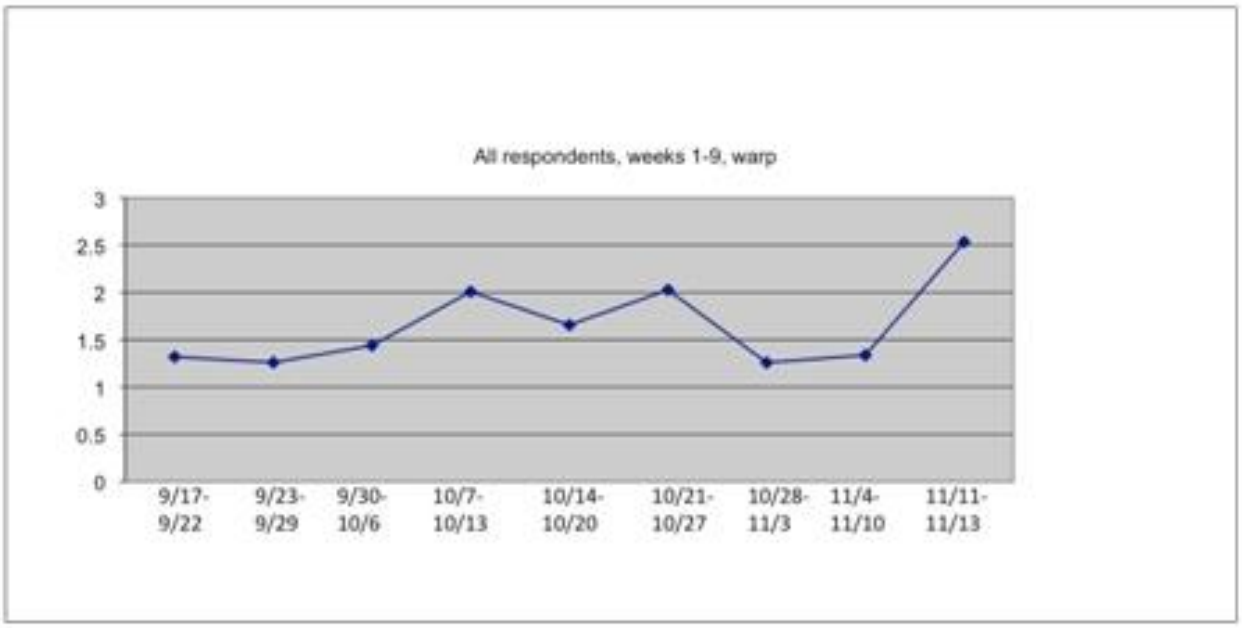
criterion pair concepts chosen are not regarded as opposite and are relatively invariant by most members of a culture (Gordon, 1976; Gordon & DeLeo, 1976; J. Woelfel & Fink, 1980). At the beginning of this research, however, it was unanticipated that unemployment would be a volatile concept.

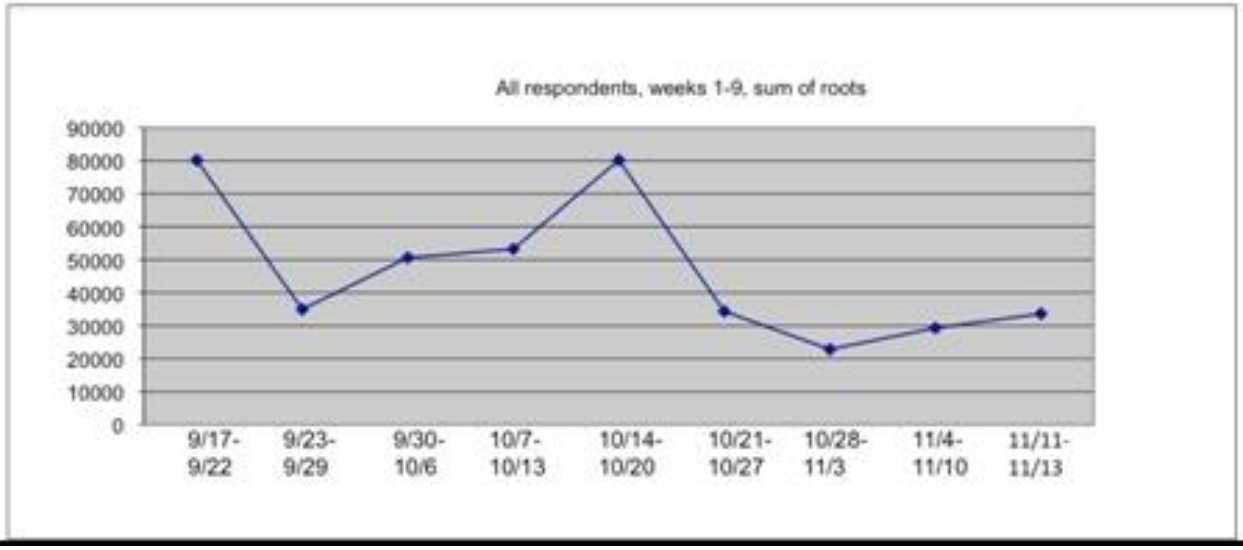


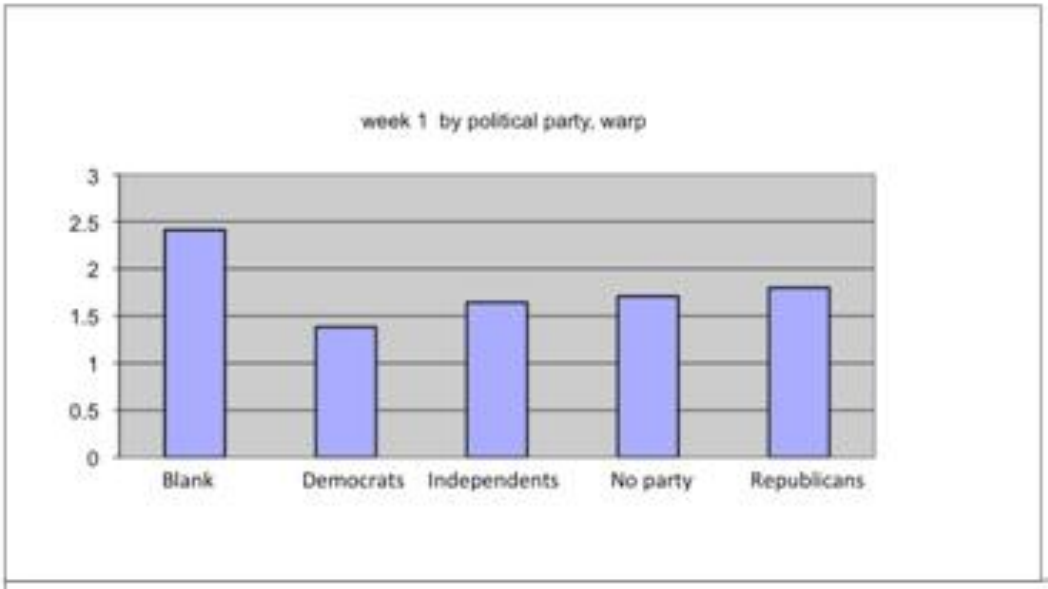

Distance from Yourself to Issues
200
180
160
140
120
100
80
60
40
20
Yourself => 0
HEALTHCARE
WAR
ABORTION
EDUCATION
ECONOMY
GAY MARRIAGE
IMMIGRATION
ENERGY
UNEMPLOYMENT
TAXES
OBAMA
BIDEN
MCCAIN
PALIN
Week1
Week2
Week3
Week4
Week5
Week6
Week7
Week8

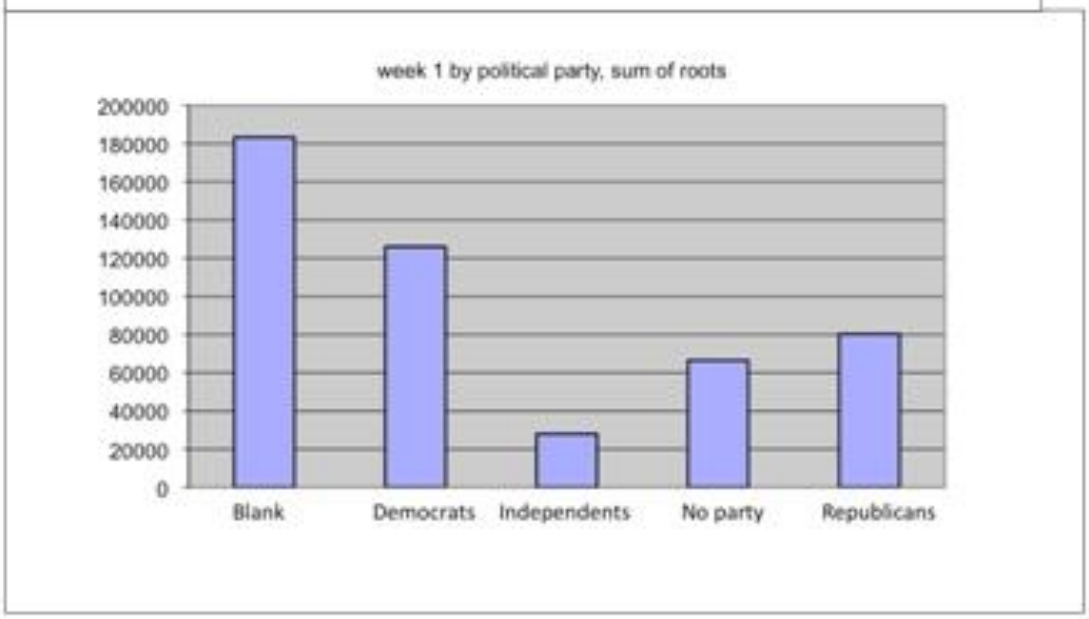
The space itself also changed, as discussed in Woelfel, Newton, Holmes, Kincaid, & Lee (1986) and shown in the graphs below during the eight weeks studied:

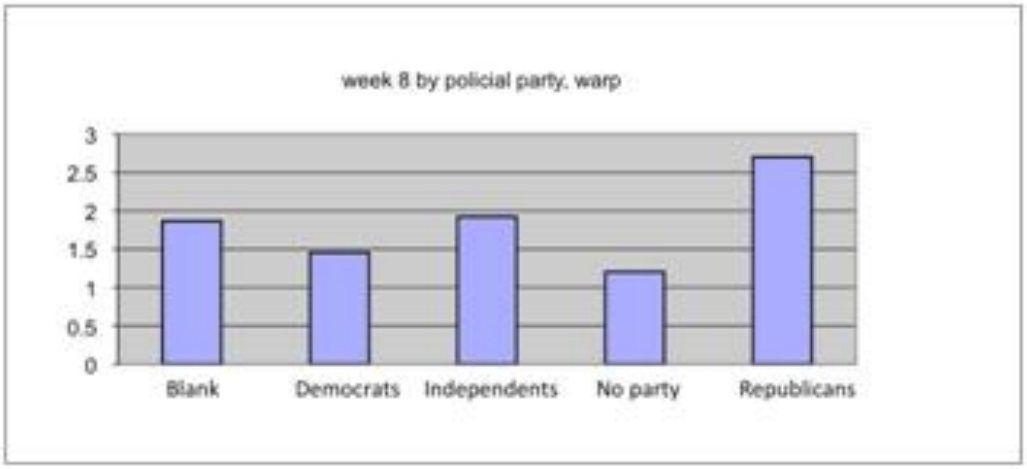
Sum of Roots & Warp graphs

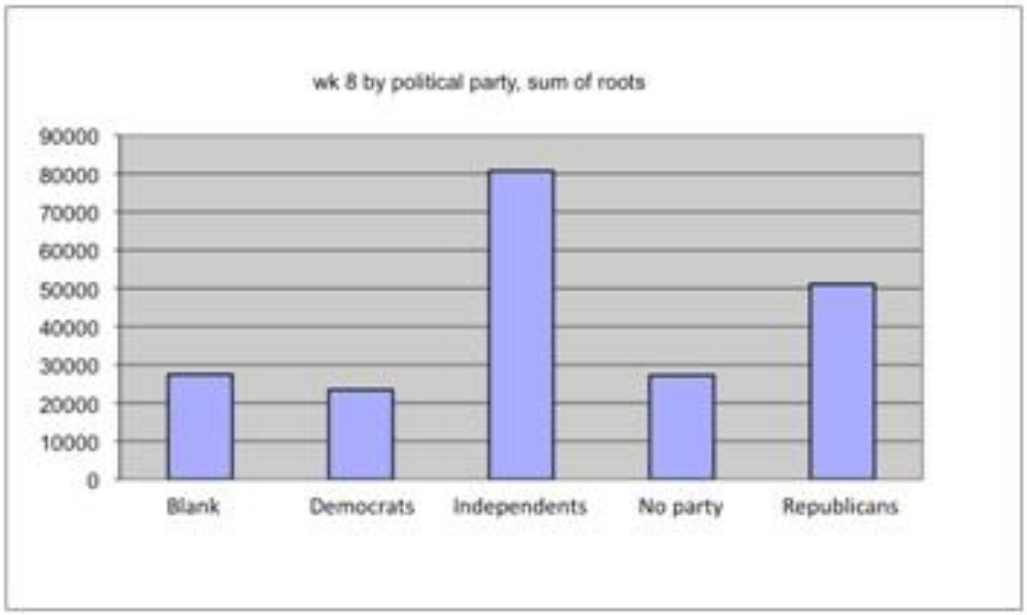





week 1 by political party, warp
3
2.5
2
1.5
1
0.5
0
Blank
Democrats
Independents
No party
Republicans


week 1 by political party, sum of roots
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
Blank
Democrats
Independents
No party
Republicans

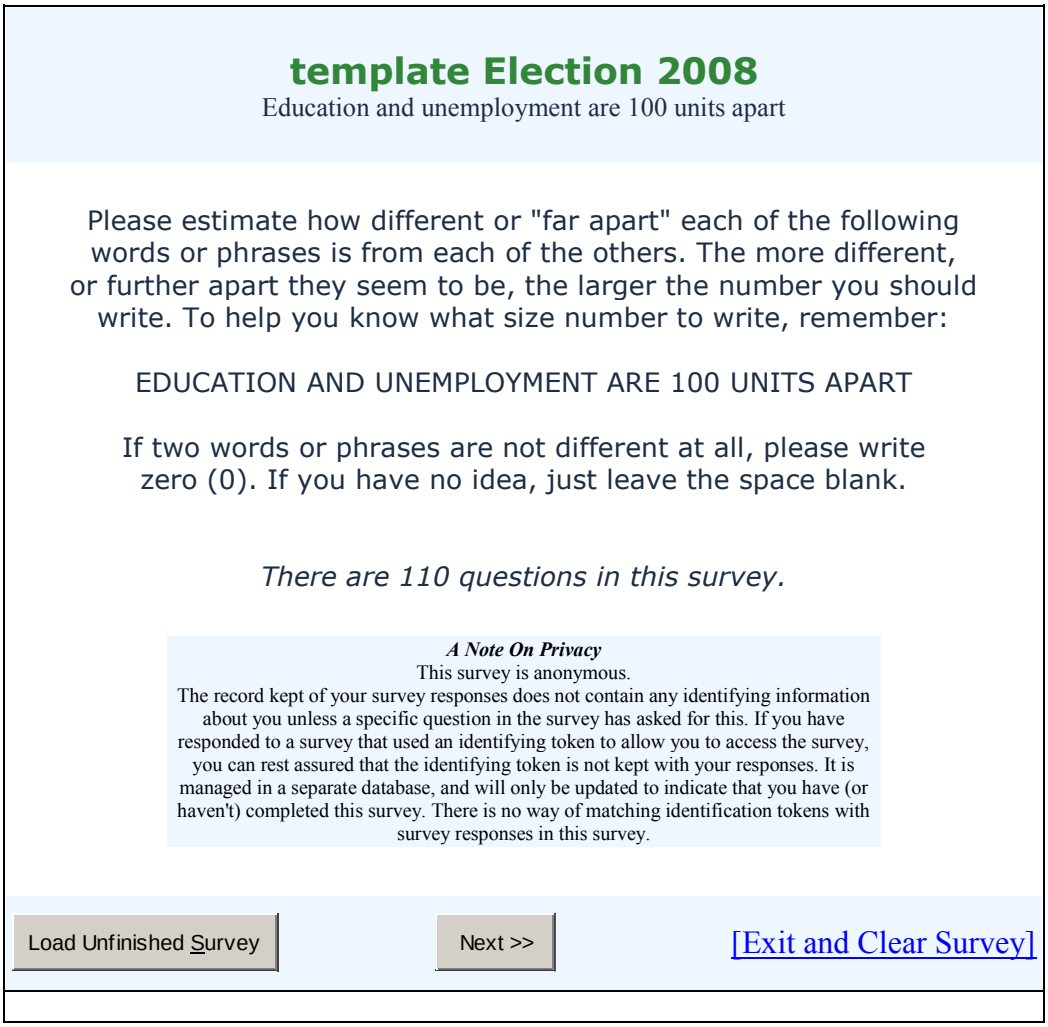




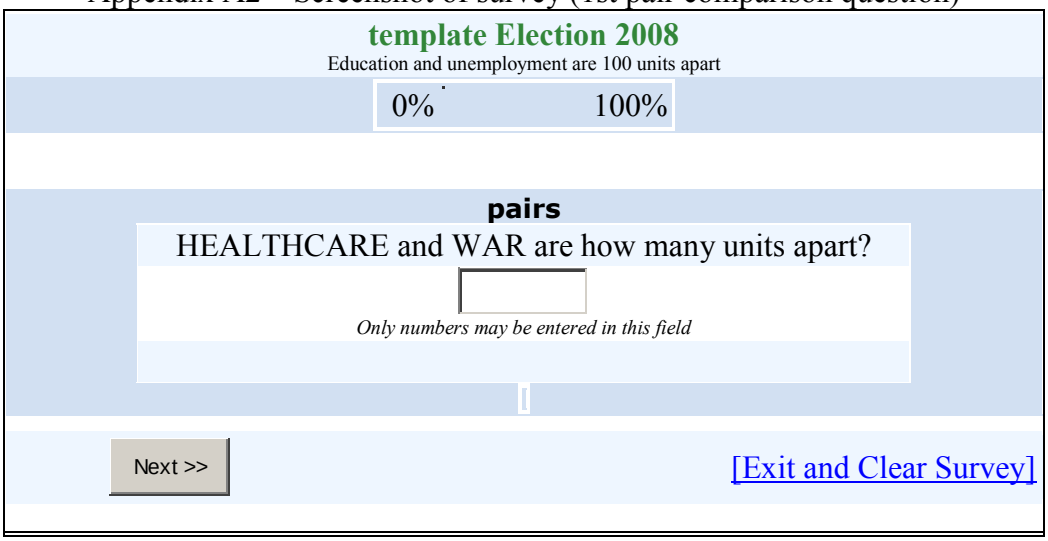
Discussion

Further research is necessary...

Appendix A1 – Screenshots of Survey



Appendix A2 – Screenshot of survey (1st pair comparison question)



Appendix B1 – Questions from Survey

Election 2008

Education and unemployment are 100 units apart

Pairs:

1-2 HEALTHCARE and WAR are how many units apart?
Please write your answer here:

_____

1-3 HEALTHCARE and ABORTION are how many units apart?
Please write your answer here:

_____

1-4 HEALTHCARE and EDUCATION are how many units apart?
Please write your answer here:

_____

1-5 HEALTHCARE and ECONOMY are how many units apart?
Please write your answer here:

_____

1-6 HEALTHCARE and GAY MARRIAGE are how many units apart?
Please write your answer here:

_____

1-7 HEALTHCARE and IMMIGRATION are how many units apart?
Please write your answer here:

_____

1-8 HEALTHCARE and ENERGY are how many units apart?
Please write your answer here:

_____

1-9 HEALTHCARE and UNEMPLOYMENT are how many units apart?
Please write your answer here:

_____

1-10 HEALTHCARE and TAXES are how many units apart?
Please write your answer here:

_____

1-11 HEALTHCARE and OBAMA are how many units apart?
Please write your answer here:

_____

1-12 HEALTHCARE and BIDEN are how many units apart?
Please write your answer here:

_____

1-13 HEALTHCARE and MCCAIN are how many units apart?
Please write your answer here:

_____

1-14 HEALTHCARE and PALIN are how many units apart?
Please write your answer here:

_____

1-15 HEALTHCARE and YOURSELF are how many units apart?
Please write your answer here:

_____

2-3 WAR and ABORTION are how many units apart?
Please write your answer here:

_____

2-4 WAR and EDUCATION are how many units apart?
Please write your answer here:

_____

2-5 WAR and ECONOMY are how many units apart?

Please write your answer here:

Appendix B2 – Questions from Survey

_____

2-6 WAR and GAY MARRIAGE are how many units apart?
Please write your answer here:

_____

2-7 WAR and IMMIGRATION are how many units apart?
Please write your answer here:

_____

2-8 WAR and ENERGY are how many units apart?
Please write your answer here:

_____

2-9 WAR and UNEMPLOYMENT are how many units apart?
Please write your answer here:

_____

2-10 WAR and TAXES are how many units apart?
Please write your answer here:

_____

2-11 WAR and OBAMA are how many units apart?
Please write your answer here:

_____

2-12 WAR and BIDEN are how many units apart?
Please write your answer here:

_____

2-13 WAR and MCCAIN are how many units apart?
Please write your answer here:

_____

2-14 WAR and PALIN are how many units apart?
Please write your answer here:

_____

2-15 WAR and YOURSELF are how many units apart?
Please write your answer here:

_____

3-4 ABORTION AND EDUCATION are how many units apart?
Please write your answer here:

_____

3-5 ABORTION and ECONOMY are how many units apart?
Please write your answer here:

_____

3-6 ABORTION and GAY MARRIAGE are how many units apart?
Please write your answer here:

_____

3-7 ABORTION and IMMIGRATION are how many units apart?
Please write your answer here:

_____

3-8 ABORTION and ENERGY are how many units apart?
Please write your answer here:

_____

3-9 ABORTION and UNEMPLOYMENT are how many units apart?
Please write your answer here:

_____

3-10 ABORTION and TAXES are how many units apart?
Please write your answer here:

_____

Appendix B3 – Questions from Survey

3-11 ABORTION and OBAMA are how many units apart?
Please write your answer here:
_____
3-12 ABORTION and BIDEN are how many units apart?
Please write your answer here:
_____
3-13 ABORTION and MCCAIN are how many units apart?
Please write your answer here:
_____
3-14 ABORTION and PALIN are how many units apart?
Please write your answer here:
_____
3-15 ABORTION and YOURSELF are how many units apart?
Please write your answer here:
_____
4-5 EDUCATION and ECONOMY are how many units apart?
Please write your answer here:
_____
4-6 EDUCATION and GAY MARRIAGE are how many units apart?
Please write your answer here:
_____
4-7 EDUCATION and IMMIGRATION are how many units apart?
Please write your answer here:
_____
4-8 EDUCATION and ENERGY are how many units apart?
Please write your answer here:
_____
4-9 EDUCATION and UNEMPLOYMENT are how many units apart?
Please write your answer here:
_____
4-10 EDUCATION and TAXES are how many units apart?
Please write your answer here:
_____
4-11 EDUCATION and OBAMA are how many units apart?
Please write your answer here:
_____
4-12 EDUCATION and BIDEN are how many units apart?
Please write your answer here:
_____
4-13 EDUCATION and MCCAIN are how many units apart?
Please write your answer here:
_____
4-14 EDUCATION and PALIN are how many units apart?
Please write your answer here:
_____
4-15 EDUCATION and YOURSELF are how many units apart?
Please write your answer here:
_____
5-6 ECONOMY and GAY MARRIAGE are how many units apart?
Please write your answer here:
_____
5-7 ECONOMY and IMMIGRATION are how many units apart?
Please write your answer here:
_____

Appendix B4 – Questions from Survey

5-8 ECONOMY and ENERGY are how many units apart?
Please write your answer here:
_____
5-9 ECONOMY and UNEMPLOYMENT are how many units apart?
Please write your answer here:
_____
5-10 ECONOMY and TAXES are how many units apart?
Please write your answer here:
_____
5-11 ECONOMY and OBAMA are how many units apart?
Please write your answer here:
_____
5-12 ECONOMY and BIDEN are how many units apart?
Please write your answer here:
_____
5-13 ECONOMY and MCCAIN are how many units apart?
Please write your answer here:
_____
5-14 ECONOMY and PALIN are how many units apart?
Please write your answer here:
_____
5-15 ECONOMY and YOURSELF are how many units apart?
Please write your answer here:
_____
6-7 GAY MARRIAGE and IMMIGRATION are how many units apart?
Please write your answer here:
_____
6-8 GAY MARRIAGE and ENERGY are how many units apart?
Please write your answer here:
_____
6-9 GAY MARRIAGE and UNEMPLOYMENT are how many units apart?
Please write your answer here:
_____
6-10 GAY MARRIAGE and TAXES are how many units apart?
Please write your answer here:
_____
6-11 GAY MARRIAGE and OBAMA are how many units apart?
Please write your answer here:
_____
6-12 GAY MARRIAGE and BIDEN are how many units apart?
Please write your answer here:
_____
6-13 GAY MARRIAGE and MCCAIN are how many units apart?
Please write your answer here:
_____
6-14 GAY MARRIAGE and PALIN are how many units apart?
Please write your answer here:
_____
6-15 GAY MARRIAGE and YOURSELF are how many units apart?
Please write your answer here:
_____
7-8 IMMIGRATION and ENERGY are how many units apart?
Please write your answer here:
_____

Appendix B5 – Questions from Survey

7-9 IMMIGRATION and UNEMPLOYMENT are how many units apart?
Please write your answer here:
_____
7-10 IMMIGRATION and TAXES are how many units apart?
Please write your answer here:
_____
7-11 IMMIGRATION and OBAMA are how many units apart?
Please write your answer here:
_____
7-12 IMMIGRATION and BIDEN are how many units apart?
Please write your answer here:
_____
7-13 IMMIGRATION and MCCAIN are how many units apart?
Please write your answer here:
_____
7-14 IMMIGRATION and PALIN are how many units apart?
Please write your answer here:
_____
7-15 IMMIGRATION and YOURSELF are how many units apart?
Please write your answer here:
_____
8-9 ENERGY and UNEMPLOYMENT are how many units apart?
Please write your answer here:
_____
8-10 ENERGY and TAXES are how many units apart?
Please write your answer here:
_____
8-11 ENERGY and OBAMA are how many units apart?
Please write your answer here:
_____
8-12 ENERGY and BIDEN are how many units apart?
Please write your answer here:
_____
8-13 ENERGY and MCCAIN are how many units apart?
Please write your answer here:
_____
8-14 ENERGY and PALIN are how many units apart?
Please write your answer here:
_____
8-15 ENERGY and YOURSELF are how many units apart?
Please write your answer here:
_____
9-10 UNEMPLOYMENT and TAXES are how many units apart?
Please write your answer here:
_____
9-11 UNEMPLOYMENT and OBAMA are how many units apart?
Please write your answer here:
_____
9-12 UNEMPLOYMENT and BIDEN are how many units apart?
Please write your answer here:
_____
9-13 UNEMPLOYMENT and MCCAIN are how many units apart?
Please write your answer here:
_____

Appendix B6 – Questions from Survey

9-14 UNEMPLOYMENT and PALIN are how many units apart?
Please write your answer here:
_____

9-15 UNEMPLOYMENT and YOURSELF are how many units apart?
Please write your answer here:
_____

10-11 TAXES and OBAMA are how many units apart?
Please write your answer here:
_____

10-12 TAXES and BIDEN are how many units apart?
Please write your answer here:
_____

10-13 TAXES and MCCAIN are how many units apart?
Please write your answer here:
_____

10-14 TAXES and PALIN are how many units apart?
Please write your answer here:
_____

10-15 TAXES and YOURSELF are how many units apart?
Please write your answer here:
_____

11-12 OBAMA and BIDEN are how many units apart?
Please write your answer here:
_____

11-13 OBAMA and MCCAIN are how many units apart?
Please write your answer here:
_____

11-14 OBAMA and PALIN are how many units apart?
Please write your answer here:
_____

11-15 OBAMA and YOURSELF are how many units apart?
Please write your answer here:
_____

12-13 BIDEN and MCCAIN are how many units apart?
Please write your answer here:
_____

12-14 BIDEN and PALIN are how many units apart?
Please write your answer here:
_____

12-15 BIDEN and YOURSELF are how many units apart?
Please write your answer here:
_____

13-14 MCCAIN and PALIN are how many units apart?
Please write your answer here:
_____

13-15 MCCAIN and YOURSELF are how many units apart?
Please write your answer here:
_____

14-15 PALIN and YOURSELF are how many units apart?
Please write your answer here:
_____

Appendix B7 – Questions from Survey

Demographics:

1 of 5

Please choose *only one* of the following:
o Female | o Male

2 of 5 What year were you born?
(four digits: ex 1989)
Please write your answer here:
_____

3 of 5 What is your political affiliation?
Please choose *only one* of the following:
o none
o Democrat
o Republican
o Independent

4 of 5 What ethnic group do you identify with?
(How do you identify ethnicity?)
Please write your answer here:
_____
_____
_____
_____

5 of 5 What is your highest level of education?
Please write your answer here:
_____

Thank you for completing this survey.

Appendix C – Event Timeline Text

from http://news.bbc.co.uk/2/hi/in_depth/629/629/7360265.stm

19 September
President George W Bush confirms the Treasury Secretary's proposal for a $700bn bail-out of the financial sector, following the collapse of Lehman Brothers investment bank and the state rescue of insurer AIG. Both presidential candidates are cautious of the proposal and the cost to taxpayers.

29 September
The first presidential debate takes place in Mississippi, despite John McCain suggesting it should be delayed due to the financial crisis on Wall Street. Neither candidate scores a knockout blow. Most commentators declare it a draw, though early polls suggest Obama may have made the more positive impression with uncommitted voters.

3 October
After a week of stock-markets collapsing across the world, Congress passes the $700bn financial rescue package. The new bill includes amendments for more political oversight, tax breaks and increased federal insurance for bank deposits. Members of Congress claim the package will now help the average American on Main Street, not just the bankers on Wall Street.

7 October
After a week of stock-markets collapsing across the world, Congress passes the $700bn financial rescue package. The new bill includes amendments for more political oversight, tax breaks and increased federal insurance for bank deposits. Members of Congress claim the package will now help the average American on Main Street, not just the bankers on Wall Street.

15 October
After a week of stock-markets collapsing across the world, Congress passes the $700bn financial rescue package. The new bill includes amendments for more political oversight, tax breaks and increased federal insurance for bank deposits. Members of Congress claim the package will now help the average American on Main Street, not just the bankers on Wall Street.

19 October
After a week of stock-markets collapsing across the world, Congress passes the $700bn financial rescue package. The new bill includes amendments for more political oversight, tax breaks and increased federal insurance for bank deposits. Members of Congress claim the package will now help the average American on Main Street, not just the bankers on Wall Street.

22 October
After a week of stock-markets collapsing across the world, Congress passes the $700bn financial rescue package. The new bill includes amendments for more political oversight, tax breaks and increased federal insurance for bank deposits. Members of Congress claim the package will now help the average American on Main Street, not just the bankers on Wall Street.

29 October
After a week of stock-markets collapsing across the world, Congress passes the $700bn financial rescue package. The new bill includes amendments for more political oversight, tax breaks and increased federal insurance for bank deposits. Members of Congress claim the package will now help the average American on Main Street, not just the bankers on Wall Street.

4 November
Americans go to the polls in huge numbers and elect Democratic Senator Barack Obama as the first black president of the United States. He wins key battleground states of Pennsylvania and Ohio as well as Florida, Virginia and Colorado - which all voted Republican in 2004. With Missouri and North Carolina still to be called, Mr. Obama's share of the popular vote stands at 52%, compared with Republican John McCain's 46.7%.

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